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Data obtained through Sentinel are intended to complement other types of evidence such as preclinical studies, clinical trials, postmarket studies, and adverse event reports, all of which are used by FDA to inform regulatory decisions regarding medical product safety. The information contained in this report is provided as part of FDA's commitment to place knowledge acquired from Sentinel in the public domain as soon as possible. Any public health actions taken by FDA regarding products involved in Sentinel queries will continue to be communicated through existing channels.

FDA wants to emphasize that the fact that FDA has initiated a query involving a medical product and is reporting findings related to that query does not mean that FDA is suggesting health care practitioners should change their prescribing practices for the medical product or that patients taking the medical product should stop using it. Patients who have questions about the use of an identified medical product should contact their health care practitioners.

The following report contains a description of the request, request specifications, and results from the modular program run(s).

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## Overview for Request: cder\_ssq\_wp003

Request ID: cder\_ssq\_wp003\_nsdp\_v01

Request Description: In this report, we described cohorts identified by five diagnosis code-based algorithms designed to detect Coronavirus Disease 2019 (COVID-19) in the inpatient (IP) setting. We calculated the positive predictive value (PPV) and sensitivity of each algorithm to compare algorithm performance, using diagnostic nucleic acid amplification (NAA) test laboratory result as our reference standard. This report describes Phase Two of a two-phase project.

<u>Data Source</u>: We distributed this request to six Sentinel Data Partners (DPs) on October 30, 2020. These two national insurers and four integrated delivery systems (IDS) used the most current data available to them, which included a combination of adjudicated and unadjudicated claims, electronic medical records, and reports from external laboratories. Patients hospitalized between February 20, 2020 and October 17, 2020 are included in this report. See Appendix A for a list of the latest dates of available data for each Data Partner.

<u>Algorithms:</u> We developed five diagnosis code-based algorithms based on International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes to detect a COVID-19 diagnosis. See Appendices B and C for diagnosis codes.

- 1. U07.1 (COVID-19)
- 2. U07.1 or B97.29 (Other coronavirus as the cause of diseases classified elsewhere)
- 3. U07.1 or B97.29 or B34.2 (Coronavirus infection, unspecified)
- 4. U07.1 or B97.29 or B34.2 or J12.81 (Pneumonia due to SARS-associated coronavirus) or B97.21 (SARS-associated coronavirus as the cause of diseases classified elsewhere)
- 5. [U07.1 or B97.29] and [pneumonia or acute respiratory distress syndrome (ARDS)]

Algorithm Cohorts: We identified inpatient stays with diagnosis codes that met any of the five algorithms, stratified across three time periods: A) February 20, 2020 to March 31, 2020; B) April 1, 2020 to April 30, 2020; and C) May 1, 2020 to October 17, 2020. The hospital admission date was the anchor point for determining time period and assessing patient characteristics. See Appendix G for the design diagrams detailing the study parameters for this request for each of the three time periods assessed.

<u>Eligible Encounters:</u> We included only the first qualifying inpatient stay per patient per algorithm. Patients could only be counted toward a single algorithm one time, and only in a single time period, but were counted toward all fulfilled algorithms.

## **Lab Result Classification:**

Within each algorithm-identified cohort, we classified patients into four categories, based on COVID NAA testing:

- Lab positive: If patient had at least one positive NAA result during ±14 days from hospital admission
- Lab negative: If patient had only negative NAA results during ±14 days from hospital admission
- Lab performed, no result to date
- No known lab test

<u>NAA-Tested Cohorts:</u> We identified cohorts of all patients with known COVID NAA test results within ±14 days from any inpatient stay, and classified them according to their test result. We reported the total counts of patients with positive or negative tests, as well as the total count of tests, including multiple tests per patient. Total count of patients with a positive test was the denominator for our sensitivity calculation.

<u>Descriptive Characteristics</u>: We stratified all cohorts by sex, age category, race, and ethnicity. We additionally stratified according to clinical symptoms, identified by ICD-10-CM diagnosis codes, antibody and antigen test results, and NAA diagnostic product description where available, identified by Logical Observation Identifiers Names and Codes (LOINC) terminology. See Appendices D-F for a list of LOINC codes.

<u>Performance Measures</u>: We calculated PPV and sensitivity for each algorithm, in each time period, both overall and stratified by

DP type (claims, IDS).

<u>Positive Predictive Value (PPV):</u> Among patients who fulfill each algorithm: (Count of NAA positive patients) / (Count of patients with any NAA test result)

<u>Sensitivity</u>: (Count of NAA positive patients who fulfill an algorithm) / (Total count of NAA positive patients among that time period's lab-tested cohort)

We calculated 95% confidence intervals using the exact Clopper-Pearson formula.

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## Overview for Request: cder\_ssq\_wp003

**Optional Table:** Two DPs provided counts of patients who fulfilled each of the five algorithms of interest in the outpatient setting. These results are reported in Table 3.

<u>Limitations:</u> Algorithms to define exposures, outcomes and treatments are imperfect and may be misclassified. Therefore, data should be interpreted with this limitation in mind. Death data may be incomplete and should be interpreted with caution.

**Notes:** Please contact the Sentinel Operations Center (info@sentinelsystem.org) for questions and to provide comments/suggestions for future enhancements to this document.

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Patients Positive | Lab Tests Positive | Patients Negative | Lab Tests Negative |
|---|-------------------|--------------------|-------------------|--------------------|
|   |                   | Nui                | mber              |                    |
| Care Setting of "Primary" Lab Test***** |                   |                    |                   |                    |
| Total Observed                          | 1,524             | 2,642              | 1,917             | 3,291              |
| Inpatient                               | 401               | 208                | 694               | 606                |
| Outpatient or Emergency Department      | 331               | 131                | 288               | 123                |
| Other                                   | 47                | 7                  | 131               | 65                 |
| Care Setting Reported as Unknown        | 385               | 1,898              | 447               | 2,094              |
| Demographics                            |                   |                    |                   |                    |
| Sex                                     |                   |                    |                   |                    |
| Female                                  | 615               | 1,026              | 1,022             | 1,709              |
| Male                                    | 909               | 1,616              | 895               | 1,582              |
| Other/Missing                           | 0                 | 0                  | 0                 | 0                  |
| Age at Hospital Admission (Years)       |                   |                    |                   |                    |
| 0-5                                     | 0                 | 0                  | 39                | 68                 |
| 6-17                                    | 1                 | 2                  | 16                | 40                 |
| 18-29                                   | 40                | 77                 | 84                | 154                |
| 30-39                                   | 84                | 173                | 146               | 286                |
| 40-49                                   | 185               | 329                | 143               | 307                |
| 50-59                                   | 311               | 590                | 266               | 567                |
| 60-69                                   | 387               | 704                | 395               | 663                |
| 70-79                                   | 311               | 459                | 407               | 601                |
| 80-89                                   | 159               | 236                | 314               | 438                |
| 90+                                     | 46                | 72                 | 106               | 166                |
| Missing                                 | 0                 | 0                  | 0                 | 0                  |
| Race                                    |                   |                    |                   |                    |
| American Indian or Alaska Native        | 3                 | 3                  | 4                 | 4                  |
| Asian                                   | 33                | 38                 | 46                | 50                 |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Patients Positive  | Lab Tests Positive | Patients Negative | Lab Tests Negative |
|---|--------------------|--------------------|-------------------|--------------------|
|   | r atients rositive |                    | mber              | Lab Tests Negative |
| Black or African American   | 193                | 211                | 161               | 179                |
| Native Hawaiian or Other Pacific Islander   | 2                  | 2                  | 1                 | 1                  |
| White   | 342                | 387                | 785               | 871                |
| Other/Mixed/Unknown   | 951                | 2,001              | 920               | 2,186              |
| Ethnicity   |                    |                    |                   |                    |
| Hispanic  | 55                 | 68                 | 50                | 60                 |
| Non-Hispanic  | 256                | 324                | 608               | 700                |
| Unknown   | 1,213              | 2,250              | 1,259             | 2,531              |
| Codes Observed During Inpatient Stay  |                    |                    |                   |                    |
| Asymptomatic screening (Z11.59)   | 27                 | 45                 | 32                | 44                 |
| Contact and suspected exposure (Z20.828)  | 286                | 510                | 261               | 422                |
| Pneumonia (see Appendix B)  | 1,248              | 2,237              | 831               | 1,403              |
| Other viral pneumonia (J12.89)  | 1,071              | 1,923              | 83                | 241                |
| ARDS (J80)  | 302                | 484                | 40                | 79                 |
| Sepsis (see Appendix C)   | 547                | 1,032              | 508               | 900                |
| Bronchitis (J20.8 OR J40)   | 22                 | 29                 | 29                | 50                 |
| Respiratory infection (J22 OR J98.8)  | 239                | 469                | 45                | 99                 |
| Cough (R05)   | 404                | 816                | 349               | 670                |
| Shortness of breath (R06.2)   | 5                  | 13                 | 20                | 53                 |
| Fever (R50.9)   | 502                | 958                | 337               | 720                |
| Optional  |                    |                    |                   |                    |
| Other COVID Tests   |                    |                    |                   |                    |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                  | -                  | -                 | -                  |
| observed within -7 days prior to hospitalization through end of patient record**    |                    |                    |                   |                    |
| Test performed, at least 1 positive result  | 82                 | 7                  | 7                 | 0                  |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| All Mucicie Acid Amplification (MAA) Lab Tests. Covid MAA Test Within 214                          | ,                 |                    |                   | ,                  |
|--|-------------------|--------------------|-------------------|--------------------|
|  | Patients Positive | Lab Tests Positive | Patients Negative | Lab Tests Negative |
|  |                   | Nu                 | mber              |                    |
| Test performed, only negative results  | 8                 | 0                  | 47                | 12                 |
| No test or unknown result  | 887               | 2,018              | 1,231             | 2,568              |
| Antigen test within ±14 days from inpatient admission**  | -                 | -                  | -                 | -                  |
| Test performed, at least 1 positive result   | 0                 | 0                  | 0                 | 0                  |
| Test performed, only negative results  | 0                 | 0                  | 0                 | 0                  |
| No test or unknown result  | 854               | 1,888              | 1,128             | 2,406              |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                                    |                   |                    |                   |                    |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)                             | 396               | 428                | 535               | 593                |
| Codes Observed During Inpatient Stay   |                   |                    |                   |                    |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness                      | 161               | 316                | 100               | 192                |
| of breath) OR R50.9 (fever)]   |                   |                    |                   |                    |
|  | 223               | 407                | 27                | 62                 |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                       |                   |                    |                   |                    |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                        |                   |                    |                   |                    |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]                        |                   |                    |                   |                    |
| "Primary" Lab Test Product Information****   |                   |                    |                   |                    |
| 847377 - SARS_COV_2_NS<br>85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual | -                 | -                  | -                 | -                  |
| Differential WBC Count   | -                 | -                  | -                 | -                  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA                                | 17                | 17                 | 24                | 24                 |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 107               | 120                | 134               | 150                |
|  | 107               | 120                | 154               | 130                |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | -                 | -                  | <del>-</del>      | <del>-</del>       |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | -                 | -                  | -                 | -                  |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT  | -                 | -                  | -                 | -                  |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | -                 | -                  | -                 | -                  |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | -                 | -                  | -                 | -                  |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|  | Patients Positive | Lab Tests Positive | Patients Negative | Lab Tests Negative |
|--|-------------------|--------------------|-------------------|--------------------|
|  |                   | Nur                | nber              |                    |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 19                | 68                 | 19                | 56                 |
| Probe Detection  |                   |                    |                   |                    |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0                 | 0                  | 0                 | 3                  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                   |                    |                   |                    |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0                 | 0                  | 0                 | 3                  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                   |                    |                   |                    |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 447               | 997                | 395               | 1,104              |
| NAA With Probe Detection   |                   |                    |                   |                    |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | -                 | -                  | -                 | -                  |
| By NAA With Probe Detection  |                   |                    |                   |                    |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | -                 | -                  | -                 | -                  |
| NAA With Probe Detection   |                   |                    |                   |                    |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 665               | 1,130              | 757               | 1,263              |
| NAA With Probe Detection   |                   |                    |                   |                    |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | -                 | -                  | -                 | -                  |
| Immunoassay  |                   |                    |                   |                    |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -                 | -                  | -                 | -                  |
| Rapid Immunoassay  |                   |                    |                   |                    |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -                 | -                  | -                 | -                  |
| Probe Detection  |                   |                    |                   |                    |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | -                 | -                  | -                 | -                  |
| NAA With Probe Detection   |                   |                    |                   |                    |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | -                 | -                  | -                 | -                  |
| By NAA With Probe Detection  |                   |                    |                   |                    |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 0                 | 0                  | 0                 | 0                  |
| Specimen By NAA With Probe Detection   |                   |                    |                   |                    |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | -                 | -                  | -                 | -                  |
| Immunoassay  |                   |                    |                   |                    |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -                 | -                  | -                 | -                  |
| Immunoassay  |                   |                    |                   |                    |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|  | Patients Positive | Lab Tests Positive | Patients Negative | Lab Tests Negative |
|--|-------------------|--------------------|-------------------|--------------------|
|  |                   | Nui                | mber              |                    |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -                 | -                  | -                 | -                  |
| Non-Probe Detection  |                   |                    |                   |                    |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | -                 | -                  | -                 | -                  |
| NAA With Probe Detection   |                   |                    |                   |                    |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -                 | -                  | -                 | -                  |
| Probe Detection  |                   |                    |                   |                    |
| Unknown  | 31                | 32                 | 345               | 366                |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 1: IP Stay with Code U07.1*   |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   |                 |                 |                 |        |                          |
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Care Setting of "Primary" Lab Test***** |                 |                 |                 |        |                          |
| Total Observed                          | 869             | 55              | 11              | 2,662  | 924 ( 25.69% )           |
| Inpatient                               | 233             | 7               | 0               | N/A    | 240                      |
| Outpatient or Emergency Department      | 171             | 7               | 1               | N/A    | 178                      |
| Other                                   | 27              | 4               | 1               | N/A    | 31                       |
| Care Setting Reported as Unknown        | 385             | 37              | 9               | N/A    | 422                      |
| Demographics                            |                 |                 |                 |        |                          |
| Sex                                     |                 |                 |                 |        |                          |
| Female                                  | 314             | 24              | 7               | 1,140  | 338 ( 22.76% )           |
| Male                                    | 555             | 31              | 4               | 1,516  | 586 ( 27.83% )           |
| Other/Missing                           | 0               | 0               | 0               | 0      | N/A                      |
| Age at Hospital Admission (Years)       |                 |                 |                 |        |                          |
| 0-5                                     | 0               | 0               | 0               | 3      | 0 (0.00%)                |
| 6-17                                    | 0               | 0               | 0               | 1      | 0 (0.00%)                |
| 18-29                                   | 16              | 1               | 0               | 32     | 17 ( 34.69% )            |
| 30-39                                   | 30              | 2               | 1               | 97     | 32 ( 24.62% )            |
| 40-49                                   | 92              | 2               | 1               | 249    | 94 ( 27.33% )            |
| 50-59                                   | 194             | 4               | 1               | 500    | 198 ( 28.33% )           |
| 60-69                                   | 245             | 11              | 2               | 666    | 256 ( 27.71% )           |
| 70-79                                   | 192             | 18              | 3               | 635    | 210 ( 24.76% )           |
| 80-89                                   | 80              | 15              | 2               | 359    | 95 ( 20.83% )            |
| 90+                                     | 20              | 2               | 1               | 114    | 22 ( 16.06% )            |
| Missing                                 | 0               | 0               | 0               | 0      | N/A                      |
| Race                                    |                 |                 |                 |        |                          |
| American Indian or Alaska Native        | 1               | 0               | 0               | 0      | 1 ( 100.0% )             |
| Asian                                   | 22              | 2               | 0               | 14     | 24 ( 63.16% )            |

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 1: IP Stay with Code U07.1*   |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   |                 |                 |                 |        |                          |
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Black or African American   | 103             | 2               | 1               | 221    | 105 ( 32.11% )           |
| Native Hawaiian or Other Pacific Islander   | 1               | 0               | 0               | 0      | 1 ( 100.0% )             |
| White   | 177             | 14              | 0               | 262    | 191 ( 42.16% )           |
| Other/Mixed/Unknown   | 565             | 37              | 10              | 2,159  | 602 ( 21.73% )           |
| Ethnicity   |                 |                 |                 |        |                          |
| Hispanic  | 31              | 0               | 0               | 18     | 31 (63.27%)              |
| Non-Hispanic Non-Hispanic   | 144             | 4               | 0               | 18     | 148 (89.16%)             |
| Unknown   | 694             | 51              | 11              | 2,620  | 745 ( 22.07% )           |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                          |
| Asymptomatic screening (Z11.59)   | 16              | 2               | 0               | 41     | 18 ( 30.51% )            |
| Contact and suspected exposure (Z20.828)  | 202             | 19              | 2               | 608    | 221 ( 26.59% )           |
| Pneumonia (see Appendix B)  | 771             | 52              | 11              | 2,410  | 823 ( 25.37% )           |
| Other viral pneumonia (J12.89)  | 728             | 42              | 10              | 2,123  | 770 ( 26.52% )           |
| ARDS (J80)  | 283             | 13              | 3               | 864    | 296 ( 25.45% )           |
| Sepsis (see Appendix C)   | 395             | 23              | 8               | 1,234  | 418 ( 25.18% )           |
| Bronchitis (J20.8 OR J40)   | 11              | 0               | 0               | 55     | 11 ( 16.67% )            |
| Respiratory infection (J22 OR J98.8)  | 149             | 12              | 2               | 665    | 161 ( 19.44% )           |
| Cough (R05)   | 240             | 13              | 4               | 846    | 253 ( 22.94% )           |
| Shortness of breath (R06.2)   | 5               | 0               | 0               | 18     | 5 ( 21.74% )             |
| Fever (R50.9)   | 332             | 22              | 2               | 1,094  | 354 ( 24.41% )           |
| Optional  |                 |                 |                 |        |                          |
| Other COVID Tests   |                 |                 |                 |        |                          |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -      | -                        |
| observed within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |        |                          |
| Test performed, at least 1 positive result  | 51              | 1               | 1               | 120    | 52 ( 30.06% )            |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 1: IP Stay with Code U07.1*   |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   |                 |                 |                 |        |                          |
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Test performed, only negative results   | 3               | 1               | 0               | 7      | 4 ( 36.36% )             |
| No test or unknown result   | 532             | 33              | 9               | 1,883  | 565 ( 23 % )             |
| Antigen test within ±14 days from inpatient admission**                       | -               | -               | -               | -      | -                        |
| Test performed, at least 1 positive result                                    | 0               | 0               | 0               | 0      | N/A                      |
| Test performed, only negative results   | 0               | 0               | 0               | 0      | N/A                      |
| No test or unknown result   | 665             | 50              | 11              | 2,613  | 715 ( 21.41% )           |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection               |                 |                 |                 |        |                          |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)        | 212             | 11              | 0               | 3      | 223 ( 98.67% )           |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 116             | 10              | 1               | 418    | 126 ( 23.12% )           |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 176             | 16              | 2               | 557    | 192 ( 25.57% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****                                    |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -               | -               | -               | -      | N/A                      |
| Differential WBC Count  |                 |                 |                 |        |                          |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 2               | -               | -               | -      | 2 ( 100.0% )             |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 68              | 1               | -               | -      | 69 ( 100.0% )            |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | -               | -               | -               | -      | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | -               | -               | -               | -      | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -               | -               | -               | -      | N/A                      |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

Algorithm 1: IP Stay with Code U07.1\*

|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 | Number          | ·               |        | Number (Percent)         |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 11              | 0               | 0               | 0      | 11 ( 100.0% )            |
| Probe Detection  |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 272             | 4               | 0               | 0      | 276 ( 100.0% )           |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 362             | 46              | 1               | 0      | 408 ( 99.76% )           |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 0               | 0               | 0               | 0      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 1: IP Stay with Code U07.1*  |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 |                 |                 |        |                          |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| Unknown  | 20              | 0               | 0               | 0      | 20 ( 100.0% )            |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 1: IP Stay with Code U07.1*   |                     |  |  |  |  |
|---|---------------------|--|--|--|--|
|   | Total Patient Count | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |
|   |                     | Number (Percent)   |  |  |  |
| Care Setting of "Primary" Lab Test***** |                     |  |  |  |  |
| Total Observed                          | 3,597 ( 100.0% )    | 94.05% ( 92.32% , 95.48% )                                   | 57.02% ( 54.49% , 59.52% )               |  |  |
| Inpatient                               | 240 ( 6.67% )       | 97.08% (94.08%, 98.82%)                                      | 58.10% (53.11%, 62.98%)                  |  |  |
| Outpatient or Emergency Department      | 179 ( 4.98% )       | 96.07% ( 92.07% , 98.40% )                                   | 51.66% (46.13%, 57.16%)                  |  |  |
| Other                                   | 32 ( 0.89% )        | 87.10% (70.17%, 96.37%)                                      | 57.45% (42.18%, 71.74%)                  |  |  |
| Care Setting Reported as Unknown        | 1,066 ( 29.64% )    | 91.23% (88.12%, 93.75%)                                      | 100.0% (99.05%, 100.0%)                  |  |  |
| Demographics                            |                     |  |  |  |  |
| Sex                                     |                     |  |  |  |  |
| Female                                  | 1,485 ( 41.28% )    | 92.90% (89.62%, 95.40%)                                      | 51.06% (47.03%, 55.08%)                  |  |  |
| Male                                    | 2,106 ( 58.55% )    | 94.71% ( 92.57% , 96.38% )                                   | 61.06% (57.80%, 64.24%)                  |  |  |
| Other/Missing                           | N/A                 | N/A  | N/A                                      |  |  |
| Age at Hospital Admission (Years)       |                     |  |  |  |  |
| 0-5                                     | 3 ( 0.08% )         | N/A  | N/A                                      |  |  |
| 6-17                                    | 1 ( 0.03% )         | N/A  | N/A                                      |  |  |
| 18-29                                   | 49 ( 1.36% )        | 94.12% (71.31%, 99.85%)                                      | 40 % ( 24.86% , 56.67% )                 |  |  |
| 30-39                                   | 130 ( 3.61% )       | 93.75% (79.19%, 99.23%)                                      | 35.71% (25.55%, 46.92%)                  |  |  |
| 40-49                                   | 344 ( 9.56% )       | 97.87% ( 92.52% , 99.74% )                                   | 49.73% ( 42.31% , 57.16% )               |  |  |
| 50-59                                   | 699 ( 19.43% )      | 97.98% (94.91%, 99.45%)                                      | 62.38% (56.74%, 67.78%)                  |  |  |
| 60-69                                   | 924 ( 25.69% )      | 95.70% ( 92.44% , 97.84% )                                   | 63.31% (58.29%, 68.12%)                  |  |  |
| 70-79                                   | 848 ( 23.58% )      | 91.43% (86.79%, 94.84%)                                      | 61.74% (56.08%, 67.16%)                  |  |  |
| 80-89                                   | 456 ( 12.68% )      | 84.21% (75.30%, 90.88%)                                      | 50.31% (42.29%, 58.33%)                  |  |  |
| 90+                                     | 137 ( 3.81% )       | 90.91% (70.84%, 98.88%)                                      | 43.48% ( 28.93% , 58.89% )               |  |  |
| Missing                                 | N/A                 | N/A  | N/A                                      |  |  |
| Race                                    |                     |  |  |  |  |
| American Indian or Alaska Native        | 1 ( 0.03%)          | 100.0% ( 2.50%, 100.0%)                                      | 33.33% ( 0.84% , 90.57% )                |  |  |
| Asian                                   | 38 ( 1.06% )        | 91.67% (73%, 98.97%)   | 66.67% (48.17%, 82.04%)                  |  |  |

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Total Patient Count | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|---|---------------------|--|--|
|   |                     | Number (Percent)   |  |
| Black or African American                 | 327 ( 9.09% )       | 98.10% (93.29%, 99.77%)                                      | 53.37% ( 46.07% , 60.56% )               |
| Native Hawaiian or Other Pacific Islander | 1 ( 0.03%)          | 100.0% ( 2.50% , 100.0% )                                    | 50 % ( 1.26% , 98.74% )                  |
| White                                     | 453 ( 12.59% )      | 92.67% (88.01%, 95.93%)                                      | 51.75% (46.32%, 57.16%)                  |
| Other/Mixed/Unknown                       | 2,771 ( 77.04% )    | 93.85% (91.63%, 95.64%)                                      | 59.41% (56.21%, 62.55%)                  |
| Ethnicity                                 |                     |  |  |
| Hispanic                                  | 49 ( 1.36% )        | 100.0% (88.78%, 100.0%)                                      | 56.36% ( 42.32% , 69.70% )               |
| Non-Hispanic                              | 166 ( 4.61%)        | 97.30% (93.22%, 99.26%)                                      | 56.25% (49.94%, 62.42%)                  |
| Unknown                                   | 3,376 ( 93.86% )    | 93.15% (91.10%, 94.86%)                                      | 57.21% ( 54.37% , 60.02% )               |
| Codes Observed During Inpatient Stay      |                     |  |  |
| Asymptomatic screening (Z11.59)           | 59 ( 1.64% )        | 88.89% (65.29%, 98.62%)                                      | 59.26% ( 38.80% , 77.61% )               |
| Contact and suspected exposure (Z20.828)  | 831 ( 23.10% )      | 91.40% (86.90%, 94.74%)                                      | 70.63% ( 64.98% , 75.84% )               |
| Pneumonia (see Appendix B)                | 3,244 ( 90.19% )    | 93.68% (91.80%, 95.25%)                                      | 61.78% (59.02%, 64.48%)                  |
| Other viral pneumonia (J12.89)            | 2,903 ( 80.71% )    | 94.55% (92.70%, 96.04%)                                      | 67.97% (65.09%, 70.76%)                  |
| ARDS (J80)                                | 1,163 ( 32.33% )    | 95.61% (92.61%, 97.64%)                                      | 93.71% (90.35%, 96.17%)                  |
| Sepsis (see Appendix C)                   | 1,660 ( 46.15% )    | 94.50% (91.86%, 96.48%)                                      | 72.21% (68.25%, 75.93%)                  |
| Bronchitis (J20.8 OR J40)                 | 66 ( 1.83% )        | 100.0% (71.51%, 100.0%)                                      | 50 % ( 28.22% , 71.78% )                 |
| Respiratory infection (J22 OR J98.8)      | 828 ( 23.02% )      | 92.55% (87.34%, 96.09%)                                      | 62.34% (55.87%, 68.51%)                  |
| Cough (R05)                               | 1,103 ( 30.66% )    | 94.86% (91.37%, 97.24%)                                      | 59.41% (54.44%, 64.23%)                  |
| Shortness of breath (R06.2)               | 23 ( 0.64% )        | 100.0% (47.82%, 100.0%)                                      | 100.0% (47.82%, 100.0%)                  |
| Fever (R50.9)                             | 1,450 ( 40.31% )    | 93.79% ( 90.74% , 96.06% )                                   | 66.14% (61.81%, 70.27%)                  |
| Optional                                  |                     |  |  |
| Other COVID Tests                         |                     |  |  |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Total Patient Count | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |  |
|---|---------------------|--|--|--|--|--|--|
|   |                     | Number (Percent)   |  |  |  |  |  |
| est performed, only negative results  | 11 ( 0.31% )        | 75 % (19.41%, 99.37%)  | 37.50% ( 8.52% , 75.51% )                |  |  |  |  |
| o test or unknown result  | 2,457 ( 68.31% )    | 94.16% (91.89%, 95.95%)                                      | 59.98% ( 56.67% , 63.22% )               |  |  |  |  |
| ntigen test within ±14 days from inpatient admission**  | -                   | -  | -  |  |  |  |  |
| est performed, at least 1 positive result   | N/A                 | N/A  | N/A                                      |  |  |  |  |
| est performed, only negative results  | N/A                 | N/A  | N/A                                      |  |  |  |  |
| o test or unknown result  | 3,339 ( 92.83% )    | 93.01% (90.88%, 94.77%)                                      | 77.87% (74.93%, 80.61%)                  |  |  |  |  |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection  |                     |  |  |  |  |  |  |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)   | 226 ( 6.28% )       | 95.07% (91.35%, 97.51%)                                      | 53.54% ( 48.49% , 58.53%                 |  |  |  |  |
| odes Observed During Inpatient Stay   |                     |  |  |  |  |  |  |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness f breath) OR R50.9 (fever)]  | 545 ( 15.15% )      | 92.06% (85.89%, 96.13%)                                      | 72.05% ( 64.44% , 78.83%                 |  |  |  |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) R J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] | 751 ( 20.88% )      | 91.67% (86.82%, 95.16%)                                      | 78.92% (72.98%, 84.08%)                  |  |  |  |  |
| Primary" Lab Test Product Information****   |                     |  |  |  |  |  |  |
| 47377 - SARS_COV_2_NS   | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual ifferential WBC Count   | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | 2 ( 0.06% )         | 100.0% (15.81%, 100.0%)                                      | 11.76% ( 1.46% , 36.44% )                |  |  |  |  |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 69 ( 1.92% )        | 98.55% (92.19%, 99.96%)                                      | 63.55% (53.69%, 72.64%                   |  |  |  |  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | N/A                 | N/A  | N/A                                      |  |  |  |  |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 1: I  | P Stay with Code U07. | 1*   |  |
|---|-----------------------|--|--|
|   | Total Patient Count   | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|   |                       | Number (Percent)   |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With Probe Detection  | 11 ( 0.31% )          | 100.0% (71.51%, 100.0%)                                      | 57.89% (33.50%, 79.75%)                  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N1 | N/A                   | N/A  | N/A                                      |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                   | N/A  | N/A                                      |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA With Probe Detection                                    | 276 ( 7.67% )         | 98.55% ( 96.33% , 99.60% )                                   | 60.85% ( 56.15% , 65.40% )               |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen By NAA With Probe Detection                              | N/A                   | N/A  | N/A                                      |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By NAA With Probe Detection                                 | N/A                   | N/A  | N/A                                      |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA With Probe Detection                                    | 409 ( 11.37% )        | 88.73% (85.25%, 91.63%)                                      | 54.44% ( 50.56% , 58.27% )               |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By Immunoassay   | N/A                   | N/A  | N/A                                      |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay                                      | N/A                   | N/A  | N/A                                      |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection  | N/A                   | N/A  | N/A                                      |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection                                 | N/A                   | N/A  | N/A                                      |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection                              | N/A                   | N/A  | N/A                                      |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection                          | N/A                   | N/A  | N/A                                      |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay   | N/A                   | N/A  | N/A                                      |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay   | N/A                   | N/A  | N/A                                      |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 1: IP Stay with Code U07.1*   |                     |  |  |  |  |
|---|---------------------|--|--|--|--|
|   | Total Patient Count | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |
|   |                     | Number (Percent)   |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection         | N/A                 | N/A  | N/A                                      |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection | N/A                 | N/A  | N/A                                      |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection             | N/A                 | N/A  | N/A                                      |  |  |
| Unknown   | 20 ( 0.56% )        | 100.0% (83.16%, 100.0%)                                      | 64.52% (45.37%, 80.77%)                  |  |  |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| 2020 and Watch 31, 2020                 |                                       |                 |                 |        |                          |
|---|---------------------------------------|-----------------|-----------------|--------|--------------------------|
| A                                       | Igorithm 2: IP Stay with Any of Codes | U07.1, B97.29*  |                 |        |                          |
|   |                                       |                 |                 |        |                          |
|   | Lab Positive***                       | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                                       | Number          |                 |        | Number (Percent)         |
| Care Setting of "Primary" Lab Test***** |                                       |                 |                 |        |                          |
| Total Observed                          | 1,328                                 | 111             | 22              | 4,459  | 1,439 ( 24.31% )         |
| Inpatient                               | 356                                   | 19              | 3               | N/A    | 375                      |
| Outpatient or Emergency Department      | 274                                   | 15              | 1               | N/A    | 289                      |
| Other                                   | 42                                    | 8               | 2               | N/A    | 50                       |
| Care Setting Reported as Unknown        | 572                                   | 67              | 13              | N/A    | 639                      |
| Demographics                            |                                       |                 |                 |        |                          |
| Sex                                     |                                       |                 |                 |        |                          |
| Female                                  | 516                                   | 50              | 13              | 1,905  | 566 ( 22.79% )           |
| Male                                    | 812                                   | 61              | 9               | 2,536  | 873 ( 25.54% )           |
| Other/Missing                           | 0                                     | 0               | 0               | 0      | -                        |
| Age at Hospital Admission (Years)       |                                       |                 |                 |        |                          |
| 0-5                                     | 0                                     | 0               | 0               | 37     | 0                        |
| 6-17                                    | 0                                     | 0               | 0               | 16     | 0                        |
| 18-29                                   | 33                                    | 4               | 1               | 107    | 37 ( 25.52% )            |
| 30-39                                   | 79                                    | 6               | 3               | 218    | 85 ( 27.28% )            |
| 40-49                                   | 168                                   | 6               | 1               | 451    | 174 ( 27.80% )           |
| 50-59                                   | 292                                   | 14              | 4               | 833    | 306 ( 26.77% )           |
| 60-69                                   | 350                                   | 17              | 4               | 1,034  | 367 ( 26.12% )           |
| 70-79                                   | 258                                   | 33              | 5               | 975    | 291 ( 22.90% )           |
| 80-89                                   | 114                                   | 27              | 2               | 583    | 141 ( 19.42% )           |
| 90+                                     | 34                                    | 3               | 2               | 185    | 37 ( 16.52% )            |
| Missing                                 | 0                                     | 0               | 0               | 0      | -                        |
| Race                                    |                                       |                 |                 |        |                          |
| American Indian or Alaska Native        | 2                                     | 0               | 0               | 0      | 2 ( 100.00% )            |
| Asian                                   | 30                                    | 2               | 0               | 22     | 32 ( 59.26% )            |

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                               |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   |                 |                 |                 |        |                          |
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Black or African American   | 151             | 5               | 1               | 334    | 156 ( 31.77% )           |
| Native Hawaiian or Other Pacific Islander   | 2               | 0               | 0               | 0      | 2 ( 100% )               |
| White   | 260             | 34              | 3               | 425    | 294 (40.72%)             |
| Other/Mixed/Unknown   | 883             | 70              | 18              | 3,660  | 953 (20.58%)             |
| Ethnicity   |                 |                 |                 |        |                          |
| Hispanic  | 47              | 1               | 0               | 32     | 48 ( 60.00% )            |
| Non-Hispanic  | 226             | 16              | 4               | 33     | 242 ( 86.74% )           |
| Unknown   | 1,055           | 94              | 18              | 4,376  | 1,149 ( 20.73% )         |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                          |
| Asymptomatic screening (Z11.59)   | 26              | 2               | 0               | 58     | 28 ( 32.56% )            |
| Contact and suspected exposure (Z20.828)  | 284             | 28              | 3               | 886    | 312 ( 25.98% )           |
| Pneumonia (see Appendix B)  | 1,141           | 93              | 18              | 3,819  | 1,234 ( 24.33% )         |
| Other viral pneumonia (J12.89)  | 1,056           | 62              | 18              | 3,191  | 1,118 ( 25.84% )         |
| ARDS (J80)  | 325             | 16              | 4               | 1,044  | 341 ( 24.55% )           |
| Sepsis (see Appendix C)   | 517             | 40              | 9               | 1,771  | 557 ( 23.83% )           |
| Bronchitis (J20.8 OR J40)   | 21              | 1               | 1               | 107    | 22 ( 16.92% )            |
| Respiratory infection (J22 OR J98.8)  | 265             | 19              | 5               | 1,024  | 284 ( 21.63% )           |
| Cough (R05)   | 388             | 23              | 9               | 1,504  | 411 ( 21.36% )           |
| Shortness of breath (R06.2)   | 7               | 0               | 0               | 33     | 7 ( 17.50% )             |
| Fever (R50.9)   | 494             | 37              | 7               | 1,785  | 531 ( 22.86% )           |
| Optional  |                 |                 |                 |        |                          |
| Other COVID Tests   |                 |                 |                 |        |                          |
|   | -               | -               | -               | -      | -                        |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) |                 |                 |                 |        |                          |
| observed within -7 days prior to hospitalization through end of patient record**    | 0.2             | 2               | 4               | 21.4   | 06 / 20 070/ \           |
| Test performed, at least 1 positive result  | 93              | 3               | 1               | 214    | 96 ( 30.87% )            |

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                         |                 |                 |                 |         |                          |
|---|-----------------|-----------------|-----------------|---------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lah  | Patients with Lab Result |
|   | Lab i Ositive   | Number          | Lab, No Results | INO Lab | Number (Percent)         |
| Test performed, only negative results   | 9               | 4               | 0               | 26      | 13 ( 33.33% )            |
| No test or unknown result   | 823             | 62              | 17              | 3,195   | 885 ( 21.60% )           |
| Antigen test within ±14 days from inpatient admission**                       | -               | -               | -               | -       | -                        |
| Test performed, at least 1 positive result                                    | 0               | 0               | 0               | 0       | -                        |
| Test performed, only negative results   | 0               | 0               | 0               | 0       | -                        |
| No test or unknown result   | 1,010           | 91              | 19              | 4,364   | 1,101 ( 20.08% )         |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection               |                 |                 |                 |         |                          |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)        | 320             | 29              | 1               | 4       | 349 ( 98.59% )           |
| Codes Observed During Inpatient Stay  |                 |                 |                 |         |                          |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 170             | 13              | 2               | 613     | 183 ( 22.93% )           |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |         |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 244             | 18              | 2               | 780     | 262 ( 25.10% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |         |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |         |                          |
| "Primary" Lab Test Product Information****                                    |                 |                 |                 |         |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -       | -                        |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -               | -               | -               | -       | -                        |
| Differential WBC Count  |                 |                 |                 |         |                          |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 14              | 1               | -               | -       | 15 ( 100% )              |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 97              | 3               | -               | -       | 100 ( 100% )             |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | -               | -               | -               | -       | -                        |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -               | -               | -               | -       | -                        |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -               | -               | -               | -       | -                        |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | -               | -               | -               | -       | -                        |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -               | -               | -               | -       | -                        |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

Algorithm 2: IP Stay with Any of Codes U07.1, B97.29\*

|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 | Number          |                 |        | Number (Percent)         |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 19              | 1               | 0               | 0      | 20 ( 100.00% )           |
| Probe Detection  |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | -                        |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | -                        |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 425             | 11              | 0               | 0      | 436 ( 100.00% )          |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | -               | -               | -               | -      | -                        |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | -                        |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 535             | 78              | 1               | 0      | 613 ( 99.84% )           |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | -               | -               | -               | -      | -                        |
| Immunoassay  |                 |                 |                 |        |                          |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | -                        |
| Rapid Immunoassay  |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | -                        |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | -               | -               | -               | -      | -                        |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | -               | -               | -               | -      | -                        |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 0               | 0               | 0               | 0      | -                        |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | -                        |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | -                        |
| Immunoassay  |                 |                 |                 |        |                          |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                        |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 |                 |                 |        |                          |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | -               | -               | -      | -                        |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | -               | -               | -               | -      | -                        |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | -               | -               | -      | -                        |
| Probe Detection  |                 |                 |                 |        |                          |
| Unknown  | 31              | 1               | 1               | 1      | 32 ( 94.12% )            |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29* |                     |                               |  |  |
|---|---------------------|-------------------------------|--|--|
|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |
|   |                     | Number (Percent)              |  |  |
| Care Setting of "Primary" Lab Test*****               |                     |                               |  |  |
| Total Observed  | 5,920 ( 100.0% )    | 92.29% ( 90.78% , 93.61% )    | 87.14% (85.35%, 88.78%)                  |  |
| Inpatient   | 378 ( 6.39% )       | 94.93% ( 92.20% , 96.92% )    | 88.78% (85.27%, 91.70%)                  |  |
| Outpatient or Emergency Department                    | 290 ( 4.90% )       | 94.81% (91.58%, 97.07%)       | 82.78% ( 78.27% , 86.69% )               |  |
| Other   | 52 ( 0.88% )        | 84 % ( 70.89% , 92.83% )      | 89.36% (76.90%, 96.45%)                  |  |
| Care Setting Reported as Unknown                      | 1,632 ( 27.57% )    | 89.51% (86.88%, 91.78%)       | ****                                     |  |
| Demographics  |                     |                               |  |  |
| Sex   |                     |                               |  |  |
| Female  | 2,484 ( 41.96% )    | 91.17% (88.52%, 93.37%)       | 83.90% (80.76%, 86.72%)                  |  |
| Male  | 3,418 ( 57.74% )    | 93.01% (91.11%, 94.61%)       | 89.33% (87.14%, 91.26%)                  |  |
| Other/Missing   | N/A                 | N/A                           | N/A                                      |  |
| Age at Hospital Admission (Years)                     |                     |                               |  |  |
| 0-5   | 37 ( 0.63% )        | N/A                           | N/A                                      |  |
| 6-17  | 16 ( 0.27% )        | N/A                           | N/A                                      |  |
| 18-29   | 145 ( 2.45%)        | 89.19% (74.58%, 96.97%)       | 82.50% (67.22%, 92.66%)                  |  |
| 30-39   | 306 ( 5.17% )       | 92.94% (85.27%, 97.37%)       | 94.05% (86.65%, 98.04%)                  |  |
| 40-49   | 626 ( 10.57% )      | 96.55% (92.65%, 98.72%)       | 90.81% (85.70%, 94.56%)                  |  |
| 50-59   | 1,143 ( 19.31% )    | 95.42% (92.44%, 97.48%)       | 93.89% ( 90.62% , 96.28% )               |  |
| 60-69   | 1,405 ( 23.73% )    | 95.37% ( 92.69% , 97.28% )    | 90.44% (87.06%, 93.18%)                  |  |
| 70-79   | 1,271 ( 21.47% )    | 88.66% (84.44%, 92.06%)       | 82.96% ( 78.31% , 86.97% )               |  |
| 80-89   | 726 ( 12.26% )      | 80.85% (73.38%, 86.99%)       | 71.70% ( 64.02% , 78.55% )               |  |
| 90+   | 224 ( 3.78%)        | 91.89% (78.09%, 98.30%)       | 73.91% (58.87%, 85.73%)                  |  |
| Missing   | N/A                 | N/A                           | N/A                                      |  |
| Race  |                     |                               |  |  |
| American Indian or Alaska Native                      | 2 ( 0.03% )         | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )                |  |
| Asian   | 54 ( 0.91% )        | 93.75% (79.19%, 99.23%)       | 90.91% (75.67%, 98.08%)                  |  |

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|---|---------------------|-------------------------------|--|
|   |                     | Number (Percent)              |  |
| Black or African American                 | 491 ( 8.29% )       | 96.79% (92.68%, 98.95%)       | 78.24% (71.74%, 83.84%)                  |
| Native Hawaiian or Other Pacific Islander | 2 ( 0.03% )         | 100.0% (15.81%, 100.0%)       | 100.0% (15.81%, 100.0%)                  |
| White                                     | 722 ( 12.20% )      | 88.44% (84.22%, 91.86%)       | 76.02% (71.14%, 80.45%)                  |
| Other/Mixed/Unknown                       | 4,631 (78.23%)      | 92.65% (90.81%, 94.23%)       | 92.85% (91.02%, 94.41%)                  |
| Ethnicity                                 |                     |                               |  |
| Hispanic                                  | 80 ( 1.35% )        | 97.92% (88.93%, 99.95%)       | 85.45% (73.34%, 93.50%)                  |
| Non-Hispanic                              | 279 ( 4.71% )       | 93.39% (89.49%, 96.17%)       | 88.28% (83.69%, 91.95%)                  |
| Unknown                                   | 5,543 ( 93.63% )    | 91.82% (90.08%, 93.34%)       | 86.97% (84.95%, 88.82%)                  |
| Codes Observed During Inpatient Stay      |                     |                               |  |
| Asymptomatic screening (Z11.59)           | 86 ( 1.45% )        | 92.86% (76.50%, 99.12%)       | 96.30% (81.03%, 99.91%)                  |
| Contact and suspected exposure (Z20.828)  | 1,201 ( 20.29% )    | 91.03% (87.29%, 93.95%)       | 99.30% (97.50%, 99.92%)                  |
| Pneumonia (see Appendix B)                | 5,071 ( 85.66% )    | 92.46% (90.85%, 93.87%)       | 91.43% (89.73%, 92.92%)                  |
| Other viral pneumonia (J12.89)            | 4,327 (73.09%)      | 94.45% (92.95%, 95.72%)       | 98.60% (97.70%, 99.21%)                  |
| ARDS (J80)                                | 1,389 ( 23.46% )    | 95.31% (92.49%, 97.29%)       | ****                                     |
| Sepsis (see Appendix C)                   | 2,337 ( 39.48% )    | 92.82% (90.35%, 94.82%)       | 94.52% ( 92.26% , 96.27% )               |
| Bronchitis (J20.8 OR J40)                 | 130 ( 2.20% )       | 95.45% (77.16%, 99.88%)       | 95.45% (77.16%, 99.88%)                  |
| Respiratory infection (J22 OR J98.8)      | 1,313 ( 22.18% )    | 93.31% (89.75%, 95.92%)       | ****                                     |
| Cough (R05)                               | 1,924 ( 32.50% )    | 94.40% (91.72%, 96.42%)       | 96.04% (93.65%, 97.72%)                  |
| Shortness of breath (R06.2)               | 40 ( 0.68% )        | 100.0% (59.04%, 100.0%)       | ****                                     |
| Fever (R50.9)                             | 2,323 ( 39.24% )    | 93.03% (90.52%, 95.05%)       | 98.41% (96.88%, 99.31%)                  |
| Optional                                  |                     |                               |  |
| Other COVID Tests                         |                     |                               |  |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|  |                            |                               | Sensitivity (95% Confidence |
|--|----------------------------|-------------------------------|-----------------------------|
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|  |                            | Number (Percent)              |                             |
| est performed, only negative results   | 39 ( 0.66% )               | 69.23% (38.57%, 90.91%)       | ****                        |
| lo test or unknown result  | 4,097 ( 69.21% )           | 92.99% (91.11%, 94.59%)       | 92.78% ( 90.88% , 94.40% )  |
| ntigen test within ±14 days from inpatient admission**   | -                          | -                             | -                           |
| est performed, at least 1 positive result  | N/A                        | N/A                           | N/A                         |
| est performed, only negative results   | N/A                        | N/A                           | N/A                         |
| lo test or unknown result  | 5,484 ( 92.64% )           | 91.73% (89.95%, 93.29%)       | ****                        |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection   |                            |                               |                             |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)  | 354 ( 5.98% )              | 91.69% (88.28%, 94.36%)       | 80.81% (76.58%, 84.57%)     |
| odes Observed During Inpatient Stay  |                            |                               |                             |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness f breath) OR R50.9 (fever)]   | 798 ( 13.48% )             | 92.90% (88.16%, 96.16%)       | ****                        |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) DR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] | 1,044 ( 17.64% )           | 93.13% (89.36%, 95.88%)       | ****                        |
| Primary" Lab Test Product Information****  |                            |                               |                             |
| 47377 - SARS_COV_2_NS  | N/A                        | N/A                           | N/A                         |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual Differential WBC Count   | N/A                        | N/A                           | N/A                         |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | 15 ( 0.25% )               | 93.33% (68.05%, 99.83%)       | 82.35% ( 56.57% , 96.20% )  |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 100 ( 1.69%)               | 97 % (91.48%, 99.38%)         | 90.65% (83.48%, 95.43%)     |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | N/A                        | N/A                           | N/A                         |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | N/A                        | N/A                           | N/A                         |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT   | N/A                        | N/A                           | N/A                         |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | N/A                        | N/A                           | N/A                         |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | N/A                        | N/A                           | N/A                         |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|  |                     |                          | Sensitivity (95% Confidence |
|--|---------------------|--------------------------|-----------------------------|
|  | Total Patient Count |                          | Interval)                   |
|  |                     | Number (Percent)         |                             |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 20 ( 0.34% )        | 95 % ( 75.13% , 99.87% ) | 100.0% (82.35%, 100.0%)     |
| Probe Detection  |                     |                          |                             |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                 | N/A                      | N/A                         |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                     |                          |                             |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                 | N/A                      | N/A                         |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                     |                          |                             |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 436 (7.36%)         | 97.48% (95.53%, 98.73%)  | 95.08% ( 92.64% , 96.89% )  |
| NAA With Probe Detection   |                     |                          |                             |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | N/A                 | N/A                      | N/A                         |
| By NAA With Probe Detection  |                     |                          |                             |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                 | N/A                      | N/A                         |
| NAA With Probe Detection   |                     |                          |                             |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 614 ( 10.37% )      | 87.28% (84.38%, 89.81%)  | 80.45% (77.23%, 83.40%)     |
| NAA With Probe Detection   |                     |                          |                             |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | N/A                 | N/A                      | N/A                         |
| Immunoassay  |                     |                          |                             |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                 | N/A                      | N/A                         |
| Rapid Immunoassay  |                     |                          |                             |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | N/A                 | N/A                      | N/A                         |
| Probe Detection  |                     |                          |                             |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | N/A                 | N/A                      | N/A                         |
| NAA With Probe Detection   |                     |                          |                             |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | N/A                 | N/A                      | N/A                         |
| By NAA With Probe Detection  |                     |                          |                             |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | N/A                 | N/A                      | N/A                         |
| Specimen By NAA With Probe Detection   |                     |                          |                             |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | N/A                 | N/A                      | N/A                         |
| Immunoassay  |                     |                          |                             |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | N/A                 | N/A                      | N/A                         |
| Immunoassay  |                     |                          |                             |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*   |                     |                               |  |  |  |  |
|---|---------------------|-------------------------------|--|--|--|--|
|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|   |                     | Number (Percent)              |  |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                             | N/A                 | N/A                           | N/A                                      |  |  |  |
| Non-Probe Detection   |                     |                               |  |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                             | N/A                 | N/A                           | N/A                                      |  |  |  |
| Probe Detection   |                     |                               |  |  |  |  |
| Unknown   | 34 ( 0.57% )        | 96.88% (83.78%, 99.92%)       | 100.0% (88.78%, 100.0%)                  |  |  |  |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 3: IP Stay with               | Any of Codes U07 | .1, B97.29, B34.2* |                 |        |                          |
|---|------------------|--------------------|-----------------|--------|--------------------------|
|   |                  |                    |                 |        |                          |
|   | Lab Positive***  | Lab Negative***    | Lab, No Results | No Lab | Patients with Lab Result |
|   |                  | Number             |                 |        | Number (Percent)         |
| Care Setting of "Primary" Lab Test***** |                  |                    |                 |        |                          |
| Total Observed                          | 1,352            | 139                | 22              | 4,757  | 1,491 ( 23.78% )         |
| Inpatient                               | 357              | 21                 | 3               | N/A    | 378                      |
| Outpatient or Emergency Department      | 277              | 16                 | 1               | N/A    | 293                      |
| Other                                   | 42               | 10                 | 2               | N/A    | 52                       |
| Care setting reported as unknown        | 592              | 89                 | 13              | N/A    | 681                      |
| Demographics                            |                  |                    |                 |        |                          |
| Sex                                     |                  |                    |                 |        |                          |
| Female                                  | 531              | 64                 | 13              | 2,062  | 595 ( 22.28% )           |
| Male                                    | 821              | 75                 | 9               | 2,677  | 896 ( 25.01% )           |
| Other/Missing                           | 0                | 0                  | 0               | 0      | N/A                      |
| Age at Hospital Admission (Years)       |                  |                    |                 |        |                          |
| 0-5                                     | 0                | 0                  | 0               | 52     | 0 (0.00%)                |
| 6-17                                    | 0                | 0                  | 0               | 23     | 0 (0.00%)                |
| 18-29                                   | 33               | 4                  | 1               | 120    | 37 ( 23.42% )            |
| 30-39                                   | 79               | 6                  | 3               | 226    | 85 ( 27.07% )            |
| 40-49                                   | 169              | 8                  | 1               | 469    | 177 ( 27.36% )           |
| 50-59                                   | 295              | 19                 | 4               | 872    | 314 ( 26.39% )           |
| 60-69                                   | 359              | 22                 | 4               | 1,082  | 381 ( 25.97% )           |
| 70-79                                   | 262              | 39                 | 5               | 1,035  | 301 ( 22.45% )           |
| 80-89                                   | 120              | 34                 | 2               | 648    | 154 ( 19.15% )           |
| 90+                                     | 35               | 6                  | 2               | 210    | 41 ( 16.21% )            |
| Missing                                 | 0                | 0                  | 0               | 0      | N/A                      |
| Race                                    |                  |                    |                 |        |                          |
| American Indian or Alaska Native        | 2                | 0                  | 0               | 1      | 2 ( 66.67% )             |
| Asian                                   | 31               | 2                  | 0               | 23     | 33 ( 58.93% )            |

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 3: IP Stay with  | Any of Codes U07 | .1, B97.29, B34.2* |                 |        |                          |
|--|------------------|--------------------|-----------------|--------|--------------------------|
|  |                  |                    |                 |        |                          |
|  | Lab Positive***  | Lab Negative***    | Lab, No Results | No Lab | Patients with Lab Result |
|  |                  | Number             |                 |        | Number (Percent)         |
| Black or African American  | 156              | 6                  | 1               | 352    | 162 ( 31.46% )           |
| Native Hawaiian or Other Pacific Islander  | 2                | 0                  | 0               | 0      | 2 ( 100.0% )             |
| White  | 267              | 43                 | 3               | 478    | 310 ( 39.19% )           |
| Other/Mixed/Unknown  | 894              | 88                 | 18              | 3,885  | 982 ( 20.10% )           |
| Ethnicity  |                  |                    |                 |        |                          |
| Hispanic   | 47               | 1                  | 0               | 35     | 48 ( 57.83% )            |
| Non-Hispanic   | 227              | 18                 | 4               | 34     | 245 ( 86.57% )           |
| Unknown  | 1,078            | 120                | 18              | 4,670  | 1,198 ( 20.35% )         |
| Codes Observed During Inpatient Stay   |                  |                    |                 |        |                          |
| Asymptomatic screening (Z11.59)  | 26               | 3                  | 0               | 58     | 29 ( 33.33% )            |
| Contact and suspected exposure (Z20.828)   | 286              | 30                 | 3               | 920    | 316 ( 25.50% )           |
| Pneumonia (see Appendix B)   | 1,159            | 112                | 18              | 3,997  | 1,271 ( 24.04% )         |
| Other viral pneumonia (J12.89)   | 1,066            | 62                 | 18              | 3,240  | 1,128 ( 25.72% )         |
| ARDS (J80)   | 325              | 16                 | 4               | 1,056  | 341 ( 24.34% )           |
| Sepsis (see Appendix C)  | 521              | 49                 | 9               | 1,854  | 570 ( 23.43% )           |
| Bronchitis (J20.8 OR J40)  | 21               | 1                  | 1               | 117    | 22 ( 15.71% )            |
| Respiratory infection (J22 OR J98.8)   | 265              | 20                 | 5               | 1,032  | 285 ( 21.56% )           |
| Cough (R05)  | 392              | 31                 | 9               | 1,585  | 423 ( 20.97% )           |
| Shortness of breath (R06.2)  | 7                | 1                  | 0               | 38     | 8 ( 17.39% )             |
| Fever (R50.9)  | 499              | 43                 | 7               | 1,864  | 542 ( 22.46% )           |
| Optional   |                  |                    |                 |        |                          |
| Other COVID Tests  |                  |                    |                 |        |                          |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) observed within -7 days prior to hospitalization through end of patient record** | -                | -                  | -               | -      | -                        |
| Test performed, at least 1 positive result   | 96               | 3                  | 1               | 218    | 99 ( 31.13% )            |

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 3: IP Stay with   | n Any of Codes U07 | .1, B97.29, B34.2* |                 |        |                          |
|---|--------------------|--------------------|-----------------|--------|--------------------------|
|   | Lab Positive***    | Lab Negative***    | Lab, No Results | No Lab | Patients with Lab Result |
|   |                    | Number             | <u> </u>        |        | Number (Percent)         |
| Test performed, only negative results   | 9                  | 6                  | 0               | 30     | 15 ( 33.33% )            |
| No test or unknown result   | 827                | 75                 | 17              | 3,387  | 902 ( 20.95% )           |
| Antigen test within ±14 days from inpatient admission**                       | -                  | -                  | -               | -      | -                        |
| Test performed, at least 1 positive result                                    | 0                  | 0                  | 0               | 0      | N/A                      |
| Test performed, only negative results   | 0                  | 0                  | 0               | 0      | N/A                      |
| No test or unknown result   | 1,032              | 116                | 19              | 4,658  | 1,148 ( 19.71% )         |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection               |                    |                    |                 |        |                          |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)        | 328                | 34                 | 1               | 4      | 362 ( 98.64% )           |
| Codes Observed During Inpatient Stay  |                    |                    |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 170                | 14                 | 2               | 632    | 184 ( 22.49% )           |
| of breath) OR R50.9 (fever)]  |                    |                    |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 244                | 18                 | 2               | 790    | 262 ( 24.86% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                    |                    |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                    |                    |                 |        |                          |
| "Primary" Lab Test Product Information****                                    |                    |                    |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -                  | -                  | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -                  | -                  | -               | -      | N/A                      |
| Differential WBC Count  |                    |                    |                 |        |                          |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 14                 | 1                  | -               | -      | 15 ( 100.0% )            |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 98                 | 4                  | -               | -      | 102 ( 100.0% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | -                  | -                  | -               | -      | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -                  | -                  | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -                  | -                  | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | -                  | -                  | -               | -      | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -                  | -                  | -               | -      | N/A                      |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2\*

|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 | Number          | ·               |        | Number (Percent)         |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 19              | 1               | 0               | 0      | 20 ( 100.0% )            |
| Probe Detection  |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 430             | 24              | 0               | 0      | 454 ( 100.0% )           |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 552             | 90              | 1               | 0      | 642 ( 99.84% )           |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 0               | 0               | 0               | 0      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 3: IP Stay with  | Any of Codes U07 | .1, B97.29, B34.2* |                 |        |                          |
|--|------------------|--------------------|-----------------|--------|--------------------------|
|  |                  |                    |                 |        |                          |
|  | Lab Positive***  | Lab Negative***    | Lab, No Results | No Lab | Patients with Lab Result |
|  |                  | Number             |                 |        | Number (Percent)         |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -                | -                  | -               | -      | N/A                      |
| Non-Probe Detection  |                  |                    |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | -                | -                  | -               | -      | N/A                      |
| NAA With Probe Detection   |                  |                    |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -                | -                  | -               | -      | N/A                      |
| Probe Detection  |                  |                    |                 |        |                          |
| Unknown  | 31               | 1                  | 1               | 1      | 32 ( 94.12% )            |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 3: IP Stay with               | n Any of Codes U07.1, B | 397.29, B34.2*                |  |
|---|-------------------------|-------------------------------|--|
|   | Total Patient Count     | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|   |                         | Number (Percent)              |  |
| Care Setting of "Primary" Lab Test***** |                         |                               |  |
| Total Observed                          | 6,270 ( 100.0% )        | 90.68% (89.09%, 92.11%)       | 88.71% (87.02%, 90.26%)                  |
| Inpatient                               | 381 ( 6.08% )           | 94.44% (91.63%, 96.53%)       | 89.03% (85.55%, 91.91%)                  |
| Outpatient or Emergency Department      | 294 ( 4.69% )           | 94.54% (91.28%, 96.85%)       | 83.69% ( 79.26% , 87.50% )               |
| Other                                   | 54 ( 0.86% )            | 80.77% (67.47%, 90.37%)       | 89.36% (76.90%, 96.45%)                  |
| Care setting reported as unknown        | 1,771 ( 28.25% )        | 86.93% ( 84.17% , 89.37% )    | ****                                     |
| Demographics                            |                         |                               |  |
| Sex                                     |                         |                               |  |
| Female                                  | 2,670 ( 42.58% )        | 89.24% (86.47%, 91.62%)       | 86.34% (83.37%, 88.96%)                  |
| Male                                    | 3,582 ( 57.13% )        | 91.63% (89.62%, 93.36%)       | 90.32% (88.21%, 92.16%)                  |
| Other/Missing                           | N/A                     | N/A                           | N/A                                      |
| Age at Hospital Admission (Years)       |                         |                               |  |
| 0-5                                     | 52 ( 0.83% )            | N/A                           | N/A                                      |
| 6-17                                    | 23 ( 0.37% )            | N/A                           | N/A                                      |
| 18-29                                   | 158 ( 2.52% )           | 89.19% (74.58%, 96.97%)       | 82.50% (67.22%, 92.66%)                  |
| 30-39                                   | 314 ( 5.01% )           | 92.94% (85.27%, 97.37%)       | 94.05% (86.65%, 98.04%)                  |
| 40-49                                   | 647 ( 10.32% )          | 95.48% (91.29%, 98.03%)       | 91.35% (86.34%, 94.98%)                  |
| 50-59                                   | 1,190 ( 18.98% )        | 93.95% (90.71%, 96.32%)       | 94.86% (91.78%, 97.03%)                  |
| 60-69                                   | 1,467 ( 23.40% )        | 94.23% (91.39%, 96.35%)       | 92.76% (89.71%, 95.14%)                  |
| 70-79                                   | 1,341 ( 21.39% )        | 87.04% (82.72%, 90.62%)       | 84.24% (79.71%, 88.11%)                  |
| 80-89                                   | 804 ( 12.82% )          | 77.92% ( 70.54% , 84.20% )    | 75.47% (68.03%, 81.94%)                  |
| 90+                                     | 253 ( 4.04% )           | 85.37% (70.83%, 94.43%)       | 76.09% (61.23%, 87.41%)                  |
| Missing                                 | N/A                     | N/A                           | N/A                                      |
| Race                                    |                         |                               |  |
| American Indian or Alaska Native        | 3 ( 0.05% )             | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )                |
| Asian                                   | 56 ( 0.89% )            | 93.94% (79.77%, 99.26%)       | 93.94% (79.77%, 99.26%)                  |

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|---|---------------------|-------------------------------|--|
|   |                     | Number (Percent)              |  |
| Black or African American                 | 515 ( 8.21% )       | 96.30% (92.11%, 98.63%)       | 80.83% (74.56%, 86.13%)                  |
| Native Hawaiian or Other Pacific Islander | 2 ( 0.03% )         | 100.0% (15.81%, 100.0%)       | 100.0% (15.81%, 100.0%)                  |
| White                                     | 791 ( 12.62% )      | 86.13% (81.77%, 89.78%)       | 78.07% (73.30%, 82.34%)                  |
| Other/Mixed/Unknown                       | 4,885 (77.91%)      | 91.04% (89.08%, 92.75%)       | 94.01% ( 92.30% , 95.43%                 |
| Ethnicity                                 |                     |                               |  |
| Hispanic                                  | 83 ( 1.32% )        | 97.92% (88.93%, 99.95%)       | 85.45% (73.34%, 93.50%)                  |
| Non-Hispanic                              | 283 ( 4.51% )       | 92.65% (88.64%, 95.59%)       | 88.67% (84.14%, 92.28%)                  |
| Unknown                                   | 5,886 ( 93.88% )    | 89.98% (88.14%, 91.63%)       | 88.87% ( 86.96% , 90.59%                 |
| Codes Observed During Inpatient Stay      |                     |                               |  |
| Asymptomatic screening (Z11.59)           | 87 ( 1.39% )        | 89.66% (72.65%, 97.81%)       | 96.30% (81.03%, 99.91%)                  |
| Contact and suspected exposure (Z20.828)  | 1,239 ( 19.76% )    | 90.51% (86.72%, 93.50%)       | 100.0% (98.72%, 100.0%)                  |
| Pneumonia (see Appendix B)                | 5,286 ( 84.31% )    | 91.19% (89.49%, 92.69%)       | 92.87% (91.30%, 94.23%)                  |
| Other viral pneumonia (J12.89)            | 4,386 ( 69.95% )    | 94.50% (93.01%, 95.76%)       | 99.53% (98.91%, 99.85%)                  |
| ARDS (J80)                                | 1,401 ( 22.34% )    | 95.31% (92.49%, 97.29%)       | ****                                     |
| Sepsis (see Appendix C)                   | 2,433 ( 38.80% )    | 91.40% (88.79%, 93.57%)       | 95.25% (93.11%, 96.87%)                  |
| Bronchitis (J20.8 OR J40)                 | 140 ( 2.23% )       | 95.45% (77.16%, 99.88%)       | 95.45% (77.16%, 99.88%)                  |
| Respiratory infection (J22 OR J98.8)      | 1,322 ( 21.08% )    | 92.98% (89.37%, 95.66%)       | ****                                     |
| Cough (R05)                               | 2,017 ( 32.17% )    | 92.67% (89.76%, 94.97%)       | 97.03% ( 94.87% , 98.46%                 |
| Shortness of breath (R06.2)               | 46 ( 0.73% )        | 87.50% (47.35%, 99.68%)       | ****                                     |
| Fever (R50.9)                             | 2,413 ( 38.48% )    | 92.07% (89.46%, 94.20%)       | 99.40% ( 98.26% , 99.88%                 |
| Optional                                  |                     |                               |  |
| Other COVID Tests                         |                     |                               |  |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence Interval) |
|--|---------------------|-------------------------------|---------------------------------------|
|  |                     | Number (Percent)              | ·                                     |
| est performed, only negative results   | 45 ( 0.72% )        | 60 % ( 32.29% , 83.66% )      | ****                                  |
| lo test or unknown result  | 4,306 ( 68.68% )    | 91.69% (89.69%, 93.40%)       | 93.24% (91.38%, 94.80%)               |
| ntigen test within ±14 days from inpatient admission**   | -                   | -                             | -                                     |
| est performed, at least 1 positive result  | N/A                 | N/A                           | N/A                                   |
| est performed, only negative results   | N/A                 | N/A                           | N/A                                   |
| lo test or unknown result  | 5,825 ( 92.90% )    | 89.90% (88 %, 91.58%)         | ****                                  |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection   |                     |                               |                                       |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)  | 367 ( 5.85% )       | 90.61% (87.12%, 93.41%)       | 82.83% (78.75%, 86.41%)               |
| odes Observed During Inpatient Stay  |                     |                               |                                       |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness f breath) OR R50.9 (fever)]   | 818 ( 13.05% )      | 92.39% (87.56%, 95.78%)       | ****                                  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] | 1,054 ( 16.81% )    | 93.13% (89.36%, 95.88%)       | ****                                  |
| Primary" Lab Test Product Information****  |                     |                               |                                       |
| 47377 - SARS_COV_2_NS  | N/A                 | N/A                           | N/A                                   |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual<br>ifferential WBC Count   | N/A                 | N/A                           | N/A                                   |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | 15 ( 0.24% )        | 93.33% (68.05%, 99.83%)       | 82.35% ( 56.57% , 96.20% )            |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 102 ( 1.63% )       | 96.08% (90.26%, 98.92%)       | 91.59% (84.63%, 96.08%)               |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | N/A                 | N/A                           | N/A                                   |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | N/A                 | N/A                           | N/A                                   |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT   | N/A                 | N/A                           | N/A                                   |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | N/A                 | N/A                           | N/A                                   |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | N/A                 | N/A                           | N/A                                   |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2\*

|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|--|---------------------|-------------------------------|--|
|  | Total Fatient Count | Number (Percent)              |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 20 ( 0.32% )        | 95 % ( 75.13% , 99.87% )      | 100.0% (82.35%, 100.0%)                  |
| Probe Detection  |                     |                               |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                 | N/A                           | N/A                                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                     |                               |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                 | N/A                           | N/A                                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                     |                               |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 454 ( 7.24% )       | 94.71% (92.24%, 96.58%)       | 96.20% (93.98%, 97.77%)                  |
| NAA With Probe Detection   |                     |                               |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | N/A                 | N/A                           | N/A                                      |
| By NAA With Probe Detection  |                     |                               |  |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                 | N/A                           | N/A                                      |
| NAA With Probe Detection   |                     |                               |  |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 643 ( 10.26% )      | 85.98% (83.05%, 88.57%)       | 83.01% (79.93%, 85.79%)                  |
| NAA With Probe Detection   |                     |                               |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | N/A                 | N/A                           | N/A                                      |
| mmunoassay   |                     |                               |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                 | N/A                           | N/A                                      |
| Rapid Immunoassay  |                     |                               |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | N/A                 | N/A                           | N/A                                      |
| Probe Detection  |                     |                               |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | N/A                 | N/A                           | N/A                                      |
| NAA With Probe Detection   |                     |                               |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | N/A                 | N/A                           | N/A                                      |
| By NAA With Probe Detection  |                     |                               |  |
| 4559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory         | N/A                 | N/A                           | N/A                                      |
| pecimen By NAA With Probe Detection  |                     |                               |  |
| 4563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By         | N/A                 | N/A                           | N/A                                      |
| mmunoassay   |                     |                               |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | N/A                 | N/A                           | N/A                                      |
| mmunoassay   |                     |                               |  |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*  |                     |                               |  |  |  |  |
|---|---------------------|-------------------------------|--|--|--|--|
|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|   |                     | Number (Percent)              |  |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection         | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection             | N/A                 | N/A                           | N/A                                      |  |  |  |
| Unknown   | 34 ( 0.54% )        | 96.88% (83.78%, 99.92%)       | 100.0% (88.78%, 100.0%)                  |  |  |  |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.2 | Algorithm 4: IP Sta | with Any of Code | es U07.1. B97.29 | . B34.2. J12.81. B97.21 |
|--|---------------------|------------------|------------------|-------------------------|
|--|---------------------|------------------|------------------|-------------------------|

|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   |                 | Number          |                 |        | Number (Percent)         |
| Care Setting of "Primary" Lab Test***** |                 |                 |                 |        |                          |
| Total Observed                          | 1,371           | 143             | 22              | 4,850  | 1,514 ( 23.71% )         |
| Inpatient                               | 360             | 22              | 3               | N/A    | 382                      |
| Outpatient or Emergency Department      | 281             | 16              | 1               | N/A    | 297                      |
| Other                                   | 42              | 11              | 2               | N/A    | 53                       |
| Care Setting Reported as Unknown        | 602             | 91              | 13              | N/A    | 693                      |
| Demographics                            |                 |                 |                 |        |                          |
| Sex                                     |                 |                 |                 |        |                          |
| Female                                  | 539             | 66              | 13              | 2,114  | 605 ( 22.14% )           |
| Male                                    | 832             | 77              | 9               | 2,718  | 909 ( 25 % )             |
| Other/Missing                           | 0               | 0               | 0               | 0      | N/A                      |
| Age at Hospital Admission (Years)       |                 |                 |                 |        |                          |
| 0-5                                     | 0               | 0               | 0               | 52     | 0 (0.00%)                |
| 6-17                                    | 0               | 0               | 0               | 23     | 0 (0.00%)                |
| 18-29                                   | 33              | 4               | 1               | 121    | 37 ( 23.27% )            |
| 30-39                                   | 79              | 6               | 3               | 228    | 85 ( 26.90% )            |
| 40-49                                   | 171             | 8               | 1               | 476    | 179 ( 27.29% )           |
| 50-59                                   | 296             | 20              | 4               | 883    | 316 ( 26.27% )           |
| 60-69                                   | 363             | 24              | 4               | 1,100  | 387 ( 25.96% )           |
| 70-79                                   | 265             | 39              | 5               | 1,062  | 304 ( 22.17% )           |
| 80-89                                   | 126             | 35              | 2               | 667    | 161 ( 19.40% )           |
| 90+                                     | 38              | 6               | 2               | 218    | 44 ( 16.67% )            |
| Missing                                 | 0               | 0               | 0               | 0      | N/A                      |
| Race                                    |                 |                 |                 |        |                          |
| American Indian or Alaska Native        | 3               | 0               | 0               | 1      | 3 ( 75 % )               |
| Asian                                   | 31              | 2               | 0               | 24     | 33 ( 57.89% )            |

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*        |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   |                 |                 |                 |        |                          |
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Black or African American   | 159             | 6               | 1               | 362    | 165 ( 31.25% )           |
| Native Hawaiian or Other Pacific Islander   | 2               | 0               | 0               | 0      | 2 ( 100.0% )             |
| White   | 274             | 43              | 3               | 498    | 317 ( 38.75% )           |
| Other/Mixed/Unknown   | 902             | 92              | 18              | 3,947  | 994 ( 20.04% )           |
| Ethnicity   |                 |                 |                 |        |                          |
| Hispanic  | 47              | 1               | 0               | 35     | 48 ( 57.83% )            |
| Non-Hispanic  | 231             | 18              | 4               | 35     | 249 ( 86.46% )           |
| Unknown   | 1,093           | 124             | 18              | 4,762  | 1,217 ( 20.29% )         |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                          |
| Asymptomatic screening (Z11.59)   | 26              | 3               | 0               | 58     | 29 ( 33.33% )            |
| Contact and suspected exposure (Z20.828)  | 291             | 31              | 3               | 927    | 322 ( 25.72% )           |
| Pneumonia (see Appendix B)  | 1,176           | 116             | 18              | 4,077  | 1,292 ( 23.98% )         |
| Other viral pneumonia (J12.89)  | 1,074           | 62              | 18              | 3,261  | 1,136 ( 25.73% )         |
| ARDS (J80)  | 327             | 16              | 4               | 1,065  | 343 ( 24.29% )           |
| Sepsis (see Appendix C)   | 531             | 50              | 9               | 1,884  | 581 ( 23.48% )           |
| Bronchitis (J20.8 OR J40)   | 22              | 1               | 1               | 118    | 23 ( 16.20% )            |
| Respiratory infection (J22 OR J98.8)  | 266             | 20              | 5               | 1,035  | 286 ( 21.57% )           |
| Cough (R05)   | 396             | 33              | 9               | 1,606  | 429 ( 20.99% )           |
| Shortness of breath (R06.2)   | 7               | 1               | 0               | 39     | 8 ( 17.02% )             |
| Fever (R50.9)   | 507             | 45              | 7               | 1,879  | 552 ( 22.64% )           |
| Optional  |                 |                 |                 |        |                          |
| Other COVID Tests   |                 |                 |                 |        |                          |
|   | -               | -               | -               | -      | -                        |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) |                 |                 |                 |        |                          |
| observed within -7 days prior to hospitalization through end of patient record**    | 06              | 2               | 1               | 221    | 00 / 20 940/ \           |
| Test performed, at least 1 positive result  | 96              | 3               | 1               | 221    | 99 ( 30.84% )            |

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N/A

N/A

Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21\* Lab Positive\*\*\* Lab Negative\*\*\* Lab. No Results No Lab **Patients with Lab Result** Number (Percent) Number 9 6 0 30 15 (33.33%) Test performed, only negative results 833 78 17 No test or unknown result 3,439 911 (20.86%) Antigen test within ±14 days from inpatient admission\*\* Test performed, at least 1 positive result 0 0 0 0 N/A 0 N/A Test performed, only negative results 0 0 0 No test or unknown result 1.046 120 19 1,166 (19.65%) 4.750 Codes Observed Within ±5 Days of Diagnostic Specimen Collection Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426) 333 34 1 4 367 (98.66%) **Codes Observed During Inpatient Stay** Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness 172 15 2 636 187 (22.67%) of breath) OR R50.9 (fever)] 247 2 793 18 265 (25%) Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] "Primary" Lab Test Product Information\*\*\*\* 847377 - SARS COV 2 NS N/A 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual N/A Differential WBC Count 15 (100.0%) 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA 14 1 98 4 102 (100.0%) 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab N/A N/A 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA 87635R - SARS-CoV-2, NAA (COVID-19), POCT N/A

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87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)

87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21\*

|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   |                 | Number          |                 |        | Number (Percent)         |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With                          | 19              | 1               | 0               | 0      | 20 ( 100.0% )            |
| Probe Detection   |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                          | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1  |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                          | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2  |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By                             | 434             | 26              | 0               | 0      | 460 ( 100.0% )           |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                          | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                          | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By                             | 562             | 92              | 1               | 0      | 654 ( 99.85% )           |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By                           | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        | _                        |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                        | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay   |                 |                 |                 |        | _                        |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With                          | -               | -               | -               | -      | N/A                      |
| Probe Detection   |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection | -               | -               | -               | -      | N/A                      |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen                          |                 |                 |                 |        | A1 / A                   |
| By NAA With Probe Detection   | -               | -               | -               | -      | N/A                      |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory                               | 0               | 0               | 0               | 0      | N1 / A                   |
| Specimen By NAA With Probe Detection  | 0               | 0               | 0               | 0      | N/A                      |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By                               |                 |                 |                 |        | N/A                      |
| Immunoassay   | -               | -               | -               | -      | N/A                      |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                               | _               | _               | _               | _      | N/A                      |
| Immunoassay   | -               | -               | -               | _      | 19/75                    |
| ,   |                 |                 |                 |        |                          |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

# Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21\*

|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 | Number          |                 |        | Number (Percent)         |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| Unknown  | 31              | 1               | 1               | 1      | 32 ( 94.12% )            |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 4: IP Stay with Any           | of Codes U07.1, B97.29, I | 334.2, J12.81, B97.21*        |  |
|---|---------------------------|-------------------------------|--|
|   | Total Patient Count       | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|   |                           | Number (Percent)              |  |
| Care Setting of "Primary" Lab Test***** |                           |                               |  |
| Total Observed                          | 6,386 ( 100.0% )          | 90.55% (88.97%, 91.98%)       | 89.96% (88.34%, 91.42%)                  |
| Inpatient                               | 385 ( 6.03% )             | 94.24% (91.41%, 96.36%)       | 89.78% (86.39%, 92.56%)                  |
| Outpatient or Emergency Department      | 298 ( 4.67% )             | 94.61% (91.40%, 96.89%)       | 84.89% (80.57%, 88.58%)                  |
| Other                                   | 55 ( 0.86% )              | 79.25% (65.89%, 89.16%)       | 89.36% (76.90%, 96.45%)                  |
| Care Setting Reported as Unknown        | 1,820 ( 28.50% )          | 86.87% (84.12%, 89.29%)       | ****                                     |
| Demographics                            |                           |                               |  |
| Sex                                     |                           |                               |  |
| Female                                  | 2,732 ( 42.78% )          | 89.09% (86.33%, 91.46%)       | 87.64% (84.78%, 90.14%)                  |
| Male                                    | 3,636 ( 56.94% )          | 91.53% (89.53%, 93.26%)       | 91.53% (89.53%, 93.26%)                  |
| Other/Missing                           | N/A                       | N/A                           | N/A                                      |
| Age at Hospital Admission (Years)       |                           |                               |  |
| 0-5                                     | 52 ( 0.81% )              | N/A                           | N/A                                      |
| 6-17                                    | 23 ( 0.36% )              | N/A                           | N/A                                      |
| 18-29                                   | 159 ( 2.49% )             | 89.19% (74.58%, 96.97%)       | 82.50% (67.22%, 92.66%)                  |
| 30-39                                   | 316 ( 4.95% )             | 92.94% (85.27%, 97.37%)       | 94.05% (86.65%, 98.04%)                  |
| 40-49                                   | 656 ( 10.27% )            | 95.53% (91.38%, 98.05%)       | 92.43% (87.63%, 95.80%)                  |
| 50-59                                   | 1,,203 ( 18.84% )         | 93.67% ( 90.39% , 96.09% )    | 95.18% (92.17%, 97.28%)                  |
| 60-69                                   | 1,491 ( 23.35% )          | 93.80% (90.91%, 95.99%)       | 93.80% (90.91%, 95.99%)                  |
| 70-79                                   | 1,371 ( 21.47% )          | 87.17% (82.88%, 90.72%)       | 85.21% (80.77%, 88.96%)                  |
| 80-89                                   | 830 ( 13 % )              | 78.26% (71.09%, 84.37%)       | 79.25% (72.11%, 85.26%)                  |
| 90+                                     | 264 ( 4.13% )             | 86.36% (72.65%, 94.83%)       | 82.61% (68.58%, 92.18%)                  |
| Missing                                 | N/A                       | N/A                           | N/A                                      |
| Race                                    |                           |                               |  |
| American Indian or Alaska Native        | 4 ( 0.06% )               | 100.0% (29.24%, 100.0%)       | 100.0% (29.24%, 100.0%)                  |
| Asian                                   | 57 ( 0.89% )              | 93.94% (79.77%, 99.26%)       | 93.94% (79.77%, 99.26%)                  |

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|---|---------------------|-------------------------------|--|
|   |                     | Number (Percent)              |  |
| Black or African American                 | 528 ( 8.27% )       | 96.36% (92.25%, 98.65%)       | 82.38% ( 76.26% , 87.48%                 |
| Native Hawaiian or Other Pacific Islander | 2 ( 0.03% )         | 100.0% (15.81%, 100.0%)       | 100.0% (15.81%, 100.0%                   |
| White                                     | 818 ( 12.81% )      | 86.44% (82.17%, 90.01%)       | 80.12% (75.49%, 84.22%                   |
| Other/Mixed/Unknown                       | 4,959 ( 77.65% )    | 90.74% (88.77%, 92.47%)       | 94.85% (93.25%, 96.16%                   |
| Ethnicity                                 |                     |                               |  |
| Hispanic                                  | 83 ( 1.30% )        | 97.92% (88.93%, 99.95%)       | 85.45% (73.34%, 93.50%                   |
| Non-Hispanic                              | 288 ( 4.51% )       | 92.77% (88.82%, 95.66%)       | 90.23% (85.92%, 93.58%                   |
| Unknown                                   | 5,997 ( 93.91% )    | 89.81% (87.97%, 91.45%)       | 90.11% (88.29%, 91.73%                   |
| Codes Observed During Inpatient Stay      |                     |                               |  |
| Asymptomatic screening (Z11.59)           | 87 ( 1.36% )        | 89.66% (72.65%, 97.81%)       | 96.30% (81.03%, 99.91%                   |
| Contact and suspected exposure (Z20.828)  | 1,252 ( 19.61% )    | 90.37% (86.61%, 93.36%)       | ****                                     |
| Pneumonia (see Appendix B)                | 5,387 ( 84.36% )    | 91.02% (89.33%, 92.52%)       | 94.23% ( 92.79% , 95.46%                 |
| Other viral pneumonia (J12.89)            | 4,415 ( 69.14% )    | 94.54% (93.06%, 95.79%)       | ****                                     |
| ARDS (J80)                                | 1,412 ( 22.11% )    | 95.34% (92.54%, 97.31%)       | ****                                     |
| Sepsis (see Appendix C)                   | 2,474 ( 38.74% )    | 91.39% (88.81%, 93.55%)       | 97.07% ( 95.29% , 98.32%                 |
| Bronchitis (J20.8 OR J40)                 | 142 ( 2.22% )       | 95.65% (78.05%, 99.89%)       | 100.0% (84.56%, 100.0%                   |
| Respiratory infection (J22 OR J98.8)      | 1,326 ( 20.76% )    | 93.01% (89.41%, 95.68%)       | ****                                     |
| Cough (R05)                               | 2,044 ( 32.01% )    | 92.31% (89.37%, 94.65%)       | 98.02% ( 96.14% , 99.14%                 |
| Shortness of breath (R06.2)               | 47 ( 0.74% )        | 87.50% (47.35%, 99.68%)       | ****                                     |
| Fever (R50.9)                             | 2,438 ( 38.18% )    | 91.85% (89.24%, 93.99%)       | ****                                     |
| Optional                                  |                     |                               |  |
| Other COVID Tests                         |                     |                               |  |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|--|---------------------|-------------------------------|--|
|  |                     | Number (Percent)              |  |
| est performed, only negative results   | 45 ( 0.70% )        | 60 % ( 32.29% , 83.66% )      | ****                                     |
| lo test or unknown result  | 4,367 ( 68.38% )    | 91.44% (89.43%, 93.17%)       | 93.91% ( 92.13% , 95.39% )               |
| ntigen test within ±14 days from inpatient admission**   | -                   | -                             | -  |
| est performed, at least 1 positive result  | N/A                 | N/A                           | N/A                                      |
| est performed, only negative results   | N/A                 | N/A                           | N/A                                      |
| lo test or unknown result  | 5,935 ( 92.94% )    | 89.71% (87.82%, 91.39%)       | ****                                     |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection   |                     |                               |  |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)  | 372 ( 5.83% )       | 90.74% (87.29%, 93.50%)       | 84.09% ( 80.11% , 87.55%                 |
| odes Observed During Inpatient Stay  |                     |                               |  |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness f breath) OR R50.9 (fever)]   | 825 ( 12.92% )      | 91.98% (87.12%, 95.44%)       | ****                                     |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) DR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] | 1,060 ( 16.60% )    | 93.21% (89.48%, 95.92%)       | ****                                     |
| Primary" Lab Test Product Information****  |                     |                               |  |
| 47377 - SARS_COV_2_NS  | N/A                 | N/A                           | N/A                                      |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual Differential WBC Count   | N/A                 | N/A                           | N/A                                      |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | 15 ( 0.23% )        | 93.33% (68.05%, 99.83%)       | 82.35% ( 56.57% , 96.20%                 |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 102 ( 1.60% )       | 96.08% (90.26%, 98.92%)       | 91.59% ( 84.63% , 96.08%                 |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | N/A                 | N/A                           | N/A                                      |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | N/A                 | N/A                           | N/A                                      |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT   | N/A                 | N/A                           | N/A                                      |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | N/A                 | N/A                           | N/A                                      |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | N/A                 | N/A                           | N/A                                      |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21\*

|  |                            |                               | Sensitivity (95% Confidence |
|--|----------------------------|-------------------------------|-----------------------------|
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|  |                            | Number (Percent)              |                             |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 20 ( 0.31% )               | 95 % (75.13%, 99.87%)         | 100.0% (82.35%, 100.0%)     |
| Probe Detection  |                            |                               |                             |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                         |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                            |                               |                             |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                         |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                            |                               |                             |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 460 ( 7.20% )              | 94.35% (91.83%, 96.27%)       | 97.09% ( 95.08% , 98.44% )  |
| NAA With Probe Detection   |                            |                               |                             |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | N/A                        | N/A                           | N/A                         |
| By NAA With Probe Detection  |                            |                               |                             |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                         |
| NAA With Probe Detection   |                            |                               |                             |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 655 ( 10.26% )             | 85.93% (83.03%, 88.51%)       | 84.51% (81.53%, 87.18%)     |
| NAA With Probe Detection   |                            |                               |                             |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | N/A                        | N/A                           | N/A                         |
| Immunoassay  |                            |                               |                             |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                        | N/A                           | N/A                         |
| Rapid Immunoassay  |                            |                               |                             |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | N/A                        | N/A                           | N/A                         |
| Probe Detection  | •                          | ·                             |                             |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | N/A                        | N/A                           | N/A                         |
| NAA With Probe Detection   |                            |                               |                             |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | N/A                        | N/A                           | N/A                         |
| By NAA With Probe Detection  |                            |                               |                             |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | N/A                        | N/A                           | N/A                         |
| Specimen By NAA With Probe Detection   |                            |                               |                             |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | N/A                        | N/A                           | N/A                         |
| Immunoassay  | •                          | •                             | ·                           |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | N/A                        | N/A                           | N/A                         |
| Immunoassay  |                            |                               |                             |



100.0% (88.78%, 100.0%)

Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

### Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21\* **Sensitivity (95% Confidence Total Patient Count PPV (95% Confidence Interval)** Interval) **Number (Percent)** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A N/A N/A Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By N/A N/A N/A **NAA With Probe Detection** 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A N/A N/A Probe Detection

Unknown

34 ( 0.53% )

96.88% (83.78%, 99.92%)



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Care Setting of "Primary" Lab Test***** | Lab Positive*** | Lab Negative*** Number | Lab, No Results | No Lab | Patients with Lab Result   |
|---|-----------------|------------------------|-----------------|--------|----------------------------|
| Care Setting of "Primary" Lab Test***** | Lab Positive*** |                        | Lab, No Results | No Lab | Patients with Lah Result   |
| Care Setting of "Primary" Lab Test***** |                 | Number                 |                 |        | . aticitis with Lab Nesult |
| Care Setting of "Primary" Lab Test***** |                 |                        |                 |        | Number (Percent)           |
|   |                 |                        |                 |        |                            |
| otal Observed                           | 1,220           | 93                     | 21              | 3,884  | 1,313 ( 25.16% )           |
| npatient                                | 327             | 13                     | 3               | N/A    | 340                        |
| Outpatient or Emergency Department      | 259             | 11                     | 1               | N/A    | 270                        |
| Other                                   | 35              | 6                      | 2               | N/A    | 41                         |
| Care Setting Reported as Unknown        | 527             | 61                     | 12              | N/A    | 588                        |
| Demographics                            |                 |                        |                 |        |                            |
| ex                                      |                 |                        |                 |        |                            |
| emale                                   | 464             | 41                     | 12              | 1,598  | 505 ( 23.88% )             |
| Лаle                                    | 756             | 52                     | 9               | 2,275  | 808 ( 26.13% )             |
| Other/Missing                           | 0               | 0                      | 0               | 0      | N/A                        |
| age at Hospital Admission (Years)       |                 |                        |                 |        |                            |
| 9-5                                     | 0               | 0                      | 0               | 14     | 0 (0.00%)                  |
| j-17                                    | 0               | 0                      | 0               | 7      | 0 (0.00%)                  |
| 8-29                                    | 30              | 4                      | 1               | 76     | 34 ( 30.63% )              |
| 0-39                                    | 69              | 4                      | 3               | 188    | 73 ( 27.65% )              |
| 0-49                                    | 152             | 4                      | 1               | 413    | 156 ( 27.37% )             |
| 0-59                                    | 277             | 9                      | 4               | 763    | 286 ( 27.16% )             |
| 50-69                                   | 326             | 15                     | 3               | 917    | 341 (27.04%)               |
| 70-79                                   | 242             | 30                     | 5               | 847    | 272 ( 24.20% )             |
| 0-89                                    | 100             | 23                     | 2               | 505    | 123 ( 19.52% )             |
| 00+                                     | 24              | 3                      | 2               | 142    | 27 ( 15.79% )              |
| Aissing (                               | 0               | 0                      | 0               | 0      | N/A                        |
| Race                                    |                 |                        |                 |        |                            |
| American Indian or Alaska Native        | 2               | 0                      | 0               | 0      | 2 ( 100.0% )               |
| Asian                                   | 28              | 2                      | 0               | 21     | 30 ( 58.82% )              |

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia\*\* OR Acute Respiratory Distress Syndrome (ARDS) (J80)]\* Lab Positive\*\*\* Lab Negative\*\*\* Lab, No Results No Lab **Patients with Lab Result** Number (Percent) Number 5 146 1 282 151 (34.79%) Black or African American 2 0 0 0 2 (100.0%) Native Hawaiian or Other Pacific Islander 234 26 3 344 260 (42.83%) White Other/Mixed/Unknown 808 60 17 3,226 868 (21.11%) Ethnicity 42 1 0 25 43 (63.24%) Hispanic Non-Hispanic 208 10 4 28 218 (87.20%) 970 82 17 3.820 1052 (21.52%) Unknown **Codes Observed During Inpatient Stay** 24 2 0 50 26 (34.21%) Asymptomatic screening (Z11.59) Contact and suspected exposure (Z20.828) 266 22 2 817 288 (26.02%) Pneumonia (see Appendix B) 1.145 93 18 3,829 1,238 (24.35%) Other viral pneumonia (J12.89) 1,060 62 18 3,200 1,122 (25.85%) 325 4 ARDS (J80) 16 1,046 341 (24.51%) Sepsis (see Appendix C) 505 38 9 1,682 543 (24.31%) 20 1 1 84 21 (19.81%) Bronchitis (J20.8 OR J40) 5 Respiratory infection (J22 OR J98.8) 233 19 869 252 (22.38%) 8 367 (21.50%) Cough (R05) 348 19 1,332 Shortness of breath (R06.2) 7 0 0 28 7 (20%) 6 Fever (R50.9) 460 31 1.594 491 (23.48%) **Optional Other COVID Tests** Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) observed within -7 days prior to hospitalization through end of patient record\*\* Test performed, at least 1 positive result 85 3 1 188 88 (31.77%)

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 5: IP Stay with Codes [007.1 OR B97.29] and [P   | neumonia** OK A | cute Respiratory Di | stress syndrome | (AKDS) (J8 | 00)].                   |
|--|-----------------|---------------------|-----------------|------------|-------------------------|
|  |                 |                     |                 |            |                         |
|  | Lab Positive*** | Lab Negative***     | Lab, No Results | No Lab     | Patients with Lab Resul |
|  |                 | Number              |                 |            | Number (Percent)        |
| Test performed, only negative results  | 9               | 1                   | 0               | 21         | 10 ( 32.26% )           |
| No test or unknown result  | 759             | 55                  | 16              | 2,818      | 814 ( 22.31% )          |
| Antigen test within ±14 days from inpatient admission**  | -               | -                   | -               | -          | -                       |
| Test performed, at least 1 positive result   | 0               | 0                   | 0               | 0          | N/A                     |
| Test performed, only negative results  | 0               | 0                   | 0               | 0          | N/A                     |
| No test or unknown result  | 926             | 78                  | 18              | 3,812      | 1,004 ( 20.77% )        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection  |                 |                     |                 |            |                         |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)   | 301             | 23                  | 1               | 4          | 324 ( 98.48% )          |
| Codes Observed During Inpatient Stay   |                 |                     |                 |            |                         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness  | 154             | 11                  | 1               | 563        | 165 ( 22.63% )          |
| of breath) OR R50.9 (fever)]   |                 |                     |                 |            |                         |
| 730 030 /ttd   | 236             | 18                  | 2               | 756        | 254 ( 25.10% )          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute |                 |                     |                 |            |                         |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                 |                     |                 |            |                         |
| "Primary" Lab Test Product Information****   |                 |                     |                 |            |                         |
| 847377 - SARS COV 2 NS   | _               | _                   | -               |            | N/A                     |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | _               | _                   | _               | _          | N/A                     |
| Differential WBC Count   |                 |                     |                 |            | N/A                     |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | 13              | 1                   | -               | -          | 14 ( 100.0% )           |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 95              | 3                   | -               | -          | 98 ( 100.0% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | -               | -                   | -               | _          | N/A                     |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | -               | -                   | _               | _          | N/A                     |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT  | _               | _                   | _               | _          | N/A                     |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | _               | _                   | _               | _          | N/A                     |
|  | -               | -                   | -               | _          | ·                       |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | -               | -                   | -               | -          | N/A                     |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 | Number          |                 |        | Number (Percent)         |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 18              | 1               | 0               | 0      | 19 ( 100.0% )            |
| Probe Detection  |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 383             | 7               | 0               | 0      | 390 ( 100.0% )           |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 500             | 70              | 1               | 0      | 570 ( 99.82% )           |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 0               | 0               | 0               | 0      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 | Number          |                 |        | Number (Percent)         |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| Unknown  | 25              | 0               | 1               | 1      | 25 ( 92.59% )            |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]* |                     |                               |  |  |  |  |  |
|--|---------------------|-------------------------------|--|--|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |  |
|  | Number (Percent)    | Per                           | cent                                     |  |  |  |  |
| Care Setting of "Primary" Lab Test*****  |                     |                               |  |  |  |  |  |
| Total Observed   | 5,218 ( 100.0% )    | 92.92% (91.39%, 94.25%)       | 80.05% (77.96%, 82.03%)                  |  |  |  |  |
| Inpatient  | 343 ( 6.57% )       | 96.18% (93.55%, 97.95%)       | 81.55% (77.40%, 85.22%)                  |  |  |  |  |
| Outpatient or Emergency Department   | 271 ( 5.19% )       | 95.93% ( 92.83% , 97.95% )    | 78.25% (73.41%, 82.57%)                  |  |  |  |  |
| Other  | 43 ( 0.82% )        | 85.37% (70.83%, 94.43%)       | 74.47% (59.65%, 86.06%)                  |  |  |  |  |
| Care Setting Reported as Unknown   | 1,426 ( 27.33% )    | 89.63% (86.87%, 91.97%)       | ****                                     |  |  |  |  |
| Demographics   |                     |                               |  |  |  |  |  |
| Sex  |                     |                               |  |  |  |  |  |
| Female   | 2,115 ( 40.53% )    | 91.88% (89.15%, 94.11%)       | 75.45% (71.85%, 78.80%)                  |  |  |  |  |
| Male   | 3,092 ( 59.26% )    | 93.56% (91.65%, 95.16%)       | 83.17% (80.57%, 85.54%)                  |  |  |  |  |
| Other/Missing  | N/A                 | N/A                           | N/A                                      |  |  |  |  |
| Age at Hospital Admission (Years)  |                     |                               |  |  |  |  |  |
| 0-5  | 14 ( 0.27% )        | N/A                           | N/A                                      |  |  |  |  |
| 6-17   | 7 ( 0.13% )         | N/A                           | N/A                                      |  |  |  |  |
| 18-29  | 111 ( 2.13% )       | 88.24% (72.55%, 96.70%)       | 75 % (58.80%, 87.31%)                    |  |  |  |  |
| 30-39  | 264 ( 5.06% )       | 94.52% (86.56%, 98.49%)       | 82.14% (72.26%, 89.65%)                  |  |  |  |  |
| 40-49  | 570 ( 10.92% )      | 97.44% (93.57%, 99.30%)       | 82.16% (75.87%, 87.39%)                  |  |  |  |  |
| 50-59  | 1,053 ( 20.18% )    | 96.85% (94.11%, 98.55%)       | 89.07% (85.06%, 92.31%)                  |  |  |  |  |
| 60-69  | 1,261 ( 24.17% )    | 95.60% (92.85%, 97.52%)       | 84.24% (80.22%, 87.72%)                  |  |  |  |  |
| 70-79  | 1,124 ( 21.54% )    | 88.97% (84.63%, 92.43%)       | 77.81% (72.78%, 82.31%)                  |  |  |  |  |
| 80-89  | 630 ( 12.07% )      | 81.30% (73.28%, 87.76%)       | 62.89% (54.88%, 70.41%)                  |  |  |  |  |
| 90+  | 171 ( 3.28% )       | 88.89% (70.84%, 97.65%)       | 52.17% (36.95%, 67.11%)                  |  |  |  |  |
| Missing  | N/A                 | N/A                           | N/A                                      |  |  |  |  |
| Race   |                     |                               |  |  |  |  |  |
| American Indian or Alaska Native   | 2 ( 0.04% )         | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )                |  |  |  |  |
| Asian  | 51 ( 0.98% )        | 93.33% (77.93%, 99.18%)       | 84.85% (68.10%, 94.89%)                  |  |  |  |  |

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Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence Interval) |
|---|---------------------|-------------------------------|---------------------------------------|
|   | Number (Percent)    |                               | cent                                  |
| Black or African American                 | 434 ( 8.32% )       | 96.69% ( 92.44% , 98.92% )    | 75.65% ( 68.96% , 81.52% )            |
| Native Hawaiian or Other Pacific Islander | 2 ( 0.04% )         | 100.0% (15.81%, 100.0%)       | 100.0% (15.81%, 100.0%)               |
| White                                     | 607 ( 11.63% )      | 90 % (85.69%, 93.36%)         | 68.42% (63.20%, 73.32%)               |
| Other/Mixed/Unknown                       | 4,111 ( 78.78% )    | 93.09% (91.19%, 94.68%)       | 84.96% ( 82.53% , 87.18% )            |
| Ethnicity                                 |                     |                               |                                       |
| Hispanic                                  | 68 ( 1.30% )        | 97.67% (87.71%, 99.94%)       | 76.36% (62.98%, 86.77%)               |
| Non-Hispanic                              | 250 ( 4.79% )       | 95.41% (91.73%, 97.78%)       | 81.25% (75.92%, 85.84%)               |
| Unknown                                   | 4,889 ( 93.69% )    | 92.21% (90.42%, 93.75%)       | 79.97% (77.60%, 82.19%)               |
| Codes Observed During Inpatient Stay      |                     |                               |                                       |
| Asymptomatic screening (Z11.59)           | 76 ( 1.46% )        | 92.31% ( 74.87% , 99.05% )    | 88.89% (70.84%, 97.65%)               |
| Contact and suspected exposure (Z20.828)  | 1,107 ( 21.22% )    | 92.36% (88.66%, 95.15%)       | 93.01% (89.41%, 95.68%)               |
| Pneumonia (see Appendix B)                | 5,085 ( 97.45% )    | 92.49% ( 90.88% , 93.89% )    | 91.75% ( 90.08% , 93.21% )            |
| Other viral pneumonia (J12.89)            | 4,340 (83.17%)      | 94.47% (92.97%, 95.74%)       | 98.97% (98.17%, 99.49%)               |
| ARDS (J80)                                | 1,391 ( 26.66% )    | 95.31% (92.49%, 97.29%)       | ****                                  |
| Sepsis (see Appendix C)                   | 2,234 ( 42.81% )    | 93 % ( 90.52% , 95 % )        | 92.32% (89.76%, 94.41%)               |
| Bronchitis (J20.8 OR J40)                 | 106 ( 2.03%)        | 95.24% (76.18%, 99.88%)       | 90.91% (70.84%, 98.88%)               |
| Respiratory infection (J22 OR J98.8)      | 1,126 ( 21.58% )    | 92.46% (88.48%, 95.40%)       | 97.49% (94.62%, 99.07%)               |
| Cough (R05)                               | 1,707 ( 32.71% )    | 94.82% ( 92.03% , 96.85% )    | 86.14% (82.38%, 89.36%)               |
| Shortness of breath (R06.2)               | 35 ( 0.67% )        | 100.0% (59.04%, 100.0%)       | ****                                  |
| Fever (R50.9)                             | 2,091 ( 40.07% )    | 93.69% (91.16%, 95.67%)       | 91.63% (88.86%, 93.90%)               |
| Optional                                  |                     |                               |                                       |
| Other COVID Tests                         |                     |                               |                                       |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|--|---------------------|-------------------------------|--|
|  | Number (Percent)    |                               | cent                                     |
| est performed, only negative results   | 31 ( 0.59% )        | 90 % ( 55.50% , 99.75% )      | ****                                     |
| lo test or unknown result  | 3,648 ( 69.91% )    | 93.24% (91.30%, 94.87%)       | 85.57% (83.08%, 87.82%)                  |
| ntigen test within ±14 days from inpatient admission**   | -                   | -                             | -  |
| est performed, at least 1 positive result  | N/A                 | N/A                           | N/A                                      |
| est performed, only negative results   | N/A                 | N/A                           | N/A                                      |
| Io test or unknown result  | 4,834 ( 92.64% )    | 92.23% (90.40%, 93.81%)       | ****                                     |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection   |                     |                               |  |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)  | 329 ( 6.31% )       | 92.90% (89.54%, 95.45%)       | 76.01% (71.49%, 80.13%                   |
| odes Observed During Inpatient Stay  |                     |                               |  |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness f breath) OR R50.9 (fever)]   | 729 ( 13.97% )      | 93.33% (88.38%, 96.63%)       | 95.65% (91.25%, 98.23%                   |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) DR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute espiratory infection) OR J80 (ARDS)] | 1,012 ( 19.39% )    | 92.91% (89.03%, 95.75%)       | ****                                     |
| Primary" Lab Test Product Information****  |                     |                               |  |
| 47377 - SARS_COV_2_NS  | N/A                 | N/A                           | N/A                                      |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual bifferential WBC Count   | N/A                 | N/A                           | N/A                                      |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | 14 ( 0.27% )        | 92.86% (66.13%, 99.82%)       | 76.47% (50.10%, 93.19%                   |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 98 ( 1.88% )        | 96.94% (91.31%, 99.36%)       | 88.79% (81.23%, 94.07%                   |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | N/A                 | N/A                           | N/A                                      |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | N/A                 | N/A                           | N/A                                      |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT   | N/A                 | N/A                           | N/A                                      |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | N/A                 | N/A                           | N/A                                      |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | N/A                 | N/A                           | N/A                                      |



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

#### Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia\*\* OR ARDS (J80)]\* Sensitivity (95% Confidence **Total Patient Count PPV (95% Confidence Interval)** Interval) **Number (Percent)** Percent 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With 19 ( 0.36% ) 94.74% (73.97%, 99.87%) 94.74% (73.97%, 99.87%) Probe Detection 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By N/A N/A N/A Nucleic Acid Amplification Using CDC Primer-Probe Set N1 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By N/A N/A N/A Nucleic Acid Amplification Using CDC Primer-Probe Set N2 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By 390 (7.47%) 98.21% (96.34%, 99.28%) 85.68% (82.09%, 88.80%) **NAA With Probe Detection** 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen N/A N/A N/A By NAA With Probe Detection 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By N/A N/A N/A NAA With Probe Detection 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA With 571 (10.94%) 87.72% (84.74%, 90.30%) 75.19% (71.72%, 78.43%) **Probe Detection** 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By N/A N/A N/A **Immunoassay** 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid N/A N/A N/A **Immunoassav** 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe N/A N/A N/A Detection 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With N/A N/A N/A **Probe Detection** 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA N/A N/A N/A With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By N/A N/A N/A NAA With Probe Detection N/A N/A N/A 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay N/A N/A N/A

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94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay



Table 1a. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

### Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia\*\* OR ARDS (J80)]\* Sensitivity (95% Confidence **Total Patient Count PPV (95% Confidence Interval)** Interval) **Number (Percent)** Percent 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe N/A N/A N/A Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With N/A N/A N/A **Probe Detection** 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe N/A N/A N/A Detection 27 (0.52%) 100.0% (86.28%, 100.0%) 80.65% (62.53%, 92.55%) Unknown

Includes one test result per encounter - positive if patient had at least one positive NAA result; negative if all NAA results are negative (during test window, from any type of specimen/site).

"Primary" test result will be the first positive molecular test within the  $\pm 14$ -day window, or the last negative molecular test within the  $\pm 14$ -day window among patients with no positive test.

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<sup>\*</sup>Includes only the first algorithm-qualifying inpatient stay per algorithm per patient.

<sup>\*\*</sup> COVID NAA, antibody, and antigen tests are identified using LOINCs or any other identifier available in the data.

<sup>\*\*\*</sup>Any NAA result in 14 days prior through 14 days after inpatient encounter during which the COVID diagnosis codes were recorded.

<sup>\*\*\*\*</sup>Only the "primary" lab test, as defined above, is described.

<sup>\*\*\*\*\*</sup>Sensitivity not calculated because algorithm cohort NAA-positive patient count is larger than laboratory result cohort NAA-positive patient count. This is a result of a different visit being used to describe characteristics among the lab-based cohort and the algorithm-based cohort.

<sup>\*\*\*\*\*\*</sup>Sum across care settings does not equal total observed because care setting was not reported for some patients.



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Care Setting of "Primary" Lab Test\*\*\*\*\* **Total Observed** 2,768 4,079 5,215 7,993 Inpatient 777 487 2,423 2,246 Outpatient or Emergency Department 801 366 706 349 Other 82 40 403 313 Care Setting Reported as Unknown 771 2,744 1,285 4,494 **Demographics** Sex Female 1,251 1,825 2,897 4,280 Male 1,517 2,254 2,318 3,713 Other/Missing 0 0 0 0 Age at Hospital Admission (Years) 0-5 1 1 52 80 6-17 7 8 80 141 18-29 75 403 586 117 30-39 187 990 269 700 40-49 291 434 441 764 50-59 953 616 712 1,266 60-69 933 703 1.094 1,519 70-79 493 667 936 1,347 80-89 303 950 414 696 90+ 92 122 262 350 Missing 0 0 0 0 Race American Indian or Alaska Native 5 6 28 33 Asian 78 91 166 195 Black or African American 439 487 494 579 Native Hawaiian or Other Pacific Islander 3 3 3 5 White 474 591 2,198 2,726 Other/Mixed/Unknown 1,769 2,889 2,326 4,447 Ethnicity

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Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   | <b>Patients Positive</b> | <b>Lab Tests Positive</b> | <b>Patients Negative</b> | Lab Tests Negative |
|---|--------------------------|---------------------------|--------------------------|--------------------|
|   |                          | Nun                       | nber                     |                    |
| Hispanic  | 258                      | 299                       | 237                      | 303                |
| Non-Hispanic  | 503                      | 677                       | 2,089                    | 2,698              |
| Unknown   | 2,007                    | 3,103                     | 2,889                    | 4,992              |
| Codes Observed During Inpatient Stay  |                          |                           |                          |                    |
| Asymptomatic screening (Z11.59)   | 41                       | 64                        | 691                      | 929                |
| Contact and suspected exposure (Z20.828)  | 520                      | 778                       | 1,647                    | 2,437              |
| Pneumonia (see Appendix B)  | 2,219                    | 3,415                     | 1,231                    | 2,347              |
| Other viral pneumonia (J12.89)  | 2,135                    | 3,173                     | 249                      | 770                |
| ARDS (J80)  | 437                      | 660                       | 74                       | 176                |
| Sepsis (see Appendix C)   | 918                      | 1,368                     | 985                      | 1,691              |
| Bronchitis (J20.8 OR J40)   | 37                       | 46                        | 36                       | 66                 |
| Respiratory infection (J22 OR J98.8)  | 231                      | 402                       | 44                       | 130                |
| Cough (RO5)   | 544                      | 843                       | 443                      | 861                |
| Shortness of breath (R06.2)   | 9                        | 10                        | 27                       | 47                 |
| Fever (R50.9)   | 669                      | 1,031                     | 606                      | 1,185              |
| Optional  |                          | ,                         |                          | ,                  |
| Other COVID Tests   |                          |                           |                          |                    |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                        | -                         | -                        | -                  |
| observed within -7 days prior to hospitalization through end of patient record**    |                          |                           |                          |                    |
| Test performed, at least 1 positive result  | 161                      | 24                        | 28                       | 4                  |
| est performed, only negative results  | 9                        | 0                         | 72                       | 13                 |
| No test or unknown result   | 1,933                    | 3,241                     | 3,876                    | 6,356              |
| Antigen test within ±14 days from inpatient admission**                             | -                        | ,<br>-                    | -                        | -                  |
| Test performed, at least 1 positive result  | 0                        | 0                         | 0                        | 0                  |
| est performed, only negative results  | 0                        | 0                         | 0                        | 0                  |
| No test or unknown result   | 1,566                    | 2,677                     | 3,313                    | 5,608              |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     | ,                        | ,-                        | -,-                      | -,                 |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,048                    | 1,074                     | 2,307                    | 2,635              |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness 221 330 298 514 of breath) OR R50.9 (fever)] Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) 408 589 85 212 OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] "Primary" Lab Test Product Information\*\*\*\* 847377 - SARS COV 2 NS 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual Differential WBC Count 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA 3 3 3 3 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR 441 479 561 631 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab 95 95 55 58 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA 87635R - SARS-CoV-2, NAA (COVID-19), POCT 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19) 73 73 11 11 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With 57 127 60 125 Probe Detection 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By 0 2 0 1 Nucleic Acid Amplification Using CDC Primer-Probe Set N1 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By n 2 0 1 Nucleic Acid Amplification Using CDC Primer-Probe Set N2 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA 615 1,020 1,022 2,057 With Probe Detection 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen 3 3 By NAA With Probe Detection 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By 0 0 2 5 NAA With Probe Detection 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA 1,207 1,841 2,769 3,958 With Probe Detection 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab Junits/Volume In Serum Or Plasma By

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**Immunoassay** 



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Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab | presence | In Serum, Plasma Or Blood By Rapid Immunoassay 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By 0 0 3 5 NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen 0 0 2 2 By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory 0 0 0 0 Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With **Probe Detection** 

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Unknown



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 1: IP Stay with Code U07.1*      |                 |        |                 |        |                          |  |
|--|-----------------|--------|-----------------|--------|--------------------------|--|
|  | Lab Positive*** |        | Lab, No Results | No Lab | Patients with Lab Result |  |
| Cours Coasting of IlDuine and Lab Toosa*** |                 | Number |                 |        | Number (Percent)         |  |
| Care Setting of "Primary" Lab Test***      | 0.507           | 0.40   | 25              | 0.000  | 2.070 / 24.020/ \        |  |
| Total Observed                             | 2,637           | 342    | 35              | 9,383  | 2,979 ( 24.03% )         |  |
| Inpatient                                  | 709             | 70     | 13              | N/A    | 779                      |  |
| Outpatient or Emergency Department         | 730             | 65     | 4               | N/A    | 795                      |  |
| Other                                      | 71              | 16     | 2               | N/A    | 87                       |  |
| Care Setting Reported as Unknown           | 1,018           | 191    | 16              | N/A    | 1,209                    |  |
| Demographics                               |                 |        |                 |        |                          |  |
| Sex  |                 |        |                 |        |                          |  |
| Female                                     | 1,186           | 153    | 13              | 4,385  | 1,339 ( 23.34% )         |  |
| Male                                       | 1,451           | 189    | 22              | 4,982  | 1,640 ( 24.68% )         |  |
| Other/Missing                              | 0               | 0      | 0               | 0      | N/A                      |  |
| Age at Hospital Admission (Years)          |                 |        |                 |        |                          |  |
| 0-5  | 0               | 0      | 0               | 14     | 0 (0.00%)                |  |
| 6-17                                       | 6               | 1      | 0               | 28     | 7 ( 20 % )               |  |
| 18-29                                      | 66              | 11     | 1               | 186    | 77 ( 29.17% )            |  |
| 30-39                                      | 173             | 13     | 5               | 379    | 186 ( 32.63% )           |  |
| 40-49                                      | 284             | 21     | 1               | 690    | 305 ( 30.62% )           |  |
| 50-59                                      | 596             | 61     | 9               | 1,432  | 657 ( 31.32% )           |  |
| 60-69                                      | 680             | 81     | 9               | 2,000  | 761 ( 27.47% )           |  |
| 70-79                                      | 460             | 77     | 4               | 2,091  | 537 ( 20.40% )           |  |
| 80-89                                      | 284             | 49     | 4               | 1,808  | 333 ( 15.52% )           |  |
| 90+  | 88              | 28     | 2               | 739    | 116 ( 13.54% )           |  |
| Missing                                    | 0               | 0      | 0               | 0      | N/A                      |  |
| Race                                       | •               | · ·    | •               | · ·    |                          |  |
| American Indian or Alaska Native           | 5               | 0      | 0               | 4      | 5 ( 55.56% )             |  |
| Asian                                      | 75              | 3      | 1               | 48     | 78 ( 61.42% )            |  |
| Black or African American                  | 423             | 29     | 2               | 887    | 452 ( 33.71% )           |  |
| Native Hawaiian or Other Pacific Islander  | 3               | 0      | 0               | 3      | 3 (50 %)                 |  |
| White<br>Other/Mixed/Unknown               | 433             | 89     | 0               | 1,400  | 522 ( 27.16% )           |  |
|  | 1,698           | 221    | 32              | 7,025  | 1,919 ( 21.38% )         |  |
| Ethnicity                                  |                 |        |                 |        |                          |  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 1: I  | P Stay with Code U | 07.1*            |                 |        |                        |
|---|--------------------|------------------|-----------------|--------|------------------------|
|   | Lab Positive***    | Lab Negative***  | Lab, No Results | No Lab | Patients with Lab Resu |
|   |                    | Number (Percent) |                 |        |                        |
| Hispanic  | 250                | 10               | 0               | 90     | 260 ( 74.29% )         |
| Non-Hispanic  | 483                | 39               | 2               | 46     | 522 ( 91.58% )         |
| Unknown   | 1,904              | 293              | 33              | 9,231  | 2,197 ( 19.17% )       |
| Codes Observed During Inpatient Stay  |                    |                  |                 |        |                        |
| Asymptomatic screening (Z11.59)   | 37                 | 20               | 0               | 126    | 57 ( 31.15% )          |
| Contact and suspected exposure (Z20.828)  | 498                | 116              | 14              | 1,850  | 614 ( 24.78% )         |
| Pneumonia (see Appendix B)  | 2,168              | 251              | 32              | 7,297  | 2,419 ( 24.82% )       |
| Other viral pneumonia (J12.89)  | 2,119              | 164              | 30              | 6,045  | 2,283 ( 27.32% )       |
| ARDS (J80)  | 433                | 38               | 7               | 1,172  | 471 ( 28.55% )         |
| Sepsis (see Appendix C)   | 886                | 119              | 13              | 2,781  | 1,005 ( 26.45% )       |
| Bronchitis (J20.8 OR J40)   | 35                 | 1                | 0               | 105    | 36 ( 25.53% )          |
| Respiratory infection (J22 OR J98.8)  | 233                | 20               | 4               | 1,086  | 253 ( 18.84% )         |
| Cough (RO5)   | 530                | 58               | 7               | 1,917  | 588 ( 23.41% )         |
| Shortness of breath (R06.2)   | 9                  | 2                | 0               | 60     | 11 ( 15.49% )          |
| Fever (R50.9)   | 653                | 91               | 9               | 2,381  | 744 ( 23.74% )         |
| Optional  |                    |                  |                 |        |                        |
| Other COVID Tests   |                    |                  |                 |        |                        |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                  | -                | -               | -      | -                      |
| observed within -7 days prior to hospitalization through end of patient record**    |                    |                  |                 |        |                        |
| est performed, at least 1 positive result   | 195                | 17               | 3               | 292    | 212 ( 41.81% )         |
| est performed, only negative results  | 9                  | 9                | 1               | 55     | 18 ( 24.32% )          |
| No test or unknown result   | 1,833              | 197              | 30              | 6,052  | 2,030 ( 25.02% )       |
| Antigen test within ±14 days from inpatient admission**                             | -                  | -                | -               | -      | -                      |
| est performed, at least 1 positive result   | 0                  | 0                | 0               | 0      | N/A                    |
| est performed, only negative results  | 0                  | 0                | 0               | 0      | N/A                    |
| No test or unknown result   | 1,795              | 273              | 33              | 9,182  | 2,068 ( 18.33% )       |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                    |                  |                 |        |                        |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 981                | 130              | 3               | 14     | 1,111 ( 98.49% )       |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 1: IP Stay with Code U07.1*   |                 |                 |                 |         |                          |  |  |
|---|-----------------|-----------------|-----------------|---------|--------------------------|--|--|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab  | Patients with Lab Result |  |  |
|   | Lab rositive    | Number          | Lab, No Results | IVO LAD | Number (Percent)         |  |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 215             | 35              | 7               | 987     | 250 ( 20.10% )           |  |  |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |         |                          |  |  |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 409             | 48              | 12              | 1,440   | 457 ( 23.94% )           |  |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 | ,       | ,                        |  |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |         |                          |  |  |
| "Primary" Lab Test Product Information****                                    |                 |                 |                 |         |                          |  |  |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -       | N/A                      |  |  |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -               | -               | -               | -       | N/A                      |  |  |
| Differential WBC Count  |                 |                 |                 |         |                          |  |  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 2               | -               | _               | -       | 2 ( 100.0% )             |  |  |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 424             | 21              | 2               | -       | 445 ( 99.55% )           |  |  |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | 87              | 4               | _               | -       | 91 ( 100.0% )            |  |  |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -               | -               | _               | -       | N/A                      |  |  |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -               | -               | -               | -       | N/A                      |  |  |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | 11              | 1               | _               | -       | 12 ( 100.0% )            |  |  |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -               | -               | -               | -       | N/A                      |  |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 55              | 6               | 0               | 0       | 61 ( 100.0% )            |  |  |
| Probe Detection   |                 |                 |                 |         | ,                        |  |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0       | N/A                      |  |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                 |                 |                 |         | ·                        |  |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0       | N/A                      |  |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                 |                 |                 |         | •                        |  |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA | 598             | 48              | 0               | 0       | 646 ( 100.0% )           |  |  |
| With Probe Detection  |                 |                 |                 |         | ,                        |  |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | -               | -               | -               | -       | N/A                      |  |  |
| By NAA With Probe Detection   |                 |                 |                 |         | •                        |  |  |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0       | N/A                      |  |  |
| NAA With Probe Detection  |                 |                 |                 |         |                          |  |  |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA | 1,129           | 218             | 2               | 0       | 1,347 ( 99.85% )         |  |  |
| With Probe Detection  |                 |                 |                 |         | . ,                      |  |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -               | -               | -               | -       | N/A                      |  |  |
| Immunoassay   |                 |                 |                 |         |                          |  |  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 1: IP Stay with Code U07.1*   |                 |                        |                 |        |                          |  |
|---|-----------------|------------------------|-----------------|--------|--------------------------|--|
|   | Lab Positive*** | Lab Nagativa***        | Lab No Posults  | No Lab | Patients with Lab Result |  |
|   | Lab Positive    | Lab Negative*** Number | Lab, No Results | NO Lab | Number (Percent)         |  |
| '94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                     |                 | - INGITIDE             | -               |        | N/A                      |  |
| Rapid Immunoassay   |                 |                        |                 |        | N/A                      |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With                        | -               | -                      | -               | -      | N/A                      |  |
| Probe Detection   |                 |                        |                 |        |                          |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By                        | 0               | 0                      | 0               | 0      | N/A                      |  |
| NAA With Probe Detection  |                 |                        |                 |        |                          |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen                        | 0               | 0                      | 0               | 0      | N/A                      |  |
| By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory | 0               | •                      |                 | •      | A1 / A                   |  |
| Specimen By NAA With Probe Detection  | 0               | 0                      | 0               | 0      | N/A                      |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By                             | _               | _                      | _               | _      | N/A                      |  |
| Immunoassay   |                 |                        |                 |        | 11/7                     |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                             | _               | -                      | -               | _      | N/A                      |  |
| Immunoassay   |                 |                        |                 |        | ,                        |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                           | -               | -                      | -               | -      | N/A                      |  |
| Non-Probe Detection   |                 |                        |                 |        |                          |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By                        | -               | -                      | -               | -      | N/A                      |  |
| NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With  |                 |                        |                 |        |                          |  |
| Probe Detection   | -               | -                      | -               | -      | N/A                      |  |
| Unknown   | 13              | 1                      | 0               | 9      | 14 ( 60.87% )            |  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   | Algorithm 1: IP Stay with Code U07.1 | <u>L</u> *                                       |                            |  |
|---|--------------------------------------|--|----------------------------|--|
|   |                                      | Positive Predictive Value (PPV) Sensitivity (95% |                            |  |
|   | <b>Total Patient Count</b>           | (95% Confidence Interval)                        | Interval)                  |  |
|   |                                      | Number (Percent)                                 |                            |  |
| Care Setting of "Primary" Lab Test***     |                                      |  |                            |  |
| Total Observed                            | 12,397 ( 100.0% )                    | 88.52% (87.32%, 89.64%)                          | 95.27% (94.41%, 96.03%)    |  |
| Inpatient                                 | 792 ( 6.39% )                        | 91.01% (88.78%, 92.93%)                          | 91.25% (89.04%, 93.14%)    |  |
| Outpatient or Emergency Department        | 799 ( 6.45% )                        | 91.82% (89.70%, 93.63%)                          | 91.14% (88.95%, 93.01%)    |  |
| Other                                     | 89 ( 0.72% )                         | 81.61% (71.86%, 89.11%)                          | 86.59% (77.26%, 93.11%)    |  |
| Care Setting Reported as Unknown          | 4,192 ( 33.81% )                     | 84.20% (82.02%, 86.21%)                          | ****                       |  |
| Demographics                              |                                      |  |                            |  |
| Sex                                       |                                      |  |                            |  |
| Female                                    | 5,737 ( 46.28% )                     | 88.57% ( 86.75% , 90.23% )                       | 94.80% (93.43%, 95.97%)    |  |
| Male                                      | 6,644 ( 53.59% )                     | 88.48% (86.83%, 89.98%)                          | 95.65% (94.50%, 96.62%)    |  |
| Other/Missing                             | N/A                                  | N/A  | N/A                        |  |
| Age at Hospital Admission (Years)         |                                      |  |                            |  |
| 0-5                                       | 14 ( 0.11% )                         | N/A  | N/A                        |  |
| 6-17                                      | 35 ( 0.28% )                         | 85.71% (42.13%, 99.64%)                          | 85.71% (42.13%, 99.64%)    |  |
| 18-29                                     | 264 ( 2.13% )                        | 85.71% (75.87%, 92.65%)                          | 88 % (78.44%, 94.36%)      |  |
| 30-39                                     | 570 ( 4.60% )                        | 93.01% (88.34%, 96.23%)                          | 92.51% (87.76%, 95.85%)    |  |
| 40-49                                     | 996 ( 8.03% )                        | 93.11% (89.67%, 95.69%)                          | 97.59% (95.11%, 99.03%)    |  |
| 50-59                                     | 2,098 ( 16.92% )                     | 90.72% (88.23%, 92.82%)                          | 96.75% (95.03%, 98.01%)    |  |
| 60-69                                     | 2,770 ( 22.34% )                     | 89.36% (86.94%, 91.46%)                          | 96.73% (95.13%, 97.91%)    |  |
| 70-79                                     | 2,632 ( 21.23% )                     | 85.66% (82.41%, 88.52%)                          | 93.31% (90.73%, 95.35%)    |  |
| 80-89                                     | 2,145 ( 17.30% )                     | 85.29% (81.02%, 88.91%)                          | 93.73% (90.38%, 96.18%)    |  |
| 90+                                       | 857 ( 6.91% )                        | 75.86% (67.04%, 83.32%)                          | 95.65% (89.24%, 98.80%)    |  |
| Missing                                   | N/A                                  | N/A  | N/A                        |  |
| Race                                      |                                      |  |                            |  |
| American Indian or Alaska Native          | 9 ( 0.07% )                          | 100.0% (47.82%, 100.0%)                          | 100.0% (47.82%, 100.0%)    |  |
| Asian                                     | 127 ( 1.02% )                        | 96.15% (89.17%, 99.20%)                          | 96.15% (89.17%, 99.20%)    |  |
| Black or African American                 | 1,341 ( 10.82% )                     | 93.58% ( 90.92% , 95.66% )                       | 96.36% (94.15%, 97.90%)    |  |
| Native Hawaiian or Other Pacific Islander | 6 ( 0.05% )                          | 100.0% ( 29.24% , 100.0% )                       | 100.0% (29.24%, 100.0%)    |  |
| White                                     | 1,922 ( 15.50% )                     | 82.95% ( 79.44% , 86.08% )                       | 91.35% (88.45%, 93.72%)    |  |
| Other/Mixed/Unknown<br>Ethnicity          | 8,976 ( 72.40% )                     | 88.48% (86.97%, 89.88%)                          | 95.99% ( 94.96% , 96.85% ) |  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   |                            | Sensitivity (95% Confidence |                            |
|---|----------------------------|-----------------------------|----------------------------|
|   | <b>Total Patient Count</b> | (95% Confidence Interval)   | Interval)                  |
|   |                            |                             |                            |
| Hispanic  | 350 ( 2.82% )              | 96.15% (93.04%, 98.14%)     | 96.90% (93.98%, 98.65%)    |
| Non-Hispanic  | 570 ( 4.60% )              | 92.53% (89.93%, 94.63%)     | 96.02% (93.93%, 97.55%)    |
| Unknown   | 11,461 ( 92.45% )          | 86.66% (85.17%, 88.06%)     | 94.87% ( 93.81% , 95.79% ) |
| Codes Observed During Inpatient Stay  |                            |                             |                            |
| Asymptomatic screening (Z11.59)   | 183 ( 1.48% )              | 64.91% (51.13%, 77.09%)     | 90.24% ( 76.87% , 97.28% ) |
| Contact and suspected exposure (Z20.828)  | 2,478 ( 19.99% )           | 81.11% (77.78%, 84.13%)     | 95.77% ( 93.66% , 97.33% ) |
| Pneumonia (see Appendix B)  | 9,748 ( 78.63% )           | 89.62% (88.34%, 90.81%)     | 97.70% ( 96.99% , 98.28% ) |
| Other viral pneumonia (J12.89)  | 8,358 ( 67.42% )           | 92.82% (91.68%, 93.84%)     | 99.25% (98.79%, 99.57%)    |
| ARDS (J80)  | 1,650 ( 13.31% )           | 91.93% (89.09%, 94.23%)     | 99.08% (97.67%, 99.75%)    |
| Sepsis (see Appendix C)   | 3,799 ( 30.64% )           | 88.16% ( 86 % , 90.09% )    | 96.51% (95.11%, 97.60%)    |
| Bronchitis (J20.8 OR J40)   | 141 ( 1.14% )              | 97.22% (85.47%, 99.93%)     | 94.59% (81.81%, 99.34%)    |
| Respiratory infection (J22 OR J98.8)  | 1,343 ( 10.83% )           | 92.09% (88.06%, 95.10%)     | ****                       |
| Cough (R05)   | 2,512 ( 20.26% )           | 90.14% (87.44%, 92.42%)     | 97.43% (95.72%, 98.59%)    |
| Shortness of breath (R06.2)   | 71 ( 0.57% )               | 81.82% (48.22%, 97.72%)     | 100.0% (66.37%, 100.0%)    |
| Fever (R50.9)   | 3,134 ( 25.28% )           | 87.77% (85.20%, 90.04%)     | 97.61% (96.15%, 98.63%)    |
| Optional  |                            |                             |                            |
| Other COVID Tests   |                            |                             |                            |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                           | -                          |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                             |                            |
| Test performed, at least 1 positive result  | 507 ( 4.09% )              | 91.98% (87.47%, 95.26%)     | ****                       |
| Test performed, only negative results   | 74 ( 0.60% )               | 50 % ( 26.02% , 73.98% )    | 100.0% (66.37%, 100.0%)    |
| No test or unknown result   | 8,112 ( 65.44% )           | 90.30% (88.92%, 91.55%)     | 94.83% (93.74%, 95.77%)    |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                           | -                          |
| Test performed, at least 1 positive result  | N/A                        | N/A                         | N/A                        |
| Test performed, only negative results   | N/A                        | N/A                         | N/A                        |
| No test or unknown result   | 11,283 ( 91.01% )          | 86.80% (85.26%, 88.23%)     | ****                       |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            |                             |                            |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,128 ( 9.10% )            | 88.30% (86.26%, 90.13%)     | 93.61% (91.95%, 95.01%)    |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 1: IP Stay with Code U07.1*   |                         |   |                             |  |  |
|---|-------------------------|---|-----------------------------|--|--|
|   |                         | Positive Predictive Value (PPV)         | Sensitivity (95% Confidence |  |  |
|   | Total Patient Count     | (95% Confidence Interval)               | Interval)                   |  |  |
| 700 000 /   | 1 2 1 1 ( 1 2 2 2 2 ( ) | Number (Percent)                        | 07.000/ / 04.400/ 00.0/ )   |  |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 1,244 ( 10.03% )        | 86 % (81.07%, 90.05%)                   | 97.29% ( 94.18% , 99 % )    |  |  |
| of breath) OR R50.9 (fever)]  | 1 000 ( 15 100( )       | 00 500/ / 05 000/ 00 450/ )             | ****                        |  |  |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 1,909 ( 15.40% )        | 89.50% (86.32%, 92.15%)                 | ***                         |  |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                         |   |                             |  |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                         |   |                             |  |  |
| "Primary" Lab Test Product Information****  847377 - SARS COV 2 NS            | N/A                     | N/A                                     | N/A                         |  |  |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | N/A<br>N/A              | N/A<br>N/A                              | N/A<br>N/A                  |  |  |
| Differential WBC Count  | N/A                     | N/A                                     | N/A                         |  |  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 2 ( 0.02% )             | 100.0% (15.81%, 100.0%)                 | 66.67% ( 9.43% , 99.16% )   |  |  |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 447 ( 3.61% )           | 95.28% ( 92.88% , 97.06% )              | 96.15% ( 93.90% , 97.74% )  |  |  |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | 91 ( 0.73% )            | 95.60% (89.13%, 98.79%)                 | 91.58% (84.08%, 96.29%)     |  |  |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | N/A                     | N/A                                     | N/A                         |  |  |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | N/A                     | N/A                                     | N/A                         |  |  |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | 12 ( 0.10% )            | 91.67% (61.52%, 99.79%)                 | 100.0% (71.51%, 100.0%)     |  |  |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | N/A                     | N/A                                     | N/A                         |  |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 61 ( 0.49% )            | 90.16% ( 79.81% , 96.30% )              | 96.49% (87.89%, 99.57%)     |  |  |
| Probe Detection   | (                       | , |                             |  |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                     | N/A                                     | N/A                         |  |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      | ·                       | ·                                       | ·                           |  |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                     | N/A                                     | N/A                         |  |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                         |   |                             |  |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA | 646 ( 5.21% )           | 92.57% ( 90.27% , 94.47% )              | 97.24% (95.61%, 98.38%)     |  |  |
| With Probe Detection  |                         |   |                             |  |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | N/A                     | N/A                                     | N/A                         |  |  |
| By NAA With Probe Detection   |                         |   |                             |  |  |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                     | N/A                                     | N/A                         |  |  |
| NAA With Probe Detection  |                         |   |                             |  |  |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA | 1,349 ( 10.88% )        | 83.82% (81.74%, 85.74%)                 | 93.54% ( 92 % , 94.86% )    |  |  |
| With Probe Detection  | N1 / A                  | A1/A                                    | N1/A                        |  |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | N/A                     | N/A                                     | N/A                         |  |  |
| Immunoassay   |                         |   |                             |  |  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 1: IP Stay with Code U07.1*   |   |                         |  |  |
|---|---|-------------------------|--|--|
|   | Positive Predictive Value (PPV) Total Patient Count (95% Confidence Interval) |                         | Sensitivity (95% Confidence<br>Interval) |  |
|   |   |                         |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                                  | N/A   | N/A                     | N/A                                      |  |
| Rapid Immunoassav<br>94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With               | N/A   | N/A                     | N/A                                      |  |
| Probe Detection<br>94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By                 | N/A   | N/A                     | N/A                                      |  |
| NAA With Probe Detection<br>94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen        | N/A   | N/A                     | N/A                                      |  |
| Bv NAA With Probe Detection<br>94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory          | N/A   | N/A                     | N/A                                      |  |
| Specimen By NAA With Probe Detection<br>94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By | N/A   | N/A                     | N/A                                      |  |
| Immunoassav<br>94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                          | N/A   | N/A                     | N/A                                      |  |
| Immunoassav<br>94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                        | N/A   | N/A                     | N/A                                      |  |
| Non-Probe Detection<br>94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By             | N/A   | N/A                     | N/A                                      |  |
| NAA With Probe Detection<br>94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With           | N/A   | N/A                     | N/A                                      |  |
| Probe Detection Unknown   | 23 ( 0.19% )  | 92.86% (66.13%, 99.82%) | 81.25% ( 54.35% , 95.95% )               |  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Parish  | Algorithm 2: IP Stay with Any of Codes U07.1, B97.29* |                 |        |                 |        |                  |
|---|---|-----------------|--------|-----------------|--------|------------------|
| Total Observed   2,640   353   35   9,500   2,993 (23.89%)   10patient   709   74   13   18   18   18   19   16   18   18   19   19   19   19   19   19   |   | Lab Positive*** |        | Lab, No Results | No Lab |                  |
| Total Observed  | Cons Court of IID the small lab Tour **               |                 | Number |                 |        | Number (Percent) |
| Inpatient   |   |                 |        |                 |        | 2 222 / 22 224 ) |
| Outpatient or Emergency Department         731         68         4         N/A         799           Other         71         16         2         N/A         87           Care Setting Reported as Unknown         1,021         195         16         N/A         1,216           Demographics           Sex           Female         1,188         159         13         4,436         1,347 (23,24%)           Male         1,452         194         22         5,048         1,646 (24,51%)           Other/Missing         0         0         0         0         N/A           Age at Hospital Admission (Years)         0         0         0         14         0 (0,00%)           6-17         6         1         0         28         7 (20%)           18-29         66         1         1         191         77 (28,62%)           18-29         13         48         2         72,80%)           18-29         66         1         1         191         77 (28,62%)           40-49         28         21         1         697         305 (30,41%)           50-59         596         62  |   |                 |        |                 | -      |                  |
| Other Care Setting Reported as Unknown         71         16         2         N/A         87           Care Setting Reported as Unknown         1,021         195         16         N/A         1,216           Demographics           Sex           Female         1,188         159         13         4,436         1,347 (23.24%)           Male         1,452         194         22         5,048         1,646 (24.51%)           Other/Missing         0         0         0         0         N/A           Age at Hospital Admission (Years)         3         0         0         14         0 (0.00%)           6-17         6         1         0         28         7 (20 %)           18-29         66         11         1         191         77 (28.62%)           30-39         173         15         5         381         188 (32.75%)           40-49         284         21         1         697         305 (30.41%)           50-59         596         62         9         1,455         568 (31.01%)           60-69         681         86         9         2,023         767 (27.40%)           70-7   | •   |                 |        |                 | -      |                  |
| Care Setting Reported as Unknown         1,021         195         16         N/A         1,216           Demographics           Sex         Sex           Female         1,188         159         13         4,436         1,347 (23.24%)           Male         1,452         194         22         5,048         1,646 (24.51%)           Other/Missing         0         0         0         0         N/A           Age at Hospital Admission (Years)         0         0         0         14         0 (0.00%)           6-17         6         1         0         28         7 (20%)           18-29         66         11         1         191         77 (28.62%)           30-39         173         15         5         381         188 (32.75%)           40-49         284         21         1         697         305 (30.41%)           50-59         596         62         9         1,455         658 (31.01%)           60-69         681         86         9         2,023         767 (27.40%)           70-79         463         78         4         2,18         541 (20.32%)           80-89  |   |                 |        |                 | -      |                  |
| Sex   Female  |   |                 |        |                 |        |                  |
| Sex         Female         1,188         159         13         4,436         1,347 (23.24%)           Male         1,452         194         22         5,048         1,646 (24.51%)           Other/Missing         0         0         0         0         N/A           Age at Hospital Admission (Years)         0         0         0         14         0 (0.00%)           6-17         6         1         0         28         7 (20%)           6-18         6         11         1         191         77 (28.62%)           30-39         173         15         5         381         188 (32.75%)           40-49         284         21         1         697         305 (30.41%)           50-59         596         62         9         1,455         658 (31.01%)           60-69         681         86         9         2,023         767 (27.40%)           70-79         463         78         4         2,118         541 (20.32%)           80-89         283         51         4         1,832         334 (15.39%)           90+         88         28         2         745         116 (13.44%)   |   | 1,021           | 195    | 16              | N/A    | 1,216            |
| Female Male Male (1,452)         1194         22         5,048         1,347 (23.24%)           Other/Missing O         0         0         0         0         N/A           Age at Hospital Admission (Years)         0         0         0         0         14         0 (0.00%)           6-17         6         1         0         28         7 (20%)         18.29         66         11         1         191         77 (28.62%)         30.39         173         15         5         381         188 (32.75%)         40-49         284         21         1         697         305 (30.41%)         50-59         50-59         62         9         1,455         658 (31.01%)         60-69         66         62         9         1,455         658 (31.01%)         60-69         66         62         9         1,455         658 (31.01%)         60-69         62         9         1,455         658 (31.01%)         60-69         62         9         1,455         658 (31.01%)         60-69         62         9         1,455         658 (31.01%)         60-69         62         9         1,455         658 (31.01%)         60-69         62         9         2,023         767 (27.40%)         767 (27.40%) <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>   |   |                 |        |                 |        |                  |
| Male Other/Missing         1,452         194         22         5,048         1,646 (24.51%) on the part of the part o  |   |                 |        |                 |        |                  |
| Other/Missing         0         0         0         0         N/A           Age at Hospital Admission (Years)         0         0         0         14         0 (0.00%)           6-17         6         1         0         28         7 (20 %)           18-29         66         11         1         191         77 (28.62%)           30-39         173         15         5         381         188 (32.75%)           40-49         284         21         1         697         305 (30.41%)           50-59         596         62         9         1,455         658 (31.01%)           60-69         681         86         9         2,023         767 (27.40%)           70-79         463         78         4         2,118         541 (20.32%)           80-89         283         51         4         1,832         334 (15.39%)           90+         88         28         2         745         116 (13.44%)           Missing         0         0         0         0         N/A           Race           Asian         75         3         1         49         78 (60.94%)   |   |                 |        |                 | 4,436  |                  |
| Age at Hospital Admission (Years)  0-5 0 0 0 0 0 14 0(0.00%) 6-17 18-29 66 11 1 191 77 (28.62%) 30-39 173 15 5 381 188 (32.75%) 40-49 284 21 1 697 305 (30.41%) 50-59 60-69 596 62 9 1,455 658 (31.01%) 60-69 681 86 9 2,023 767 (27.40%) 70-79 463 78 40-49 80-89 80-89 90+ 88-89 80-89 90+ 88-8 80-89 90+ 88-8 80-89 90+ 88-8 80-89 90+ 88-8 80-89 90+ 88-8 80-89 90+ 88-8 80-89 90+ 88-8 80-89 90+ 88-8 80-89 90+ 88-8 80-89 90+ 88-8 80-89 90+ 88-8 80-89 90+ 88-8 80-89 90+ 88-8 80-89 90+ 88-8 80-89 90+ 88-8 28 2 745 116 (13.44%) 80-80 |   | 1,452           | 194    | 22              | 5,048  | 1,646 ( 24.51% ) |
| 0-5         0         0         14         0 (0.00%)           6-17         6         1         0         28         7 (20 %)           18-29         66         11         1         191         77 (28.62%)           30-39         173         15         5         381         188 (32.75%)           40-49         284         21         1         697         305 (30.41%)           50-59         66-69         62         9         1,455         658 (31.01%)           60-69         681         86         9         2,023         767 (27.40%)           70-79         463         78         4         2,118         541 (20.32%)           80-89         283         51         4         1,832         334 (15.39%)           90+         88         28         2         745         116 (13.44%)           Missing         0         0         0         N/A           Race           American Indian or Alaska Native         5         0         0         4         5 (55.56%)           Asian         75         3         1         49         78 (60.94%)           Black or African American         <   |   | 0               | 0      | 0               | 0      | N/A              |
| 6-17 6 1 0 28 7 (20 %) 18-29 66 11 1 1 191 77 (28.62%) 30-39 173 15 5 381 188 (32.75%) 40-49 284 21 1 697 305 (30.41%) 50-59 596 62 9 1,455 658 (31.01%) 60-69 681 86 9 2,023 767 (27.40%) 70-79 463 78 4 2,118 541 (20.32%) 80-89 283 51 4 1,832 334 (15.39%) 90+ 88 28 2 745 116 (13.44%) Missing 0 0 0 0 0 N/A  Race  American Indian or Alaska Native Asian 75 3 1 49 78 (60.94%) Black or African American Native Hawaiian or Other Pacific Islander White 434 93 0 1,411 527 (27.19%) Other/Mixed/Unknown 1,698 226 32 7,116 1,924 (21.21%)   | Age at Hospital Admission (Years)                     |                 |        |                 |        |                  |
| 18-29       66       11       1       191       77 (28.62%)         30-39       173       15       5       381       188 (32.75%)         40-49       284       21       1       697       305 (30.41%)         50-59       596       62       9       1,455       658 (31.01%)         60-69       681       86       9       2,023       767 (27.40%)         70-79       463       78       4       2,118       541 (20.32%)         80-89       283       51       4       1,832       334 (15.39%)         90+       88       28       2       745       116 (13.44%)         Missing       0       0       0       0       N/A         Race         American Indian or Alaska Native       5       0       0       4       5 (55.56%)         Asian       75       3       1       49       78 (60.94%)         Black or African American       425       31       2       901       456 (33.55%)         Native Hawaiian or Other Pacific Islander       3       0       0       1,411       527 (27.19%)         Other/Mixed/Unknown       1,698       226  | 0-5   | 0               | 0      | 0               | 14     | 0 (0.00%)        |
| 30-39   | 6-17  | 6               | 1      | 0               | 28     | 7 ( 20 % )       |
| 40-49 284 21 1 697 305 (30.41%) 50-59 596 62 9 1,455 658 (31.01%) 60-69 681 86 9 2,023 767 (27.40%) 70-79 463 78 4 2,118 541 (20.32%) 80-89 283 51 4 1,832 334 (15.39%) 90+ 888 28 2 745 116 (13.44%) Missing 0 0 0 0 0 N/A  Race  American Indian or Alaska Native 5 0 0 0 4 5 (55.56%) Asian 75 3 1 49 78 (60.94%) Black or African American 425 31 2 901 456 (33.55%) Native Hawaiian or Other Pacific Islander 434 93 0 1,411 527 (27.19%) Other/Mixed/Unknown 1,698 226 32 7,116 1,924 (21.21%)  | 18-29   | 66              | 11     | 1               | 191    | 77 ( 28.62% )    |
| 50-59       596       62       9       1,455       658 (31.01%)         60-69       681       86       9       2,023       767 (27.40%)         70-79       463       78       4       2,118       541 (20.32%)         80-89       283       51       4       1,832       334 (15.39%)         90+       88       28       2       745       116 (13.44%)         Missing       0       0       0       0       N/A         Race       American Indian or Alaska Native         Asian       5       0       0       4       5 (55.56%)         Asian       75       3       1       49       78 (60.94%)         Black or African American       425       31       2       901       456 (33.55%)         Native Hawaiian or Other Pacific Islander       3       0       0       0       3 (50 %)         White       434       93       0       1,411       527 (27.19%)         Other/Mixed/Unknown       1,698       226       32       7,116       1,924 (21.21%)  | 30-39   | 173             | 15     | 5               | 381    | 188 ( 32.75% )   |
| 60-69 681 86 9 2,023 767 (27.40%) 70-79 463 78 4 2,118 541 (20.32%) 80-89 283 51 4 1,832 334 (15.39%) 90+ 88 28 2 745 116 (13.44%) Missing 0 0 0 0 0 N/A  Race  American Indian or Alaska Native 5 0 0 4 5 (55.56%) Asian 75 3 1 49 78 (60.94%) Black or African American Merican 425 31 2 901 456 (33.55%) Native Hawaiian or Other Pacific Islander 3 0 0 3 3 (50 %) White 434 93 0 1,411 527 (27.19%) Other/Mixed/Unknown 1,698 226 32 7,116 1,924 (21.21%)  | 40-49   | 284             | 21     | 1               | 697    | 305 ( 30.41% )   |
| 70-79 463 78 4 2,118 541 (20.32%) 80-89 283 51 4 1,832 334 (15.39%) 90+ 88 28 2 745 116 (13.44%) Missing 0 0 0 0 0 0 N/A  Race  American Indian or Alaska Native 5 0 0 0 4 5 (55.56%) Asian 75 3 1 49 78 (60.94%) Black or African American 75 3 1 49 78 (60.94%) Black or African American 425 31 2 901 456 (33.55%) Native Hawaiian or Other Pacific Islander 3 0 0 3 3 (50 %) White 434 93 0 1,411 527 (27.19%) Other/Mixed/Unknown 1,698 226 32 7,116 1,924 (21.21%)  | 50-59   | 596             | 62     | 9               | 1,455  | 658 ( 31.01% )   |
| 80-89       283       51       4       1,832       334 ( 15.39% )         90+       88       28       2       745       116 ( 13.44% )         Missing       0       0       0       0       N/A         Race         American Indian or Alaska Native       5       0       0       4       5 ( 55.56% )         Asian       75       3       1       49       78 ( 60.94% )         Black or African American       425       31       2       901       456 ( 33.55% )         Native Hawaiian or Other Pacific Islander       3       0       0       3       3 ( 50 % )         White       434       93       0       1,411       527 ( 27.19% )         Other/Mixed/Unknown       1,698       226       32       7,116       1,924 ( 21.21% )  | 60-69   | 681             | 86     | 9               | 2,023  | 767 ( 27.40% )   |
| 80-89       283       51       4       1,832       334 (15.39%)         90+       88       28       2       745       116 (13.44%)         Missing       0       0       0       0       N/A         Race         American Indian or Alaska Native       5       0       0       4       5 (55.56%)         Asian       75       3       1       49       78 (60.94%)         Black or African American       425       31       2       901       456 (33.55%)         Native Hawaiian or Other Pacific Islander       3       0       0       3       3 (50 %)         White       434       93       0       1,411       527 (27.19%)         Other/Mixed/Unknown       1,698       226       32       7,116       1,924 (21.21%)  | 70-79   | 463             | 78     | 4               | 2,118  | 541 ( 20.32% )   |
| 90+ 88 28 2 745 116 (13.44%) Missing 0 0 0 0 0 N/A  Race American Indian or Alaska Native 5 0 0 4 5 (55.56%) Asian 75 3 1 49 78 (60.94%) Black or African American Black or African American 425 31 2 901 456 (33.55%) Native Hawaiian or Other Pacific Islander 3 0 0 3 3 (50%) White 434 93 0 1,411 527 (27.19%) Other/Mixed/Unknown 1,698 226 32 7,116 1,924 (21.21%)  | 80-89   | 283             | 51     | 4               |        |                  |
| Missing       0       0       0       0       N/A         Race         American Indian or Alaska Native       5       0       0       4       5 (55.56%)         Asian       75       3       1       49       78 (60.94%)         Black or African American       425       31       2       901       456 (33.55%)         Native Hawaiian or Other Pacific Islander       3       0       0       3       3 (50%)         White       434       93       0       1,411       527 (27.19%)         Other/Mixed/Unknown       1,698       226       32       7,116       1,924 (21.21%)  | 90+   |                 | 28     | 2               |        |                  |
| Race         American Indian or Alaska Native       5       0       0       4       5 (55.56%)         Asian       75       3       1       49       78 (60.94%)         Black or African American       425       31       2       901       456 (33.55%)         Native Hawaiian or Other Pacific Islander       3       0       0       3       3 (50%)         White       434       93       0       1,411       527 (27.19%)         Other/Mixed/Unknown       1,698       226       32       7,116       1,924 (21.21%)  | Missing   |                 | 0      | 0               | 0      | , ,              |
| Asian 75 3 1 49 78 ( 60.94% ) Black or African American 425 31 2 901 456 ( 33.55% ) Native Hawaiian or Other Pacific Islander 3 0 0 3 3 ( 50 % ) White 434 93 0 1,411 527 ( 27.19% ) Other/Mixed/Unknown 1,698 226 32 7,116 1,924 ( 21.21% )  | Race  |                 |        |                 |        | ·                |
| Asian       75       3       1       49       78 (60.94%)         Black or African American       425       31       2       901       456 (33.55%)         Native Hawaiian or Other Pacific Islander       3       0       0       3       3 (50%)         White       434       93       0       1,411       527 (27.19%)         Other/Mixed/Unknown       1,698       226       32       7,116       1,924 (21.21%)   | American Indian or Alaska Native                      | 5               | 0      | 0               | 4      | 5 ( 55.56% )     |
| Native Hawaiian or Other Pacific Islander  Native Hawaiian or Other Pacific Islander  3 0 0 3 3 (50 %)  White  434 93 0 1,411 527 (27.19%)  Other/Mixed/Unknown  1,698 226 32 7,116 1,924 (21.21%)  |   |                 |        |                 |        |                  |
| White       434       93       0       1,411       527 ( 27.19% )         Other/Mixed/Unknown       1,698       226       32       7,116       1,924 ( 21.21% )   |   | 425             |        |                 |        |                  |
| Other/Mixed/Unknown 1,698 226 32 7,116 1,924 ( 21.21% )   |   |                 | -      |                 | _      |                  |
| 1,050 220 32 7,110 1,524 (21.21/0)  |   |                 |        |                 |        |                  |
|   | Ethnicity   | 1,698           | 226    | 32              | 7,116  | 1,924 ( 21.21% ) |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 2: IP Stay w  | ith Any of Codes U | 07.1, B97.29*   |                 |        |                                       |
|---|--------------------|-----------------|-----------------|--------|---------------------------------------|
|   | Lab Positive***    | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu                |
|   |                    | Number          |                 |        | Number (Percent)                      |
| Hispanic  | 250                | 10              | 0               | 90     | 260 ( 74.29% )                        |
| Non-Hispanic  | 483                | 41              | 2               | 46     | 524 (91.61%)                          |
| Unknown   | 1,907              | 302             | 33              | 9,348  | 2,209 ( 19.06% )                      |
| Codes Observed During Inpatient Stay  |                    |                 |                 |        | · · · · · · · · · · · · · · · · · · · |
| Asymptomatic screening (Z11.59)   | 37                 | 21              | 0               | 128    | 58 ( 31.18% )                         |
| Contact and suspected exposure (Z20.828)  | 499                | 123             | 14              | 1,881  | 622 ( 24.71% )                        |
| Pneumonia (see Appendix B)  | 2,171              | 256             | 32              | 7,374  | 2,427 ( 24.68% )                      |
| Other viral pneumonia (J12.89)  | 2,121              | 166             | 30              | 6,085  | 2,287 ( 27.22% )                      |
| ARDS (J80)  | 433                | 39              | 7               | 1,177  | 472 ( 28.50% )                        |
| Sepsis (see Appendix C)   | 887                | 127             | 13              | 2,806  | 1,014 ( 26.45% )                      |
| Bronchitis (J20.8 OR J40)   | 35                 | 1               | 0               | 107    | 36 ( 25.17% )                         |
| Respiratory infection (J22 OR J98.8)  | 233                | 20              | 4               | 1,089  | 253 ( 18.80% )                        |
| Cough (RO5)   | 530                | 62              | 7               | 1,933  | 592 ( 23.38% )                        |
| Shortness of breath (R06.2)   | 9                  | 2               | 0               | 60     | 11 ( 15.49% )                         |
| Fever (R50.9)   | 653                | 97              | 9               | 2,404  | 750 ( 23.71% )                        |
| Optional  |                    |                 |                 |        |                                       |
| Other COVID Tests   |                    |                 |                 |        |                                       |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                  | -               | -               | -      | -                                     |
| bbserved within -7 days prior to hospitalization through end of patient record**    |                    |                 |                 |        |                                       |
| est performed, at least 1 positive result   | 195                | 17              | 3               | 294    | 212 ( 41.65% )                        |
| est performed, only negative results  | 9                  | 9               | 1               | 55     | 18 ( 24.32% )                         |
| No test or unknown result   | 1,834              | 205             | 30              | 6,138  | 2,039 ( 24.84% )                      |
| Antigen test within ±14 days from inpatient admission**                             | -                  | -               | -               | -      | -                                     |
| est performed, at least 1 positive result   | 0                  | 0               | 0               | 0      | N/A                                   |
| est performed, only negative results  | 0                  | 0               | 0               | 0      | N/A                                   |
| No test or unknown result   | 1,798              | 278             | 33              | 9,297  | 2,076 ( 18.20% )                      |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                    |                 |                 |        |                                       |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 984                | 134             | 3               | 14     | 1,118 ( 98.50% )                      |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                         |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   | Lab i Ositive   | Number          | Lab, No Results | NO Lab | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 215             | 39              | 7               | 1,000  | 254 ( 20.14% )           |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 410             | 49              | 12              | 1,452  | 459 ( 23.87% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 | ,      | ,                        |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****                                    |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -               | -               | -               | -      | N/A                      |
| Differential WBC Count  |                 |                 |                 |        |                          |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 2               | -               | _               | -      | 2 ( 100.0% )             |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 425             | 25              | 2               | -      | 450 ( 99.56% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | 87              | 4               | _               | -      | 91 ( 100.0% )            |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -               | -               | _               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | 11              | 1               | _               | -      | 12 ( 100.0% )            |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 55              | 6               | 0               | 0      | 61 ( 100.0% )            |
| Probe Detection   |                 |                 |                 |        | ,                        |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                 |                 |                 |        | ·                        |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                 |                 |                 |        | •                        |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA | 598             | 48              | 0               | 0      | 646 ( 100.0% )           |
| With Probe Detection  |                 |                 |                 |        | ,                        |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA | 1,132           | 223             | 2               | 0      | 1,355 ( 99.85% )         |
| With Probe Detection  |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |

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Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*   |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                                  | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay<br>94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With               | -               | -               | -               | -      | N/A                      |
| Probe Detection<br>94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By                 | 0               | 0               | 0               | 0      | N/A                      |
| NAA With Probe Detection<br>94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen        | 0               | 0               | 0               | 0      | N/A                      |
| By NAA With Probe Detection<br>94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory          | 0               | 0               | 0               | 0      | N/A                      |
| Specimen By NAA With Probe Detection<br>94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By | -               | -               | -               | -      | N/A                      |
| Immunoassay<br>94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                          | -               | -               | -               | -      | N/A                      |
| Immunoassay<br>94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                        | -               | _               | -               | -      | N/A                      |
| Non-Probe Detection<br>94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By             | _               | _               | -               | _      | N/A                      |
| NAA With Probe Detection<br>94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With           | _               | _               | -               | _      | N/A                      |
| Probe Detection   |                 |                 |                 |        | 14/11                    |
| Unknown   | 13              | 1               | 0               | 9      | 14 ( 60.87% )            |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Al  | gorithm 2: IP Stay with Any of Codes U07.1 | ., B97.29*                    |                             |
|---|--|-------------------------------|-----------------------------|
|   |  |                               | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b>                 | PPV (95% Confidence Interval) | Interval)                   |
|   |  | Number (Percent)              |                             |
| Care Setting of "Primary" Lab Test***     |  |                               |                             |
| Total Observed                            | 12,528 ( 100.0% )                          | 88.21% (87%, 89.34%)          | 95.38% (94.53%, 96.13%)     |
| Inpatient                                 | 796 ( 6.35% )                              | 90.55% (88.28%, 92.51%)       | 91.25% (89.04%, 93.14%)     |
| Outpatient or Emergency Department        | 803 ( 6.41% )                              | 91.49% (89.34%, 93.33%)       | 91.26% (89.09%, 93.12%)     |
| Other                                     | 89 ( 0.71% )                               | 81.61% (71.86%, 89.11%)       | 86.59% (77.26%, 93.11%)     |
| Care Setting Reported as Unknown          | 4,228 ( 33.75% )                           | 83.96% (81.78%, 85.98%)       | ****                        |
| Demographics                              |  |                               |                             |
| Sex                                       |  |                               |                             |
| Female                                    | 5,796 ( 46.26% )                           | 88.20% (86.35%, 89.87%)       | 94.96% (93.60%, 96.11%)     |
| Male                                      | 6,716 ( 53.61% )                           | 88.21% (86.56%, 89.73%)       | 95.72% (94.57%, 96.68%)     |
| Other/Missing                             | N/A  | N/A                           | N/A                         |
| Age at Hospital Admission (Years)         |  |                               |                             |
| 0-5                                       | 14 ( 0.11% )                               | N/A                           | N/A                         |
| 6-17                                      | 35 ( 0.28% )                               | 85.71% (42.13%, 99.64%)       | 85.71% (42.13%, 99.64%)     |
| 18-29                                     | 269 ( 2.15% )                              | 85.71% (75.87%, 92.65%)       | 88 % (78.44%, 94.36%)       |
| 30-39                                     | 574 ( 4.58% )                              | 92.02% (87.18%, 95.47%)       | 92.51% (87.76%, 95.85%)     |
| 40-49                                     | 1,003 ( 8.01% )                            | 93.11% (89.67%, 95.69%)       | 97.59% (95.11%, 99.03%)     |
| 50-59                                     | 2,122 ( 16.94% )                           | 90.58% (88.08%, 92.70%)       | 96.75% (95.03%, 98.01%)     |
| 60-69                                     | 2,799 ( 22.34% )                           | 88.79% (86.34%, 90.93%)       | 96.87% (95.30%, 98.03%)     |
| 70-79                                     | 2,663 ( 21.26% )                           | 85.58% (82.34%, 88.43%)       | 93.91% (91.43%, 95.86%)     |
| 80-89                                     | 2,170 ( 17.32% )                           | 84.73% (80.42%, 88.41%)       | 93.40% (89.99%, 95.92%)     |
| 90+                                       | 863 ( 6.89% )                              | 75.86% (67.04%, 83.32%)       | 95.65% (89.24%, 98.80%)     |
| Missing                                   | N/A  | N/A                           | N/A                         |
| Race                                      |  |                               |                             |
| American Indian or Alaska Native          | 9 ( 0.07% )                                | 100.0% (47.82%, 100.0%)       | 100.0% (47.82%, 100.0%)     |
| Asian                                     | 128 ( 1.02% )                              | 96.15% (89.17%, 99.20%)       | 96.15% (89.17%, 99.20%)     |
| Black or African American                 | 1,359 ( 10.85% )                           | 93.20% ( 90.49% , 95.33% )    | 96.81% (94.71%, 98.25%)     |
| Native Hawaiian or Other Pacific Islander | 6 ( 0.05% )                                | 100.0% (29.24%, 100.0%)       | 100.0% (29.24%, 100.0%)     |
| White                                     | 1,938 ( 15.47% )                           | 82.35% (78.82%, 85.51%)       | 91.56% (88.69%, 93.90%)     |
| Other/Mixed/Unknown<br>Ethnicity          | 9,072 ( 72.41% )                           | 88.25% ( 86.73% , 89.66% )    | 95.99% ( 94.96% , 96.85% )  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   |                            |                               | Sensitivity (95% Confidence |
|---|----------------------------|-------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            | Number (Percent)              |                             |
| Hispanic  | 350 ( 2.79% )              | 96.15% (93.04%, 98.14%)       | 96.90% ( 93.98% , 98.65% )  |
| Non-Hispanic  | 572 ( 4.57% )              | 92.18% (89.53%, 94.33%)       | 96.02% (93.93%, 97.55%)     |
| Unknown   | 11,590 ( 92.51% )          | 86.33% (84.83%, 87.74%)       | 95.02% ( 93.97% , 95.93% )  |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| Asymptomatic screening (Z11.59)   | 186 ( 1.48% )              | 63.79% (50.12%, 76.01%)       | 90.24% (76.87%, 97.28%)     |
| Contact and suspected exposure (Z20.828)  | 2,517 ( 20.09% )           | 80.23% (76.87%, 83.29%)       | 95.96% (93.89%, 97.48%)     |
| Pneumonia (see Appendix B)  | 9833 (78.49%)              | 89.45% (88.16%, 90.65%)       | 97.84% (97.14%, 98.40%)     |
| Other viral pneumonia (J12.89)  | 8,402 ( 67.07% )           | 92.74% (91.60%, 93.77%)       | 99.34% ( 98.90% , 99.64% )  |
| ARDS (J80)  | 1,656 ( 13.22% )           | 91.74% (88.88%, 94.06%)       | 99.08% (97.67%, 99.75%)     |
| Sepsis (see Appendix C)   | 3,833 ( 30.60% )           | 87.48% (85.28%, 89.45%)       | 96.62% ( 95.24% , 97.69% )  |
| Bronchitis (J20.8 OR J40)   | 143 ( 1.14% )              | 97.22% (85.47%, 99.93%)       | 94.59% (81.81%, 99.34%)     |
| Respiratory infection (J22 OR J98.8)  | 1,346 ( 10.74% )           | 92.09% (88.06%, 95.10%)       | ****                        |
| Cough (R05)   | 2,532 ( 20.21% )           | 89.53% (86.78%, 91.88%)       | 97.43% (95.72%, 98.59%)     |
| Shortness of breath (R06.2)   | 71 ( 0.57% )               | 81.82% (48.22%, 97.72%)       | 100.0% (66.37%, 100.0%)     |
| Fever (R50.9)   | 3,163 ( 25.25% )           | 87.07% (84.45%, 89.39%)       | 97.61% (96.15%, 98.63%)     |
| Optional  |                            |                               |                             |
| Other COVID Tests   |                            |                               |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                               |                             |
| Test performed, at least 1 positive result  | 509 ( 4.06% )              | 91.98% (87.47%, 95.26%)       | ****                        |
| Test performed, only negative results   | 74 ( 0.59% )               | 50 % ( 26.02% , 73.98% )      | 100.0% (66.37%, 100.0%)     |
| No test or unknown result   | 8,207 (65.51%)             | 89.95% (88.56%, 91.22%)       | 94.88% (93.80%, 95.82%)     |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                             | -                           |
| Test performed, at least 1 positive result  | N/A                        | N/A                           | N/A                         |
| Test performed, only negative results   | N/A                        | N/A                           | N/A                         |
| No test or unknown result   | 11,406 ( 91.04% )          | 86.61% (85.07%, 88.05%)       | ****                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            | ·                             |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,135 ( 9.06% )            | 88.01% (85.97%, 89.86%)       | 93.89% ( 92.27% , 95.27% )  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                         |                            |                               |                             |  |  |
|---|----------------------------|-------------------------------|-----------------------------|--|--|
|   |                            |                               | Sensitivity (95% Confidence |  |  |
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |
|   |                            | Number (Percent)              |                             |  |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 1,261 ( 10.07% )           | 84.65% (79.61%, 88.85%)       | 97.29% (94.18%, 99%)        |  |  |
| of breath) OR R50.9 (fever)]  |                            |                               |                             |  |  |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 1,923 ( 15.35% )           | 89.32% (86.13%, 92%)          | ****                        |  |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                            |                               |                             |  |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                            |                               |                             |  |  |
| "Primary" Lab Test Product Information****                                    |                            |                               |                             |  |  |
| 847377 - SARS_COV_2_NS  | N/A                        | N/A                           | N/A                         |  |  |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | N/A                        | N/A                           | N/A                         |  |  |
| Differential WBC Count  |                            |                               |                             |  |  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 2 ( 0.02% )                | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )   |  |  |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 452 ( 3.61% )              | 94.44% (91.91%, 96.37%)       | 96.37% (94.17%, 97.91%)     |  |  |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | 91 ( 0.73% )               | 95.60% (89.13%, 98.79%)       | 91.58% (84.08%, 96.29%)     |  |  |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | N/A                        | N/A                           | N/A                         |  |  |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | N/A                        | N/A                           | N/A                         |  |  |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | 12 ( 0.10% )               | 91.67% (61.52%, 99.79%)       | 100.0% (71.51%, 100.0%)     |  |  |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | N/A                        | N/A                           | N/A                         |  |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 61 ( 0.49% )               | 90.16% (79.81%, 96.30%)       | 96.49% (87.89%, 99.57%)     |  |  |
| Probe Detection   |                            |                               |                             |  |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                        | N/A                           | N/A                         |  |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                            |                               |                             |  |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                        | N/A                           | N/A                         |  |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                            |                               |                             |  |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA | 646 ( 5.16% )              | 92.57% (90.27%, 94.47%)       | 97.24% (95.61%, 98.38%)     |  |  |
| With Probe Detection  |                            |                               |                             |  |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | N/A                        | N/A                           | N/A                         |  |  |
| By NAA With Probe Detection   |                            |                               |                             |  |  |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                        | N/A                           | N/A                         |  |  |
| NAA With Probe Detection  |                            |                               |                             |  |  |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA | 1,357 ( 10.83% )           | 83.54% (81.46%, 85.48%)       | 93.79% ( 92.27% , 95.08% )  |  |  |
| With Probe Detection  |                            |                               |                             |  |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | N/A                        | N/A                           | N/A                         |  |  |
| Immunoassay   |                            |                               |                             |  |  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*   |                     |                               |  |  |  |  |  |
|---|---------------------|-------------------------------|--|--|--|--|--|
|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |  |
|   |                     | Number (Percent)              |  |  |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                                  | N/A                 | N/A                           | N/A                                      |  |  |  |  |
| Rapid Immunoassav<br>94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With               | N/A                 | N/A                           | N/A                                      |  |  |  |  |
| Probe Detection<br>94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By                 | N/A                 | N/A                           | N/A                                      |  |  |  |  |
| NAA With Probe Detection<br>94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen        | N/A                 | N/A                           | N/A                                      |  |  |  |  |
| Bv NAA With Probe Detection<br>94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory          | N/A                 | N/A                           | N/A                                      |  |  |  |  |
| Specimen By NAA With Probe Detection<br>94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By | N/A                 | N/A                           | N/A                                      |  |  |  |  |
| Immunoassav<br>94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                          | N/A                 | N/A                           | N/A                                      |  |  |  |  |
| Immunoassav<br>94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                        | N/A                 | N/A                           | N/A                                      |  |  |  |  |
| Non-Probe Detection<br>94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By             | N/A                 | N/A                           | N/A                                      |  |  |  |  |
| NAA With Probe Detection<br>94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With           | N/A                 | N/A                           | N/A                                      |  |  |  |  |
| Probe Detection<br>Unknown  | 23 ( 0.18% )        | 92.86% (66.13%, 99.82%)       | 81.25% (54.35%, 95.95%)                  |  |  |  |  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2* |                 |                 |                 |         |                          |
|--|-----------------|-----------------|-----------------|---------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab  | Patients with Lab Result |
|  | Lab rositive    | Number          |                 | INO LAD | Number (Percent)         |
| Care Setting of "Primary" Lab Test***                        |                 | Number          |                 |         | Number (Fercent)         |
| Total Observed   | 2,647           | 364             | 35              | 9,617   | 3,011 ( 23.78% )         |
| Inpatient  | 711             | 76              | 13              | N/A     | 787                      |
| Outpatient or Emergency Department                           | 732             | 70              | 4               | N/A     | 802                      |
| Other  | 71              | 16              | 2               | N/A     | 87                       |
| Care Setting Reported as Unknown                             | 1,025           | 202             | 16              | N/A     | 1,227                    |
| Demographics   | 1,023           | 202             | 10              | 14/74   | 1,227                    |
| Sex  |                 |                 |                 |         |                          |
| Female   | 1,192           | 166             | 13              | 4,489   | 1,358 ( 23.17% )         |
| Male   | 1,455           | 198             | 22              | 5,112   | 1,653 ( 24.36% )         |
| Other/Missing  | 0               | 0               | 0               | 0       | N/A                      |
| Age at Hospital Admission (Years)                            | -               | -               | -               | -       |                          |
| 0-5  | 1               | 0               | 0               | 16      | 1 (5.88%)                |
| 6-17   | 6               | 1               | 0               | 28      | 7 ( 20 % )               |
| 18-29  | 66              | 11              | 1               | 194     | 77 ( 28.31% )            |
| 30-39  | 173             | 16              | 5               | 386     | 189 ( 32.59% )           |
| 40-49  | 285             | 24              | 1               | 705     | 309 ( 30.44% )           |
| 50-59  | 596             | 62              | 9               | 1,465   | 658 ( 30.86% )           |
| 60-69  | 684             | 90              | 9               | 2,049   | 774 ( 27.33% )           |
| 70-79  | 464             | 79              | 4               | 2,144   | 543 ( 20.18% )           |
| 80-89  | 284             | 53              | 4               | 1,859   | 337 ( 15.32% )           |
| 90+  | 88              | 28              | 2               | 755     | 116 (13.29%)             |
| Missing  | 0               | 0               | 0               | 0       | N/A                      |
| Race   |                 |                 |                 |         | ,                        |
| American Indian or Alaska Native                             | 5               | 0               | 0               | 4       | 5 ( 55.56% )             |
| Asian  | 75              | 3               | 1               | 49      | 78 ( 60.94% )            |
| Black or African American                                    | 425             | 32              | 2               | 914     | 457 ( 33.28% )           |
| Native Hawaiian or Other Pacific Islander                    | 3               | 0               | 0               | 3       | 3 ( 50 % )               |
| White  | 435             | 93              | 0               | 1,436   | 528 ( 26.88% )           |
| Other/Mixed/Unknown  | 1,704           | 236             | 32              | 7,195   | 1,940 ( 21.16% )         |
| Ethnicity  |                 |                 |                 |         |                          |

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Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lah  | Patients with Lab Resu |
|---|-----------------|-----------------|-----------------|---------|------------------------|
|   | Lab i Ositive   | Number          | Lab, No Results | IVO LAD | Number (Percent)       |
| Hispanic  | 250             | 11              | 0               | 91      | 261 ( 74.15% )         |
| Non-Hispanic  | 483             | 41              | 2               | 46      | 524 ( 91.61% )         |
| Unknown   | 1,914           | 312             | 33              | 9,464   | 2,226 ( 18.99% )       |
| Codes Observed During Inpatient Stay  | <u> </u>        |                 |                 | ,       | , , , ,                |
| Asymptomatic screening (Z11.59)   | 37              | 21              | 0               | 132     | 58 ( 30.53% )          |
| Contact and suspected exposure (Z20.828)  | 499             | 127             | 14              | 1,897   | 626 ( 24.67% )         |
| Pneumonia (see Appendix B)  | 2,175           | 263             | 32              | 7,441   | 2,438 ( 24.60% )       |
| Other viral pneumonia (J12.89)  | 2,124           | 167             | 30              | 6,093   | 2,291 ( 27.23% )       |
| ARDS (J80)  | 433             | 39              | 7               | 1,177   | 472 ( 28.50% )         |
| Sepsis (see Appendix C)   | 890             | 129             | 13              | 2,823   | 1,019 ( 26.43% )       |
| Bronchitis (J20.8 OR J40)   | 35              | 1               | 0               | 109     | 36 ( 24.83% )          |
| Respiratory infection (J22 OR J98.8)  | 233             | 20              | 4               | 1,089   | 253 ( 18.80% )         |
| Cough (RO5)   | 531             | 64              | 7               | 1,955   | 595 ( 23.27% )         |
| Shortness of breath (R06.2)   | 9               | 2               | 0               | 62      | 11 ( 15.07% )          |
| Fever (R50.9)   | 655             | 100             | 9               | 2,428   | 755 ( 23.65% )         |
| Optional  |                 |                 |                 |         |                        |
| Other COVID Tests   |                 |                 |                 |         |                        |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -       | -                      |
| bserved within -7 days prior to hospitalization through end of patient record**     |                 |                 |                 |         |                        |
| est performed, at least 1 positive result   | 195             | 17              | 3               | 296     | 212 ( 41.49% )         |
| est performed, only negative results  | 9               | 9               | 1               | 56      | 18 ( 24 % )            |
| lo test or unknown result   | 1,838           | 213             | 30              | 6,205   | 2,051 ( 24.75% )       |
| Antigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -       | -                      |
| est performed, at least 1 positive result   | 0               | 0               | 0               | 0       | N/A                    |
| est performed, only negative results  | 0               | 0               | 0               | 0       | N/A                    |
| No test or unknown result   | 1,805           | 288             | 33              | 9,413   | 2,093 ( 18.14% )       |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 |         |                        |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 986             | 137             | 3               | 15      | 1,123 ( 98.42% )       |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                                     |                 |                 |                 |         |                          |
|--|-----------------|-----------------|-----------------|---------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab  | Patients with Lab Result |
|  | Lab Fositive    | Number          | Lab, No Results | INU Lab | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness                    | 215             | 40              | 7               | 1,011   | 255 ( 20.03% )           |
| of breath) OR R50.9 (fever)]   |                 |                 |                 | ,       | ,                        |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                     | 410             | 50              | 12              | 1,455   | 460 ( 23.87% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                      | -               |                 |                 | ,       | , ,                      |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]                      |                 |                 |                 |         |                          |
| "Primary" Lab Test Product Information****   |                 |                 |                 |         |                          |
| 847377 - SARS_COV_2_NS   | -               | -               | -               | -       | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual                         | -               | -               | -               | -       | N/A                      |
| Differential WBC Count   |                 |                 |                 |         |                          |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA                              | 2               | -               | -               | -       | 2 ( 100.0% )             |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 425             | 25              | 2               | -       | 450 ( 99.56% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | 87              | 4               | -               | -       | 91 ( 100.0% )            |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | -               | -               | _               | -       | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT  | -               | -               | -               | -       | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | 11              | 1               | -               | -       | 12 ( 100.0% )            |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | -               | -               | -               | -       | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With                     | 55              | 6               | 0               | 0       | 61 ( 100.0% )            |
| Probe Detection  |                 |                 |                 |         |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                     | 0               | 0               | 0               | 0       | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1   |                 |                 |                 |         |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                     | 0               | 0               | 0               | 0       | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2   |                 |                 |                 |         |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA                    | 601             | 51              | 0               | 0       | 652 ( 100.0% )           |
| With Probe Detection   |                 |                 |                 |         |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                     | -               | -               | -               | -       | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |         |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                     | 0               | 0               | 0               | 0       | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |         |                          |
| 94500-6 - SARS-COV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA                    | 1,136           | 230             | 2               | 0       | 1,366 ( 99.85% )         |
| With Probe Detection 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By |                 |                 |                 |         |                          |
| ,  | -               | -               | -               | -       | N/A                      |
| Immunoassay  |                 |                 |                 |         |                          |

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Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*  |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                                  | _               | -               | -               | -      | N/A                      |
| Rapid Immunoassay<br>94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With               | -               | -               | -               | -      | N/A                      |
| Probe Detection<br>94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By                 | 0               | 0               | 0               | 0      | N/A                      |
| NAA With Probe Detection<br>94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen        | 0               | 0               | 0               | 0      | N/A                      |
| By NAA With Probe Detection<br>94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory          | 0               | 0               | 0               | 0      | ,<br>N/A                 |
| Specimen By NAA With Probe Detection<br>94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By | -               | -               | -               | -      | N/A                      |
| Immunoassay<br>94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                          | -               | -               | -               | -      | N/A                      |
| Immunoassay<br>94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                        | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection<br>94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By             | _               | _               | -               | _      | N/A                      |
| NAA With Probe Detection<br>94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With           | _               | _               | -               | _      | N/A                      |
| Probe Detection   |                 |                 |                 |        | ,/\                      |
| Unknown   | 13              | 1               | 0               | 9      | 14 ( 60.87% )            |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorith                                  | m 3: IP Stay with Any of Codes U07.1, B9 | 7.29, B34.2*                  |                             |
|---|--|-------------------------------|-----------------------------|
|   |  |                               | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b>               | PPV (95% Confidence Interval) | Interval)                   |
|   |  | Number (Percent)              |                             |
| Care Setting of "Primary" Lab Test***     |  |                               |                             |
| Total Observed                            | 1,2663 ( 100.0% )                        | 87.91% (86.69%, 89.05%)       | 95.63% (94.80%, 96.36%)     |
| Inpatient                                 | 800 ( 6.32% )                            | 90.34% (88.06%, 92.32%)       | 91.51% (89.32%, 93.37%)     |
| Outpatient or Emergency Department        | 806 ( 6.37% )                            | 91.27% (89.10%, 93.13%)       | 91.39% (89.22%, 93.24%)     |
| Other                                     | 89 ( 0.70% )                             | 81.61% (71.86%, 89.11%)       | 86.59% (77.26%, 93.11%)     |
| Care Setting Reported as Unknown          | 4,286 ( 33.85% )                         | 83.54% (81.34%, 85.57%)       | ****                        |
| Demographics                              |  |                               |                             |
| Sex                                       |  |                               |                             |
| Female                                    | 5,860 ( 46.28% )                         | 87.78% (85.92%, 89.47%)       | 95.28% (93.96%, 96.39%)     |
| Male                                      | 6,787 ( 53.60% )                         | 88.02% (86.36%, 89.55%)       | 95.91% (94.79%, 96.85%)     |
| Other/Missing                             | N/A                                      | N/A                           | N/A                         |
| Age at Hospital Admission (Years)         |  |                               |                             |
| 0-5                                       | 17 ( 0.13% )                             | 100.0% ( 2.50%, 100.0%)       | 100.0% ( 2.50% , 100.0% )   |
| 6-17                                      | 35 ( 0.28% )                             | 85.71% (42.13%, 99.64%)       | 85.71% (42.13%, 99.64%)     |
| 18-29                                     | 272 ( 2.15% )                            | 85.71% (75.87%, 92.65%)       | 88 % ( 78.44% , 94.36% )    |
| 30-39                                     | 580 ( 4.58% )                            | 91.53% (86.62%, 95.08%)       | 92.51% (87.76%, 95.85%)     |
| 40-49                                     | 1,015 ( 8.02% )                          | 92.23% (88.66%, 94.96%)       | 97.94% (95.57%, 99.24%)     |
| 50-59                                     | 2,132 ( 16.84% )                         | 90.58% (88.08%, 92.70%)       | 96.75% (95.03%, 98.01%)     |
| 60-69                                     | 2,832 ( 22.36% )                         | 88.37% (85.90%, 90.55%)       | 97.30% (95.81%, 98.37%)     |
| 70-79                                     | 2,691 ( 21.25% )                         | 85.45% (82.20%, 88.31%)       | 94.12% (91.66%, 96.03%)     |
| 80-89                                     | 2,200 ( 17.37% )                         | 84.27% ( 79.94% , 87.99% )    | 93.73% (90.38%, 96.18%)     |
| 90+                                       | 873 ( 6.89% )                            | 75.86% (67.04%, 83.32%)       | 95.65% (89.24%, 98.80%)     |
| Missing                                   | N/A                                      | N/A                           | N/A                         |
| Race                                      | •  | ,                             | •                           |
| American Indian or Alaska Native          | 9 ( 0.07% )                              | 100.0% (47.82%, 100.0%)       | 100.0% (47.82%, 100.0%)     |
| Asian                                     | 128 ( 1.01% )                            | 96.15% ( 89.17% , 99.20% )    | 96.15% (89.17%, 99.20%)     |
| Black or African American                 | 1,373 ( 10.84% )                         | 93 % ( 90.26% , 95.16% )      | 96.81% (94.71%, 98.25%)     |
| Native Hawaiian or Other Pacific Islander | 6 ( 0.05% )                              | 100.0% ( 29.24% , 100.0% )    | 100.0% (29.24%, 100.0%)     |
| White                                     | 1,964 ( 15.51% )                         | 82.39% ( 78.86% , 85.54% )    | 91.77% (88.92%, 94.08%)     |
| Other/Mixed/Unknown                       | 9,167 ( 72.39% )                         | 87.84% ( 86.30% , 89.26% )    | 96.33% (95.34%, 97.15%)     |
| Ethnicity                                 |  |                               |                             |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   |                            |                               | Sensitivity (95% Confidence |
|---|----------------------------|-------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            |                               |                             |
| Hispanic  | 352 ( 2.78% )              | 95.79% ( 92.58% , 97.88% )    | 96.90% ( 93.98% , 98.65%    |
| Non-Hispanic  | 572 ( 4.52% )              | 92.18% (89.53%, 94.33%)       | 96.02% (93.93%, 97.55%      |
| Unknown   | 11,723 ( 92.58% )          | 85.98% (84.47%, 87.40%)       | 95.37% (94.35%, 96.24%      |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| Asymptomatic screening (Z11.59)   | 190 ( 1.50% )              | 63.79% (50.12%, 76.01%)       | 90.24% (76.87%, 97.28%      |
| Contact and suspected exposure (Z20.828)  | 2,537 ( 20.03% )           | 79.71% (76.35%, 82.80%)       | 95.96% (93.89%, 97.48%      |
| Pneumonia (see Appendix B)  | 9,911 ( 78.27% )           | 89.21% (87.91%, 90.42%)       | 98.02% (97.35%, 98.56%      |
| Other viral pneumonia (J12.89)  | 8,414 ( 66.45% )           | 92.71% (91.57%, 93.74%)       | 99.48% (99.08%, 99.74%      |
| ARDS (J80)  | 1,656 ( 13.08% )           | 91.74% (88.88%, 94.06%)       | 99.08% (97.67%, 99.75%      |
| Sepsis (see Appendix C)   | 3,855 ( 30.44% )           | 87.34% (85.14%, 89.32%)       | 96.95% (95.62%, 97.96%      |
| Bronchitis (J20.8 OR J40)   | 145 ( 1.15% )              | 97.22% (85.47%, 99.93%)       | 94.59% (81.81%, 99.34%      |
| Respiratory infection (J22 OR J98.8)  | 1,346 ( 10.63% )           | 92.09% (88.06%, 95.10%)       | ****                        |
| Cough (R05)   | 2,557 ( 20.19% )           | 89.24% (86.47%, 91.62%)       | 97.61% (95.95%, 98.72%      |
| Shortness of breath (R06.2)   | 73 ( 0.58% )               | 81.82% (48.22%, 97.72%)       | 100.0% (66.37%, 100.0%      |
| Fever (R50.9)   | 3,192 ( 25.21% )           | 86.75% (84.13%, 89.09%)       | 97.91% (96.51%, 98.85%      |
| Optional  |                            |                               |                             |
| Other COVID Tests   |                            |                               |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                               |                             |
| est performed, at least 1 positive result   | 511 ( 4.04% )              | 91.98% (87.47%, 95.26%)       | ****                        |
| est performed, only negative results  | 75 ( 0.59% )               | 50 % ( 26.02% , 73.98% )      | 100.0% (66.37%, 100.0%      |
| No test or unknown result   | 8,286 ( 65.43% )           | 89.61% (88.21%, 90.90%)       | 95.09% (94.03%, 96.01%      |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                             | -                           |
| est performed, at least 1 positive result   | N/A                        | N/A                           | N/A                         |
| est performed, only negative results  | N/A                        | N/A                           | N/A                         |
| No test or unknown result   | 11,539 ( 91.12% )          | 86.24% (84.69%, 87.69%)       | ****                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            |                               |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,141 ( 9.01% )            | 87.80% (85.74%, 89.66%)       | 94.08% (92.48%, 95.43%      |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                  |                     |                               |                             |  |  |  |
|---|---------------------|-------------------------------|-----------------------------|--|--|--|
|   |                     |                               | Sensitivity (95% Confidence |  |  |  |
|   | Total Patient Count | PPV (95% Confidence Interval) | Interval)                   |  |  |  |
|   |                     | Number (Percent)              |                             |  |  |  |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 1,273 ( 10.05% )    | 84.31% (79.26%, 88.55%)       | 97.29% (94.18%, 99%)        |  |  |  |
| of breath) OR R50.9 (fever)]  |                     |                               |                             |  |  |  |
| 220.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 1,927 ( 15.22% )    | 89.13% (85.92%, 91.82%)       |                             |  |  |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                     |                               |                             |  |  |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                     |                               |                             |  |  |  |
| Primary" Lab Test Product Information****                                     |                     |                               |                             |  |  |  |
| 47377 - SARS_COV_2_NS   | N/A                 | N/A                           | N/A                         |  |  |  |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual       | N/A                 | N/A                           | N/A                         |  |  |  |
| Differential WBC Count  |                     |                               |                             |  |  |  |
| 37635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 2 ( 0.02% )         | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )   |  |  |  |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                       | 452 ( 3.57% )       | 94.44% (91.91%, 96.37%)       | 96.37% (94.17%, 97.91%)     |  |  |  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                       | 91 ( 0.72% )        | 95.60% (89.13%, 98.79%)       | 91.58% (84.08%, 96.29%)     |  |  |  |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                       | N/A                 | N/A                           | N/A                         |  |  |  |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT                                      | N/A                 | N/A                           | N/A                         |  |  |  |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                         | 12 ( 0.09% )        | 91.67% (61.52%, 99.79%)       | 100.0% (71.51%, 100.0%)     |  |  |  |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                      | N/A                 | N/A                           | N/A                         |  |  |  |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 61 ( 0.48% )        | 90.16% (79.81%, 96.30%)       | 96.49% (87.89%, 99.57%)     |  |  |  |
| robe Detection  |                     |                               |                             |  |  |  |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                 | N/A                           | N/A                         |  |  |  |
| Iucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                     |                               |                             |  |  |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                 | N/A                           | N/A                         |  |  |  |
| Iucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                     |                               |                             |  |  |  |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA  | 652 ( 5.15% )       | 92.18% (89.84%, 94.12%)       | 97.72% (96.21%, 98.75%)     |  |  |  |
| Vith Probe Detection  |                     |                               |                             |  |  |  |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | N/A                 | N/A                           | N/A                         |  |  |  |
| y NAA With Probe Detection  |                     |                               |                             |  |  |  |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                 | N/A                           | N/A                         |  |  |  |
| IAA With Probe Detection  |                     |                               |                             |  |  |  |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA  | 1,368 ( 10.80% )    | 83.16% (81.07%, 85.11%)       | 94.12% (92.64%, 95.38%)     |  |  |  |
| With Probe Detection  |                     |                               |                             |  |  |  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | N/A                 | N/A                           | N/A                         |  |  |  |
| mmunoassay  |                     |                               |                             |  |  |  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                   |                            |                               |  |  |  |  |
|--|----------------------------|-------------------------------|--|--|--|--|
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|  |                            | Number (Percent)              |  |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                        | N/A                           | N/A                                      |  |  |  |
| Rapid Immunoassay  |                            |                               |  |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | N/A                        | N/A                           | N/A                                      |  |  |  |
| Probe Detection  |                            |                               |  |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | N/A                        | N/A                           | N/A                                      |  |  |  |
| NAA With Probe Detection   |                            |                               |  |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | N/A                        | N/A                           | N/A                                      |  |  |  |
| By NAA With Probe Detection  |                            |                               |  |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | N/A                        | N/A                           | N/A                                      |  |  |  |
| Specimen By NAA With Probe Detection   |                            |                               |  |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | N/A                        | N/A                           | N/A                                      |  |  |  |
| Immunoassay  |                            |                               |  |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | N/A                        | N/A                           | N/A                                      |  |  |  |
| Immunoassay  |                            |                               |  |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | N/A                        | N/A                           | N/A                                      |  |  |  |
| Non-Probe Detection  |                            |                               |  |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                                      |  |  |  |
| NAA With Probe Detection   |                            |                               |  |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | N/A                        | N/A                           | N/A                                      |  |  |  |
| Probe Detection  |                            |                               |  |  |  |  |
| Unknown  | 23 ( 0.18% )               | 92.86% (66.13%, 99.82%)       | 81.25% (54.35%, 95.95%)                  |  |  |  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21* |                 |                        |                 |             |                          |
|--|-----------------|------------------------|-----------------|-------------|--------------------------|
|  | Lab Positive*** | Lab Nagative***        | Lab No Possilta | Notab       | Patients with Lab Result |
|  | Lab Positive    | Lab Negative*** Number | Lab, No Results | INO Lab     |                          |
| Care Setting of "Primary" Lab Test***  |                 | Number                 |                 |             | Number (Percent)         |
| Total Observed   | 2651            | 369                    | 35              | 9676        | 3020 ( 23.72% )          |
| Inpatient  | 711             | 79                     | 13              | 9070<br>N/A | 790                      |
| Outpatient or Emergency Department   | 711 735         | 79<br>70               | 4               | N/A<br>N/A  | 805                      |
| Other  | 735<br>71       | 16                     | 2               | N/A<br>N/A  | 87                       |
| Care Setting Reported as Unknown   |                 |                        |                 |             |                          |
| Demographics   | 1026            | 204                    | 16              | N/A         | 1230                     |
| Sex  |                 |                        |                 |             |                          |
| Female   | 1100            | 160                    | 12              | 4F1C        | 1264/22 150/\            |
| Male   | 1196            | 168                    | 13              | 4516        | 1364 ( 23.15% )          |
|  | 1455            | 201                    | 22              | 5144        | 1656 ( 24.27% )          |
| Other/Missing  | 0               | 0                      | 0               | 0           | N/A                      |
| Age at Hospital Admission (Years)  |                 |                        |                 |             |                          |
| 0-5  | 1               | 0                      | 0               | 16          | 1 ( 5.88%)               |
| 6-17   | 6               | 1                      | 0               | 28          | 7 ( 20 % )               |
| 18-29  | 66              | 12                     | 1               | 195         | 78 ( 28.47% )            |
| 30-39  | 174             | 16                     | 5               | 389         | 190 ( 32.53% )           |
| 40-49  | 285             | 25                     | 1               | 707         | 310 ( 30.45% )           |
| 50-59  | 597             | 63                     | 9               | 1475        | 660 ( 30.78% )           |
| 60-69  | 685             | 90                     | 9               | 2061        | 775 ( 27.24% )           |
| 70-79  | 464             | 80                     | 4               | 2155        | 544 ( 20.13% )           |
| 80-89  | 285             | 54                     | 4               | 1875        | 339 ( 15.28% )           |
| 90+  | 88              | 28                     | 2               | 759         | 116 ( 13.23% )           |
| Missing  | 0               | 0                      | 0               | 0           | N/A                      |
| Race   | -               | -                      | -               | -           | .,                       |
| American Indian or Alaska Native   | 5               | 0                      | 0               | 4           | 5 ( 55.56% )             |
| Asian  | 75              | 3                      | 1               | 49          | 78 ( 60.94% )            |
| Black or African American  | 425             | 32                     | 2               | 926         | 457 ( 33 % )             |
| Native Hawaiian or Other Pacific Islander                                    | 3               | 0                      | 0               | 3           | 3 ( 50 % )               |
| White  | 436             | 93                     | 0               | 1445        | 529 ( 26.80% )           |
| Other/Mixed/Unknown  | 1707            | 241                    | 32              | 7233        | 1948 ( 21.14% )          |
| Ethnicity  |                 |                        |                 |             |                          |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 4: IP Stay with Any of 0  | , ,             | , , , , , , , , , , , , , |                 |        |                       |
|---|-----------------|---------------------------|-----------------|--------|-----------------------|
|   | Lab Positive*** | Lab Negative***           | Lab, No Results | No Lab | Patients with Lab Res |
|   |                 | Number                    |                 |        | Number (Percent)      |
| Hispanic  | 250             | 12                        | 0               | 91     | 262 ( 74.22% )        |
| Non-Hispanic  | 483             | 41                        | 2               | 46     | 524 (91.61%)          |
| Unknown   | 1918            | 316                       | 33              | 9523   | 2234 ( 18.95% )       |
| Codes Observed During Inpatient Stay  |                 |                           |                 |        |                       |
| Asymptomatic screening (Z11.59)   | 37              | 22                        | 0               | 133    | 59 ( 30.73% )         |
| Contact and suspected exposure (Z20.828)  | 499             | 129                       | 14              | 1906   | 628 ( 24.65% )        |
| Pneumonia (see Appendix B)  | 2179            | 266                       | 32              | 7491   | 2445 ( 24.53% )       |
| Other viral pneumonia (J12.89)  | 2124            | 167                       | 30              | 6097   | 2291 ( 27.22% )       |
| ARDS (J80)  | 433             | 39                        | 7               | 1179   | 472 ( 28.47% )        |
| Sepsis (see Appendix C)   | 891             | 132                       | 13              | 2837   | 1023 ( 26.41% )       |
| Bronchitis (J20.8 OR J40)   | 35              | 1                         | 0               | 110    | 36 ( 24.66% )         |
| Respiratory infection (J22 OR J98.8)  | 233             | 20                        | 4               | 1089   | 253 ( 18.80% )        |
| Cough (R05)   | 533             | 65                        | 7               | 1962   | 598 ( 23.30% )        |
| Shortness of breath (R06.2)   | 9               | 2                         | 0               | 62     | 11 ( 15.07% )         |
| Fever (R50.9)   | 655             | 103                       | 9               | 2438   | 758 ( 23.65% )        |
| Optional  |                 |                           |                 |        |                       |
| Other COVID Tests   |                 |                           |                 |        |                       |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -                         | -               | -      | -                     |
| observed within -7 days prior to hospitalization through end of patient record**    |                 |                           |                 |        |                       |
| Test performed, at least 1 positive result  | 197             | 17                        | 3               | 298    | 214 ( 41.55% )        |
| Test performed, only negative results   | 9               | 9                         | 1               | 57     | 18 ( 23.68% )         |
| No test or unknown result   | 1839            | 217                       | 30              | 6231   | 2056 ( 24.72% )       |
| Antigen test within ±14 days from inpatient admission**                             | -               | -                         | -               | -      | -                     |
| Test performed, at least 1 positive result  | 0               | 0                         | 0               | 0      | N/A                   |
| Test performed, only negative results   | 0               | 0                         | 0               | 0      | N/A                   |
| No test or unknown result   | 1809            | 292                       | 33              | 9470   | 2101 ( 18.11% )       |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                           |                 |        |                       |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 987             | 138                       | 3               | 15     | 1125 ( 98.43% )       |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*  |                 |                 |                 |         |                          |  |
|---|-----------------|-----------------|-----------------|---------|--------------------------|--|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab  | Patients with Lab Result |  |
|   | Lab rositive    | Number          | Lab, NO Results | INO LAD | Number (Percent)         |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 215             | 41              | 7               | 1016    | 256 ( 20.02% )           |  |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |         | , ,                      |  |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 410             | 50              | 12              | 1458    | 460 ( 23.83% )           |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   | -               |                 |                 |         | , , ,                    |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |         |                          |  |
| "Primary" Lab Test Product Information****                                    |                 |                 |                 |         |                          |  |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -       | N/A                      |  |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -               | -               | -               | -       | N/A                      |  |
| Differential WBC Count  |                 |                 |                 |         |                          |  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 2               | -               | _               | -       | 2 ( 100.0% )             |  |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 425             | 25              | 2               | _       | 450 ( 99.56% )           |  |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | 87              | 4               | _               | -       | 91 ( 100.0% )            |  |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -               | -               | -               | -       | N/A                      |  |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -               | -               | _               | -       | N/A                      |  |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | 11              | 1               |                 |         | 12 ( 100.0% )            |  |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -               | -               | _               | -       | N/A                      |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 55              | 6               | 0               | 0       | 61 ( 100.0% )            |  |
| Probe Detection   |                 |                 |                 |         | , ,                      |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0       | N/A                      |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                 |                 |                 |         |                          |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0       | N/A                      |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                 |                 |                 |         |                          |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA | 602             | 54              | 0               | 0       | 656 ( 100.0% )           |  |
| With Probe Detection  |                 |                 |                 |         |                          |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | -               | -               | -               | -       | N/A                      |  |
| By NAA With Probe Detection   |                 |                 |                 |         |                          |  |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0       | N/A                      |  |
| NAA With Probe Detection  |                 |                 |                 |         |                          |  |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA | 1139            | 231             | 2               | 0       | 1370 ( 99.85% )          |  |
| With Probe Detection  |                 |                 |                 |         |                          |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -               | -               | -               | -       | N/A                      |  |
| Immunoassay   |                 |                 |                 |         |                          |  |

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14 (60.87%)

Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21\* Lab Positive\*\*\* Lab Negative\*\*\* Lab, No Results No Lab **Patients with Lab Result Number (Percent)** Number 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab | presence | In Serum, Plasma Or Blood By N/A Rapid Immunoassay 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With N/A Probe Detection 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By 0 0 0 0 N/A NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen 0 0 0 0 N/A By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory 0 0 0 0 N/A Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By N/A 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By N/A **Immunoassav** 94565-9 - SARS-CoV-2 (COVID-19) RNA | presence | In Nasopharynx By NAA With N/A Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By N/A NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A **Probe Detection** 

13

0

1

cder ssq wp003

Unknown



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 4: IP                           | Stay with Any of Codes U07.1, B97.29, B3 | 34.2, J12.81, B97.21*         |                             |
|---|--|-------------------------------|-----------------------------|
|   |  |                               | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b>               | PPV (95% Confidence Interval) | Interval)                   |
|   |  | Number (Percent)              |                             |
| Care Setting of "Primary" Lab Test***     |  |                               |                             |
| Total Observed                            | 12731 ( 100.0% )                         | 87.78% ( 86.56% , 88.93% )    | 95.77% (94.96%, 96.49%)     |
| Inpatient                                 | 803 ( 6.31% )                            | 90 % (87.69%, 92 %)           | 91.51% (89.32%, 93.37%)     |
| Outpatient or Emergency Department        | 809 ( 6.35% )                            | 91.30% (89.14%, 93.16%)       | 91.76% (89.64%, 93.57%)     |
| Other                                     | 89 ( 0.70% )                             | 81.61% (71.86%, 89.11%)       | 86.59% (77.26%, 93.11%)     |
| Care Setting Reported as Unknown          | 4319 ( 33.93% )                          | 83.41% (81.22%, 85.45%)       | ****                        |
| Demographics                              |  |                               |                             |
| Sex                                       |  |                               |                             |
| Female                                    | 5893 ( 46.29% )                          | 87.68% (85.82%, 89.38%)       | 95.60% (94.32%, 96.67%)     |
| Male                                      | 6822 ( 53.59% )                          | 87.86% (86.19%, 89.40%)       | 95.91% (94.79%, 96.85%)     |
| Other/Missing                             | N/A                                      | N/A                           | N/A                         |
| Age at Hospital Admission (Years)         |  |                               |                             |
| 0-5                                       | 17 ( 0.13% )                             | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50% , 100.0% )   |
| 6-17                                      | 35 ( 0.27% )                             | 85.71% (42.13%, 99.64%)       | 85.71% (42.13%, 99.64%)     |
| 18-29                                     | 274 ( 2.15% )                            | 84.62% (74.67%, 91.79%)       | 88 % ( 78.44% , 94.36% )    |
| 30-39                                     | 584 ( 4.59% )                            | 91.58% (86.68%, 95.11%)       | 93.05% (88.41%, 96.25%)     |
| 40-49                                     | 1018 ( 8 % )                             | 91.94% (88.33%, 94.71%)       | 97.94% (95.57%, 99.24%)     |
| 50-59                                     | 2144 ( 16.84% )                          | 90.45% (87.95%, 92.59%)       | 96.92% (95.23%, 98.13%)     |
| 60-69                                     | 2845 ( 22.35% )                          | 88.39% ( 85.92% , 90.56% )    | 97.44% (95.98%, 98.48%)     |
| 70-79                                     | 2703 ( 21.23% )                          | 85.29% ( 82.03% , 88.16% )    | 94.12% (91.66%, 96.03%)     |
| 80-89                                     | 2218 ( 17.42% )                          | 84.07% ( 79.73% , 87.80% )    | 94.06% (90.77%, 96.44%)     |
| 90+                                       | 877 ( 6.89% )                            | 75.86% (67.04%, 83.32%)       | 95.65% (89.24%, 98.80%)     |
| Missing                                   | N/A                                      | N/A                           | N/A                         |
| Race                                      | •  | ,                             | •                           |
| American Indian or Alaska Native          | 9 ( 0.07% )                              | 100.0% (47.82%, 100.0%)       | 100.0% (47.82%, 100.0%)     |
| Asian                                     | 128 ( 1.01% )                            | 96.15% (89.17%, 99.20%)       | 96.15% (89.17%, 99.20%)     |
| Black or African American                 | 1385 ( 10.88% )                          | 93 % ( 90.26% , 95.16% )      | 96.81% (94.71%, 98.25%)     |
| Native Hawaiian or Other Pacific Islander | 6 ( 0.05% )                              | 100.0% ( 29.24% , 100.0% )    | 100.0% (29.24%, 100.0%)     |
| White                                     | 1974 ( 15.51% )                          | 82.42% ( 78.90% , 85.57% )    | 91.98% (89.16%, 94.26%)     |
| Other/Mixed/Unknown                       | 9213 ( 72.37% )                          | 87.63% ( 86.08% , 89.06% )    | 96.50% (95.53%, 97.30%)     |
| Ethnicity                                 |  |                               |                             |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   | Tatal Bations Count                           | DDV (050/ Cfid lut                    | Sensitivity (95% Confidence |
|---|---|---------------------------------------|-----------------------------|
|   | Total Patient Count                           | PPV (95% Confidence Interval)         | Interval)                   |
| History is  |   | Number (Percent)                      |                             |
| Hispanic  | 353 ( 2.77% )                                 | 95.42% (92.14%, 97.61%)               | 96.90% (93.98%, 98.65%      |
| Non-Hispanic  | 572 ( 4.49% )                                 | 92.18% (89.53%, 94.33%)               | 96.02% (93.93%, 97.55%      |
| Unknown   | 11790 ( 92.61% )                              | 85.85% (84.34%, 87.27%)               | 95.57% ( 94.57% , 96.42%    |
| Codes Observed During Inpatient Stay  |   |                                       |                             |
| Asymptomatic screening (Z11.59)   | 192 ( 1.51% )                                 | 62.71% (49.15%, 74.96%)               | 90.24% (76.87%, 97.28%      |
| Contact and suspected exposure (Z20.828)  | 2548 ( 20.01% )                               | 79.46% ( 76.08% , 82.55% )            | 95.96% ( 93.89% , 97.48%    |
| Pneumonia (see Appendix B)  | 9968 ( 78.30% )                               | 89.12% (87.82%, 90.33%)               | 98.20% (97.55%, 98.71%      |
| Other viral pneumonia (J12.89)  | 8418 ( 66.12% )                               | 92.71% (91.57%, 93.74%)               | 99.48% ( 99.08% , 99.74%    |
| ARDS (J80)  | 1658 ( 13.02% )                               | 91.74% (88.88%, 94.06%)               | 99.08% ( 97.67% , 99.75%    |
| Sepsis (see Appendix C)   | 3873 ( 30.42% )                               | 87.10% (84.89%, 89.09%)               | 97.06% ( 95.75% , 98.05%    |
| Bronchitis (J20.8 OR J40)   | 146 ( 1.15% )                                 | 97.22% (85.47%, 99.93%)               | 94.59% (81.81%, 99.34%      |
| Respiratory infection (J22 OR J98.8)  | 1346 ( 10.57% )                               | 92.09% (88.06%, 95.10%)               | ****                        |
| Cough (RO5)   | 2567 ( 20.16% )                               | 89.13% (86.36%, 91.51%)               | 97.98% (96.41%, 98.99%      |
| Shortness of breath (R06.2)   | 73 ( 0.57% )                                  | 81.82% (48.22%, 97.72%)               | 100.0% (66.37%, 100.0%      |
| Fever (R50.9)   | 3205 ( 25.17% )                               | 86.41% (83.76%, 88.77%)               | 97.91% (96.51%, 98.85%      |
| Optional  |   |                                       |                             |
| Other COVID Tests   |   |                                       |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -   | -                                     | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |   |                                       |                             |
| Test performed, at least 1 positive result  | 515 ( 4.05% )                                 | 92.06% (87.59%, 95.30%)               | ****                        |
| Fest performed, only negative results   | 76 ( 0.60% )                                  | 50 % ( 26.02% , 73.98% )              | 100.0% (66.37%, 100.0%      |
| No test or unknown result   | 8317 (65.33%)                                 | 89.45% (88.04%, 90.74%)               | 95.14% (94.08%, 96.05%      |
| Antigen test within ±14 days from inpatient admission**                             | -   | -                                     | -                           |
| Fest performed, at least 1 positive result  | N/A   | N/A                                   | N/A                         |
| est performed, only negative results  | N/A   | N/A                                   | N/A                         |
| No test or unknown result   | 11604 ( 91.15% )                              | 86.10% (84.55%, 87.55%)               | ****                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     | <u>,                                     </u> | · · · · · · · · · · · · · · · · · · · |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1143 ( 8.98% )                                | 87.73% (85.67%, 89.59%)               | 94.18% ( 92.59% , 95.52%    |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 4: IP Stay with Any of C   | odes U07.1, B97.29, B | 34.2, J12.81, B97.21*         |                             |
|--|-----------------------|-------------------------------|-----------------------------|
|  |                       |                               | Sensitivity (95% Confidence |
|  | Total Patient Count   | PPV (95% Confidence Interval) | Interval)                   |
|  |                       | Number (Percent)              |                             |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 1279 ( 10.05% )       | 83.98% (78.91%, 88.26%)       | 97.29% (94.18%, 99%)        |
| f breath) OR R50.9 (fever)]  |                       |                               |                             |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 1930 ( 15.16% )       | 89.13% (85.92%, 91.82%)       | ****                        |
| PR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  |                       |                               |                             |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                       |                               |                             |
| Primary" Lab Test Product Information****                                    |                       |                               |                             |
| 47377 - SARS_COV_2_NS  | N/A                   | N/A                           | N/A                         |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | N/A                   | N/A                           | N/A                         |
| offerential WBC Count  |                       |                               |                             |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 2 ( 0.02% )           | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )   |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 452 ( 3.55% )         | 94.44% (91.91%, 96.37%)       | 96.37% (94.17%, 97.91%      |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | 91 ( 0.71% )          | 95.60% (89.13%, 98.79%)       | 91.58% (84.08%, 96.29%      |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | N/A                   | N/A                           | N/A                         |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | N/A                   | N/A                           | N/A                         |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | 12 ( 0.09% )          | 91.67% (61.52%, 99.79%)       | 100.0% (71.51%, 100.0%      |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | N/A                   | N/A                           | N/A                         |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 61 ( 0.48% )          | 90.16% (79.81%, 96.30%)       | 96.49% (87.89%, 99.57%      |
| robe Detection   |                       |                               | •                           |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                   | N/A                           | N/A                         |
| lucleic Acid Amplification Using CDC Primer-Probe Set N1                     |                       |                               |                             |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                   | N/A                           | N/A                         |
| lucleic Acid Amplification Using CDC Primer-Probe Set N2                     |                       |                               |                             |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA | 656 ( 5.15% )         | 91.77% (89.40%, 93.76%)       | 97.89% (96.41%, 98.87%      |
| Vith Probe Detection   |                       |                               | •                           |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | N/A                   | N/A                           | N/A                         |
| y NAA With Probe Detection   |                       |                               |                             |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                   | N/A                           | N/A                         |
| AA With Probe Detection  |                       |                               |                             |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA | 1372 ( 10.78% )       | 83.14% (81.05%, 85.09%)       | 94.37% (92.91%, 95.60%      |
| Vith Probe Detection   | ,                     | •                             | •                           |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | N/A                   | N/A                           | N/A                         |
| nmunoassay   |                       |                               |                             |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*                          |                     |                               |  |  |  |  |
|---|---------------------|-------------------------------|--|--|--|--|
|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|   |                     | Number (Percent)              |  |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                        | N/A                 | N/A                           | N/A                                      |  |  |  |
| Rapid Immunoassay   |                     |                               |  |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With                          | N/A                 | N/A                           | N/A                                      |  |  |  |
| Probe Detection  OAE 22 7 SARS COV 2 (COVID 10) N. Cong Inresence In Respiratory Specimen By          | _                   |                               |  |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen                          | NI / A              | NI / A                        | N1/A                                     |  |  |  |
| By NAA With Probe Detection   | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory                               | N/A                 | N/A                           | N/A                                      |  |  |  |
| Specimen By NAA With Probe Detection  | 14//                | 14//                          | 14//                                     |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By                               | N/A                 | N/A                           | N/A                                      |  |  |  |
| Immunoassay   | •                   | ,                             | ·  |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                               | N/A                 | N/A                           | N/A                                      |  |  |  |
| Immunoassay   |                     |                               |  |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                             | N/A                 | N/A                           | N/A                                      |  |  |  |
| Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene   presence   In Unspecified Specimen By    | 21/2                | 21/2                          | 21/2                                     |  |  |  |
| NAA With Probe Detection  | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                             | N/A                 | N/A                           | N/A                                      |  |  |  |
| Probe Detection   | IN/ CA              | N/A                           | N/A                                      |  |  |  |
| Unknown   | 23 ( 0.18% )        | 92.86% (66.13%, 99.82%)       | 81.25% (54.35%, 95.95%)                  |  |  |  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]* |                 |                 |                 |        |                          |  |
|--|-----------------|-----------------|-----------------|--------|--------------------------|--|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |  |
|  |                 | Number          |                 |        | Number (Percent)         |  |
| Care Setting of "Primary" Lab Test***  |                 |                 |                 |        |                          |  |
| Total Observed   | 2,291           | 267             | 32              | 7,507  | 2,558 ( 25.33% )         |  |
| Inpatient  | 595             | 45              | 13              | N/A    | 640                      |  |
| Outpatient or Emergency Department   | 651             | 55              | 3               | N/A    | 706                      |  |
| Other  | 64              | 11              | 1               | N/A    | 75                       |  |
| Care Setting Reported as Unknown   | 884             | 156             | 15              | N/A    | 1,040                    |  |
| Demographics   |                 |                 |                 |        |                          |  |
| Sex  |                 |                 |                 |        |                          |  |
| Female   | 974             | 108             | 12              | 3,369  | 1,082 ( 24.24% )         |  |
| Male   | 1,317           | 159             | 20              | 4,125  | 1,476 ( 26.26% )         |  |
| Other/Missing  | 0               | 0               | 0               | 0      | N/A                      |  |
| Age at Hospital Admission (Years)  |                 |                 |                 |        |                          |  |
| 0-5  | 0               | 0               | 0               | 3      | 0 (0.00%)                |  |
| 6-17   | 2               | 0               | 0               | 12     | 2 ( 14.29% )             |  |
| 18-29  | 40              | 6               | 1               | 119    | 46 ( 27.71% )            |  |
| 30-39  | 130             | 9               | 4               | 269    | 139 ( 33.74% )           |  |
| 40-49  | 247             | 17              | 1               | 581    | 264 ( 31.21% )           |  |
| 50-59  | 539             | 47              | 8               | 1,223  | 586 ( 32.25% )           |  |
| 60-69  | 616             | 70              | 9               | 1,671  | 686 ( 28.99% )           |  |
| 70-79  | 403             | 60              | 4               | 1,671  | 463 ( 21.66% )           |  |
| 80-89  | 241             | 39              | 3               | 1,398  | 280 ( 16.66% )           |  |
| 90+  | 73              | 19              | 2               | 547    | 92 ( 14.35% )            |  |
| Missing  | 0               | 0               | 0               | 0      | N/A                      |  |
| Race   | •               | -               | -               | -      |                          |  |
| American Indian or Alaska Native   | 4               | 0               | 0               | 3      | 4 ( 57.14% )             |  |
| Asian  | 69              | 3               | 1               | 36     | 72 ( 66.06% )            |  |
| Black or African American  | 374             | 28              | 2               | 679    | 402 ( 37.12% )           |  |
| Native Hawaiian or Other Pacific Islander  | 2               | 0               | 0               | 3      | 2 ( 40 % )               |  |
| White  | 343             | 66              | 0               | 1,024  | 409 ( 28.54% )           |  |
| Other/Mixed/Unknown  | 1,499           | 170             | 29              | 5,749  | 1,669 ( 22.41% )         |  |
| Ethnicity  |                 |                 |                 |        |                          |  |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pi                           | TOWNSHIE ON AC  | ato neophatory Dis | ar coo oynarome (r |        | -/1                    |
|---|-----------------|--------------------|--------------------|--------|------------------------|
|   | Lab Positive*** | Lab Negative***    | Lab, No Results    | No Lab | Patients with Lab Resu |
|   |                 | Number             |                    |        | Number (Percent)       |
| Hispanic  | 217             | 8                  | 0                  | 72     | 225 ( 75.76% )         |
| Non-Hispanic  | 412             | 26                 | 2                  | 35     | 438 ( 92.21% )         |
| Unknown   | 1,662           | 233                | 30                 | 7,387  | 1,895 ( 20.35% )       |
| Codes Observed During Inpatient Stay  |                 |                    |                    |        |                        |
| Asymptomatic screening (Z11.59)   | 33              | 13                 | 0                  | 98     | 46 ( 31.94% )          |
| Contact and suspected exposure (Z20.828)  | 472             | 91                 | 13                 | 1,605  | 563 ( 25.81% )         |
| Pneumonia (see Appendix B)  | 2,180           | 258                | 32                 | 7,422  | 2,438 ( 24.65% )       |
| Other viral pneumonia (J12.89)  | 2,130           | 168                | 30                 | 6,127  | 2,298 ( 27.18% )       |
| ARDS (J80)  | 436             | 39                 | 7                  | 1,187  | 475 ( 28.46% )         |
| Sepsis (see Appendix C)   | 858             | 99                 | 12                 | 2,532  | 957 ( 27.34% )         |
| Bronchitis (J20.8 OR J40)   | 22              | 0                  | 0                  | 82     | 22 ( 21.15% )          |
| Respiratory infection (J22 OR J98.8)  | 207             | 17                 | 4                  | 882    | 224 ( 20.18% )         |
| Cough (RO5)   | 481             | 51                 | 7                  | 1,651  | 532 ( 24.29% )         |
| Shortness of breath (R06.2)   | 9               | 2                  | 0                  | 53     | 11 ( 17.19% )          |
| Fever (R50.9)   | 616             | 74                 | 9                  | 2,061  | 690 ( 25 % )           |
| Optional  |                 |                    |                    |        |                        |
| Other COVID Tests   |                 |                    |                    |        |                        |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -                  | -                  | -      | -                      |
| bserved within -7 days prior to hospitalization through end of patient record**     |                 |                    |                    |        |                        |
| est performed, at least 1 positive result   | 170             | 14                 | 3                  | 264    | 184 ( 40.80% )         |
| est performed, only negative results  | 9               | 7                  | 1                  | 38     | 16 ( 29.09% )          |
| No test or unknown result   | 1,619           | 154                | 27                 | 4,992  | 1,773 ( 26.10% )       |
| Antigen test within ±14 days from inpatient admission**                             | -               | -                  | -                  | -      | -                      |
| est performed, at least 1 positive result   | 0               | 0                  | 0                  | 0      | N/A                    |
| est performed, only negative results  | 0               | 0                  | 0                  | 0      | N/A                    |
| No test or unknown result   | 1,555           | 212                | 30                 | 7,341  | 1,767 ( 19.34% )       |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                    |                    |        |                        |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 831             | 102                | 2                  | 14     | 933 ( 98.31% )         |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia\*\* OR Acute Respiratory Distress Syndrome (ARDS) (J80)]\* Lab Positive\*\*\* Lab Negative\*\*\* Lab, No Results No Lab **Patients with Lab Result** Number (Percent) Number Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness 205 29 7 870 234 (21.06%) of breath) OR R50.9 (fever)] Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) 407 48 12 1,417 455 (24.15%) OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] "Primary" Lab Test Product Information\*\*\*\* 847377 - SARS COV 2 NS N/A 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual N/A Differential WBC Count 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA 2 2 (100.0%) 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR 380 20 2 400 (99.50%) 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab 79 4 83 (100.0%) 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA N/A 87635R - SARS-CoV-2, NAA (COVID-19), POCT N/A 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19) 11 (100.0%) 10 1 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test N/A 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With 52 6 0 0 58 (100.0%) Probe Detection 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By 0 0 0 0 N/A Nucleic Acid Amplification Using CDC Primer-Probe Set N1 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By 0 0 0 0 N/A Nucleic Acid Amplification Using CDC Primer-Probe Set N2 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA 534 35 0 0 569 (100.0%) With Probe Detection 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen N/A By NAA With Probe Detection 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By 0 0 0 0 N/A NAA With Probe Detection 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA 958 171 2 0 1,129 (99.82%) With Probe Detection 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab Junits/Volume In Serum Or Plasma By N/A **Immunoassay** 

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Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia\*\* OR Acute Respiratory Distress Syndrome (ARDS) (J80)]\* Lab Positive\*\*\* Lab Negative\*\*\* Lab, No Results No Lab **Patients with Lab Result** Number (Percent) Number 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab | presence | In Serum, Plasma Or Blood By N/A Rapid Immunoassay 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With N/A Probe Detection 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By 0 0 0 0 N/A NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen 0 0 0 0 N/A By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory 0 0 0 0 N/A Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By N/A 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab | presence | In Serum Or Plasma By N/A **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA | presence | In Nasopharynx By NAA With N/A Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By N/A NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A **Probe Detection** 

11

0

0

7

11 (61.11%)

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Unknown



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 5: IP Stay   | with Codes [U07.1 OR B97.29] and [Pneu | monia** OR ARDS (J80)]*       |  |
|--|--|-------------------------------|--|
|  |  |                               | Sensitivity (95% Confidence                        |
|  | <b>Total Patient Count</b>             | PPV (95% Confidence Interval) | Interval)  |
|  | Number (Percent)                       | Per                           | cent   |
| Care Setting of "Primary" Lab Test*****                                |  |                               |  |
| Total Observed   | 10,097 ( 100.0% )                      | 89.56% (88.31%, 90.72%)       | 82.77% (81.31%, 84.16%)                            |
| Inpatient  | 653 ( 6.47% )                          | 92.97% ( 90.70% , 94.83% )    | 76.58% (73.44%, 79.51%)                            |
| Outpatient or Emergency Department                                     | 709 ( 7.02% )                          | 92.21% (89.98%, 94.08%)       | 81.27% (78.40%, 83.92%)                            |
| Other  | 76 ( 0.75% )                           | 85.33% (75.27%, 92.44%)       | 78.05% (67.54%, 86.44%)                            |
| Care Setting Reported as Unknown                                       | 3,254 ( 32.23% )                       | 85 % (82.68%, 87.12%)         | ****   |
| Demographics   |  |                               |  |
| Sex  |  |                               |  |
| Female   | 4,463 ( 44.20% )                       | 90.02% (88.08%, 91.74%)       | 77.86% (75.45%, 80.13%)                            |
| Male   | 5,621 ( 55.67% )                       | 89.23% (87.53%, 90.76%)       | 86.82% (85.01%, 88.48%)                            |
| Other/Missing  | N/A                                    | N/A                           | N/A  |
| Age at Hospital Admission (Years)                                      |  |                               |  |
| 0-5  | 3 ( 0.03% )                            | N/A                           | N/A  |
| 6-17   | 14 ( 0.14% )                           | 100.0% (15.81%, 100.0%)       | 28.57% ( 3.67% , 70.96% )                          |
| 18-29  | 166 ( 1.64% )                          | 86.96% (73.74%, 95.06%)       | 53.33% (41.45%, 64.95%)                            |
| 30-39  | 412 ( 4.08% )                          | 93.53% (88.06%, 97%)          | 69.52% (62.38%, 76.03%)                            |
| 40-49  | 846 ( 8.38% )                          | 93.56% (89.89%, 96.20%)       | 84.88% (80.24%, 88.79%)                            |
| 50-59  | 1817 ( 18 % )                          | 91.98% (89.48%, 94.05%)       | 87.50% (84.63%, 90.01%)                            |
| 60-69  | 2,366 ( 23.43% )                       | 89.80% (87.28%, 91.96%)       | 87.62% (84.96%, 89.97%)                            |
| 70-79  | 2,138 ( 21.17% )                       | 87.04% (83.64%, 89.96%)       | 81.74% (78.05%, 85.06%)                            |
| 80-89  | 1,681 ( 16.65% )                       | 86.07% (81.45%, 89.90%)       | 79.54% (74.55%, 83.94%)                            |
| 90+  | 641 ( 6.35% )                          | 79.35% (69.64%, 87.08%)       | 79.35% (69.64%, 87.08%)                            |
| Missing  | N/A                                    | N/A                           | N/A  |
| Race   |  | •                             | ·  |
| American Indian or Alaska Native                                       | 7 ( 0.07% )                            | 100.0% (39.76%, 100.0%)       | 80 % (28.36%, 99.49%)                              |
| Asian  | 109 ( 1.08% )                          | 95.83% (88.30%, 99.13%)       | 88.46% (79.22%, 94.59%)                            |
| Black or African American<br>Native Hawaiian or Other Pacific Islander | 1,083 ( 10.73% )                       | 93.03% (90.09%, 95.32%)       | 85.19% (81.52%, 88.38%)                            |
| White  | 5 ( 0.05% )                            | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )                          |
| Other/Mixed/Unknown  | 1,433 ( 14.19% )                       | 83.86% (79.93%, 87.29%)       | 72.36% (68.10%, 76.34%)<br>84.74% (82.98%, 86.38%) |
| Ethnicity  | 7,447 ( 73.75% )                       | 89.81% (88.26%, 91.22%)       | 04.74/0 (02.30%, 00.38%)                           |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   |                     |                               | Sensitivity (95% Confidence |
|---|---------------------|-------------------------------|-----------------------------|
|   | Total Patient Count | PPV (95% Confidence Interval) | Interval)                   |
|   | Number (Percent)    | rcent                         |                             |
| Hispanic  | 297 ( 2.94% )       | 96.44% (93.11%, 98.45%)       | 84.11% (79.07%, 88.35%      |
| Non-Hispanic  | 475 ( 4.70% )       | 94.06% (91.42%, 96.09%)       | 81.91% (78.26%, 85.18%      |
| Unknown   | 9,312 ( 92.23% )    | 87.70% (86.14%, 89.15%)       | 82.81% (81.09%, 84.44%      |
| Codes Observed During Inpatient Stay  |                     |                               |                             |
| Asymptomatic screening (Z11.59)   | 144 ( 1.43% )       | 71.74% (56.54%, 84.01%)       | 80.49% (65.13%, 91.18%      |
| Contact and suspected exposure (Z20.828)  | 2,181 ( 21.60% )    | 83.84% (80.53%, 86.78%)       | 90.77% (87.95%, 93.12%      |
| Pneumonia (see Appendix B)  | 9,892 ( 97.97% )    | 89.42% (88.13%, 90.61%)       | 98.24% (97.61%, 98.75%      |
| Other viral pneumonia (J12.89)  | 8,455 (83.74%)      | 92.69% (91.55%, 93.72%)       | 99.77% (99.45%, 99.92%      |
| ARDS (J80)  | 1,669 ( 16.53% )    | 91.79% (88.95%, 94.10%)       | 99.77% ( 98.73% , 99.99%    |
| Sepsis (see Appendix C)   | 3,501 (34.67%)      | 89.66% (87.55%, 91.51%)       | 93.46% (91.67%, 94.98%      |
| Bronchitis (J20.8 OR J40)   | 104 ( 1.03% )       | 100.0% (84.56%, 100.0%)       | 59.46% (42.10%, 75.25%      |
| Respiratory infection (J22 OR J98.8)  | 1,110 ( 10.99% )    | 92.41% (88.13%, 95.52%)       | 89.61% (84.94%, 93.23%      |
| Cough (R05)   | 2,190 (21.69%)      | 90.41% (87.59%, 92.78%)       | 88.42% (85.43%, 90.99%      |
| Shortness of breath (R06.2)   | 64 ( 0.63% )        | 81.82% (48.22%, 97.72%)       | 100.0% (66.37%, 100.0%      |
| Fever (R50.9)   | 2,760 ( 27.33% )    | 89.28% (86.72%, 91.48%)       | 92.08% (89.77%, 94.01%      |
| Optional  |                     |                               |                             |
| Other COVID Tests   |                     |                               |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                   | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                     |                               |                             |
| Test performed, at least 1 positive result  | 451 ( 4.47% )       | 92.39% (87.56%, 95.78%)       | ****                        |
| est performed, only negative results  | 55 ( 0.54% )        | 56.25% (29.88%, 80.25%)       | 100.0% (66.37%, 100.0%      |
| No test or unknown result   | 6,792 ( 67.27% )    | 91.31% (89.91%, 92.58%)       | 83.76% (82.03%, 85.37%      |
| Antigen test within ±14 days from inpatient admission**                             | -                   | -                             | -                           |
| est performed, at least 1 positive result   | N/A                 | N/A                           | N/A                         |
| est performed, only negative results  | N/A                 | N/A                           | N/A                         |
| No test or unknown result   | 9,138 ( 90.50% )    | 88 % (86.40%, 89.48%)         | 99.30% ( 98.75% , 99.65%    |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                     |                               |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 949 ( 9.40% )       | 89.07% (86.89%, 91%)          | 79.29% (76.71%, 81.71%      |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 5: IP Stay with Codes [U07.1   | OR B97.29] and [Pneu | monia** OR ARDS (J80)]*       |                             |
|--|----------------------|-------------------------------|-----------------------------|
|  |                      |                               | Sensitivity (95% Confidence |
|  | Total Patient Count  | PPV (95% Confidence Interval) | Interval)                   |
|  | Number (Percent)     | Pero                          | cent                        |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness              | 1,111 ( 11 % )       | 87.61% (82.69%, 91.54%)       | 92.76% (88.51%, 95.81%)     |
| of breath) OR R50.9 (fever)]   |                      |                               |                             |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                | 1,884 ( 18.66% )     | 89.45% (86.26%, 92.12%)       | 99.75% (98.64%, 99.99%)     |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                |                      |                               |                             |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]                |                      |                               |                             |
| Primary" Lab Test Product Information****  |                      |                               |                             |
| 47377 - SARS_COV_2_NS  | N/A                  | N/A                           | N/A                         |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual                    | N/A                  | N/A                           | N/A                         |
| Differential WBC Count   |                      |                               |                             |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA                         | 2 ( 0.02% )          | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )   |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                                    | 402 ( 3.98% )        | 95 % (92.38%, 96.92%)         | 86.17% ( 82.59% , 89.25%    |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                                    | 83 ( 0.82% )         | 95.18% (88.12%, 98.67%)       | 83.16% (74.10%, 90.06%      |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                                    | N/A                  | N/A                           | N/A                         |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT   | N/A                  | N/A                           | N/A                         |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                                      | 11 ( 0.11% )         | 90.91% (58.72%, 99.77%)       | 90.91% (58.72%, 99.77%)     |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                                   | N/A                  | N/A                           | N/A                         |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With robe Detection | 58 ( 0.57% )         | 89.66% (78.83%, 96.11%)       | 91.23% (80.70%, 97.09%)     |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                | N/A                  | N/A                           | N/A                         |
| Iucleic Acid Amplification Using CDC Primer-Probe Set N1                                   |                      |                               |                             |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                | N/A                  | N/A                           | N/A                         |
| Iucleic Acid Amplification Using CDC Primer-Probe Set N2                                   |                      |                               |                             |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA               | 569 ( 5.64% )        | 93.85% (91.55%, 95.68%)       | 86.83% (83.90%, 89.40%)     |
| Vith Probe Detection   |                      |                               |                             |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                | N/A                  | N/A                           | N/A                         |
| y NAA With Probe Detection   |                      |                               |                             |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                | N/A                  | N/A                           | N/A                         |
| IAA With Probe Detection   |                      |                               |                             |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA With          | 1,131 ( 11.20% )     | 84.85% ( 82.63% , 86.90% )    | 79.37% ( 76.98% , 81.62%    |
| robe Detection   |                      |                               |                             |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By<br>mmunoassay   | N/A                  | N/A                           | N/A                         |



Table 1b. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 5: IP Stay with Codes [U07.1   | OR B97.29] and [Pneu | monia** OR ARDS (J80)]*       |  |  |
|--|----------------------|-------------------------------|--|--|
|  | Total Patient Count  | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |
|  | Number (Percent)     |                               | Percent                                  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay             | N/A                  | N/A                           | N/A                                      |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                  | N/A                           | N/A                                      |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A                  | N/A                           | N/A                                      |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                  | N/A                           | N/A                                      |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | N/A                  | N/A                           | N/A                                      |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                  | N/A                           | N/A                                      |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                  | N/A                           | N/A                                      |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe                          | N/A                  | N/A                           | N/A                                      |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                  | N/A                           | N/A                                      |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe                              | N/A                  | N/A                           | N/A                                      |  |
| Unknown  | 18 ( 0.18% )         | 100.0% (71.51%, 100.0%)       | 68.75% (41.34%, 88.98%)                  |  |

<sup>\*</sup>Includes only the first algorithm-qualifying inpatient stay per algorithm per patient.

Includes one test result per encounter - positive if patient had at least one positive NAA result; negative if all NAA results are negative (during test window, from any type of specimen/site).

<sup>\*\*</sup> COVID NAA, antibody, and antigen tests are identified using LOINCs or any other identifier available in the data.

<sup>\*\*\*</sup>Any NAA result in 14 days prior through 14 days after inpatient encounter during which the COVID diagnosis codes were recorded.

<sup>&</sup>quot;Primary" test result will be the first positive molecular test within the ±14-day window, or the last negative molecular test within the ±14-day window among patients with no positive test.

<sup>\*\*\*\*</sup>Only the "primary" lab test, as defined above, is described

<sup>\*\*\*\*\*</sup>Sensitivity not calculated because algorithm cohort NAA-positive patient count is larger than laboratory result cohort NAA-positive patient count. This is a result of a different visit being used to describe characteristics among the lab-based cohort and the algorithm-based cohort.

<sup>\*\*\*\*\*\*</sup>Sum across care settings does not equal total observed because care setting was not reported for some patients.



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Care Setting of "Primary" Lab Test\*\*\*\*\* **Total Observed** 57.044 4.811 6.698 90.681 Inpatient 1,090 1,034 21,010 22,351 **Outpatient or Emergency Department** 1,973 943 11,230 6,747 Other 337 382 5,834 7,967 Care Setting Reported as Unknown 690 3,482 10,927 44,441 **Demographics** Sex Female 2,293 3,245 32,911 51,014 Male 2,518 3,453 24,133 39,667 Other/Missing 0 0 0 0 Age at Hospital Admission (Years) 0-5 469 725 18 27 6-17 20 42 789 1,282 18-29 294 533 8,143 5,205 30-39 439 682 8.076 12,156 40-49 639 905 4,487 8,131 50-59 1,019 1,428 7,087 13,412 60-69 1,063 1,402 10.768 17,728 70-79 747 938 11,171 16,203 80-89 429 556 6.932 9.903 90+ 143 185 2,060 2,998 Missing 0 0 0 0 Race American Indian or Alaska Native 23 28 229 326 Asian 267 318 1,779 2,217 Black or African American 862 971 6,223 7.711 Native Hawaiian or Other Pacific Islander 3 3 45 63 White 1,192 1,383 27,234 35,127 Other/Mixed/Unknown 2,464 3,995 21,535 45,237

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Ethnicity



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Hispanic 654 753 2,323 2,892 Non-Hispanic 1.327 24.118 33.220 1.611 Unknown 2,830 4,334 30,603 54,569 **Codes Observed During Inpatient Stay** Asymptomatic screening (Z11.59) 94 9,293 14,321 211 Contact and suspected exposure (Z20.828) 509 714 15,169 24,670 Pneumonia (see Appendix B) 3.479 4.468 5.287 10,312 Other viral pneumonia (J12.89) 3,274 641 2,006 4,053 ARDS (J80) 204 569 444 605 Sepsis (see Appendix C) 1,230 1,748 5,132 10,281 Bronchitis (J20.8 OR J40) 57 79 97 202 Respiratory infection (J22 OR J98.8) 181 240 104 321 Cough (R05) 516 682 1,348 2,929 Shortness of breath (R06.2) 12 17 340 131 Fever (R50.9) 682 968 2,707 5,982 Optional **Other COVID Tests** Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) observed within -7 days prior to hospitalization through end of patient record\*\* Test performed, at least 1 positive result 89 74 25 40 Test performed, only negative results 16 3 565 286 No test or unknown result 3.653 5.498 42.476 75,211 Antigen test within ±14 days from inpatient admission\*\* Test performed, at least 1 positive result 0 0 0 1 Test performed, only negative results 0 0 1 26 No test or unknown result 2,548 4,172 35,287 66,113 Codes Observed Within ±5 Days of Diagnostic Specimen Collection Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426) 3,094 2,391 31,744 32,890 **Codes Observed During Inpatient Stay** 

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Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness 227 308 1,640 3,019 of breath) OR R50.9 (fever)] Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) 368 245 463 757 OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] "Primary" Lab Test Product Information\*\*\*\* 847377 - SARS COV 2 NS 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR 526 571 2,840 3,219 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab 640 649 2,272 2.407 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA 87635R - SARS-CoV-2, NAA (COVID-19), POCT 7 6 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19) 3.775 146 149 3.474 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test 1 1 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With 3 36 305 534 **Probe Detection** 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By 0 0 0 1 Nucleic Acid Amplification Using CDC Primer-Probe Set N1 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By 0 0 0 1 Nucleic Acid Amplification Using CDC Primer-Probe Set N2 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By 280 600 7.031 15.096 NAA With Probe Detection 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen 0 0 2 1 By NAA With Probe Detection 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By 15 1 1 5 NAA With Probe Detection 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By 2.867 4.126 36.433 58.596 NAA With Probe Detection 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By

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**Immunoassay** 



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Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With **Probe Detection** 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By 2 2 92 94 NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen 5 205 268 By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory 78 120 6 11 Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By 8 23 68 **Immunoassay** 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By 7 7 **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With 7 11 160 238 Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By 0 0 1 1 NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With 0 0 2 2 **Probe Detection** 

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Unknown



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1* |                 |                 |                 |               |                          |
|---|-----------------|-----------------|-----------------|---------------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab        | Patients with Lab Result |
|   | Lab Positive    |                 | Lab, No Results | INO Lab       |                          |
| Care Setting of "Primary" Lab Test*****           |                 | Number          |                 |               | Number (Percent)         |
| Total Observed                                    | 4,564           | 1,060           | 28              | 20,249        | 5,624 ( 21.71% )         |
| Inpatient   | 1,029           | 97              | 4               | 20,249<br>N/A | 1,126                    |
| Outpatient or Emergency Department                | 1,816           | 373             | 12              | N/A           | 2,189                    |
| Other   | 314             | 30              | 5               | N/A           | 344                      |
| Care Setting Reported as Unknown                  | 1,225           | 554             |                 | N/A           | 1,779                    |
| Demographics                                      | 1,223           | 354             | ,               | 11/7          | 1,773                    |
| Sex   |                 |                 |                 |               |                          |
| Female  | 2,153           | 545             | 10              | 9,839         | 2,698 ( 21.50% )         |
| Male  | 2,411           | 515             | 18              | 10,347        | 2,926 ( 22.01% )         |
| Other/Missing                                     | 0               | 0               | 0               | 0             | N/A                      |
| Age at Hospital Admission (Years)                 | -               | -               | -               | -             |                          |
| 0-5   | 12              | 4               | 0               | 79            | 16 ( 16.84% )            |
| 6-17  | 18              | 5               | 1               | 128           | 23 ( 15.13% )            |
| 18-29   | 280             | 74              | 1               | 900           | 354 ( 28.21% )           |
| 30-39   | 418             | 89              | 3               | 1,280         | 507 ( 28.32% )           |
| 40-49   | 614             | 117             | 1               | 2,035         | 731 ( 26.42% )           |
| 50-59   | 978             | 172             | 4               | 3,321         | 1,150 ( 25.70% )         |
| 60-69   | 1,019           | 200             | 8               | 4,132         | 1,219 ( 22.75% )         |
| 70-79   | 698             | 217             | 6               | 4,020         | 915 ( 18.52% )           |
| 80-89   | 399             | 136             | 3               | 3,077         | 535 ( 14.80% )           |
| 90+   | 128             | 46              | 1               | 1,214         | 174 ( 12.53% )           |
| Missing   | 0               | 0               | 0               | 0             | N/A                      |
| Race  |                 |                 |                 |               |                          |
| American Indian or Alaska Native                  | 23              | 1               | 0               | 14            | 24 ( 63.16% )            |
| Asian   | 263             | 16              | 0               | 62            | 279 ( 81.82% )           |
| Black or African American                         | 826             | 94              | 0               | 1,201         | 920 ( 43.38% )           |
| Native Hawaiian or Other Pacific Islander         | 3               | 0               | 0               | 1             | 3 ( 75 % )               |
| White   | 1,107           | 272             | 1               | 2,898         | 1,379 ( 32.23% )         |
| Other/Mixed/Unknown                               | 2,342           | 677             | 27              | 16,010        | 3,019 ( 15.84% )         |
| Ethnicity   |                 |                 |                 |               |                          |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 1: Inpati   | ent (IP) Stay with ( | Code U07.1*     |                 |        |                         |
|---|----------------------|-----------------|-----------------|--------|-------------------------|
|   | Lab Positive***      | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resul |
|   |                      | Number          |                 |        | Number (Percent)        |
| Hispanic  | 634                  | 43              | 0               | 186    | 677 ( 78.45% )          |
| Non-Hispanic  | 1,276                | 69              | 1               | 181    | 1,345 (88.08%)          |
| Unknown   | 2,656                | 946             | 27              | 19,819 | 3,602 ( 15.36% )        |
| Codes Observed During Inpatient Stay  |                      |                 |                 |        |                         |
| Asymptomatic screening (Z11.59)   | 66                   | 45              | 1               | 403    | 111 ( 21.55% )          |
| Contact and suspected exposure (Z20.828)  | 438                  | 248             | 6               | 3,339  | 686 ( 17.02% )          |
| Pneumonia (see Appendix B)  | 3,419                | 636             | 21              | 13,644 | 4,055 ( 22.88% )        |
| Other viral pneumonia (J12.89)  | 3,269                | 420             | 20              | 10,980 | 3,689 ( 25.11% )        |
| ARDS (J80)  | 433                  | 50              | 3               | 1,374  | 483 ( 25.97% )          |
| Sepsis (see Appendix C)   | 1,198                | 271             | 6               | 4,773  | 1,469 (23.51%)          |
| Bronchitis (J20.8 OR J40)   | 57                   | 9               | 0               | 217    | 66 ( 23.32% )           |
| Respiratory infection (J22 OR J98.8)  | 178                  | 33              | 1               | 963    | 211 ( 17.96% )          |
| Cough (RO5)   | 506                  | 139             | 4               | 2,723  | 645 ( 19.13% )          |
| Shortness of breath (R06.2)   | 11                   | 4               | 0               | 80     | 15 ( 15.79% )           |
| Fever (R50.9)   | 659                  | 218             | 6               | 3,453  | 877 ( 20.23% )          |
| Optional  |                      |                 |                 |        |                         |
| Other COVID Tests   |                      |                 |                 |        |                         |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                    | -               | -               | -      | -                       |
| observed within -7 days prior to hospitalization through end of patient record**    |                      |                 |                 |        |                         |
| Test performed, at least 1 positive result  | 97                   | 28              | 0               | 232    | 125 ( 35.01% )          |
| est performed, only negative results  | 17                   | 18              | 0               | 90     | 35 ( 28 % )             |
| No test or unknown result   | 3,502                | 636             | 26              | 14,525 | 4,138 ( 22.14% )        |
| Antigen test within ±14 days from inpatient admission**                             | -                    | -               | -               | -      | -                       |
| Fest performed, at least 1 positive result  | 4                    | 0               | 0               | 1      | 4 ( 80 % )              |
| est performed, only negative results  | 3                    | 1               | 0               | 2      | 4 ( 66.67% )            |
| No test or unknown result   | 3,028                | 887             | 27              | 19,802 | 3,915 ( 16.49% )        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                      |                 |                 |        |                         |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 2,952                | 607             | 11              | 47     | 3,559 ( 98.40% )        |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*                             |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab. No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 210             | 111             | 3               | 1,424  | 321 ( 18.36% )           |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 351             | 115             | 5               | 2,112  | 466 ( 18.04% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****                                    |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | -               | -               | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 485             | 45              | -               | -      | 530 ( 100.0% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | 562             | 44              | -               | -      | 606 ( 100.0% )           |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | 131             | 24              | -               | -      | 155 ( 100.0% )           |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 3               | 2               | 0               | 0      | 5 ( 100.0% )             |
| Probe Detection   |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By     | 256             | 85              | 5               | 0      | 341 ( 98.55% )           |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | 0               | 0               | 0               | 0      | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 1               | 0               | 0               | 0      | 1 ( 100.0% )             |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By     | 2,711           | 794             | 3               | 0      | 3,505 ( 99.91% )         |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*   |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   |                 |                 |                 |        |                          |
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                        | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay   |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With                          | -               | -               | -               | -      | N/A                      |
| Probe Detection   |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection | 2               | 3               | 0               | 0      | 5 ( 100.0% )             |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen                          | 4               | 2               | 0               | 0      | 6 ( 100.0% )             |
| By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory                               | 5               | 0               | 0               | 0      | 5 ( 100.0% )             |
| Specimen By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By                               | 0               | 0               | 0               | 0      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                               | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                             | 6               | 1               | 0               | 0      | 7 ( 100.0% )             |
| Non-Probe Detection   |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By                          | 0               | 0               | 0               | 0      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                             | 0               | 0               | 0               | 0      | N/A                      |
| Probe Detection   |                 |                 |                 |        |                          |
| Unknown   | 47              | 0               | 0               | 129    | 47 ( 26.70% )            |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   | Total Patient Count | Positive Predictive Value (PPV) (95% Confidence Interval)  Number (Percent) | Sensitivity (95% Confidence<br>Interval) |
|---|---------------------|---|--|
|   |                     |   | Interval)                                |
|   | 25.004 / 400.00/ )  | Number (Percent)  |  |
|   | 25 004 (400 00()    |   |  |
| Care Setting of "Primary" Lab Test*****   | 25 004 / 400 00/ \  |   |  |
| Total Observed                            | 25,901 ( 100.0% )   | 81.15% (80.11%, 82.17%)   | 94.87% (94.20%, 95.47%)                  |
| npatient                                  | 1,130 ( 4.36% )     | 91.39% (89.59%, 92.96%)   | 94.40% (92.87%, 95.69%)                  |
| Outpatient or Emergency Department        | 2,201 ( 8.50% )     | 82.96% (81.32%, 84.51%)   | 92.04% (90.76%, 93.20%)                  |
| Other                                     | 349 ( 1.35% )       | 91.28% (87.78%, 94.04%)   | 93.18% (89.94%, 95.62%)                  |
| Care Setting Reported as Unknown          | 7209 ( 27.83% )     | 68.86% (66.65%, 71.01%)   | ****                                     |
| Demographics                              |                     |   |  |
| Sex                                       |                     |   |  |
| Female                                    | 12,547 ( 48.44% )   | 79.80% ( 78.23% , 81.30% )  | 93.89% ( 92.84% , 94.84% )               |
| Male                                      | 13,291 ( 51.31% )   | 82.40% (80.97%, 83.76%)   | 95.75% (94.89%, 96.50%)                  |
| Other/Missing                             | N/A                 | N/A   | N/A                                      |
| Age at Hospital Admission (Years)         |                     |   |  |
| 0-5                                       | 95 ( 0.37% )        | 75 % (47.62%, 92.73%)   | 66.67% (40.99%, 86.66%)                  |
| 6-17                                      | 152 ( 0.59% )       | 78.26% (56.30%, 92.54%)   | 90 % (68.30%, 98.77%)                    |
| 18-29                                     | 1,255 ( 4.85% )     | 79.10% (74.48%, 83.21%)   | 95.24% (92.14%, 97.37%)                  |
| 30-39                                     | 1,790 ( 6.91% )     | 82.45% (78.85%, 85.66%)   | 95.22% (92.78%, 97.01%)                  |
| 40-49                                     | 2,767 ( 10.68% )    | 83.99% (81.13%, 86.58%)   | 96.09% (94.28%, 97.45%)                  |
| 50-59                                     | 4,475 ( 17.28% )    | 85.04% (82.85%, 87.06%)   | 95.98% (94.58%, 97.10%)                  |
| 60-69                                     | 5,359 ( 20.69% )    | 83.59% (81.39%, 85.63%)   | 95.86% (94.48%, 96.98%)                  |
| 70-79                                     | 4,941 ( 19.08% )    | 76.28% (73.39%, 79.01%)   | 93.44% (91.42%, 95.11%)                  |
| 80-89                                     | 3,615 ( 13.96% )    | 74.58% ( 70.67% , 78.22% )  | 93.01% (90.17%, 95.23%)                  |
| 90+                                       | 1,389 ( 5.36% )     | 73.56% (66.36%, 79.95%)   | 89.51% (83.29%, 94.01%)                  |
| Missing                                   | N/A                 | N/A   | N/A                                      |
| Race                                      |                     |   |  |
| American Indian or Alaska Native          | 38 ( 0.15% )        | 95.83% (78.88%, 99.89%)   | 100.0% (85.18%, 100.0%)                  |
| Asian                                     | 341 ( 1.32% )       | 94.27% ( 90.85% , 96.69% )  | 98.50% (96.21%, 99.59%)                  |
| Black or African American                 | 2,121 ( 8.19% )     | 89.78% (87.64%, 91.66%)   | 95.82% (94.26%, 97.06%)                  |
| Native Hawaiian or Other Pacific Islander | 4 ( 0.02% )         | 100.0% (29.24%, 100.0%)   | 100.0% (29.24%, 100.0%)                  |
| White                                     | 4,278 ( 16.52% )    | 80.28% (78.08%, 82.35%)   | 92.87% (91.26%, 94.26%)                  |
| Other/Mixed/Unknown                       | 19,056 ( 73.57% )   | 77.58% (76.04%, 79.05%)   | 95.05% (94.12%, 95.87%)                  |
| Ethnicity                                 | ,                   | ,   | , , ,                                    |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   |                            | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |
|---|----------------------------|---------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | (95% Confidence Interval)       | Interval)                   |
|   |                            | Number (Percent)                |                             |
| Hispanic  | 863 ( 3.33% )              | 93.65% (91.54%, 95.37%)         | 96.94% (95.32%, 98.12%)     |
| Non-Hispanic  | 1,527 ( 5.90% )            | 94.87% (93.55%, 95.99%)         | 96.16% (94.98%, 97.13%)     |
| Unknown   | 23,448 ( 90.53% )          | 73.74% (72.27%, 75.17%)         | 93.85% (92.90%, 94.71%)     |
| Codes Observed During Inpatient Stay  |                            |                                 |                             |
| Asymptomatic screening (Z11.59)   | 515 ( 1.99% )              | 59.46% (49.73%, 68.68%)         | 70.21% (59.90%, 79.21%)     |
| Contact and suspected exposure (Z20.828)  | 4,031 ( 15.56% )           | 63.85% (60.13%, 67.45%)         | 86.05% (82.73%, 88.94%)     |
| Pneumonia (see Appendix B)  | 17,720 ( 68.41% )          | 84.32% (83.16%, 85.42%)         | 98.28% (97.79%, 98.68%)     |
| Other viral pneumonia (J12.89)  | 14,689 ( 56.71% )          | 88.61% (87.55%, 89.62%)         | 99.85% (99.64%, 99.95%)     |
| ARDS (J80)  | 1,860 ( 7.18% )            | 89.65% (86.58%, 92.22%)         | 97.52% (95.61%, 98.76%)     |
| Sepsis (see Appendix C)   | 6,248 ( 24.12% )           | 81.55% (79.47%, 83.50%)         | 97.40% (96.35%, 98.21%)     |
| Bronchitis (J20.8 OR J40)   | 283 ( 1.09% )              | 86.36% (75.69%, 93.57%)         | 100.0% (93.73%, 100.0%)     |
| Respiratory infection (J22 OR J98.8)  | 1,175 ( 4.54% )            | 84.36% (78.74%, 88.98%)         | 98.34% (95.23%, 99.66%)     |
| Cough (RO5)   | 3,372 ( 13.02% )           | 78.45% (75.07%, 81.56%)         | 98.06% (96.46%, 99.07%)     |
| Shortness of breath (R06.2)   | 95 ( 0.37% )               | 73.33% (44.90%, 92.21%)         | 91.67% (61.52%, 99.79%)     |
| ever (R50.9)  | 4,336 ( 16.74% )           | 75.14% (72.14%, 77.97%)         | 96.63% (94.98%, 97.85%)     |
| Optional  |                            |                                 |                             |
| Other COVID Tests   |                            |                                 |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                               | -                           |
| bserved within -7 days prior to hospitalization through end of patient record**     |                            |                                 |                             |
| est performed, at least 1 positive result   | 357 ( 1.38% )              | 77.60% (69.28%, 84.57%)         | ****                        |
| est performed, only negative results  | 125 ( 0.48% )              | 48.57% (31.38%, 66.01%)         | ****                        |
| Io test or unknown result   | 18,689 ( 72.16% )          | 84.63% (83.49%, 85.72%)         | 95.87% (95.17%, 96.49%)     |
| Intigen test within ±14 days from inpatient admission**                             | -                          | -                               | -                           |
| est performed, at least 1 positive result   | 5 ( 0.02% )                | 100.0% (39.76%, 100.0%)         | ****                        |
| est performed, only negative results  | 6 ( 0.02% )                | 75 % ( 19.41% , 99.37% )        | ****                        |
| No test or unknown result   | 23,744 ( 91.67% )          | 77.34% ( 76 % , 78.65% )        | ****                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            |                                 |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 3,617 ( 13.96% )           | 82.94% (81.67%, 84.17%)         | 95.41% (94.61%, 96.12%)     |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*   |                     |  |  |  |  |  |  |
|---|---------------------|--|--|--|--|--|--|
|   | Total Patient Count | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |  |
|   | Total Fatient Count | Number (Percent)   | intervary                                |  |  |  |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 1,748 ( 6.75% )     | 65.42% (59.94%, 70.62%)                                      | 92.51% (88.28%, 95.58%)                  |  |  |  |  |
| of breath) OR R50.9 (fever)]  | , , ,               | ,  | , , ,                                    |  |  |  |  |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 2,583 ( 9.97% )     | 75.32% (71.15%, 79.17%)                                      | 95.38% (92.71%, 97.29%)                  |  |  |  |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                     |  |  |  |  |  |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                     |  |  |  |  |  |  |
| "Primary" Lab Test Product Information****  |                     |  |  |  |  |  |  |
| 847377 - SARS_COV_2_NS  | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 530 ( 2.05% )       | 91.51% (88.80%, 93.74%)                                      | 92.21% (89.57%, 94.35%)                  |  |  |  |  |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | 606 ( 2.34% )       | 92.74% ( 90.38% , 94.68% )                                   | 87.81% (85.02%, 90.25%)                  |  |  |  |  |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | 155 ( 0.60% )       | 84.52% (77.84%, 89.82%)                                      | 89.73% (83.62%, 94.13%)                  |  |  |  |  |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 5 ( 0.02% )         | 60 % (14.66%, 94.73%)  | 100.0% (29.24%, 100.0%)                  |  |  |  |  |
| Probe Detection   |                     |  |  |  |  |  |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                 | N/A  | N/A                                      |  |  |  |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1  |                     |  |  |  |  |  |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA With Probe Detection                                    | 346 ( 1.34% )       | 75.07% ( 70.13% , 79.58% )                                   | 91.43% (87.51%, 94.43%)                  |  |  |  |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen By NAA With Probe Detection                              | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By NAA With Probe Detection                                 | 1(0%)               | 100.0% ( 2.50%, 100.0%)                                      | 100.0% ( 2.50%, 100.0%)                  |  |  |  |  |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA With Probe Detection                                    | 3,508 ( 13.54% )    | 77.35% ( 75.92% , 78.72% )                                   | 94.56% ( 93.66% , 95.36% )               |  |  |  |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By Immunoassay   | N/A                 | N/A  | N/A                                      |  |  |  |  |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*  |                            |                                 |                             |  |  |  |
|--|----------------------------|---------------------------------|-----------------------------|--|--|--|
|  |                            | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |  |  |  |
|  | <b>Total Patient Count</b> | (95% Confidence Interval)       | Interval)                   |  |  |  |
|  |                            | Number (Percent)                |                             |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                               | N/A                        | N/A                             | N/A                         |  |  |  |
| Rapid Immunoassay  |                            |                                 |                             |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                        | N/A                             | N/A                         |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | 5 ( 0.02% )                | 40 % ( 5.27% , 85.34% )         | 100.0% (15.81%, 100.0%)     |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | 6 ( 0.02% )                | 66.67% ( 22.28% , 95.67% )      | 100.0% (39.76%, 100.0%)     |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | 5 ( 0.02% )                | 100.0% (47.82%, 100.0%)         | 83.33% ( 35.88% , 99.58% )  |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                        | N/A                             | N/A                         |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                        | N/A                             | N/A                         |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | 7 ( 0.03% )                | 85.71% (42.13%, 99.64%)         | 85.71% (42.13%, 99.64%)     |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                        | N/A                             | N/A                         |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A                        | N/A                             | N/A                         |  |  |  |
| Unknown  | 176 ( 0.68% )              | 100.0% (92.45%, 100.0%)         | 97.92% (88.93%, 99.95%)     |  |  |  |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   | Lab Positive***  | Lab Negative*** | Lab Na Daggita  |                 |                          |
|---|------------------|-----------------|-----------------|-----------------|--------------------------|
|   | Lab Positive**** | Lab Negative    |                 | Nia Lab         | Dationto with Lab Danult |
|   |                  |                 | Lab, No Results | No Lab          | Patients with Lab Result |
| Care Setting of "Primary" Lab Test*****   |                  | Number          |                 |                 | Number (Percent)         |
| Total Observed                            | 4.500            | 4.074           | 20              | 20.442          | F (20 / 24 (20/ )        |
| Inpatient                                 | 4,568            | 1,071           | 28              | 20,412          | 5,639 ( 21.62% )         |
| Outpatient or Emergency Department        | 1,029            | 102             | 4               | N/A             | 1,131                    |
| Other                                     | 1,819            | 374             | 12              | N/A             | 2,193                    |
| Care Setting Reported as Unknown          | 314              | 30              | 5               | N/A             | 344                      |
| Demographics                              | 1,226            | 559             | 7               | N/A             | 1,785                    |
| Sex                                       |                  |                 |                 |                 |                          |
| Female                                    | 2,156            | 550             | 10              | 9,929           | 2,706 ( 21.40% )         |
| Male                                      | 2,136            | 521             | 18              | 9,929<br>10,419 | 2,706 ( 21.40% )         |
| Other/Missing                             | 0                | 0               | 0               | 0               | 2,933 ( 21.94% )<br>N/A  |
| Age at Hospital Admission (Years)         | U                | U               | U               | U               | IN/A                     |
| 0-5                                       | 12               | 4               | 0               | 79              | 16 ( 16.84% )            |
| 6-17                                      | 18               | 6               | 1               | 133             | 24 ( 15.19% )            |
| 18-29                                     | 280              | 75              | 1               | 924             | 355 ( 27.73% )           |
| 30-39                                     | 419              | 89              | 3               | 1,296           | 508 ( 28.11% )           |
| 40-49                                     | 614              | 117             | 1               | 2,058           | 731 ( 26.20% )           |
| 50-59                                     | 978              | 175             | 4               | 3,345           | 1,153 ( 25.61% )         |
| 60-69                                     | 1,019            | 203             | 8               | 4,159           | 1,222 ( 22.68% )         |
| 70-79                                     | 701              | 217             | 6               | 4,040           | 918 ( 18.49% )           |
| 80-89                                     | 399              | 138             | 3               | 3,092           | 537 ( 14.79% )           |
| 90+                                       | 128              | 47              | 1               | 1,222           | 175 ( 12.52% )           |
| Missing                                   | 0                | 0               | 0               | 0               | N/A                      |
| Race                                      | -                | -               | -               | -               | ,                        |
| American Indian or Alaska Native          | 23               | 1               | 0               | 14              | 24 ( 63.16% )            |
| Asian                                     | 263              | 16              | 0               | 62              | 279 ( 81.82% )           |
| Black or African American                 | 826              | 94              | 0               | 1,203           | 920 ( 43.33% )           |
| Native Hawaiian or Other Pacific Islander | 3                | 0               | 0               | 1               | 3 (75 %)                 |
| White                                     | 1,107            | 274             | 1               | 2,908           | 1,381 ( 32.19% )         |
| Other/Mixed/Unknown                       | 2,346            | 686             | 27              | 16,160          | 3,032 ( 15.78% )         |
| Ethnicity                                 | ,                |                 |                 | ,               | , , , ,                  |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 2: IP Stay v  | vith Any of Codes l | J07.1, B97.29*  |                 |        |                         |
|---|---------------------|-----------------|-----------------|--------|-------------------------|
|   | Lab Positive***     | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resul |
|   |                     | Number          |                 |        | Number (Percent)        |
| Hispanic  | 635                 | 44              | 0               | 186    | 679 ( 78.50% )          |
| Non-Hispanic  | 1,276               | 70              | 1               | 181    | 1,346 (88.09%)          |
| Unknown   | 2,659               | 955             | 27              | 19,981 | 3,614 ( 15.30% )        |
| Codes Observed During Inpatient Stay  |                     |                 |                 |        | · · · · ·               |
| Asymptomatic screening (Z11.59)   | 66                  | 46              | 1               | 412    | 112 ( 21.33% )          |
| Contact and suspected exposure (Z20.828)  | 438                 | 253             | 6               | 3,396  | 691 ( 16.88% )          |
| Pneumonia (see Appendix B)  | 3,420               | 639             | 21              | 13,701 | 4,059 ( 22.83% )        |
| Other viral pneumonia (J12.89)  | 3,270               | 421             | 20              | 11,006 | 3,691 (25.08%)          |
| ARDS (J80)  | 433                 | 50              | 3               | 1,375  | 483 ( 25.95% )          |
| Sepsis (see Appendix C)   | 1,198               | 271             | 6               | 4,812  | 1,469 ( 23.37% )        |
| Bronchitis (J20.8 OR J40)   | 57                  | 10              | 0               | 219    | 67 ( 23.43% )           |
| Respiratory infection (J22 OR J98.8)  | 178                 | 33              | 1               | 964    | 211 ( 17.94% )          |
| Cough (R05)   | 506                 | 140             | 4               | 2,743  | 646 ( 19.04% )          |
| Shortness of breath (R06.2)   | 11                  | 4               | 0               | 80     | 15 ( 15.79% )           |
| Fever (R50.9)   | 659                 | 221             | 6               | 3,480  | 880 ( 20.16% )          |
| Optional  |                     |                 |                 |        |                         |
| Other COVID Tests   |                     |                 |                 |        |                         |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                   | -               | -               | -      | -                       |
| observed within -7 days prior to hospitalization through end of patient record**    |                     |                 |                 |        |                         |
| est performed, at least 1 positive result   | 97                  | 28              | 0               | 232    | 125 ( 35.01% )          |
| est performed, only negative results  | 17                  | 18              | 0               | 91     | 35 ( 27.78% )           |
| No test or unknown result   | 3,506               | 644             | 26              | 14,674 | 4,150 ( 22.02% )        |
| Antigen test within ±14 days from inpatient admission**                             | -                   | -               | -               | -      | -                       |
| est performed, at least 1 positive result   | 4                   | 0               | 0               | 1      | 4 (80 %)                |
| est performed, only negative results  | 3                   | 1               | 0               | 2      | 4 ( 66.67% )            |
| No test or unknown result   | 3,031               | 896             | 27              | 19,963 | 3,927 ( 16.42% )        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                     |                 |                 |        |                         |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 2,956               | 614             | 11              | 47     | 3,570 ( 98.40% )        |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*  |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness                | 210             | 112             | 3               | 1,443  | 322 ( 18.21% )           |
| of breath) OR R50.9 (fever)]   |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                 | 351             | 116             | 5               | 2,128  | 467 ( 17.96% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                  |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]                  |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****   |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS   | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual                     | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA                          | -               | -               | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                                     | 486             | 45              | -               | -      | 531 ( 100.0% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                                     | 562             | 45              | -               | -      | 607 ( 100.0% )           |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                                     | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT  | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                                       | 131             | 24              | -               | -      | 155 ( 100.0% )           |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                                    | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With Probe Detection | 3               | 2               | 0               | 0      | 5 ( 100.0% )             |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                 |                 |                 | _               | _      |                          |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                                     | 0               | 0               | 0               | 0      | N/A                      |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                 | 0               | 0               | 0               | 0      | N1 / A                   |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                                     | 0               | 0               | 0               | 0      | N/A                      |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By                    | 35.0            | 0.7             |                 | 0      | 242 / 00 200/ \          |
| NAA With Probe Detection   | 256             | 87              | 6               | 0      | 343 ( 98.28% )           |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                 | 0               | 0               | 0               | 0      | N/A                      |
| By NAA With Probe Detection  | U               | U               | U               | U      | N/A                      |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                 | 1               | 0               | 0               | 0      | 1 ( 100.0% )             |
| NAA With Probe Detection   | 1               | U               | O               | U      | 1 (100.070)              |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By                    | 2,714           | 801             | 3               | 0      | 3,515 ( 99.91% )         |
| NAA With Probe Detection   | 2,717           | 001             | 3               | J      | 3,313 ( 33.31/0 )        |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By                  | -               | -               | _               | _      | N/A                      |
| Immunoassay  |                 |                 |                 |        | ,                        |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                          |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 |                 |                 |        |                          |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | 2               | 3               | 0               | 0      | 5 ( 100.0% )             |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | 4               | 2               | 0               | 0      | 6 ( 100.0% )             |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 5               | 0               | 0               | 0      | 5 ( 100.0% )             |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | 0               | 0               | 0               | 0      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | 6               | 1               | 0               | 0      | 7 ( 100.0% )             |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | 0               | 0               | 0               | 0      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| Unknown  | 47              | 0               | 0               | 129    | 47 ( 26.70% )            |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29* |                            |                               |                             |  |  |
|---|----------------------------|-------------------------------|-----------------------------|--|--|
|   |                            |                               | Sensitivity (95% Confidence |  |  |
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |
|   |                            | Number (Percent)              |                             |  |  |
| Care Setting of "Primary" Lab Test*****               |                            |                               |                             |  |  |
| Total Observed  | 26,079 ( 100.0% )          | 81.01% (79.96%, 82.02%)       | 94.95% ( 94.29% , 95.55% )  |  |  |
| Inpatient   | 1,135 ( 4.35% )            | 90.98% (89.16%, 92.59%)       | 94.40% (92.87%, 95.69%)     |  |  |
| Outpatient or Emergency Department                    | 2,205 ( 8.46% )            | 82.95% (81.31%, 84.50%)       | 92.19% (90.92%, 93.34%)     |  |  |
| Other   | 349 ( 1.34% )              | 91.28% (87.78%, 94.04%)       | 93.18% (89.94%, 95.62%)     |  |  |
| Care Setting Reported as Unknown                      | 7,227 ( 27.71% )           | 68.68% (66.47%, 70.83%)       | ****                        |  |  |
| Demographics  |                            |                               |                             |  |  |
| Sex   |                            |                               |                             |  |  |
| Female  | 12,645 ( 48.49% )          | 79.67% (78.11%, 81.18%)       | 94.03% (92.98%, 94.96%)     |  |  |
| Male  | 13,370 ( 51.27% )          | 82.24% (80.80%, 83.60%)       | 95.79% (94.93%, 96.54%)     |  |  |
| Other/Missing   | N/A                        | N/A                           | N/A                         |  |  |
| Age at Hospital Admission (Years)                     |                            |                               |                             |  |  |
| 0-5   | 95 ( 0.36% )               | 75 % ( 47.62% , 92.73% )      | 66.67% (40.99%, 86.66%)     |  |  |
| 6-17  | 158 ( 0.61% )              | 75 % (53.29%, 90.23%)         | 90 % (68.30%, 98.77%)       |  |  |
| 18-29   | 1,280 ( 4.91% )            | 78.87% ( 74.25% , 83 % )      | 95.24% (92.14%, 97.37%)     |  |  |
| 30-39   | 1,807 ( 6.93% )            | 82.48% (78.89%, 85.69%)       | 95.44% (93.05%, 97.20%)     |  |  |
| 40-49   | 2,790 ( 10.70% )           | 83.99% (81.13%, 86.58%)       | 96.09% (94.28%, 97.45%)     |  |  |
| 50-59   | 4,502 ( 17.26% )           | 84.82% (82.62%, 86.85%)       | 95.98% (94.58%, 97.10%)     |  |  |
| 60-69   | 5,389 ( 20.66% )           | 83.39% (81.18%, 85.43%)       | 95.86% (94.48%, 96.98%)     |  |  |
| 70-79   | 4,964 ( 19.03% )           | 76.36% (73.48%, 79.08%)       | 93.84% (91.87%, 95.46%)     |  |  |
| 80-89   | 3,632 ( 13.93% )           | 74.30% (70.39%, 77.95%)       | 93.01% (90.17%, 95.23%)     |  |  |
| 90+   | 1,398 ( 5.36% )            | 73.14% (65.93%, 79.55%)       | 89.51% (83.29%, 94.01%)     |  |  |
| Missing   | N/A                        | N/A                           | N/A                         |  |  |
| Race  |                            |                               |                             |  |  |
| American Indian or Alaska Native                      | 38 ( 0.15% )               | 95.83% (78.88%, 99.89%)       | 100.0% (85.18%, 100.0%)     |  |  |
| Asian   | 341 ( 1.31% )              | 94.27% ( 90.85% , 96.69% )    | 98.50% (96.21%, 99.59%)     |  |  |
| Black or African American                             | 2,123 ( 8.14% )            | 89.78% (87.64%, 91.66%)       | 95.82% (94.26%, 97.06%)     |  |  |
| Native Hawaiian or Other Pacific Islander             | 4 ( 0.02% )                | 100.0% (29.24%, 100.0%)       | 100.0% (29.24%, 100.0%)     |  |  |
| White   | 4,290 ( 16.45% )           | 80.16% (77.96%, 82.23%)       | 92.87% (91.26%, 94.26%)     |  |  |
| Other/Mixed/Unknown                                   | 19,219 ( 73.70% )          | 77.37% (75.84%, 78.85%)       | 95.21% (94.29%, 96.02%)     |  |  |
| Ethnicity   | ,                          | ,                             | •                           |  |  |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   |                            |                               | Sensitivity (95% Confidence |
|---|----------------------------|-------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            | Number (Percent)              |                             |
| Hispanic  | 865 ( 3.32% )              | 93.52% (91.40%, 95.25%)       | 97.09% ( 95.50% , 98.24% )  |
| Non-Hispanic  | 1,528 ( 5.86% )            | 94.80% (93.47%, 95.92%)       | 96.16% (94.98%, 97.13%)     |
| Unknown   | 23,622 ( 90.58% )          | 73.57% (72.10%, 75.01%)       | 93.96% (93.02%, 94.81%)     |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| Asymptomatic screening (Z11.59)   | 525 ( 2.01% )              | 58.93% (49.24%, 68.14%)       | 70.21% (59.90%, 79.21%)     |
| Contact and suspected exposure (Z20.828)  | 4,093 ( 15.69% )           | 63.39% (59.67%, 66.99%)       | 86.05% (82.73%, 88.94%)     |
| Pneumonia (see Appendix B)  | 17,781 (68.18%)            | 84.26% (83.10%, 85.36%)       | 98.30% (97.82%, 98.71%)     |
| Other viral pneumonia (J12.89)  | 14,717 ( 56.43% )          | 88.59% (87.52%, 89.60%)       | 99.88% (99.69%, 99.97%)     |
| ARDS (J80)  | 1,861 (7.14%)              | 89.65% (86.58%, 92.22%)       | 97.52% (95.61%, 98.76%)     |
| Sepsis (see Appendix C)   | 6,287 ( 24.11% )           | 81.55% (79.47%, 83.50%)       | 97.40% (96.35%, 98.21%)     |
| Bronchitis (J20.8 OR J40)   | 286 ( 1.10% )              | 85.07% (74.26%, 92.60%)       | 100.0% (93.73%, 100.0%)     |
| Respiratory infection (J22 OR J98.8)  | 1,176 ( 4.51%)             | 84.36% (78.74%, 88.98%)       | 98.34% (95.23%, 99.66%)     |
| Cough (RO5)   | 3,393 ( 13.01% )           | 78.33% (74.95%, 81.45%)       | 98.06% (96.46%, 99.07%)     |
| hortness of breath (R06.2)  | 95 ( 0.36% )               | 73.33% (44.90%, 92.21%)       | 91.67% (61.52%, 99.79%)     |
| ever (R50.9)  | 4,366 ( 16.74% )           | 74.89% (71.88%, 77.72%)       | 96.63% (94.98%, 97.85%)     |
| Optional  |                            |                               |                             |
| Other COVID Tests   |                            |                               |                             |
| antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |
| bserved within -7 days prior to hospitalization through end of patient record**     |                            |                               |                             |
| est performed, at least 1 positive result   | 357 ( 1.37% )              | 77.60% (69.28%, 84.57%)       | ****                        |
| est performed, only negative results  | 126 ( 0.48% )              | 48.57% (31.38%, 66.01%)       | ****                        |
| lo test or unknown result   | 18,850 ( 72.28% )          | 84.48% (83.34%, 85.57%)       | 95.98% ( 95.29% , 96.59% )  |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                             | -                           |
| est performed, at least 1 positive result   | 5 ( 0.02% )                | 100.0% (39.76%, 100.0%)       | ****                        |
| est performed, only negative results  | 6 ( 0.02% )                | 75 % ( 19.41% , 99.37% )      | ****                        |
| No test or unknown result   | 23,917 ( 91.71% )          | 77.18% ( 75.84% , 78.49% )    | ****                        |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection                      |                            |                               |                             |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)               | 3,628 ( 13.91% )           | 82.80% (81.52%, 84.03%)       | 95.54% (94.75%, 96.24%)     |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 2: IP Stay w  | ith Any of Codes U07.      | 1, B97.29*                     |                             |
|---|----------------------------|--------------------------------|-----------------------------|
|   |                            |                                | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval)  | Interval)                   |
|   |                            | Number (Percent)               |                             |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness                     | 1,768 ( 6.78% )            | 65.22% (59.74%, 70.41%)        | 92.51% (88.28%, 95.58%)     |
| of breath) OR R50.9 (fever)]  |                            |                                |                             |
| 720.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                      | 2,600 ( 9.97% )            | 75.16% (70.98%, 79.02%)        | 95.38% (92.71%, 97.29%)     |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                       |                            |                                |                             |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]                       |                            |                                |                             |
| Primary" Lab Test Product Information****   | <u> </u>                   |                                |                             |
| 847377 - SARS_COV_2_NS  | N/A                        | N/A                            | N/A                         |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual                          | N/A                        | N/A                            | N/A                         |
| 37635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA                               | N/A                        | N/A                            | N/A                         |
| 37635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 531 ( 2.04% )              | 91.53% (88.82%, 93.75%)        | 92.40% (89.79%, 94.51%)     |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | 607 ( 2.33% )              | 92.59% (90.21%, 94.54%)        | 87.81% (85.02%, 90.25%)     |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A                        | N/A                            | N/A                         |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT<br>7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19) | N/A                        | N/A                            | N/A                         |
| 7635Y - SARS-COV-2, Qualitative, Rapid NAA (COVID-19)   | 155 ( 0.59% )              | 84.52% (77.84%, 89.82%)        | 89.73% (83.62%, 94.13%)     |
| 14306-8 - SARS-COV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With                      | N/A<br>5 ( 0.02% )         | N/A                            | N/A                         |
| Probe Detection   | 5 ( 0.02% )                | 60 % (14.66%, 94.73%)          | 100.0% (29.24%, 100.0%)     |
| 14307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                      | N/A                        | N/A                            | N/A                         |
| Jucleic Acid Amplification Using CDC Primer-Probe Set N1  | N/A                        | IN/A                           | N/A                         |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                      | N/A                        | N/A                            | N/A                         |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2  | 14/74                      | 14/1                           | 14,7.                       |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By                         | 349 ( 1.34% )              | 74.64% (69.68%, 79.16%)        | 91.43% (87.51%, 94.43%)     |
| NAA With Probe Detection  | 3.3 ( 2.3.70 )             | 7 110 170 (03.0070) 73.12070 7 | 31.10% (07.31%) 3 1.10%     |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                       | N/A                        | N/A                            | N/A                         |
| y NAA With Probe Detection  | ,                          | •                              | ,                           |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                       | 1(0%)                      | 100.0% ( 2.50% , 100.0% )      | 100.0% ( 2.50% , 100.0% )   |
| AA With Probe Detection   | , ,                        | , ,                            | ,                           |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By                          | 3,518 ( 13.49% )           | 77.21% (75.79%, 78.59%)        | 94.66% (93.78%, 95.46%)     |
| IAA With Probe Detection  | ,                          | ,                              | ,                           |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By                        | N/A                        | N/A                            | N/A                         |
| mmunoassay  |                            |                                |                             |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                          |                            |                               |                             |  |  |  |  |
|--|----------------------------|-------------------------------|-----------------------------|--|--|--|--|
|  |                            |                               | Sensitivity (95% Confidence |  |  |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |  |  |
|  |                            | Number (Percent)              |                             |  |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                        | N/A                           | N/A                         |  |  |  |  |
| Rapid Immunoassay  |                            |                               |                             |  |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | N/A                        | N/A                           | N/A                         |  |  |  |  |
| Probe Detection  |                            |                               |                             |  |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | 5 ( 0.02% )                | 40 % ( 5.27% , 85.34% )       | 100.0% (15.81%, 100.0%)     |  |  |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | 6 ( 0.02% )                | 66.67% ( 22.28% , 95.67% )    | 100.0% (39.76%, 100.0%)     |  |  |  |  |
| By NAA With Probe Detection  |                            |                               |                             |  |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 5 ( 0.02% )                | 100.0% (47.82%, 100.0%)       | 83.33% (35.88%, 99.58%)     |  |  |  |  |
| Specimen By NAA With Probe Detection   |                            |                               |                             |  |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | N/A                        | N/A                           | N/A                         |  |  |  |  |
| Immunoassay  |                            |                               |                             |  |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | N/A                        | N/A                           | N/A                         |  |  |  |  |
| Immunoassay  |                            |                               |                             |  |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | 7 ( 0.03% )                | 85.71% (42.13%, 99.64%)       | 85.71% (42.13%, 99.64%)     |  |  |  |  |
| Non-Probe Detection  | , ,                        | ,                             | ,                           |  |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                         |  |  |  |  |
| NAA With Probe Detection   | ·                          | ·                             | •                           |  |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | N/A                        | N/A                           | N/A                         |  |  |  |  |
| Probe Detection  | •                          | •                             | •                           |  |  |  |  |
| Unknown  | 176 ( 0.67% )              | 100.0% (92.45%, 100.0%)       | 97.92% (88.93%, 99.95%)     |  |  |  |  |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 3: IP Stay                      | Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2* |                 |                 |          |                          |  |
|---|--|-----------------|-----------------|----------|--------------------------|--|
|   | Lab Positive***  | Lab Negative*** | Lab, No Results | No Lab   | Patients with Lab Result |  |
|   |  | Number          |                 | 110 2010 | Number (Percent)         |  |
| Care Setting of "Primary" Lab Test*****   |  | - Italiibei     |                 |          | rumber (Fercent)         |  |
| Total Observed                            | 4,571  | 1,090           | 28              | 20,543   | 5,661 ( 21.58% )         |  |
| Inpatient                                 | 1,029  | 106             | 4               | N/A      | 1,135                    |  |
| Outpatient or Emergency Department        | 1,820  | 374             | 12              | N/A      | 2,194                    |  |
| Other                                     | 314  | 34              | 5               | N/A      | 348                      |  |
| Care Setting Reported as Unknown          | 1,228  | 570             | 7               | N/A      | 1,798                    |  |
| Demographics                              | ,  |                 |                 |          | ,                        |  |
| Sex                                       |  |                 |                 |          |                          |  |
| Female                                    | 2,157  | 559             | 10              | 9,981    | 2,716 ( 21.37% )         |  |
| Male                                      | 2,414  | 531             | 18              | 10,498   | 2,945 ( 21.88% )         |  |
| Other/Missing                             | 0  | 0               | 0               | 0        | N/A                      |  |
| Age at Hospital Admission (Years)         |  |                 |                 |          |                          |  |
| 0-5                                       | 12   | 4               | 0               | 80       | 16 ( 16.67% )            |  |
| 6-17                                      | 18   | 6               | 1               | 136      | 24 ( 14.91% )            |  |
| 18-29                                     | 280  | 75              | 1               | 929      | 355 ( 27.63% )           |  |
| 30-39                                     | 420  | 90              | 3               | 1,301    | 510 ( 28.11% )           |  |
| 40-49                                     | 614  | 118             | 1               | 2,066    | 732 ( 26.15% )           |  |
| 50-59                                     | 978  | 177             | 4               | 3,367    | 1,155 ( 25.52% )         |  |
| 60-69                                     | 1,019  | 209             | 8               | 4,181    | 1,228 ( 22.67% )         |  |
| 70-79                                     | 703  | 223             | 6               | 4,072    | 926 ( 18.51% )           |  |
| 80-89                                     | 399  | 141             | 3               | 3,116    | 540 ( 14.76% )           |  |
| 90+                                       | 128  | 47              | 1               | 1,231    | 175 ( 12.44% )           |  |
| Missing                                   | 0  | 0               | 0               | 0        | N/A                      |  |
| Race                                      |  |                 |                 |          |                          |  |
| American Indian or Alaska Native          | 23   | 1               | 0               | 14       | 24 ( 63.16% )            |  |
| Asian                                     | 263  | 16              | 0               | 63       | 279 ( 81.58% )           |  |
| Black or African American                 | 827  | 96              | 0               | 1,213    | 923 ( 43.21% )           |  |
| Native Hawaiian or Other Pacific Islander | 3  | 0               | 0               | 1        | 3 (75 %)                 |  |
| White                                     | 1,107  | 279             | 1               | 2,927    | 1,386 ( 32.13% )         |  |
| Other/Mixed/Unknown                       | 2,348  | 698             | 27              | 16,261   | 3,046 ( 15.75% )         |  |
| Ethnicity                                 |  |                 |                 |          |                          |  |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 3: IP Stay with   | Any of Codes U07 | .1, 897.29, 834.2* |                 |        |                                       |
|---|------------------|--------------------|-----------------|--------|---------------------------------------|
|   | Lab Positive***  | Lab Negative***    | Lab, No Results | No Lab | Patients with Lab Resul               |
|   |                  | Number             |                 |        | Number (Percent)                      |
| Hispanic  | 635              | 45                 | 0               | 187    | 680 ( 78.43% )                        |
| Non-Hispanic  | 1,276            | 70                 | 1               | 181    | 1,346 (88.09%)                        |
| Unknown   | 2,662            | 973                | 27              | 20,111 | 3,635 ( 15.29% )                      |
| Codes Observed During Inpatient Stay  |                  |                    |                 |        | · · · · · · · · · · · · · · · · · · · |
| Asymptomatic screening (Z11.59)   | 66               | 48                 | 1               | 417    | 114 ( 21.43% )                        |
| Contact and suspected exposure (Z20.828)  | 439              | 258                | 6               | 3,422  | 697 ( 16.90% )                        |
| Pneumonia (see Appendix B)  | 3,423            | 648                | 21              | 13,751 | 4,071 ( 22.82% )                      |
| Other viral pneumonia (J12.89)  | 3,270            | 422                | 20              | 11,009 | 3,692 ( 25.08% )                      |
| ARDS (J80)  | 433              | 50                 | 3               | 1,377  | 483 ( 25.93% )                        |
| Sepsis (see Appendix C)   | 1,198            | 277                | 6               | 4,839  | 1,475 ( 23.34% )                      |
| Bronchitis (J20.8 OR J40)   | 57               | 10                 | 0               | 219    | 67 ( 23.43% )                         |
| Respiratory infection (J22 OR J98.8)  | 178              | 33                 | 1               | 965    | 211 ( 17.93% )                        |
| Cough (RO5)   | 507              | 143                | 4               | 2,760  | 650 ( 19.04% )                        |
| Shortness of breath (R06.2)   | 11               | 4                  | 0               | 80     | 15 ( 15.79% )                         |
| Fever (R50.9)   | 660              | 226                | 6               | 3,504  | 886 ( 20.15% )                        |
| Optional  |                  |                    |                 |        |                                       |
| Other COVID Tests   |                  |                    |                 |        |                                       |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                | -                  | -               | -      | -                                     |
| observed within -7 days prior to hospitalization through end of patient record**    |                  |                    |                 |        |                                       |
| est performed, at least 1 positive result   | 97               | 28                 | 0               | 232    | 125 ( 35.01% )                        |
| est performed, only negative results  | 17               | 19                 | 0               | 92     | 36 ( 28.13% )                         |
| No test or unknown result   | 3,507            | 653                | 26              | 14,766 | 4,160 (21.95%)                        |
| Antigen test within ±14 days from inpatient admission**                             | -                | -                  | -               | -      | -                                     |
| est performed, at least 1 positive result   | 4                | 0                  | 0               | 1      | 4 ( 80 % )                            |
| est performed, only negative results  | 3                | 1                  | 0               | 2      | 4 ( 66.67% )                          |
| No test or unknown result   | 3,034            | 913                | 27              | 20,094 | 3,947 ( 16.40% )                      |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                  |                    |                 |        |                                       |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 2,958            | 623                | 11              | 47     | 3,581 ( 98.41% )                      |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 3: IP Stay with   | Any of Codes U07 | .1, B97.29, B34.2* |                 |        |                          |
|---|------------------|--------------------|-----------------|--------|--------------------------|
|   | Lab Positive***  | Lab Negative***    | Lab, No Results | No Lab | Patients with Lab Result |
|   |                  | Number             |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 211              | 113                | 3               | 1,457  | 324 ( 18.16% )           |
| of breath) OR R50.9 (fever)]  |                  |                    |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 351              | 117                | 5               | 2,130  | 468 ( 17.98% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                  |                    |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                  |                    |                 |        |                          |
| "Primary" Lab Test Product Information****  |                  |                    |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -                | -                  | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | -                | -                  | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | -                | -                  | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 486              | 46                 | -               | -      | 532 ( 100.0% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | 562              | 45                 | -               | -      | 607 ( 100.0% )           |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -                | -                  | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -                | -                  | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | 131              | 24                 | -               | -      | 155 ( 100.0% )           |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | -                | -                  | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 3                | 2                  | 0               | 0      | 5 ( 100.0% )             |
| Probe Detection   | _                | _                  | _               | _      |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0                | 0                  | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By |                  |                    |                 |        |                          |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2  | 0                | 0                  | 0               | 0      | N/A                      |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   | 256              | 0.2                | 6               |        | 240 / 00 240/ )          |
| NAA With Probe Detection  | 256              | 92                 | 6               | 0      | 348 ( 98.31% )           |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | 0                | 0                  | 0               | 0      | N1 / A                   |
| By NAA With Probe Detection   | 0                | 0                  | 0               | 0      | N/A                      |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 1                | 0                  | 0               | 0      | 1 / 100 00/ \            |
| NAA With Probe Detection  | 1                | 0                  | 0               | 0      | 1 ( 100.0% )             |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 2,717            | 813                | 2               | 0      | 2 520 / 00 020/ \        |
| NAA With Probe Detection  | 2,/1/            | 913                | 3               | 0      | 3,530 ( 99.92% )         |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | _                | _                  | _               | _      | N/A                      |
| Immunoassay   | -                | -                  | -               | _      | IN/ A                    |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                   |                 |                 |                 |        |                          |  |
|--|-----------------|-----------------|-----------------|--------|--------------------------|--|
|  |                 |                 |                 |        |                          |  |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |  |
|  |                 | Number          |                 |        | Number (Percent)         |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |  |
| Rapid Immunoassay  |                 |                 |                 |        |                          |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |  |
| Probe Detection  |                 |                 |                 |        |                          |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | 2               | 3               | 0               | 0      | 5 ( 100.0% )             |  |
| NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | 4               | 2               | 0               | 0      | 6 ( 100.0% )             |  |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 5               | 0               | 0               | 0      | 5 ( 100.0% )             |  |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | 0               | 0               | 0               | 0      | N/A                      |  |
| Immunoassay  |                 |                 |                 |        |                          |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |  |
| Immunoassay  |                 |                 |                 |        |                          |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | 6               | 1               | 0               | 0      | 7 ( 100.0% )             |  |
| Non-Probe Detection  |                 |                 |                 |        | ,                        |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |  |
| NAA With Probe Detection   |                 |                 |                 |        | •                        |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | 0               | 0               | 0               | 0      | N/A                      |  |
| Probe Detection  |                 |                 |                 |        | •                        |  |
| Unknown  | 47              | 0               | 0               | 129    | 47 ( 26.70% )            |  |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2* |                            |                               |                             |  |  |
|--|----------------------------|-------------------------------|-----------------------------|--|--|
|  |                            |                               | Sensitivity (95% Confidence |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |
|  |                            | Number (Percent)              |                             |  |  |
| Care Setting of "Primary" Lab Test*****                      |                            |                               |                             |  |  |
| Total Observed   | 26,232 ( 100.0% )          | 80.75% (79.69%, 81.77%)       | 95.01% (94.36%, 95.61%)     |  |  |
| Inpatient  | 1,139 ( 4.34% )            | 90.66% (88.82%, 92.29%)       | 94.40% (92.87%, 95.69%)     |  |  |
| Outpatient or Emergency Department                           | 2,206 ( 8.41% )            | 82.95% (81.31%, 84.50%)       | 92.25% (90.98%, 93.39%)     |  |  |
| Other  | 3,53 ( 1.35% )             | 90.23% (86.62%, 93.14%)       | 93.18% (89.94%, 95.62%)     |  |  |
| Care Setting Reported as Unknown                             | 7,278 ( 27.74% )           | 68.30% (66.09%, 70.45%)       | ****                        |  |  |
| Demographics   |                            |                               |                             |  |  |
| Sex  |                            |                               |                             |  |  |
| Female   | 12,707 ( 48.44% )          | 79.42% (77.85%, 80.92%)       | 94.07% (93.02%, 95%)        |  |  |
| Male   | 13,461 ( 51.32% )          | 81.97% (80.53%, 83.34%)       | 95.87% ( 95.02% , 96.61% )  |  |  |
| Other/Missing  | N/A                        | N/A                           | N/A                         |  |  |
| Age at Hospital Admission (Years)                            |                            |                               |                             |  |  |
| 0-5  | 96 ( 0.37% )               | 75 % (47.62%, 92.73%)         | 66.67% (40.99%, 86.66%)     |  |  |
| 6-17   | 161 ( 0.61% )              | 75 % (53.29%, 90.23%)         | 90 % (68.30%, 98.77%)       |  |  |
| 18-29  | 1,285 ( 4.90% )            | 78.87% ( 74.25% , 83 % )      | 95.24% (92.14%, 97.37%)     |  |  |
| 30-39  | 1,814 ( 6.92% )            | 82.35% (78.76%, 85.56%)       | 95.67% (93.32%, 97.37%)     |  |  |
| 40-49  | 2,799 ( 10.67% )           | 83.88% (81.01%, 86.47%)       | 96.09% (94.28%, 97.45%)     |  |  |
| 50-59  | 4,526 ( 17.25% )           | 84.68% (82.47%, 86.71%)       | 95.98% (94.58%, 97.10%)     |  |  |
| 60-69  | 5,417 ( 20.65% )           | 82.98% (80.76%, 85.04%)       | 95.86% (94.48%, 96.98%)     |  |  |
| 70-79  | 5,004 ( 19.08% )           | 75.92% (73.03%, 78.64%)       | 94.11% (92.17%, 95.69%)     |  |  |
| 80-89  | 3,659 ( 13.95% )           | 73.89% (69.97%, 77.55%)       | 93.01% (90.17%, 95.23%)     |  |  |
| 90+  | 1,407 ( 5.36% )            | 73.14% (65.93%, 79.55%)       | 89.51% (83.29%, 94.01%)     |  |  |
| Missing  | N/A                        | N/A                           | N/A                         |  |  |
| Race   |                            |                               |                             |  |  |
| American Indian or Alaska Native                             | 38 ( 0.14% )               | 95.83% (78.88%, 99.89%)       | 100.0% (85.18%, 100.0%)     |  |  |
| Asian  | 342 ( 1.30% )              | 94.27% ( 90.85% , 96.69% )    | 98.50% (96.21%, 99.59%)     |  |  |
| Black or African American                                    | 2,136 ( 8.14% )            | 89.60% (87.45%, 91.49%)       | 95.94% (94.40%, 97.16%)     |  |  |
| Native Hawaiian or Other Pacific Islander                    | 4 ( 0.02% )                | 100.0% (29.24%, 100.0%)       | 100.0% (29.24%, 100.0%)     |  |  |
| White  | 4,314 ( 16.45% )           | 79.87% (77.66%, 81.95%)       | 92.87% (91.26%, 94.26%)     |  |  |
| Other/Mixed/Unknown  | 19,334 (73.70%)            | 77.08% (75.55%, 78.57%)       | 95.29% (94.38%, 96.09%)     |  |  |
| Ethnicity  | , , ,                      | ,                             | , , ,                       |  |  |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   |                            |                               | Sensitivity (95% Confidence |
|---|----------------------------|-------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            | Number (Percent)              |                             |
| Hispanic  | 867 ( 3.31% )              | 93.38% (91.24%, 95.13%)       | 97.09% (95.50%, 98.24%      |
| Non-Hispanic  | 1,528 ( 5.82% )            | 94.80% (93.47%, 95.92%)       | 96.16% (94.98%, 97.13%      |
| Unknown   | 23,773 ( 90.63% )          | 73.23% (71.76%, 74.67%)       | 94.06% (93.13%, 94.91%      |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| Asymptomatic screening (Z11.59)   | 532 ( 2.03% )              | 57.89% (48.29%, 67.08%)       | 70.21% (59.90%, 79.21%      |
| Contact and suspected exposure (Z20.828)  | 4,125 ( 15.73% )           | 62.98% (59.28%, 66.58%)       | 86.25% (82.95%, 89.12%      |
| Pneumonia (see Appendix B)  | 17,843 ( 68.02% )          | 84.08% (82.92%, 85.19%)       | 98.39% (97.91%, 98.78%      |
| Other viral pneumonia (J12.89)  | 14,721 ( 56.12% )          | 88.57% (87.50%, 89.58%)       | 99.88% (99.69%, 99.97%      |
| ARDS (J80)  | 1,863 (7.10%)              | 89.65% (86.58%, 92.22%)       | 97.52% (95.61%, 98.76%      |
| Sepsis (see Appendix C)   | 6,320 ( 24.09% )           | 81.22% (79.13%, 83.18%)       | 97.40% (96.35%, 98.21%      |
| Bronchitis (J20.8 OR J40)   | 286 ( 1.09% )              | 85.07% (74.26%, 92.60%)       | 100.0% (93.73%, 100.0%      |
| Respiratory infection (J22 OR J98.8)  | 1,177 ( 4.49% )            | 84.36% (78.74%, 88.98%)       | 98.34% (95.23%, 99.66%      |
| Cough (RO5)   | 3,414 ( 13.01% )           | 78 % (74.61%, 81.13%)         | 98.26% (96.71%, 99.20%      |
| Shortness of breath (R06.2)   | 95 ( 0.36% )               | 73.33% (44.90%, 92.21%)       | 91.67% (61.52%, 99.79%      |
| ever (R50.9)  | 4,396 ( 16.76% )           | 74.49% (71.49%, 77.33%)       | 96.77% (95.16%, 97.97%      |
| Optional  |                            |                               |                             |
| Other COVID Tests   |                            |                               |                             |
| antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |
| bserved within -7 days prior to hospitalization through end of patient record**     |                            |                               |                             |
| est performed, at least 1 positive result   | 357 ( 1.36% )              | 77.60% (69.28%, 84.57%)       | ****                        |
| est performed, only negative results  | 128 ( 0.49% )              | 47.22% (30.41%, 64.51%)       | ****                        |
| lo test or unknown result   | 18,952 ( 72.25% )          | 84.30% (83.16%, 85.40%)       | 96 % (95.32%, 96.62%)       |
| Intigen test within ±14 days from inpatient admission**                             | -                          | -                             | -                           |
| est performed, at least 1 positive result   | 5 ( 0.02% )                | 100.0% (39.76%, 100.0%)       | ****                        |
| est performed, only negative results  | 6 ( 0.02% )                | 75 % (19.41%, 99.37%)         | ****                        |
| No test or unknown result   | 24,068 ( 91.75% )          | 76.87% ( 75.52% , 78.18% )    | ****                        |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection                      |                            |                               |                             |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)               | 3,639 ( 13.87% )           | 82.60% (81.32%, 83.83%)       | 95.60% ( 94.82% , 96.30%    |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 3: IP Stay with   | Any of Codes U07.1, B | 397.29, B34.2*                |                               |
|---|-----------------------|-------------------------------|-------------------------------|
|   |                       |                               | Sensitivity (95% Confidence   |
|   | Total Patient Count   | PPV (95% Confidence Interval) | Interval)                     |
|   |                       | Number (Percent)              |                               |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness                                     | 1,784 ( 6.80% )       | 65.12% (59.66%, 70.31%)       | 92.95% (88.81%, 95.92%)       |
| of breath) OR R50.9 (fever)]  |                       |                               |                               |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                                       | 2,603 ( 9.92% )       | 75 %(70.82%,78.86%)           | 95.38% (92.71%, 97.29%)       |
| DR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                                       |                       |                               |                               |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]                                       |                       |                               |                               |
| Primary" Lab Test Product Information****   | <u>.</u>              |                               |                               |
| 47377 - SARS_COV_2_NS   | N/A                   | N/A                           | N/A                           |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A                   | N/A                           | N/A                           |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | N/A                   | N/A                           | N/A                           |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 532 ( 2.03% )         | 91.35% (88.64%, 93.60%)       | 92.40% (89.79%, 94.51%)       |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | 607 ( 2.31% )         | 92.59% (90.21%, 94.54%)       | 87.81% (85.02%, 90.25%)       |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA<br>7635R - SARS-CoV-2, NAA (COVID-19), POCT               | N/A                   | N/A                           | N/A                           |
| 7635T - SARS-COV-2, NAA (COVID-19), POCT  | N/A                   | N/A                           | N/A                           |
| 7635Y - SARS-COV-2, Qualitative, Rapid NAA (COVID-19)<br>7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test | 155 ( 0.59% )         | 84.52% (77.84%, 89.82%)       | 89.73% (83.62%, 94.13%)       |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With                                       | N/A<br>5 ( 0.02% )    | N/A<br>60 %(14.66%,94.73%)    | N/A<br>100.0%(29.24%, 100.0%) |
| robe Detection  | 3 ( 0.02% )           | 60 % (14.66%, 94.73%)         | 100.0% (29.24%, 100.0%)       |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                                       | N/A                   | N/A                           | N/A                           |
| lucleic Acid Amplification Using CDC Primer-Probe Set N1  | N/A                   | N/A                           | N/A                           |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                                       | N/A                   | N/A                           | N/A                           |
| Jucleic Acid Amplification Using CDC Primer-Probe Set N2  | 14/71                 | 14,7.                         | 14//1                         |
| 04309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   | 354 ( 1.35% )         | 73.56% (68.60%, 78.12%)       | 91.43% (87.51%, 94.43%)       |
| IAA With Probe Detection  | 00 : ( 2.00/0 )       | 70.0070 (00.0070) 70.2270)    | 02.1070 (07.0270) 01.1070)    |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                                       | N/A                   | N/A                           | N/A                           |
| y NAA With Probe Detection  | ,                     | ,                             | ,                             |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                                       | 1(0%)                 | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50% , 100.0% )     |
| AA With Probe Detection   | , ,                   | , , ,                         | , , ,                         |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By  | 3,533 ( 13.47% )      | 76.97% ( 75.54% , 78.35% )    | 94.77% (93.89%, 95.55%)       |
| AA With Probe Detection   | . , ,                 | ,                             | , ,                           |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | N/A                   | N/A                           | N/A                           |
| nmunoassay  |                       |                               |                               |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                   |                            |                               |                             |  |  |  |
|--|----------------------------|-------------------------------|-----------------------------|--|--|--|
|  |                            |                               | Sensitivity (95% Confidence |  |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |  |
|  |                            | Number (Percent)              |                             |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                        | N/A                           | N/A                         |  |  |  |
| Rapid Immunoassay  |                            |                               |                             |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | N/A                        | N/A                           | N/A                         |  |  |  |
| Probe Detection  |                            |                               |                             |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | 5 ( 0.02% )                | 40 % ( 5.27% , 85.34% )       | 100.0% (15.81%, 100.0%)     |  |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | 6 ( 0.02% )                | 66.67% ( 22.28% , 95.67% )    | 100.0% (39.76%, 100.0%)     |  |  |  |
| By NAA With Probe Detection  |                            |                               |                             |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 5 ( 0.02% )                | 100.0% (47.82%, 100.0%)       | 83.33% (35.88%, 99.58%)     |  |  |  |
| Specimen By NAA With Probe Detection   |                            |                               |                             |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | N/A                        | N/A                           | N/A                         |  |  |  |
| Immunoassay  |                            |                               |                             |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | N/A                        | N/A                           | N/A                         |  |  |  |
| Immunoassay  |                            |                               |                             |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | 7 ( 0.03% )                | 85.71% (42.13%, 99.64%)       | 85.71% (42.13%, 99.64%)     |  |  |  |
| Non-Probe Detection  |                            |                               |                             |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                         |  |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | N/A                        | N/A                           | N/A                         |  |  |  |
| Probe Detection  |                            |                               |                             |  |  |  |
| Unknown  | 176 ( 0.67% )              | 100.0% (92.45%, 100.0%)       | 97.92% (88.93%, 99.95%)     |  |  |  |

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Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21* |                 |                 |                 |               |                          |
|--|-----------------|-----------------|-----------------|---------------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab        | Patients with Lab Result |
|  | Lab Positive    |                 | Lab, No Results | NO Lab        |                          |
| Care Setting of "Primary" Lab Test*****                                      |                 | Number          |                 |               | Number (Percent)         |
| Total Observed   | 4,576           | 1,095           | 28              | 20,601        | 5,671 ( 21.56% )         |
| Inpatient  | 1,030           | 1,095           | 4               | 20,601<br>N/A | 1,136                    |
| Outpatient or Emergency Department   | 1,822           | 376             |                 | N/A           | 2,198                    |
| Other  | 314             | 34              | 12<br>5         | N/A<br>N/A    | 2,198<br>348             |
| Care Setting Reported as Unknown   | 1,230           | 573             | 5<br>7          | N/A<br>N/A    | 1,803                    |
| Demographics   | 1,230           | 373             |                 | IN/A          | 1,005                    |
| Sex  |                 |                 |                 |               |                          |
| Female   | 2,159           | 563             | 10              | 10,013        | 2,722 ( 21.36% )         |
| Male   | 2,417           | 532             | 18              | 10,524        | 2,949 ( 21.86% )         |
| Other/Missing  | 0               | 0               | 0               | 0             | N/A                      |
| Age at Hospital Admission (Years)  | · ·             | •               | · ·             |               |                          |
| 0-5  | 12              | 4               | 0               | 80            | 16 ( 16.67% )            |
| 6-17   | 18              | 6               | 1               | 136           | 24 ( 14.91% )            |
| 18-29  | 281             | 76              | 1               | 932           | 357 ( 27.67% )           |
| 30-39  | 420             | 90              | 3               | 1,301         | 510 ( 28.11% )           |
| 40-49  | 614             | 118             | 1               | 2,068         | 732 ( 26.13% )           |
| 50-59  | 980             | 177             | 4               | 3,376         | 1,157 ( 25.50% )         |
| 60-69  | 1,020           | 211             | 8               | 4,188         | 1,231 ( 22.68% )         |
| 70-79  | 704             | 224             | 6               | 4,082         | 928 ( 18.50% )           |
| 80-89  | 399             | 141             | 3               | 3,137         | 540 ( 14.67% )           |
| 90+  | 128             | 48              | 1               | 1,237         | 176 ( 12.45% )           |
| Missing  | 0               | 0               | 0               | 0             | N/A                      |
| Race   |                 |                 |                 |               |                          |
| American Indian or Alaska Native   | 23              | 1               | 0               | 14            | 24 ( 63.16% )            |
| Asian  | 263             | 16              | 0               | 63            | 279 ( 81.58% )           |
| Black or African American  | 827             | 97              | 0               | 1,215         | 924 ( 43.20% )           |
| Native Hawaiian or Other Pacific Islander                                    | 3               | 0               | 0               | 1             | 3 (75 %)                 |
| White  | 1,107           | 279             | 1               | 2,939         | 1,386 ( 32.04% )         |
| Other/Mixed/Unknown  | 2,353           | 702             | 27              | 16,305        | 3,055 ( 15.76% )         |
| Ethnicity  |                 |                 |                 |               |                          |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   | Lab Darit ***   | 1 a b N a z - 1 * * * | Lab Na Danid    | No. 1 - b | Dationto del Lab D     |
|---|-----------------|-----------------------|-----------------|-----------|------------------------|
|   | Lab Positive*** | Lab Negative***       | Lab, No Results | No Lab    | Patients with Lab Resu |
|   |                 | Number                |                 |           | Number (Percent)       |
| Hispanic  | 635             | 45                    | 0               | 187       | 680 ( 78.43% )         |
| Non-Hispanic  | 1,276           | 70                    | 1               | 181       | 1,346 ( 88.09% )       |
| Unknown   | 2,667           | 978                   | 27              | 20,169    | 3,645 ( 15.29% )       |
| Codes Observed During Inpatient Stay  |                 |                       |                 |           |                        |
| Asymptomatic screening (Z11.59)   | 66              | 48                    | 1               | 418       | 114 ( 21.39% )         |
| Contact and suspected exposure (Z20.828)  | 439             | 260                   | 6               | 3,429     | 699 ( 16.91% )         |
| Pneumonia (see Appendix B)  | 3,428           | 652                   | 21              | 13,796    | 4,080 ( 22.80% )       |
| Other viral pneumonia (J12.89)  | 3,270           | 422                   | 20              | 11,010    | 3,692 ( 25.08% )       |
| ARDS (J80)  | 434             | 50                    | 3               | 1,377     | 484 ( 25.97% )         |
| Sepsis (see Appendix C)   | 1,198           | 279                   | 6               | 4,848     | 1,477 ( 23.33% )       |
| Bronchitis (J20.8 OR J40)   | 57              | 10                    | 0               | 219       | 67 ( 23.43% )          |
| Respiratory infection (J22 OR J98.8)  | 178             | 33                    | 1               | 965       | 211 ( 17.93% )         |
| Cough (RO5)   | 507             | 143                   | 4               | 2,765     | 650 (19.01%)           |
| shortness of breath (R06.2)   | 11              | 4                     | 0               | 80        | 15 ( 15.79% )          |
| Fever (R50.9)   | 661             | 227                   | 6               | 3,511     | 888 ( 20.16% )         |
| Optional  |                 |                       |                 |           |                        |
| Other COVID Tests   |                 |                       |                 |           |                        |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -                     | -               | -         | -                      |
| bserved within -7 days prior to hospitalization through end of patient record**     |                 |                       |                 |           |                        |
| est performed, at least 1 positive result   | 97              | 28                    | 0               | 232       | 125 ( 35.01% )         |
| est performed, only negative results  | 17              | 19                    | 0               | 93        | 36 (27.91%)            |
| lo test or unknown result   | 3,512           | 657                   | 26              | 14,804    | 4,169 ( 21.94% )       |
| Intigen test within ±14 days from inpatient admission**                             | -               | -                     | -               | -         | -                      |
| est performed, at least 1 positive result   | 4               | 0                     | 0               | 1         | 4 ( 80 % )             |
| est performed, only negative results  | 3               | 1                     | 0               | 2         | 4 ( 66.67% )           |
| No test or unknown result   | 3,039           | 918                   | 27              | 20,152    | 3,957 ( 16.39% )       |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     | -,              |                       |                 | -,        |                        |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 2,959           | 625                   | 11              | 47        | 3,584 ( 98.41% )       |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*  |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 211             | 114             | 3               | 1,461  | 325 ( 18.17% )           |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 351             | 117             | 5               | 2,129  | 468 ( 17.99% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****                                    |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | -               | -               | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 486             | 46              | -               | -      | 532 ( 100.0% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | 562             | 45              | -               | -      | 607 ( 100.0% )           |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | 131             | 24              |                 |        | 155 ( 100.0% )           |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 3               | 2               | 0               | 0      | 5 ( 100.0% )             |
| Probe Detection   |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By     | 258             | 94              | 6               | 0      | 352 ( 98.32% )           |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | 0               | 0               | 0               | 0      | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 1               | 0               | 0               | 0      | 1 ( 100.0% )             |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By     | 2,720           | 816             | 3               | 0      | 3,536 ( 99.92% )         |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21\* Lab Positive\*\*\* Lab Negative\*\*\* Lab, No Results No Lab **Patients with Lab Result Number (Percent)** Number 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By N/A Rapid Immunoassay 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With N/A **Probe Detection** 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By 2 3 0 0 5 (100.0%) NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen 0 2 0 6 (100.0%) By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory 5 0 0 0 5 (100.0%) Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By 0 0 0 0 N/A **Immunoassay** 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With 6 0 0 7 (100.0%) 1 Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By 0 0 0 0 N/A NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With 0 0 0 0 N/A **Probe Detection** Unknown 47 0 0 129 47 (26.70%)

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Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21* |                            |                               |                             |  |  |
|--|----------------------------|-------------------------------|-----------------------------|--|--|
|  |                            |                               | Sensitivity (95% Confidence |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |
|  |                            | Number (Percent)              |                             |  |  |
| Care Setting of "Primary" Lab Test*****                                      |                            |                               |                             |  |  |
| Total Observed   | 26,300 ( 100.0% )          | 80.69% (79.64%, 81.71%)       | 95.12% (94.47%, 95.71%)     |  |  |
| Inpatient  | 1,140 ( 4.33% )            | 90.67% (88.83%, 92.30%)       | 94.50% (92.97%, 95.77%)     |  |  |
| Outpatient or Emergency Department   | 2,210 ( 8.40% )            | 82.89% (81.25%, 84.45%)       | 92.35% (91.08%, 93.48%)     |  |  |
| Other  | 353 ( 1.34% )              | 90.23% (86.62%, 93.14%)       | 93.18% (89.94%, 95.62%)     |  |  |
| Care Setting Reported as Unknown   | 7,302 ( 27.76% )           | 68.22% (66.01%, 70.37%)       | ****                        |  |  |
| Demographics   |                            |                               |                             |  |  |
| Sex  |                            |                               |                             |  |  |
| Female   | 12,745 ( 48.46% )          | 79.32% ( 77.75% , 80.82% )    | 94.16% (93.12%, 95.08%)     |  |  |
| Male   | 13,491 ( 51.30% )          | 81.96% (80.52%, 83.33%)       | 95.99% (95.15%, 96.72%)     |  |  |
| Other/Missing  | N/A                        | N/A                           | N/A                         |  |  |
| Age at Hospital Admission (Years)  |                            |                               |                             |  |  |
| 0-5  | 96 ( 0.37% )               | 75 % (47.62%, 92.73%)         | 66.67% (40.99%, 86.66%)     |  |  |
| 6-17   | 161 ( 0.61% )              | 75 % (53.29% , 90.23%)        | 90 % (68.30%, 98.77%)       |  |  |
| 18-29  | 1,290 ( 4.90% )            | 78.71% (74.10%, 82.84%)       | 95.58% (92.56%, 97.62%)     |  |  |
| 30-39  | 1,814 ( 6.90% )            | 82.35% ( 78.76% , 85.56% )    | 95.67% (93.32%, 97.37%)     |  |  |
| 40-49  | 2,801 ( 10.65% )           | 83.88% (81.01%, 86.47%)       | 96.09% (94.28%, 97.45%)     |  |  |
| 50-59  | 4,537 ( 17.25% )           | 84.70% (82.50%, 86.73%)       | 96.17% (94.80%, 97.26%)     |  |  |
| 60-69  | 5,427 ( 20.63% )           | 82.86% (80.64%, 84.92%)       | 95.95% (94.59%, 97.06%)     |  |  |
| 70-79  | 5,016 ( 19.07% )           | 75.86% (72.98%, 78.58%)       | 94.24% (92.32%, 95.80%)     |  |  |
| 80-89  | 3,680 ( 13.99% )           | 73.89% (69.97%, 77.55%)       | 93.01% (90.17%, 95.23%)     |  |  |
| 90+  | 1,414 ( 5.38% )            | 72.73% (65.52%, 79.16%)       | 89.51% (83.29%, 94.01%)     |  |  |
| Missing  | N/A                        | N/A                           | N/A                         |  |  |
| Race   |                            |                               |                             |  |  |
| American Indian or Alaska Native   | 38 ( 0.14% )               | 95.83% (78.88%, 99.89%)       | 100.0% (85.18%, 100.0%)     |  |  |
| Asian  | 342 ( 1.30% )              | 94.27% ( 90.85% , 96.69% )    | 98.50% (96.21%, 99.59%)     |  |  |
| Black or African American  | 2,139 ( 8.13% )            | 89.50% (87.34%, 91.40%)       | 95.94% (94.40%, 97.16%)     |  |  |
| Native Hawaiian or Other Pacific Islander                                    | 4 ( 0.02% )                | 100.0% (29.24%, 100.0%)       | 100.0% (29.24%, 100.0%)     |  |  |
| White  | 4,326 ( 16.45% )           | 79.87% (77.66%, 81.95%)       | 92.87% (91.26%, 94.26%)     |  |  |
| Other/Mixed/Unknown  | 19,387 ( 73.71% )          | 77.02% (75.49%, 78.50%)       | 95.50% (94.60%, 96.28%)     |  |  |
| Ethnicity  |                            |                               | ,                           |  |  |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|  |                            |                                       | Sensitivity (95% Confidence |
|--|----------------------------|---------------------------------------|-----------------------------|
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval)         | Interval)                   |
|  |                            | Number (Percent)                      |                             |
| Hispanic   | 867 ( 3.30% )              | 93.38% (91.24%, 95.13%)               | 97.09% ( 95.50% , 98.24% )  |
| Non-Hispanic   | 1,528 ( 5.81% )            | 94.80% (93.47%, 95.92%)               | 96.16% (94.98%, 97.13%)     |
| Unknown  | 23,841 ( 90.65% )          | 73.17% (71.70%, 74.60%)               | 94.24% (93.32%, 95.07%)     |
| Codes Observed During Inpatient Stay   |                            |                                       |                             |
| Asymptomatic screening (Z11.59)  | 533 ( 2.03% )              | 57.89% (48.29%, 67.08%)               | 70.21% (59.90%, 79.21%)     |
| Contact and suspected exposure (Z20.828)   | 4,134 ( 15.72% )           | 62.80% (59.10%, 66.40%)               | 86.25% ( 82.95% , 89.12% )  |
| Pneumonia (see Appendix B)   | 17,897 ( 68.05% )          | 84.02% (82.86%, 85.13%)               | 98.53% ( 98.08% , 98.91% )  |
| Other viral pneumonia (J12.89)   | 14,722 ( 55.98% )          | 88.57% (87.50%, 89.58%)               | 99.88% (99.69%, 99.97%)     |
| RDS (J80)  | 1,864 ( 7.09% )            | 89.67% (86.61%, 92.23%)               | 97.75% (95.90%, 98.91%)     |
| epsis (see Appendix C)   | 6,331 (24.07%)             | 81.11% (79.02%, 83.08%)               | 97.40% (96.35%, 98.21%)     |
| ronchitis (J20.8 OR J40)   | 286 ( 1.09% )              | 85.07% (74.26%, 92.60%)               | 100.0% (93.73%, 100.0%      |
| espiratory infection (J22 OR J98.8)  | 1,177 ( 4.48%)             | 84.36% (78.74%, 88.98%)               | 98.34% ( 95.23% , 99.66%    |
| ough (R05)   | 3,419 ( 13 % )             | 78 % (74.61%, 81.13%)                 | 98.26% (96.71%, 99.20%      |
| hortness of breath (R06.2)   | 95 ( 0.36% )               | 73.33% (44.90%, 92.21%)               | 91.67% (61.52%, 99.79%      |
| ever (R50.9)   | 4,405 ( 16.75% )           | 74.44% (71.43%, 77.28%)               | 96.92% (95.33%, 98.08%)     |
| ptional  |                            | ,                                     |                             |
| ther COVID Tests   |                            |                                       |                             |
| ntibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                                     | -                           |
| bserved within -7 days prior to hospitalization through end of patient record**    |                            |                                       |                             |
| est performed, at least 1 positive result  | 357 ( 1.36% )              | 77.60% (69.28%, 84.57%)               | ****                        |
| est performed, only negative results   | 129 ( 0.49% )              | 47.22% (30.41%, 64.51%)               | ****                        |
| o test or unknown result   | 18,999 ( 72.24% )          | 84.24% (83.10%, 85.33%)               | 96.14% ( 95.46% , 96.74%    |
| ntigen test within ±14 days from inpatient admission**                             | -                          | -                                     | · -                         |
| est performed, at least 1 positive result  | 5 ( 0.02% )                | 100.0% (39.76%, 100.0%)               | ****                        |
| est performed, only negative results   | 6 ( 0.02% )                | 75 % ( 19.41% , 99.37% )              | ****                        |
| lo test or unknown result  | 24,136 ( 91.77% )          | 76.80% (75.45%, 78.11%)               | ****                        |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection                     | , ,                        | , , , , , , , , , , , , , , , , , , , |                             |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 3,642 ( 13.85% )           | 82.56% (81.28%, 83.79%)               | 95.64% ( 94.86% , 96.33%    |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*                      |                            |                               |                              |  |  |  |
|---|----------------------------|-------------------------------|------------------------------|--|--|--|
|   |                            |                               | Sensitivity (95% Confidence  |  |  |  |
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                    |  |  |  |
|   |                            | Number (Percent)              |                              |  |  |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness                     | 1,789 ( 6.80% )            | 64.92% (59.46%, 70.11%)       | 92.95% (88.81%, 95.92%)      |  |  |  |
| of breath) OR R50.9 (fever)]  |                            |                               |                              |  |  |  |
| 220.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                      | 2,602 ( 9.89% )            | 75 % ( 70.82% , 78.86% )      | 95.38% (92.71%, 97.29%)      |  |  |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                       |                            |                               |                              |  |  |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]                       |                            |                               |                              |  |  |  |
| Primary" Lab Test Product Information****   |                            |                               |                              |  |  |  |
| 847377 - SARS_COV_2_NS  | N/A                        | N/A                           | N/A                          |  |  |  |
| 35008 - Blood Count; Blood Smear, Microscopic Examination Without Manual                          | N/A                        | N/A                           | N/A                          |  |  |  |
| 37635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA                               | N/A                        | N/A                           | N/A                          |  |  |  |
| 37635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 532 ( 2.02% )              | 91.35% (88.64%, 93.60%)       | 92.40% (89.79%, 94.51%)      |  |  |  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | 607 ( 2.31% )              | 92.59% (90.21%, 94.54%)       | 87.81% (85.02%, 90.25%)      |  |  |  |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A                        | N/A                           | N/A                          |  |  |  |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT<br>7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19) | N/A                        | N/A                           | N/A                          |  |  |  |
| 7635Y - SARS-COV-2, Qualitative, Rapid NAA (COVID-19)   | 155 ( 0.59% )              | 84.52% (77.84%, 89.82%)       | 89.73% (83.62%, 94.13%)      |  |  |  |
| 14306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With                      | N/A<br>5 ( 0.02% )         | N/A                           | N/A                          |  |  |  |
| Probe Detection   | 3 ( 0.02% )                | 60 % (14.66%, 94.73%)         | 100.0% (29.24%, 100.0%)      |  |  |  |
| 14307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                      | N/A                        | N/A                           | N/A                          |  |  |  |
| Jucleic Acid Amplification Using CDC Primer-Probe Set N1  | IN/A                       | N/A                           | N/A                          |  |  |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                      | N/A                        | N/A                           | N/A                          |  |  |  |
| Jucleic Acid Amplification Using CDC Primer-Probe Set N2  | 14/74                      | 14/7                          | 14//                         |  |  |  |
| 04309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By                         | 358 ( 1.36% )              | 73.30% (68.35%, 77.85%)       | 92.14% (88.35%, 95.01%)      |  |  |  |
| IAA With Probe Detection  | 000 ( 2.00/0 )             | , 5.55, 6 ( 55.55, 6 ) ,      | 5_1/c ( 65.65/c ) 55.65_/c ) |  |  |  |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                       | N/A                        | N/A                           | N/A                          |  |  |  |
| y NAA With Probe Detection  | ,                          | •                             | ,                            |  |  |  |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                       | 1(0%)                      | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50% , 100.0% )    |  |  |  |
| AA With Probe Detection   | ` ,                        | , , ,                         | ,                            |  |  |  |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By                          | 3,539 ( 13.46% )           | 76.92% ( 75.50% , 78.30% )    | 94.87% (94%, 95.65%)         |  |  |  |
| IAA With Probe Detection  | . ,                        | ,                             | ,                            |  |  |  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By                        | N/A                        | N/A                           | N/A                          |  |  |  |
| mmunoassay  |                            |                               |                              |  |  |  |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*                                 |                     |                               |  |  |  |  |
|--|---------------------|-------------------------------|--|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|  |                     | Number (Percent)              |  |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay             | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | 5 ( 0.02% )         | 40 % ( 5.27% , 85.34% )       | 100.0% (15.81%, 100.0%)                  |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | 6 ( 0.02% )         | 66.67% ( 22.28% , 95.67% )    | 100.0% (39.76%, 100.0%)                  |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | 5 ( 0.02% )         | 100.0% (47.82%, 100.0%)       | 83.33% (35.88%, 99.58%)                  |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By mmunoassay                           | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By mmunoassay                           | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | 7 ( 0.03% )         | 85.71% (42.13%, 99.64%)       | 85.71% ( 42.13% , 99.64% )               |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                                    | N/A                 | N/A                           | N/A                                      |  |  |  |
| Unknown  | 176 ( 0.67% )       | 100.0% (92.45%, 100.0%)       | 97.92% (88.93%, 99.95%)                  |  |  |  |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia\*\* OR Acute Respiratory Distress Syndrome (ARDS) (J80)]\* Lab Positive\*\*\* Lab Negative\*\*\* Lab, No Results No Lab **Patients with Lab Result** Number **Number (Percent)** Care Setting of "Primary" Lab Test\*\*\*\*\* **Total Observed** 23 14.060 4,237 (23.13%) 3.584 653 Inpatient 666 55 4 N/A 721 Outpatient or Emergency Department 1,603 250 9 N/A 1,853 Other 254 22 4 N/A 276 Care Setting Reported as Unknown 6 934 321 N/A 1,255 **Demographics** Sex Female 1,592 309 5 6,371 1,901 (22.97%) Male 1,992 344 18 7,637 2,336 (23.38%) Other/Missing 0 0 0 0 N/A Age at Hospital Admission (Years) 0-5 0 9 1 0 1 (10%) 6-17 5 4 1 32 9 (21.43%) 18-29 0 163 (29.26%) 131 32 394 30-39 2 278 44 783 322 (29.09%) 40-49 1 526 70 1,529 596 (28.03%) 50-59 3 841 126 2,541 967 (27.54%) 60-69 8 856 134 3,085 990 (24.25%) 70-79 572 4 2,799 714 (20.30%) 142 80-89 290 75 3 2.058 365 (15.05%) 90+ 84 26 1 778 110 (12.37%) Missing 0 0 0 0 N/A Race American Indian or Alaska Native 0 12 0 10 12 (54.55%) Asian 218 0 51 228 (81.72%) 10 Black or African American 651 53 0 792 704 (47.06%) Native Hawaiian or Other Pacific Islander 2 0 0 1 2 (66.67%) White 811 0 156 1,915 967 (33.55%) Other/Mixed/Unknown 23 1,890 434 11,239 2,324 (17.11%) Ethnicity

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Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [P                            |                 |                 |                 |        |                         |
|---|-----------------|-----------------|-----------------|--------|-------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resul |
|   |                 | Number          |                 |        | Number (Percent)        |
| Hispanic  | 533             | 31              | 0               | 127    | 564 (81.62%)            |
| Non-Hispanic  | 927             | 41              | 0               | 137    | 968 ( 87.60% )          |
| Unknown   | 2,124           | 581             | 23              | 13,744 | 2,705 ( 16.42% )        |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                         |
| Asymptomatic screening (Z11.59)   | 48              | 23              | 0               | 217    | 71 ( 24.65% )           |
| Contact and suspected exposure (Z20.828)  | 392             | 190             | 6               | 2,580  | 582 ( 18.37% )          |
| Pneumonia (see Appendix B)  | 3,452           | 645             | 22              | 13,901 | 4,097 ( 22.74% )        |
| Other viral pneumonia (J12.89)  | 3,299           | 423             | 21              | 11,148 | 3,722 ( 24.99% )        |
| ARDS (J80)  | 435             | 50              | 3               | 1,387  | 485 ( 25.87% )          |
| Sepsis (see Appendix C)   | 1,103           | 210             | 7               | 4,107  | 1,313 ( 24.19% )        |
| Bronchitis (J20.8 OR J40)   | 30              | 6               | 1               | 156    | 36 ( 18.65% )           |
| Respiratory infection (J22 OR J98.8)  | 150             | 20              | 1               | 714    | 170 ( 19.21% )          |
| Cough (R05)   | 433             | 113             | 3               | 2,203  | 546 ( 19.84% )          |
| Shortness of breath (R06.2)   | 8               | 3               | 0               | 57     | 11 ( 16.18% )           |
| Fever (R50.9)   | 572             | 159             | 5               | 2,750  | 731 ( 20.97% )          |
| Optional  |                 |                 |                 |        |                         |
| Other COVID Tests   |                 |                 |                 |        |                         |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -      | -                       |
| observed within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |        |                         |
| est performed, at least 1 positive result   | 83              | 21              | 0               | 171    | 104 ( 37.82% )          |
| est performed, only negative results  | 12              | 12              | 0               | 57     | 24 ( 29.63% )           |
| No test or unknown result   | 2,769           | 392             | 22              | 10,211 | 3,161 (23.60%)          |
| Antigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -      | -                       |
| est performed, at least 1 positive result   | 4               | 0               | 0               | 1      | 4 ( 80 % )              |
| est performed, only negative results  | 2               | 1               | 0               | 1      | 3 (75 %)                |
| No test or unknown result   | 2,293           | 551             | 23              | 13,761 | 2,844 ( 17.10% )        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 |        |                         |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 2,452           | 392             | 9               | 32     | 2,844 ( 98.58% )        |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]*  |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 180             | 89              | 2               | 1,158  | 269 ( 18.82% )           |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 351             | 116             | 5               | 2,091  | 467 ( 18.22% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****  |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | -               | -               | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 387             | 24              | -               | -      | 411 ( 100.0% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | 532             | 28              | -               | -      | 560 ( 100.0% )           |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | 97              | 12              | -               | -      | 109 ( 100.0% )           |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With Probe Detection  | 2               | 0               | 0               | 0      | 2 ( 100.0% )             |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N1                             | 0               | 0               | 0               | 0      | N/A                      |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2<br>94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By<br>NAA With Probe Detection | 160             | 52              | 4               | 0      | 212 ( 98.15% )           |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen<br>By NAA With Probe Detection   | 0               | 0               | 0               | 0      | N/A                      |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By NAA With Probe Detection   | 1               | 0               | 0               | 0      | 1 ( 100.0% )             |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA With Probe Detection  | 2,084           | 494             | 2               | 0      | 2,578 ( 99.92% )         |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By Immunoassay   | -               | -               | -               | -      | N/A                      |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia\*\* OR Acute Respiratory Distress Syndrome (ARDS) (J80)]\* Lab Positive\*\*\* Lab Negative\*\*\* Lab, No Results No Lab **Patients with Lab Result** Number (Percent) Number 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By N/A Rapid Immunoassay 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With N/A **Probe Detection** 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By 2 3 0 0 5 (100.0%) NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen 0 1 1 0 2 (100.0%) By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory 3 0 0 0 3 (100.0%) Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By 0 0 0 0 N/A **Immunoassay** 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With 3 0 0 4 (100.0%) 1 Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By 0 0 0 0 N/A NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With 0 0 0 0 N/A **Probe Detection** Unknown 43 0 0 109 43 (28.29%)

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Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]* |                            |                               |                           |  |  |
|--|----------------------------|-------------------------------|---------------------------|--|--|
|  |                            | Sensitivity (95% Con          |                           |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                 |  |  |
|  | Number (Percent)           | Per                           | cent                      |  |  |
| Care Setting of "Primary" Lab Test*****  |                            |                               |                           |  |  |
| Total Observed   | 18,320 ( 100.0% )          | 84.59% (83.47%, 85.66%)       | 74.50% (73.24%, 75.72%)   |  |  |
| Inpatient  | 725 ( 3.96% )              | 92.37% (90.19%, 94.20%)       | 61.10% (58.13%, 64.01%)   |  |  |
| Outpatient or Emergency Department   | 1,862 ( 10.16% )           | 86.51% (84.87%, 88.03%)       | 81.25% (79.45%, 82.95%)   |  |  |
| Other  | 280 ( 1.53% )              | 92.03% (88.18%, 94.94%)       | 75.37% (70.41%, 79.88%)   |  |  |
| Care Setting Reported as Unknown   | 4,909 ( 26.80% )           | 74.42% (71.91%, 76.82%)       | ****                      |  |  |
| Demographics   |                            |                               |                           |  |  |
| Sex  |                            |                               |                           |  |  |
| Female   | 8,277 ( 45.18% )           | 83.75% (82.01%, 85.38%)       | 69.43% (67.50%, 71.31%)   |  |  |
| Male   | 9,991 ( 54.54% )           | 85.27% (83.77%, 86.69%)       | 79.11% (77.47%, 80.68%)   |  |  |
| Other/Missing  | N/A                        | N/A                           | N/A                       |  |  |
| Age at Hospital Admission (Years)  |                            |                               |                           |  |  |
| 0-5  | 10 ( 0.05% )               | 100.0% ( 2.50% , 100.0% )     | 5.56% ( 0.14% , 27.29% )  |  |  |
| 6-17   | 42 ( 0.23% )               | 55.56% (21.20%, 86.30%)       | 25 % ( 8.66% , 49.10% )   |  |  |
| 18-29  | 557 ( 3.04% )              | 80.37% (73.43%, 86.17%)       | 44.56% (38.79%, 50.44%)   |  |  |
| 30-39  | 1,107 ( 6.04% )            | 86.34% (82.09%, 89.89%)       | 63.33% (58.63%, 67.84%)   |  |  |
| 40-49  | 2,126 ( 11.60% )           | 88.26% (85.39%, 90.73%)       | 82.32% (79.13%, 85.20%)   |  |  |
| 50-59  | 3,511 ( 19.16% )           | 86.97% (84.68%, 89.03%)       | 82.53% (80.06%, 84.82%)   |  |  |
| 60-69  | 4,083 ( 22.29% )           | 86.46% (84.17%, 88.54%)       | 80.53% (78.02%, 82.87%)   |  |  |
| 70-79  | 3,517 ( 19.20% )           | 80.11% (76.99%, 82.98%)       | 76.57% (73.37%, 79.57%)   |  |  |
| 80-89  | 2,426 ( 13.24% )           | 79.45% (74.94%, 83.48%)       | 67.60% (62.94%, 72.01%)   |  |  |
| 90+  | 889 ( 4.85% )              | 76.36% (67.32%, 83.94%)       | 58.74% (50.21%, 66.90%)   |  |  |
| Missing  | N/A                        | N/A                           | N/A                       |  |  |
| Race   |                            |                               |                           |  |  |
| American Indian or Alaska Native   | 22 ( 0.12% )               | 100.0% (73.54%, 100.0%)       | 52.17% (30.59%, 73.18%)   |  |  |
| Asian  | 279 ( 1.52% )              | 95.61% (92.08%, 97.88%)       | 81.65% (76.47%, 86.10%)   |  |  |
| Black or African American  | 1,496 ( 8.17% )            | 92.47% (90.27%, 94.31%)       | 75.52% (72.51%, 78.36%)   |  |  |
| Native Hawaiian or Other Pacific Islander  | 3 ( 0.02% )                | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% ) |  |  |
| White  | 2,882 ( 15.73% )           | 83.87% (81.40%, 86.13%)       | 68.04% (65.31%, 70.68%)   |  |  |
| Other/Mixed/Unknown  | 13,586 (74.16%)            | 81.33% (79.68%, 82.89%)       | 76.70% (74.98%, 78.36%)   |  |  |
| Ethnicity  | ,                          | • • • •                       | ,                         |  |  |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   |                            |                               | Sensitivity (95% Confidence |
|---|----------------------------|-------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   | Number (Percent)           | Per                           | cent                        |
| Hispanic  | 691 ( 3.77% )              | 94.50% ( 92.29% , 96.24% )    | 81.50% (78.31%, 84.40%)     |
| Non-Hispanic  | 1,105 ( 6.03% )            | 95.76% (94.30%, 96.94%)       | 69.86% (67.31%, 72.32%)     |
| Unknown   | 16,472 (89.91%)            | 78.52% ( 76.92% , 80.06% )    | 75.05% (73.42%, 76.64%)     |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| Asymptomatic screening (Z11.59)   | 288 ( 1.57% )              | 67.61% (55.45%, 78.24%)       | 51.06% (40.54%, 61.52%)     |
| Contact and suspected exposure (Z20.828)  | 3,168 ( 17.29% )           | 67.35% (63.38%, 71.15%)       | 77.01% (73.11%, 80.60%)     |
| Pneumonia (see Appendix B)  | 18,020 ( 98.36% )          | 84.26% (83.10%, 85.36%)       | 99.22% ( 98.87% , 99.49% )  |
| Other viral pneumonia (J12.89)  | 14,891 (81.28%)            | 88.64% (87.57%, 89.64%)       | ****                        |
| ARDS (J80)  | 1,875 ( 10.23% )           | 89.69% (86.63%, 92.25%)       | 97.97% (96.19%, 99.07%)     |
| Sepsis (see Appendix C)   | 5,427 ( 29.62% )           | 84.01% (81.91%, 85.95%)       | 89.67% (87.84%, 91.32%)     |
| Bronchitis (J20.8 OR J40)   | 193 ( 1.05% )              | 83.33% (67.19%, 93.63%)       | 52.63% (38.97%, 66.02%)     |
| Respiratory infection (J22 OR J98.8)  | 885 ( 4.83% )              | 88.24% ( 82.42% , 92.66% )    | 82.87% (76.58%, 88.06%)     |
| Cough (R05)   | 2,752 ( 15.02% )           | 79.30% ( 75.66% , 82.63% )    | 83.91% (80.46%, 86.98%)     |
| Shortness of breath (R06.2)   | 68 ( 0.37% )               | 72.73% (39.03%, 93.98%)       | 66.67% ( 34.89% , 90.08%    |
| Fever (R50.9)   | 3,486 ( 19.03% )           | 78.25% (75.08%, 81.19%)       | 83.87% (80.89%, 86.55%      |
| Optional  |                            |                               |                             |
| Other COVID Tests   |                            |                               |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                               |                             |
| Test performed, at least 1 positive result  | 275 ( 1.50% )              | 79.81% (70.81%, 87.04%)       | 93.26% (85.90%, 97.49%)     |
| est performed, only negative results  | 81 ( 0.44% )               | 50 % (29.12%, 70.88%)         | 75 % (47.62%, 92.73%)       |
| No test or unknown result   | 13,394 (73.11%)            | 87.60% (86.40%, 88.73%)       | 75.80% (74.38%, 77.18%)     |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                             | <del>-</del>                |
| est performed, at least 1 positive result   | 5 ( 0.03% )                | 100.0% (39.76%, 100.0%)       | ****                        |
| est performed, only negative results  | 4 ( 0.02% )                | 66.67% ( 9.43% , 99.16% )     | ****                        |
| No test or unknown result   | 16,628 ( 90.76% )          | 80.63% (79.12%, 82.06%)       | 89.99% (88.76%, 91.13%)     |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            |                               |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 2,885 ( 15.75% )           | 86.22% ( 84.89% , 87.46% )    | 79.25% (77.78%, 80.67%)     |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 5: IP Stay with Codes [U07.1   | 1 OR B97.29] and [Pne      | umonia** OR ARDS (J80)]*      |                             |
|--|----------------------------|-------------------------------|-----------------------------|
|  |                            |                               | Sensitivity (95% Confidence |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|  | Number (Percent)           | Per                           | cent                        |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness  | 1,429 ( 7.80% )            | 66.91% (60.94%, 72.51%)       | 79.30% (73.44%, 84.37%)     |
| of breath) OR R50.9 (fever)]   |                            |                               |                             |
| 720.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 2,563 ( 13.99% )           | 75.16% ( 70.98% , 79.02% )    | 95.38% ( 92.71% , 97.29% )  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  |                            |                               |                             |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                            |                               |                             |
| Primary" Lab Test Product Information****  |                            |                               |                             |
| 847377 - SARS_COV_2_NS   | N/A                        | N/A                           | N/A                         |
| 35008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A                        | N/A                           | N/A                         |
| 37635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | N/A                        | N/A                           | N/A                         |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 411 ( 2.24% )              | 94.16% (91.44%, 96.22%)       | 73.57% ( 69.59% , 77.30% )  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | 560 ( 3.06% )              | 95 % ( 92.85% , 96.65% )      | 83.13% (79.99%, 85.95%)     |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | N/A                        | N/A                           | N/A                         |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT   | N/A                        | N/A                           | N/A                         |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | 109 ( 0.59% )              | 88.99% (81.56%, 94.18%)       | 66.44% (58.16%, 74.03%)     |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | N/A                        | N/A                           | N/A                         |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With robe Detection   | 2 ( 0.01% )                | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )   |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Jucleic Acid Amplification Using CDC Primer-Probe Set N1 | N/A                        | N/A                           | N/A                         |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Jucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                        | N/A                           | N/A                         |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By IAA With Probe Detection                                    | 216 ( 1.18% )              | 75.47% ( 69.11% , 81.11% )    | 57.14% (51.12%, 63.01%)     |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen y NAA With Probe Detection                               | N/A                        | N/A                           | N/A                         |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 1 ( 0.01%)                 | 100.0% ( 2.50%, 100.0%)       | 100.0% ( 2.50%, 100.0%)     |
| AA With Probe Detection 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By                                     | 2,580 ( 14.08% )           | 80.84% (79.26%, 82.34%)       | 72.69% (71.02%, 74.31%)     |
| NAA With Probe Detection<br>04505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By<br>mmunoassay                | N/A                        | N/A                           | N/A                         |



Table 1c. Aggregated Baseline Table for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]*                           |                     |                               |  |  |  |
|--|---------------------|-------------------------------|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |
|  | Number (Percent)    | Per                           | cent                                     |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                               | N/A                 | N/A                           | N/A                                      |  |  |
| Rapid Immunoassay  |                     |                               |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                 | N/A                           | N/A                                      |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | 5 ( 0.03% )         | 40 % ( 5.27% , 85.34% )       | 100.0% (15.81%, 100.0%)                  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | 2 ( 0.01%)          | 50 % ( 1.26% , 98.74% )       | 25 % ( 0.63% , 80.59% )                  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | 3 ( 0.02% )         | 100.0% (29.24%, 100.0%)       | 50 % (11.81%, 88.19%)                    |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | 4 ( 0.02% )         | 75 % (19.41%, 99.37%)         | 42.86% ( 9.90%, 81.59%)                  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A                 | N/A                           | N/A                                      |  |  |
| Unknown  | 152 ( 0.83% )       | 100.0% (91.78%, 100.0%)       | 89.58% (77.34%, 96.53%)                  |  |  |

<sup>\*</sup>Includes only the first algorithm-qualifying inpatient stay per algorithm per patient.

Includes one test result per encounter - positive if patient had at least one positive NAA result; negative if all NAA results are negative (during test window, from any type of specimen/site).

<sup>\*\*</sup> COVID NAA, antibody, and antigen tests are identified using LOINCs or any other identifier available in the data.

<sup>\*\*\*</sup>Any NAA result in 14 days prior through 14 days after inpatient encounter during which the COVID diagnosis codes were recorded.

<sup>&</sup>quot;Primary" test result will be the first positive molecular test within the ±14-day window, or the last negative molecular test within the ±14-day window among patients with no positive test.

<sup>\*\*\*\*</sup>Only the "primary" lab test, as defined above, is described

<sup>\*\*\*\*\*</sup>Sensitivity not calculated because algorithm cohort NAA-positive patient count is larger than laboratory result cohort NAA-positive patient count. This is a result of a different visit being used to describe characteristics among the lab-based cohort and the algorithm-based cohort.

<sup>\*\*\*\*\*\*</sup>Sum across care settings does not equal total observed because care setting was not reported for some patients.



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Care Setting of "Primary" Lab Tes\*\*\*\*\* **Total Observed** 1,129 2,159 1,119 2,360 Inpatient Outpatient or Emergency Department Other Care Setting Reported as Unknown 1.850 1.971 **Demographics** Sex Female 1,209 Male 1,330 1,151 Other/Missing Age at Hospital Admission (Years) 0-5 6-17 18-29 30-39 40-49 50-59 60-69 70-79 80-89 90+ Missing Race American Indian or Alaska Native Asian Black or African American Native Hawaiian or Other Pacific Islander White Other/Mixed/Unknown 1.910 2,071

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Ethnicity



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Hispanic Non-Hispanic Unknown 1.124 2.154 1.117 2.358 **Codes Observed During Inpatient Stay** Asymptomatic screening (Z11.59) Contact and suspected exposure (Z20.828) Pneumonia (see Appendix B) 1,809 1,025 Other viral pneumonia (J12.89) 1,550 ARDS (J80) Sepsis (see Appendix C) Bronchitis (J20.8 OR J40) Respiratory infection (J22 OR J98.8) Cough (R05) Shortness of breath (R06.2) Fever (R50.9) Optional **Other COVID Tests** Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) observed within -7 days prior to hospitalization through end of patient record\*\* Test performed, at least 1 positive result Test performed, only negative results No test or unknown result 1.850 1,971 Antigen test within ±14 days from inpatient admission\*\* Test performed, at least 1 positive result Test performed, only negative results No test or unknown result 1,850 1,971 Codes Observed Within ±5 Days of Diagnostic Specimen Collection Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426) **Codes Observed During Inpatient Stay** Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness of breath) OR R50.9 (fever)]

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1,194

Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) 184 359 19 53 OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] "Primary" Lab Test Product Information\*\*\*\* 847377 - SARS\_COV\_2\_NS 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA 87635R - SARS-CoV-2, NAA (COVID-19), POCT 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19) 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With 19 68 19 56 **Probe Detection** 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By O O 3 Nucleic Acid Amplification Using CDC Primer-Probe Set N1 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By n 3 0 0 Nucleic Acid Amplification Using CDC Primer-Probe Set N2 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA 447 997 395 1.104 With Probe Detection 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen By NAA With Probe Detection 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By NAA With Probe Detection

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663

1,124

705

94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA

94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By

94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By

With Probe Detection

Rapid Immunoassay

**Immunoassay** 



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason)

| All Reducte Acid Amplification (NAA) 200 Tests. Covid NAA Test Within 214 I  |                   |                    | one (ii y oody (i ioiniood | ,,                 |
|--|-------------------|--------------------|----------------------------|--------------------|
|  | Patients Positive | Lab Tests Positive | Patients Negative          | Lab Tests Negative |
|  |                   | Nun                | nber                       |                    |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With | -                 | -                  | -                          | -                  |
| Probe Detection  |                   |                    |                            |                    |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By | -                 | -                  | -                          | -                  |
| NAA With Probe Detection   |                   |                    |                            |                    |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen | -                 | -                  | -                          | -                  |
| By NAA With Probe Detection  |                   |                    |                            |                    |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory      | -                 | -                  | -                          | -                  |
| Specimen By NAA With Probe Detection   |                   |                    |                            |                    |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By      | -                 | -                  | -                          | -                  |
| Immunoassay  |                   |                    |                            |                    |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By      | -                 | -                  | -                          | -                  |
| Immunoassay  |                   |                    |                            |                    |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -                 | -                  | -                          | -                  |
| Non-Probe Detection  |                   |                    |                            |                    |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | -                 | -                  | -                          | -                  |
| NAA With Probe Detection   |                   |                    |                            |                    |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -                 | -                  | -                          | -                  |
| Probe Detection  |                   |                    |                            |                    |
| Unknown  | 0                 | 0                  | 0                          | 0                  |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

|   | Algorithm 1: Inpati | ent (IP) Stay with ( | Code U07.1*     |                 |              |                          |
|---|---------------------|----------------------|-----------------|-----------------|--------------|--------------------------|
|   |                     | Lab Positive***      | Lab Negative*** | Lab, No Results | No Lab       | Patients with Lab Result |
|   |                     | Lab Positive***      | Number          | Lab, No Results | NO Lab       | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****   |                     |                      | Number          |                 |              | Number (Percent)         |
| Total Observed                            |                     | 643                  | 50              | 11              | 2,613        | 693 ( 20.89% )           |
| Inpatient                                 |                     | 140                  | 4               | 0               | 2,013<br>N/A | 144                      |
| Outpatient or Emergency Department        |                     | 121                  | 5               | 1               | N/A<br>N/A   | 126                      |
| Other                                     |                     | 24                   | 4               | 1               | N/A<br>N/A   | 28                       |
| Care Setting Reported as Unknown          |                     | 358                  | 37              | 9               | N/A          | 395                      |
| Demographics                              |                     | 336                  | 37              | <del></del>     | IN/A         | 393                      |
| Sex                                       |                     |                      |                 |                 |              |                          |
| Female                                    |                     | 228                  | 22              | 7               | 1,121        | 250 ( 18.14% )           |
| Male                                      |                     | 415                  | 28              | 4               | 1,492        | 443 ( 22.85% )           |
| Other/Missing                             |                     | 0                    | 0               | 0               | 0            | N/A                      |
| Age at Hospital Admission (Years)         |                     | Ü                    | Ü               | Ŭ               | Ü            | 14/74                    |
| 0-5                                       |                     | 0                    | 0               | 0               | 3            | 0 (0.00%)                |
| 6-17                                      |                     | 0                    | 0               | 0               | 1            | 0 (0.00%)                |
| 18-29                                     |                     | 14                   | 1               | 0               | 32           | 15 ( 31.91% )            |
| 30-39                                     |                     | 24                   | 1               | 1               | 93           | 25 ( 21.01% )            |
| 40-49                                     |                     | 71                   | 2               | 1               | 246          | 73 ( 22.81% )            |
| 50-59                                     |                     | 141                  | 2               | 1               | 493          | 143 ( 22.45% )           |
| 60-69                                     |                     | 185                  | 9               | 2               | 657          | 194 ( 22.74% )           |
| 70-79                                     |                     | 145                  | 18              | 3               | 623          | 163 ( 20.66% )           |
| 80-89                                     |                     | 51                   | 15              | 2               | 352          | 66 ( 15.71% )            |
| 90+                                       |                     | 12                   | 2               | 1               | 113          | 14 ( 10.94% )            |
| Missing                                   |                     | 0                    | 0               | 0               | 0            | N/A                      |
| Race                                      |                     |                      |                 |                 |              | •                        |
| American Indian or Alaska Native          |                     | 0                    | 0               | 0               | 0            | N/A                      |
| Asian                                     |                     | 2                    | 1               | 0               | 11           | 3 ( 21.43% )             |
| Black or African American                 |                     | 34                   | 1               | 1               | 197          | 35 ( 15.02% )            |
| Native Hawaiian or Other Pacific Islander |                     | 0                    | 0               | 0               | 0            | N/A                      |
| White                                     |                     | 83                   | 12              | 0               | 255          | 95 ( 27.14% )            |
| Other/Mixed/Unknown                       |                     | 524                  | 36              | 10              | 2,150        | 560 ( 20.59% )           |
| Ethnicity                                 |                     |                      |                 |                 |              | . ,                      |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 1: Inpati   | ient (IP) Stay with ( | Code U07.1*     |                 |        |                         |
|---|-----------------------|-----------------|-----------------|--------|-------------------------|
|   | Lab Positive***       | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resul |
|   |                       | Number          |                 |        | Number (Percent)        |
| Hispanic  | 3                     | 0               | 0               | 15     | 3 ( 16.67% )            |
| Non-Hispanic  | 0                     | 0               | 0               | 0      | N/A                     |
| Unknown   | 640                   | 50              | 11              | 2,598  | 690 ( 20.92% )          |
| Codes Observed During Inpatient Stay  |                       |                 |                 |        |                         |
| Asymptomatic screening (Z11.59)   | 8                     | 2               | 0               | 38     | 10 ( 20.83% )           |
| Contact and suspected exposure (Z20.828)  | 156                   | 15              | 2               | 598    | 171 ( 22.18% )          |
| Pneumonia (see Appendix B)  | 606                   | 47              | 11              | 2,381  | 653 ( 21.44% )          |
| Other viral pneumonia (J12.89)  | 548                   | 37              | 10              | 2,090  | 585 ( 21.79% )          |
| ARDS (J80)  | 195                   | 11              | 3               | 854    | 206 ( 19.38% )          |
| Sepsis (see Appendix C)   | 295                   | 21              | 8               | 1,219  | 316 ( 20.48% )          |
| Bronchitis (J20.8 OR J40)   | 8                     | 0               | 0               | 55     | 8 ( 12.70% )            |
| Respiratory infection (J22 OR J98.8)  | 133                   | 12              | 2               | 662    | 145 ( 17.92% )          |
| Cough (RO5)   | 203                   | 12              | 4               | 837    | 215 ( 20.36% )          |
| Shortness of breath (R06.2)   | 4                     | 0               | 0               | 18     | 4 ( 18.18% )            |
| Fever (R50.9)   | 272                   | 20              | 2               | 1,083  | 292 ( 21.21% )          |
| Optional  |                       |                 |                 | ·      |                         |
| Other COVID Tests   |                       |                 |                 |        |                         |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                     | -               | -               | -      | -                       |
| observed within -7 days prior to hospitalization through end of patient record**    |                       |                 |                 |        |                         |
| Test performed, at least 1 positive result  | 49                    | 1               | 1               | 120    | 50 ( 29.24% )           |
| Test performed, only negative results   | 3                     | 1               | 0               | 7      | 4 ( 36.36% )            |
| No test or unknown result   | 442                   | 32              | 9               | 1,851  | 474 ( 20.31% )          |
| Antigen test within ±14 days from inpatient admission**                             | -                     | -               | -               | -      | -                       |
| Test performed, at least 1 positive result  | 0                     | 0               | 0               | 0      | N/A                     |
| Test performed, only negative results   | 0                     | 0               | 0               | 0      | N/A                     |
| No test or unknown result   | 643                   | 50              | 11              | 2,613  | 693 ( 20.89% )          |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                       |                 |                 |        | , ,                     |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 72                    | 7               | 0               | 0      | 79 ( 100.0% )           |
| Codes Observed During Inpatient Stay  |                       |                 |                 |        |                         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 99                    | 9               | 1               | 414    | 108 ( 20.65% )          |
| of breath) OR R50.9 (fever)]  |                       |                 |                 |        |                         |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*                              |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 |                 |                 |        |                          |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
| 730 030 /  |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 144             | 15              | 2               | 546    | 159 ( 22.49% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute    |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]    |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****                                     |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS   | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual       | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA            | -               | -               | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                       | -               | -               | -               | -      | N/A                      |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                       | -               | -               | -               | -      | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                       | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                      | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                         | -               | -               | -               | -      | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                      | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 11              | 0               | 0               | 0      | 11 ( 100.0% )            |
| Probe Detection  |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 272             | 4               | 0               | 0      | 276 ( 100.0% )           |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 360             | 46              | 1               | 0      | 406 ( 99.75% )           |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |

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Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*                            |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory      | -               | -               | -               | -      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By      | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By      | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | _               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| Unknown  | 0               | 0               | 0               | 0      | N/A                      |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

|   | Algorithm 1: Inpatient (IP) Stay with Code | 2 U07.1*                        |                             |
|---|--|---------------------------------|-----------------------------|
|   |  | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b>                 | (95% Confidence Interval)       | Interval)                   |
|   |  | Number (Percent)                |                             |
| Care Setting of "Primary" Lab Test*****   |  |                                 |                             |
| Total Observed                            | 3,317 ( 100.0% )                           | 92.78% (90.60%, 94.60%)         | 56.95% (54.01%, 59.86%)     |
| Inpatient                                 | 144 ( 4.34% )                              | 97.22% (93.04%, 99.24%)         | 61.40% (54.75%, 67.76%)     |
| Outpatient or Emergency Department        | 127 ( 3.83% )                              | 96.03% (90.98%, 98.70%)         | 57.62% (50.63%, 64.39%)     |
| Other                                     | 29 ( 0.87% )                               | 85.71% (67.33%, 95.97%)         | 58.54% (42.11%, 73.68%)     |
| Care Setting Reported as Unknown          | 1,039 ( 31.32% )                           | 90.63% (87.32%, 93.32%)         | ****                        |
| Demographics                              |  |                                 |                             |
| Sex                                       |  |                                 |                             |
| Female                                    | 1,378 ( 41.54% )                           | 91.20% (86.98%, 94.40%)         | 51.12% (46.38%, 55.85%)     |
| Male                                      | 1,939 ( 58.46% )                           | 93.68% (90.99%, 95.76%)         | 60.76% ( 56.99% , 64.44% )  |
| Other/Missing                             | N/A  | N/A                             | N/A                         |
| Age at Hospital Admission (Years)         |  |                                 |                             |
| 0-5                                       | 3 ( 0.09% )                                | N/A                             | N/A                         |
| 6-17                                      | 1 ( 0.03% )                                | N/A                             | N/A                         |
| 18-29                                     | 47 ( 1.42% )                               | 93.33% (68.05%, 99.83%)         | 45.16% (27.32%, 63.97%)     |
| 30-39                                     | 119 ( 3.59% )                              | 96 % (79.65%, 99.90%)           | 35.29% (24.08%, 47.83%)     |
| 40-49                                     | 320 ( 9.65% )                              | 97.26% ( 90.45% , 99.67% )      | 50 % (41.50%, 58.50%)       |
| 50-59                                     | 637 ( 19.20% )                             | 98.60% (95.04%, 99.83%)         | 62.39% (55.72%, 68.73%)     |
| 60-69                                     | 853 ( 25.72% )                             | 95.36% (91.38%, 97.86%)         | 64.01% (58.19%, 69.55%)     |
| 70-79                                     | 789 ( 23.79% )                             | 88.96% (83.11%, 93.32%)         | 64.16% (57.53%, 70.41%)     |
| 80-89                                     | 420 ( 12.66% )                             | 77.27% (65.30%, 86.69%)         | 44.35% (35.09%, 53.91%)     |
| 90+                                       | 128 ( 3.86% )                              | 85.71% (57.19%, 98.22%)         | 37.50% (21.10%, 56.31%)     |
| Missing                                   | N/A  | N/A                             | N/A                         |
| Race                                      |  |                                 |                             |
| American Indian or Alaska Native          | N/A  | N/A                             | N/A                         |
| Asian                                     | 14 ( 0.42% )                               | 66.67% ( 9.43% , 99.16% )       | 40 % ( 5.27% , 85.34% )     |
| Black or African American                 | 233 ( 7.02% )                              | 97.14% (85.08%, 99.93%)         | 45.33% (33.79%, 57.25%)     |
| Native Hawaiian or Other Pacific Islander | N/A  | N/A                             | N/A                         |
| White                                     | 350 ( 10.55% )                             | 87.37% ( 78.97% , 93.30% )      | 49.40% (41.62%, 57.21%)     |
| Other/Mixed/Unknown                       | 2,720 ( 82 % )                             | 93.57% (91.21%, 95.46%)         | 59.48% (56.15%, 62.74%)     |
| Ethnicity                                 | , ,  | ,                               | ,                           |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 1: Inpati   | ent (IP) Stay with Code    | e U07.1*                        |                             |
|---|----------------------------|---------------------------------|-----------------------------|
|   |                            | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b> | (95% Confidence Interval)       | Interval)                   |
|   |                            | Number (Percent)                |                             |
| Hispanic  | 18 ( 0.54% )               | 100.0% (29.24%, 100.0%)         | 60 % (14.66%, 94.73%)       |
| Non-Hispanic  | N/A                        | N/A                             | N/A                         |
| Unknown   | 3,299 ( 99.46% )           | 92.75% (90.56%, 94.57%)         | 56.94% (53.99%, 59.86%      |
| Codes Observed During Inpatient Stay  |                            |                                 |                             |
| Asymptomatic screening (Z11.59)   | 48 ( 1.45% )               | 80 % (44.39%, 97.48%)           | 53.33% ( 26.59% , 78.73%    |
| Contact and suspected exposure (Z20.828)  | 771 ( 23.24% )             | 91.23% (85.94%, 95.01%)         | 71.56% (65.08%, 77.45%      |
| Pneumonia (see Appendix B)  | 3,045 (91.80%)             | 92.80% ( 90.54% , 94.66% )      | 62.28% (59.15%, 65.34%      |
| Other viral pneumonia (J12.89)  | 2,685 ( 80.95% )           | 93.68% ( 91.39% , 95.51% )      | 68.84% (65.50%, 72.05%      |
| ARDS (J80)  | 1,063 ( 32.05% )           | 94.66% ( 90.65% , 97.30% )      | 96.53% (92.99%, 98.60%      |
| Sepsis (see Appendix C)   | 1,543 ( 46.52% )           | 93.35% ( 90.02% , 95.84% )      | 71.60% (66.98%, 75.91%      |
| Bronchitis (J20.8 OR J40)   | 63 ( 1.90% )               | 100.0% (63.06%, 100.0%)         | 66.67% (34.89%, 90.08%      |
| Respiratory infection (J22 OR J98.8)  | 809 ( 24.39% )             | 91.72% (85.99%, 95.65%)         | 64.25% (57.31%, 70.77%      |
| Cough (R05)   | 1,056 ( 31.84% )           | 94.42% (90.45%, 97.08%)         | 59.53% (54.11%, 64.78%      |
| Shortness of breath (R06.2)   | 22 ( 0.66% )               | 100.0% (39.76%, 100.0%)         | 100.0% (39.76%, 100.0%      |
| Fever (R50.9)   | 1,377 ( 41.51% )           | 93.15% (89.62%, 95.77%)         | 66.50% (61.70%, 71.07%      |
| Optional  |                            |                                 |                             |
| Other COVID Tests   |                            |                                 |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                               | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                                 |                             |
| est performed, at least 1 positive result   | 171 ( 5.16% )              | 98 % (89.35%, 99.95%)           | 64.47% (52.66%, 75.12%      |
| est performed, only negative results  | 11 ( 0.33% )               | 75 % ( 19.41% , 99.37% )        | 37.50% ( 8.52% , 75.51%     |
| No test or unknown result   | 2,334 ( 70.36% )           | 93.25% ( 90.60% , 95.34% )      | 59.97% (56.33%, 63.53%      |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                               | -                           |
| Test performed, at least 1 positive result  | N/A                        | N/A                             | N/A                         |
| Test performed, only negative results   | N/A                        | N/A                             | N/A                         |
| No test or unknown result   | 3,317 ( 100.0% )           | 92.78% ( 90.60% , 94.60% )      | 78.32% (75.34%, 81.09%      |
| codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            |                                 |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 79 ( 2.38% )               | 91.14% (82.59%, 96.36%)         | 46.45% ( 38.41% , 54.63%    |
| Codes Observed During Inpatient Stay  |                            |                                 |                             |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 523 ( 15.77% )             | 91.67% (84.77%, 96.12%)         | 71.74% (63.45%, 79.07%      |
| of breath) OR R50.9 (fever)]  |                            |                                 |                             |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 1: Inpat   | ient (IP) Stay with Code | e U07.1*   |  |
|--|--------------------------|--|--|
|  | Total Patient Count      | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|  |                          | Number (Percent)   |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                      | 707 ( 21.31% )           | 90.57% (84.92%, 94.62%)                                      | 78.26% (71.60%, 83.99%)                  |
| R J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                       |                          |  |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]                       |                          |  |  |
| Primary" Lab Test Product Information****  |                          |  |  |
| 47377 - SARS_COV_2_NS  | N/A                      | N/A  | N/A                                      |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual                          | N/A                      | N/A  | N/A                                      |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA                               | N/A                      | N/A  | N/A                                      |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | N/A                      | N/A  | N/A                                      |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | N/A                      | N/A  | N/A                                      |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | N/A                      | N/A  | N/A                                      |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT   | N/A                      | N/A  | N/A                                      |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | N/A                      | N/A  | N/A                                      |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | N/A                      | N/A  | N/A                                      |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With                      | 11 ( 0.33% )             | 100.0% (71.51%, 100.0%)                                      | 57.89% (33.50%, 79.75%)                  |
| robe Detection   |                          |  |  |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                      | N/A                      | N/A  | N/A                                      |
| ucleic Acid Amplification Using CDC Primer-Probe Set N1  |                          |  |  |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                      | N/A                      | N/A  | N/A                                      |
| ucleic Acid Amplification Using CDC Primer-Probe Set N2  |                          |  |  |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By AA With Probe Detection | 276 ( 8.32% )            | 98.55% (96.33%, 99.60%)                                      | 60.85% (56.15%, 65.40%)                  |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                      | N/A                      | N/A  | N/A                                      |
| y NAA With Probe Detection   | IN/A                     | N/A  | N/A                                      |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                      | N/A                      | N/A  | N/A                                      |
| AA With Probe Detection  | N/A                      | IV/A   | NA                                       |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By                         | 407 ( 12.27% )           | 88.67% (85.18%, 91.58%)                                      | 54.30% ( 50.42% , 58.14% )               |
| AA With Probe Detection  | 70/ (12.2//0)            | 33.0770 (33.1070, 31.3070)                                   | 34.30% (30.42%, 30.14%)                  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By                       | N/A                      | N/A  | N/A                                      |
| nmunoassay   | IN/ A                    | IV/A   | N/A                                      |
| 4507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                    | ′ N/A                    | N/A  | N/A                                      |
| apid Immunoassay   | 14/ 🗥                    | 19/17  | 19/75                                    |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*                            |                     |  |  |  |  |
|--|---------------------|--|--|--|--|
|  | Total Patient Count | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |
|  |                     | Number (Percent)   |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With | N/A                 | N/A  | N/A                                      |  |  |
| Probe Detection  |                     |  |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By | N/A                 | N/A  | N/A                                      |  |  |
| NAA With Probe Detection   |                     |  |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen | N/A                 | N/A  | N/A                                      |  |  |
| By NAA With Probe Detection  |                     |  |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory      | N/A                 | N/A  | N/A                                      |  |  |
| Specimen By NAA With Probe Detection   |                     |  |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By      | N/A                 | N/A  | N/A                                      |  |  |
| Immunoassay  |                     |  |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By      | N/A                 | N/A  | N/A                                      |  |  |
| Immunoassay  |                     |  |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | N/A                 | N/A  | N/A                                      |  |  |
| Non-Probe Detection  |                     |  |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | N/A                 | N/A  | N/A                                      |  |  |
| NAA With Probe Detection   |                     |  |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | N/A                 | N/A  | N/A                                      |  |  |
| Probe Detection  |                     |  |  |  |  |
| Unknown  | N/A                 | N/A  | N/A                                      |  |  |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

|  | Algorithm 2: IP Stay v | with Any of Codes l | J07.1, B97.29*   |                 |            |                          |
|--|------------------------|---------------------|------------------|-----------------|------------|--------------------------|
|  |                        | Lab Positive***     | 1 - b N1 + * * * | Lab Na Dasulta  | No Lob     | Patients with Lab Result |
|  |                        | Lab Positive***     | Lab Negative***  | Lab, No Results | NO Lab     |                          |
| Cours Cataling of IIDuinney, II Lab Tanta****          |                        |                     | Number           |                 |            | Number (Percent)         |
| Care Setting of "Primary" Lab Test***** Total Observed |                        | 977                 | 00               | 18              | 4.262      | 1.007/10.500/\           |
| Inpatient  |                        |                     | 90               |                 | 4,363      | 1,067 ( 19.59% )         |
| Outpatient or Emergency Department                     |                        | 215                 | 5                | 3               | N/A<br>N/A | 220                      |
| Other  |                        | 191<br>37           | 12               | 1<br>1          | N/A<br>N/A | 203<br>45                |
| Care Setting Reported as Unknown                       |                        | 534                 | 8<br>65          | 13              | -          | 45<br>599                |
| Demographics   |                        | 534                 | 05               | 13              | N/A        | 599                      |
| Sex  |                        |                     |                  |                 |            |                          |
| Female   |                        | 369                 | 41               | 10              | 1,864      | 410 ( 17.95% )           |
| Male   |                        | 608                 | 49               | 8               | 2,499      | 657 ( 20.76% )           |
| Other/Missing  |                        | 0                   | 0                | 0               | 0          | N/A                      |
| Age at Hospital Admission (Years)                      |                        | Ü                   | Ü                | Ü               | Ü          | 14/7                     |
| 0-5  |                        | 0                   | 0                | 0               | 34         | 0 (0.00%)                |
| 6-17   |                        | 0                   | 0                | 0               | 16         | 0 (0.00%)                |
| 18-29  |                        | 27                  | 3                | 1               | 105        | 30 ( 22.06% )            |
| 30-39  |                        | 65                  | 4                | 2               | 213        | 69 ( 24.30% )            |
| 40-49  |                        | 129                 | 3                | 1               | 439        | 132 ( 23.08% )           |
| 50-59  |                        | 212                 | 9                | 2               | 823        | 221 ( 21.13% )           |
| 60-69  |                        | 262                 | 13               | 4               | 1,019      | 275 ( 21.19% )           |
| 70-79  |                        | 184                 | 29               | 5               | 956        | 213 ( 18.14% )           |
| 80-89  |                        | 76                  | 26               | 2               | 574        | 102 ( 15.04% )           |
| 90+  |                        | 22                  | 3                | 1               | 184        | 25 ( 11.90% )            |
| Missing  |                        | 0                   | 0                | 0               | 0          | N/A                      |
| Race   |                        |                     |                  |                 |            |                          |
| American Indian or Alaska Native                       |                        | 0                   | 0                | 0               | 0          | N/A                      |
| Asian  |                        | 3                   | 1                | 0               | 16         | 4 ( 20 % )               |
| Black or African American                              |                        | 45                  | 1                | 1               | 299        | 46 (13.29%)              |
| Native Hawaiian or Other Pacific Islander              |                        | 0                   | 0                | 0               | 0          | N/A                      |
| White  |                        | 109                 | 21               | 0               | 404        | 130 ( 24.34% )           |
| Other/Mixed/Unknown                                    |                        | 820                 | 67               | 17              | 3,644      | 887 ( 19.50% )           |
| Ethnicity  |                        |                     |                  |                 |            |                          |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 2: IP Stay  | with Any of Codes l | J07.1, B97.29*  |                 |        |                       |
|---|---------------------|-----------------|-----------------|--------|-----------------------|
|   | Lab Positive***     | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Res |
|   |                     | Number          |                 |        | Number (Percent)      |
| Hispanic  | 3                   | 0               | 0               | 24     | 3 ( 11.11% )          |
| Non-Hispanic  | 0                   | 0               | 0               | 0      | N/A                   |
| Unknown   | 974                 | 90              | 18              | 4,339  | 1,064 ( 19.63% )      |
| Codes Observed During Inpatient Stay  |                     |                 |                 |        |                       |
| Asymptomatic screening (Z11.59)   | 16                  | 2               | 0               | 54     | 18 ( 25 % )           |
| Contact and suspected exposure (Z20.828)  | 225                 | 21              | 3               | 873    | 246 ( 21.93% )        |
| Pneumonia (see Appendix B)  | 894                 | 78              | 17              | 3,778  | 972 ( 20.39% )        |
| Other viral pneumonia (J12.89)  | 790                 | 54              | 15              | 3,143  | 844 (21.09%)          |
| ARDS (J80)  | 225                 | 14              | 3               | 1,031  | 239 ( 18.77% )        |
| Sepsis (see Appendix C)   | 393                 | 32              | 9               | 1,749  | 425 (19.47%)          |
| Bronchitis (J20.8 OR J40)   | 12                  | 1               | 0               | 106    | 13 ( 10.92% )         |
| Respiratory infection (J22 OR J98.8)  | 235                 | 19              | 5               | 1,021  | 254 ( 19.84% )        |
| Cough (R05)   | 331                 | 20              | 9               | 1,490  | 351 (18.97%)          |
| Shortness of breath (R06.2)   | 6                   | 0               | 0               | 33     | 6 ( 15.38% )          |
| Fever (R50.9)   | 412                 | 34              | 7               | 1,766  | 446 ( 20.10% )        |
| Optional  |                     |                 |                 | ,      |                       |
| Other COVID Tests   |                     |                 |                 |        |                       |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                   | -               | -               | -      | -                     |
| observed within -7 days prior to hospitalization through end of patient record**    |                     |                 |                 |        |                       |
| Test performed, at least 1 positive result  | 87                  | 3               | 1               | 213    | 90 ( 29.61% )         |
| Test performed, only negative results   | 9                   | 4               | 0               | 26     | 13 ( 33.33% )         |
| No test or unknown result   | 685                 | 57              | 16              | 3,145  | 742 ( 19.01% )        |
| Antigen test within ±14 days from inpatient admission**                             | -                   | -               | -               | _      | -                     |
| Test performed, at least 1 positive result  | 0                   | 0               | 0               | 0      | N/A                   |
| Test performed, only negative results   | 0                   | 0               | 0               | 0      | N/A                   |
| No test or unknown result   | 977                 | 90              | 18              | 4,363  | 1,067 ( 19.59% )      |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                     |                 |                 | .,     |                       |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 109                 | 14              | 0               | 0      | 123 ( 100.0% )        |
| Codes Observed During Inpatient Stay  |                     |                 |                 |        |                       |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 149                 | 12              | 2               | 606    | 161 ( 20.94% )        |
| of breath) OR R50.9 (fever)]  |                     |                 |                 |        | ,                     |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 2: IP Stay v  | vith Any of Codes l | J07.1, B97.29*  |                 |        |                          |
|---|---------------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive***     | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                     | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                                | 205                 | 17              | 2               | 768    | 222 ( 22.38% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                                 |                     |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]                                 |                     |                 |                 |        |                          |
| "Primary" Lab Test Product Information****  |                     |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -                   | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual                                    | -                   | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | -                   | -               | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | -                   | -               | -               | -      | N/A                      |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | -                   | -               | -               | -      | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -                   | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -                   | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | -                   | -               | -               | -      | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | -                   | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With                                | 19                  | 1               | 0               | 0      | 20 ( 100.0% )            |
| Probe Detection   |                     |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                                | 0                   | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1  |                     |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                                | 0                   | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2  |                     |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By                                   | 425                 | 11              | 0               | 0      | 436 ( 100.0% )           |
| NAA With Probe Detection  |                     |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                                | -                   | -               | -               | -      | N/A                      |
| By NAA With Probe Detection<br>94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By |                     |                 |                 |        |                          |
|   | -                   | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                     | 70              | _               | •      | 644 / 60 040/ 3          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By                                   | 533                 | 78              | 1               | 0      | 611 ( 99.84% )           |
| NAA With Probe Detection 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By        |                     |                 |                 |        |                          |
|   | -                   | -               | -               | -      | N/A                      |
| Immunoassay 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                  |                     |                 |                 |        | A1 / A                   |
|   | -                   | -               | -               | -      | N/A                      |
| Rapid Immunoassay   |                     |                 |                 |        |                          |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                        |                 |                 |                 |        |                          |  |
|--|-----------------|-----------------|-----------------|--------|--------------------------|--|
|  |                 |                 |                 |        |                          |  |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |  |
|  |                 | Number          |                 |        | Number (Percent)         |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With | -               | -               | -               | -      | N/A                      |  |
| Probe Detection  |                 |                 |                 |        |                          |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By | -               | -               | -               | -      | N/A                      |  |
| NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen | -               | -               | -               | -      | N/A                      |  |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory      | -               | -               | -               | -      | N/A                      |  |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By      | -               | -               | -               | -      | N/A                      |  |
| Immunoassay  |                 |                 |                 |        |                          |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By      | -               | -               | -               | -      | N/A                      |  |
| Immunoassay  |                 |                 |                 |        |                          |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | -               | -               | -      | N/A                      |  |
| Non-Probe Detection  |                 |                 |                 |        |                          |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | -               | -               | -               | -      | N/A                      |  |
| NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | -               | -               | -      | N/A                      |  |
| Probe Detection  |                 |                 |                 |        |                          |  |
| Unknown  | 0               | 0               | 0               | 0      | N/A                      |  |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Alg                                       | orithm 2: IP Stay with Any of Codes U07. | 1, B97.29*                    |                             |
|---|--|-------------------------------|-----------------------------|
|   |  |                               | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b>               | PPV (95% Confidence Interval) | Interval)                   |
|   |  | Number (Percent)              |                             |
| Care Setting of "Primary" Lab Test*****   |  |                               |                             |
| Total Observed                            | 5,448 ( 100.0% )                         | 91.57% (89.73%, 93.16%)       | 86.54% (84.41%, 88.47%)     |
| Inpatient                                 | 223 ( 4.09% )                            | 97.73% (94.78%, 99.26%)       | 94.30% (90.45%, 96.93%)     |
| Outpatient or Emergency Department        | 204 ( 3.74% )                            | 94.09% (89.90%, 96.91%)       | 90.95% (86.23%, 94.46%)     |
| Other                                     | 46 ( 0.84% )                             | 82.22% (67.95%, 92%)          | 90.24% (76.87%, 97.28%)     |
| Care Setting Reported as Unknown          | 1,591 ( 29.20% )                         | 89.15% (86.38%, 91.52%)       | ****                        |
| Demographics                              |  |                               |                             |
| Sex                                       |  |                               |                             |
| Female                                    | 2,284 ( 41.92% )                         | 90 % (86.68%, 92.73%)         | 82.74% (78.90%, 86.13%)     |
| Male                                      | 3,164 ( 58.08% )                         | 92.54% ( 90.26% , 94.43% )    | 89.02% (86.43%, 91.26%)     |
| Other/Missing                             | N/A                                      | N/A                           | N/A                         |
| Age at Hospital Admission (Years)         |  |                               |                             |
| 0-5                                       | 34 ( 0.62% )                             | N/A                           | N/A                         |
| 6-17                                      | 16 ( 0.29% )                             | N/A                           | N/A                         |
| 18-29                                     | 136 ( 2.50% )                            | 90 % (73.47%, 97.89%)         | 87.10% (70.17%, 96.37%)     |
| 30-39                                     | 284 ( 5.21% )                            | 94.20% (85.82%, 98.40%)       | 95.59% (87.64%, 99.08%)     |
| 40-49                                     | 572 ( 10.50% )                           | 97.73% ( 93.50% , 99.53% )    | 90.85% (84.85%, 95.03%)     |
| 50-59                                     | 1,046 ( 19.20% )                         | 95.93% (92.41%, 98.12%)       | 93.81% (89.82%, 96.57%)     |
| 60-69                                     | 1,298 ( 23.83% )                         | 95.27% ( 92.05% , 97.46% )    | 90.66% (86.70%, 93.75%)     |
| 70-79                                     | 1,174 ( 21.55% )                         | 86.38% (81.04%, 90.69%)       | 81.42% (75.72%, 86.27%)     |
| 80-89                                     | 678 ( 12.44% )                           | 74.51% (64.92%, 82.62%)       | 66.09% (56.67%, 74.65%)     |
| 90+                                       | 210 ( 3.85% )                            | 88 % (68.78%, 97.45%)         | 68.75% (49.99%, 83.88%)     |
| Missing                                   | N/A                                      | N/A                           | N/A                         |
| Race                                      |  |                               |                             |
| American Indian or Alaska Native          | N/A                                      | N/A                           | N/A                         |
| Asian                                     | 20 ( 0.37% )                             | 75 % (19.41%, 99.37%)         | 60 % (14.66%, 94.73%)       |
| Black or African American                 | 346 ( 6.35% )                            | 97.83% (88.47%, 99.94%)       | 60 % (48.04%, 71.15%)       |
| Native Hawaiian or Other Pacific Islander | N/A                                      | N/A                           | N/A                         |
| White                                     | 534 ( 9.80% )                            | 83.85% (76.37%, 89.71%)       | 64.88% (57.15%, 72.07%)     |
| Other/Mixed/Unknown                       | 4,548 ( 83.48% )                         | 92.45% (90.51%, 94.10%)       | 93.08% (91.19%, 94.66%)     |
| Ethnicity                                 |  | •                             |                             |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 2: IP Stay v  | vith Any of Codes U07.     | 1, B97.29*                    |                             |
|---|----------------------------|-------------------------------|-----------------------------|
|   |                            |                               | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            | Number (Percent)              |                             |
| Hispanic  | 27 ( 0.50% )               | 100.0% (29.24%, 100.0%)       | 60 % (14.66%, 94.73%)       |
| Non-Hispanic  | N/A                        | N/A                           | N/A                         |
| Unknown   | 5,421 ( 99.50% )           | 91.54% (89.71%, 93.14%)       | 86.65% (84.53%, 88.59%      |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| Asymptomatic screening (Z11.59)   | 72 ( 1.32% )               | 88.89% (65.29%, 98.62%)       | ****                        |
| Contact and suspected exposure (Z20.828)  | 1,122 ( 20.59% )           | 91.46% (87.25%, 94.64%)       | ****                        |
| Pneumonia (see Appendix B)  | 4,767 (87.50%)             | 91.98% ( 90.09% , 93.61% )    | 91.88% (89.98%, 93.52%      |
| Other viral pneumonia (J12.89)  | 4,002 (73.46%)             | 93.60% (91.73%, 95.16%)       | 99.25% ( 98.37% , 99.72%    |
| ARDS (J80)  | 1,273 ( 23.37% )           | 94.14% ( 90.37% , 96.76% )    | ****                        |
| Sepsis (see Appendix C)   | 2,183 ( 40.07% )           | 92.47% (89.54%, 94.79%)       | 95.39% (92.89%, 97.20%      |
| Bronchitis (J20.8 OR J40)   | 119 ( 2.18% )              | 92.31% (63.97%, 99.81%)       | 100.0% (73.54%, 100.0%      |
| Respiratory infection (J22 OR J98.8)  | 1,280 ( 23.49% )           | 92.52% (88.56%, 95.44%)       | ****                        |
| Cough (R05)   | 1,850 (33.96%)             | 94.30% (91.34%, 96.49%)       | 97.07% (94.67%, 98.58%      |
| Shortness of breath (R06.2)   | 39 ( 0.72% )               | 100.0% (54.07%, 100.0%)       | ****                        |
| Fever (R50.9)   | 2,219 ( 40.73% )           | 92.38% (89.51%, 94.66%)       | ****                        |
| Optional  |                            |                               |                             |
| Other COVID Tests   |                            |                               |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                               |                             |
| est performed, at least 1 positive result   | 304 ( 5.58% )              | 96.67% ( 90.57% , 99.31% )    | ****                        |
| Test performed, only negative results   | 39 ( 0.72% )               | 69.23% (38.57%, 90.91%)       | ****                        |
| No test or unknown result   | 3,903 (71.64%)             | 92.32% (90.16%, 94.13%)       | 92.94% ( 90.85% , 94.69%    |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                             | -                           |
| Test performed, at least 1 positive result  | N/A                        | N/A                           | N/A                         |
| Fest performed, only negative results   | N/A                        | N/A                           | N/A                         |
| No test or unknown result   | 5,448 ( 100.0% )           | 91.57% (89.73%, 93.16%)       | ****                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            |                               |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 123 ( 2.26% )              | 88.62% (81.64%, 93.64%)       | 70.32% ( 62.47% , 77.38%    |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 769 ( 14.12% )             | 92.55% (87.34%, 96.09%)       | ****                        |
| of breath) OR R50.9 (fever)]  | ,                          |                               |                             |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 2: IP Stay w   | ith Any of Codes U07.      | 1, B97.29*                    |                             |
|--|----------------------------|-------------------------------|-----------------------------|
|  |                            |                               | Sensitivity (95% Confidence |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|  |                            | Number (Percent)              |                             |
| 220.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 992 ( 18.21% )             | 92.34% (88.02%, 95.48%)       | ****                        |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute    |                            |                               |                             |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]     |                            |                               |                             |
| Primary" Lab Test Product Information****                                      |                            |                               |                             |
| 47377 - SARS_COV_2_NS  | N/A                        | N/A                           | N/A                         |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual        | N/A                        | N/A                           | N/A                         |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA             | N/A                        | N/A                           | N/A                         |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                        | N/A                        | N/A                           | N/A                         |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                        | N/A                        | N/A                           | N/A                         |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                        | N/A                        | N/A                           | N/A                         |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT                                       | N/A                        | N/A                           | N/A                         |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                          | N/A                        | N/A                           | N/A                         |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                       | N/A                        | N/A                           | N/A                         |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With    | 20 ( 0.37% )               | 95 % (75.13%, 99.87%)         | 100.0% (82.35%, 100.0%)     |
| robe Detection   |                            |                               |                             |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By    | N/A                        | N/A                           | N/A                         |
| Jucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                            |                               |                             |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By    | N/A                        | N/A                           | N/A                         |
| lucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                            |                               |                             |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By       | 436 ( 8 % )                | 97.48% (95.53%, 98.73%)       | 95.08% (92.64%, 96.89%)     |
| IAA With Probe Detection   |                            |                               |                             |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen    | N/A                        | N/A                           | N/A                         |
| y NAA With Probe Detection   |                            |                               |                             |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By    | N/A                        | N/A                           | N/A                         |
| AA With Probe Detection  |                            |                               |                             |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By       | 612 ( 11.23% )             | 87.23% (84.33%, 89.78%)       | 80.39% (77.16%, 83.35%)     |
| AA With Probe Detection  |                            |                               |                             |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By     | N/A                        | N/A                           | N/A                         |
| mmunoassay   |                            |                               |                             |
| 04507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                        | N/A                           | N/A                         |
| lapid Immunoassay  |                            |                               |                             |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                        |                            |                               |                             |  |  |  |  |
|--|----------------------------|-------------------------------|-----------------------------|--|--|--|--|
|  |                            |                               | Sensitivity (95% Confidence |  |  |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |  |  |
|  |                            | Number (Percent)              |                             |  |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With | N/A                        | N/A                           | N/A                         |  |  |  |  |
| Probe Detection  |                            |                               |                             |  |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By | N/A                        | N/A                           | N/A                         |  |  |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen | N/A                        | N/A                           | N/A                         |  |  |  |  |
| By NAA With Probe Detection  |                            |                               |                             |  |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory      | N/A                        | N/A                           | N/A                         |  |  |  |  |
| Specimen By NAA With Probe Detection   |                            |                               |                             |  |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By      | N/A                        | N/A                           | N/A                         |  |  |  |  |
| Immunoassay  |                            |                               |                             |  |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By      | N/A                        | N/A                           | N/A                         |  |  |  |  |
| Immunoassay  |                            |                               |                             |  |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | N/A                        | N/A                           | N/A                         |  |  |  |  |
| Non-Probe Detection  |                            |                               |                             |  |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | N/A                        | N/A                           | N/A                         |  |  |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | N/A                        | N/A                           | N/A                         |  |  |  |  |
| Probe Detection  |                            |                               |                             |  |  |  |  |
| Unknown  | N/A                        | N/A                           | N/A                         |  |  |  |  |

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Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Al  | gorithm 3: IP Stay with Any of Codes U07 | 7.1, B97.29, B34.2* |                 |              |                          |
|---|--|---------------------|-----------------|--------------|--------------------------|
|   | Lab Positive***                          | Lab Negative***     | Lab, No Results | No Lab       | Patients with Lab Result |
|   | Lab Positive                             | Number              | -               | INO Lab      | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****   |  | Number              |                 |              | Number (Percent)         |
| Total Observed                            | 999                                      | 115                 | 18              | 4,657        | 1,114 ( 19.24% )         |
| Inpatient                                 | 216                                      | 6                   | 3               | 4,037<br>N/A | 222                      |
| Outpatient or Emergency Department        | 193                                      | 13                  | 1               | N/A          | 206                      |
| Other                                     | 37                                       | 10                  | 1               | N/A          | 47                       |
| Care Setting Reported as Unknown          | 553                                      | 86                  | 13              | N/A          | 639                      |
| Demographics                              | 333                                      | 80                  | 13              | IN/A         | 033                      |
| Sex                                       |  |                     |                 |              |                          |
| Female                                    | 382                                      | 52                  | 10              | 2,019        | 434 ( 17.62% )           |
| Male                                      | 617                                      | 63                  | 8               | 2,638        | 680 ( 20.44% )           |
| Other/Missing                             | 0  | 0                   | 0               | 0            | N/A                      |
| Age at Hospital Admission (Years)         |  | -                   |                 |              | •                        |
| 0-5                                       | 0  | 0                   | 0               | 49           | 0 (0.00%)                |
| 6-17                                      | 0  | 0                   | 0               | 23           | 0 (0.00%)                |
| 18-29                                     | 27                                       | 3                   | 1               | 118          | 30 ( 20.13% )            |
| 30-39                                     | 65                                       | 4                   | 2               | 221          | 69 ( 23.63% )            |
| 40-49                                     | 130                                      | 5                   | 1               | 457          | 135 ( 22.77% )           |
| 50-59                                     | 215                                      | 13                  | 2               | 860          | 228 ( 20.92% )           |
| 60-69                                     | 270                                      | 18                  | 4               | 1,067        | 288 ( 21.19% )           |
| 70-79                                     | 187                                      | 34                  | 5               | 1,014        | 221 ( 17.82% )           |
| 80-89                                     | 82                                       | 33                  | 2               | 639          | 115 ( 15.21% )           |
| 90+                                       | 23                                       | 5                   | 1               | 209          | 28 ( 11.76% )            |
| Missing                                   | 0  | 0                   | 0               | 0            | N/A                      |
| Race                                      |  |                     |                 |              |                          |
| American Indian or Alaska Native          | 0  | 0                   | 0               | 0            | N/A                      |
| Asian                                     | 4  | 1                   | 0               | 17           | 5 ( 22.73% )             |
| Black or African American                 | 49                                       | 2                   | 1               | 316          | 51 ( 13.86% )            |
| Native Hawaiian or Other Pacific Islander | 0  | 0                   | 0               | 0            | N/A                      |
| White                                     | 115                                      | 27                  | 0               | 456          | 142 ( 23.75% )           |
| Other/Mixed/Unknown                       | 831                                      | 85                  | 17              | 3,868        | 916 (19.08%)             |
| Ethnicity                                 |  |                     |                 |              |                          |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 3: IP Stay with   | Any of Codes U07 | .1, B97.29, B34.2* |                 |        |                        |
|---|------------------|--------------------|-----------------|--------|------------------------|
|   | Lab Positive***  | Lab Negative***    | Lab, No Results | No Lab | Patients with Lab Resu |
|   |                  | Number             | · ·             |        | Number (Percent)       |
| Hispanic  | 3                | 0                  | 0               | 27     | 3 ( 10 % )             |
| Non-Hispanic  | 0                | 0                  | 0               | 0      | N/A                    |
| Unknown   | 996              | 115                | 18              | 4,630  | 1,111 ( 19.29% )       |
| Codes Observed During Inpatient Stay  |                  |                    |                 | ·      |                        |
| Asymptomatic screening (Z11.59)   | 16               | 3                  | 0               | 54     | 19 ( 26.03% )          |
| Contact and suspected exposure (Z20.828)  | 226              | 22                 | 3               | 906    | 248 ( 21.43% )         |
| Pneumonia (see Appendix B)  | 911              | 95                 | 17              | 3,954  | 1,006 ( 20.21% )       |
| Other viral pneumonia (J12.89)  | 800              | 54                 | 15              | 3,191  | 854 ( 21.03% )         |
| ARDS (J80)  | 225              | 14                 | 3               | 1,043  | 239 ( 18.60% )         |
| Sepsis (see Appendix C)   | 397              | 40                 | 9               | 1,830  | 437 ( 19.20% )         |
| Bronchitis (J20.8 OR J40)   | 12               | 1                  | 0               | 116    | 13 ( 10.08% )          |
| Respiratory infection (J22 OR J98.8)  | 235              | 20                 | 5               | 1,029  | 255 ( 19.78% )         |
| Cough (RO5)   | 335              | 28                 | 9               | 1,571  | 363 ( 18.68% )         |
| Shortness of breath (R06.2)   | 6                | 1                  | 0               | 37     | 7 ( 15.91% )           |
| Fever (R50.9)   | 417              | 40                 | 7               | 1,845  | 457 ( 19.79% )         |
| Optional  |                  |                    |                 |        |                        |
| Other COVID Tests   |                  |                    |                 |        |                        |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                | -                  | -               | -      | -                      |
| observed within -7 days prior to hospitalization through end of patient record**    |                  |                    |                 |        |                        |
| Fest performed, at least 1 positive result  | 90               | 3                  | 1               | 217    | 93 ( 29.90% )          |
| Test performed, only negative results   | 9                | 6                  | 0               | 30     | 15 ( 33.33% )          |
| No test or unknown result   | 688              | 69                 | 16              | 3,334  | 757 ( 18.43% )         |
| Antigen test within ±14 days from inpatient admission**                             | -                | -                  | -               | -      | -                      |
| Test performed, at least 1 positive result  | 0                | 0                  | 0               | 0      | N/A                    |
| Test performed, only negative results   | 0                | 0                  | 0               | 0      | N/A                    |
| No test or unknown result   | 999              | 115                | 18              | 4,657  | 1,114 ( 19.24% )       |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                  |                    |                 |        |                        |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 116              | 17                 | 0               | 0      | 133 ( 100.0% )         |
| Codes Observed During Inpatient Stay  |                  |                    |                 |        | _                      |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 149              | 13                 | 2               | 625    | 162 ( 20.53% )         |
| of breath) OR R50.9 (fever)]  |                  |                    |                 |        |                        |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 3: IP Stay with  | Any of Codes U07 | .1, B97.29, B34.2* |                 |        |                          |
|--|------------------|--------------------|-----------------|--------|--------------------------|
|  |                  |                    |                 |        |                          |
|  | Lab Positive***  | Lab Negative***    | Lab, No Results | No Lab | Patients with Lab Result |
|  |                  | Number             |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 205              | 17                 | 2               | 778    | 222 ( 22.16% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute    |                  |                    |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]    |                  |                    |                 |        |                          |
| "Primary" Lab Test Product Information****                                     |                  |                    |                 |        |                          |
| 847377 - SARS_COV_2_NS   | -                | -                  | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual       | -                | -                  | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA            | -                | -                  | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                       | -                | -                  | -               | -      | N/A                      |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                       | -                | -                  | -               | -      | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                       | -                | -                  | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                      | -                | -                  | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                         | -                | -                  | -               | -      | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                      | -                | -                  | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 19               | 1                  | 0               | 0      | 20 ( 100.0% )            |
| Probe Detection  |                  |                    |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0                | 0                  | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                  |                    |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0                | 0                  | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                  |                    |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 430              | 24                 | 0               | 0      | 454 ( 100.0% )           |
| NAA With Probe Detection   |                  |                    |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | -                | -                  | -               | -      | N/A                      |
| By NAA With Probe Detection  |                  |                    |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | -                | -                  | -               | -      | N/A                      |
| NAA With Probe Detection   |                  |                    |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 550              | 90                 | 1               | 0      | 640 ( 99.84% )           |
| NAA With Probe Detection   |                  |                    |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | -                | -                  | -               | -      | N/A                      |
| Immunoassay  |                  |                    |                 |        |                          |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -                | -                  | -               | -      | N/A                      |
| Rapid Immunoassay  |                  |                    |                 |        |                          |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                 |                 |                 |                 |        |                          |  |  |
|--|-----------------|-----------------|-----------------|--------|--------------------------|--|--|
|  |                 |                 |                 |        |                          |  |  |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |  |  |
|  |                 | Number          |                 |        | Number (Percent)         |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With | -               | -               | -               | -      | N/A                      |  |  |
| Probe Detection  |                 |                 |                 |        |                          |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By | -               | -               | -               | -      | N/A                      |  |  |
| NAA With Probe Detection   |                 |                 |                 |        |                          |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen | -               | -               | -               | -      | N/A                      |  |  |
| By NAA With Probe Detection  |                 |                 |                 |        | •                        |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory      | -               | -               | -               | -      | N/A                      |  |  |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        | ,                        |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By      | -               | -               | -               | _      | N/A                      |  |  |
| Immunoassay  |                 |                 |                 |        | ,                        |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By      | _               | _               | _               | _      | N/A                      |  |  |
| Immunoassay  |                 |                 |                 |        | ,                        |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | _               | -               | _      | N/A                      |  |  |
| Non-Probe Detection  |                 |                 |                 |        | ,                        |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | _               | _               | _               | _      | N/A                      |  |  |
| NAA With Probe Detection   |                 |                 |                 |        | ,                        |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | -               | _               | _               | _      | N/A                      |  |  |
| Probe Detection  |                 |                 |                 |        | , , ,                    |  |  |
| Unknown  | 0               | 0               | 0               | 0      | N/A                      |  |  |

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Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algoriti                                  | nm 3: IP Stay with Any of Codes U07.1, B | 97.29, B34.2*                 |                             |
|---|--|-------------------------------|-----------------------------|
|   |  |                               | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b>               | PPV (95% Confidence Interval) | Interval)                   |
|   |  | Number (Percent)              |                             |
| Care Setting of "Primary" Lab Test*****   |  |                               |                             |
| Total Observed                            | 5,789 ( 100.0% )                         | 89.68% (87.74%, 91.40%)       | 88.49% (86.48%, 90.29%)     |
| Inpatient                                 | 225 ( 3.89% )                            | 97.30% (94.21%, 99%)          | 94.74% ( 90.99% , 97.25% )  |
| Outpatient or Emergency Department        | 207 ( 3.58% )                            | 93.69% (89.45%, 96.60%)       | 91.90% (87.36%, 95.21%)     |
| Other                                     | 48 ( 0.83% )                             | 78.72% (64.34%, 89.30%)       | 90.24% (76.87%, 97.28%)     |
| Care Setting Reported as Unknown          | 1,728 ( 29.85% )                         | 86.54% (83.65%, 89.09%)       | ****                        |
| Demographics                              |  |                               |                             |
| Sex                                       |  |                               |                             |
| Female                                    | 2,463 ( 42.55% )                         | 88.02% (84.59%, 90.92%)       | 85.65% ( 82.05% , 88.77% )  |
| Male                                      | 3,326 ( 57.45% )                         | 90.74% (88.30%, 92.81%)       | 90.34% (87.87%, 92.45%)     |
| Other/Missing                             | N/A                                      | N/A                           | N/A                         |
| Age at Hospital Admission (Years)         |  |                               |                             |
| 0-5                                       | 49 ( 0.85% )                             | N/A                           | N/A                         |
| 6-17                                      | 23 ( 0.40% )                             | N/A                           | N/A                         |
| 18-29                                     | 149 ( 2.57% )                            | 90 % (73.47%, 97.89%)         | 87.10% (70.17%, 96.37%)     |
| 30-39                                     | 292 ( 5.04% )                            | 94.20% (85.82%, 98.40%)       | 95.59% (87.64%, 99.08%)     |
| 40-49                                     | 593 ( 10.24% )                           | 96.30% (91.57%, 98.79%)       | 91.55% (85.70%, 95.56%)     |
| 50-59                                     | 1,090 ( 18.83% )                         | 94.30% (90.45%, 96.93%)       | 95.13% (91.46%, 97.55%)     |
| 60-69                                     | 1,359 (23.48%)                           | 93.75% (90.30%, 96.25%)       | 93.43% (89.92%, 96%)        |
| 70-79                                     | 1,240 ( 21.42% )                         | 84.62% (79.17%, 89.10%)       | 82.74% (77.17%, 87.43%)     |
| 80-89                                     | 756 ( 13.06% )                           | 71.30% (62.12%, 79.35%)       | 71.30% (62.12%, 79.35%)     |
| 90+                                       | 238 ( 4.11% )                            | 82.14% (63.11%, 93.94%)       | 71.88% (53.25%, 86.25%)     |
| Missing                                   | N/A                                      | N/A                           | N/A                         |
| Race                                      | ,  | •                             | •                           |
| American Indian or Alaska Native          | N/A                                      | N/A                           | N/A                         |
| Asian                                     | 22 ( 0.38% )                             | 80 %(28.36%,99.49%)           | 80 % ( 28.36% , 99.49% )    |
| Black or African American                 | 368 ( 6.36% )                            | 96.08% (86.54%, 99.52%)       | 65.33% (53.46%, 75.96%)     |
| Native Hawaiian or Other Pacific Islander | N/A                                      | N/A                           | N/A                         |
| White                                     | 598 ( 10.33% )                           | 80.99% (73.55%, 87.08%)       | 68.45% ( 60.85% , 75.39% )  |
| Other/Mixed/Unknown                       | 4,801 (82.93%)                           | 90.72% (88.65%, 92.52%)       | 94.32% (92.59%, 95.76%)     |
| Ethnicity                                 | .,552 ( 52.55/6 )                        |                               | 1 ( 1 ) 55.7676             |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

|   | Stay with Any of Codes U07.1, B97.29, B34.2*  Sensitivity (95% Confidence |                               |                          |  |  |  |  |
|---|---|-------------------------------|--------------------------|--|--|--|--|
|   | <b>Total Patient Count</b>  | PPV (95% Confidence Interval) | Interval)                |  |  |  |  |
|   |   | Number (Percent)              |                          |  |  |  |  |
| Hispanic  | 30 ( 0.52% )  | 100.0% (29.24%, 100.0%)       | 60 % (14.66%, 94.73%)    |  |  |  |  |
| Non-Hispanic  | N/A   | N/A                           | N/A                      |  |  |  |  |
| Unknown   | 5,759 ( 99.48% )  | 89.65% (87.71%, 91.38%)       | 88.61% (86.61%, 90.41%)  |  |  |  |  |
| Codes Observed During Inpatient Stay  |   |                               |                          |  |  |  |  |
| Asymptomatic screening (Z11.59)   | 73 ( 1.26% )  | 84.21% (60.42%, 96.62%)       | ****                     |  |  |  |  |
| Contact and suspected exposure (Z20.828)  | 1,157 ( 19.99% )  | 91.13% (86.88%, 94.36%)       | ****                     |  |  |  |  |
| Pneumonia (see Appendix B)  | 4,977 (85.97%)  | 90.56% (88.58%, 92.29%)       | 93.63% (91.91%, 95.08%)  |  |  |  |  |
| Other viral pneumonia (J12.89)  | 4,060 ( 70.13% )  | 93.68% ( 91.83% , 95.21% )    | ****                     |  |  |  |  |
| ARDS (J80)  | 1,285 ( 22.20% )  | 94.14% (90.37%, 96.76%)       | ****                     |  |  |  |  |
| Sepsis (see Appendix C)   | 2,276 ( 39.32% )  | 90.85% (87.74%, 93.38%)       | 96.36% ( 94.07% , 97.95% |  |  |  |  |
| Bronchitis (J20.8 OR J40)   | 129 ( 2.23% )   | 92.31% (63.97%, 99.81%)       | 100.0% (73.54%, 100.0%   |  |  |  |  |
| Respiratory infection (J22 OR J98.8)  | 1,289 ( 22.27% )  | 92.16% (88.15%, 95.14%)       | ****                     |  |  |  |  |
| Cough (R05)   | 1,943 ( 33.56% )  | 92.29% (89.04%, 94.81%)       | 98.24% (96.21%, 99.35%   |  |  |  |  |
| Shortness of breath (R06.2)   | 44 ( 0.76% )  | 85.71% (42.13%, 99.64%)       | ****                     |  |  |  |  |
| Fever (R50.9)   | 2,309 ( 39.89% )  | 91.25% (88.27%, 93.67%)       | ****                     |  |  |  |  |
| Optional  |   |                               |                          |  |  |  |  |
| Other COVID Tests   |   |                               |                          |  |  |  |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -   | -                             | -                        |  |  |  |  |
| observed within -7 days prior to hospitalization through end of patient record**    |   |                               |                          |  |  |  |  |
| est performed, at least 1 positive result   | 311 ( 5.37% )   | 96.77% ( 90.86% , 99.33% )    | ****                     |  |  |  |  |
| est performed, only negative results  | 45 ( 0.78% )  | 60 % (32.29%, 83.66%)         | ****                     |  |  |  |  |
| lo test or unknown result   | 4,107 (70.94%)  | 90.89% (88.61%, 92.84%)       | 93.35% (91.31%, 95.04%   |  |  |  |  |
| Antigen test within ±14 days from inpatient admission**                             | -   | -                             | -                        |  |  |  |  |
| est performed, at least 1 positive result   | N/A   | N/A                           | N/A                      |  |  |  |  |
| est performed, only negative results  | N/A   | N/A                           | N/A                      |  |  |  |  |
| No test or unknown result   | 5,789 ( 100.0% )  | 89.68% (87.74%, 91.40%)       | ****                     |  |  |  |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |   |                               |                          |  |  |  |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 133 ( 2.30% )   | 87.22% (80.33%, 92.37%)       | 74.84% (67.25%, 81.46%   |  |  |  |  |
| Codes Observed During Inpatient Stay  |   |                               |                          |  |  |  |  |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 789 ( 13.63% )  | 91.98% (86.67%, 95.66%)       | ****                     |  |  |  |  |
| of breath) OR R50.9 (fever)]  |   | •                             |                          |  |  |  |  |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                  |                            |                               |                             |  |  |  |
|---|----------------------------|-------------------------------|-----------------------------|--|--|--|
|   |                            |                               | Sensitivity (95% Confidence |  |  |  |
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |  |
|   |                            | Number (Percent)              |                             |  |  |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 1,002 ( 17.31% )           | 92.34% (88.02%, 95.48%)       | ****                        |  |  |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                            |                               |                             |  |  |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]    |                            |                               |                             |  |  |  |
| Primary" Lab Test Product Information****                                     |                            |                               |                             |  |  |  |
| 47377 - SARS_COV_2_NS   | N/A                        | N/A                           | N/A                         |  |  |  |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual       | N/A                        | N/A                           | N/A                         |  |  |  |
| 37635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | N/A                        | N/A                           | N/A                         |  |  |  |
| 37635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | N/A                        | N/A                           | N/A                         |  |  |  |
| 37635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | N/A                        | N/A                           | N/A                         |  |  |  |
| 37635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | N/A                        | N/A                           | N/A                         |  |  |  |
| 37635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | N/A                        | N/A                           | N/A                         |  |  |  |
| 37635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | N/A                        | N/A                           | N/A                         |  |  |  |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                      | N/A                        | N/A                           | N/A                         |  |  |  |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 20 ( 0.35% )               | 95 % (75.13%, 99.87%)         | 100.0% (82.35%, 100.0%)     |  |  |  |
| Probe Detection   |                            |                               |                             |  |  |  |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                         |  |  |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                            |                               |                             |  |  |  |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                         |  |  |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                            |                               |                             |  |  |  |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 454 ( 7.84% )              | 94.71% (92.24%, 96.58%)       | 96.20% (93.98%, 97.77%)     |  |  |  |
| NAA With Probe Detection  |                            |                               |                             |  |  |  |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | N/A                        | N/A                           | N/A                         |  |  |  |
| By NAA With Probe Detection   |                            |                               |                             |  |  |  |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                         |  |  |  |
| NAA With Probe Detection  |                            |                               |                             |  |  |  |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 641 (11.07%)               | 85.94% (83%, 88.54%)          | 82.96% (79.87%, 85.74%)     |  |  |  |
| NAA With Probe Detection  |                            |                               |                             |  |  |  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | N/A                        | N/A                           | N/A                         |  |  |  |
| mmunoassay  |                            |                               |                             |  |  |  |
| 4507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                        | N/A                           | N/A                         |  |  |  |
| Rapid Immunoassay   |                            |                               |                             |  |  |  |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                 |                            |                               |                             |  |  |  |
|--|----------------------------|-------------------------------|-----------------------------|--|--|--|
|  |                            |                               | Sensitivity (95% Confidence |  |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |  |
|  |                            | Number (Percent)              |                             |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With | N/A                        | N/A                           | N/A                         |  |  |  |
| Probe Detection  |                            |                               |                             |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By | N/A                        | N/A                           | N/A                         |  |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen | N/A                        | N/A                           | N/A                         |  |  |  |
| By NAA With Probe Detection  |                            |                               |                             |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory      | N/A                        | N/A                           | N/A                         |  |  |  |
| Specimen By NAA With Probe Detection   |                            |                               |                             |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By      | N/A                        | N/A                           | N/A                         |  |  |  |
| Immunoassay  |                            |                               |                             |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By      | N/A                        | N/A                           | N/A                         |  |  |  |
| Immunoassay  |                            |                               |                             |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | N/A                        | N/A                           | N/A                         |  |  |  |
| Non-Probe Detection  |                            |                               |                             |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | N/A                        | N/A                           | N/A                         |  |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | N/A                        | N/A                           | N/A                         |  |  |  |
| Probe Detection  |                            |                               |                             |  |  |  |
| Unknown  | N/A                        | N/A                           | N/A                         |  |  |  |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21* |                 |        |                 |        |                          |
|--|-----------------|--------|-----------------|--------|--------------------------|
|  |                 |        |                 |        |                          |
|  | Lab Positive*** |        | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number |                 |        | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****                                      |                 |        |                 |        |                          |
| Total Observed   | 1,013           | 119    | 18              | 4,749  | 1,132 ( 19.19% )         |
| Inpatient  | 218             | 7      | 3               | N/A    | 225                      |
| Outpatient or Emergency Department   | 195             | 13     | 1               | N/A    | 208                      |
| Other  | 37              | 11     | 1               | N/A    | 48                       |
| Care Setting Reported as Unknown   | 563             | 88     | 13              | N/A    | 651                      |
| Demographics   |                 |        |                 |        |                          |
| Sex  |                 |        |                 |        |                          |
| Female   | 387             | 54     | 10              | 2,070  | 441 ( 17.49% )           |
| Male   | 626             | 65     | 8               | 2,679  | 691 ( 20.46% )           |
| Other/Missing  | 0               | 0      | 0               | 0      | N/A                      |
| Age at Hospital Admission (Years)  |                 |        |                 |        |                          |
| 0-5  | 0               | 0      | 0               | 49     | 0 (0.00%)                |
| 6-17   | 0               | 0      | 0               | 23     | 0 (0.00%)                |
| 18-29  | 27              | 3      | 1               | 119    | 30 ( 20 % )              |
| 30-39  | 65              | 4      | 2               | 223    | 69 ( 23.47% )            |
| 40-49  | 132             | 5      | 1               | 464    | 137 ( 22.76% )           |
| 50-59  | 216             | 14     | 2               | 870    | 230 ( 20.87% )           |
| 60-69  | 272             | 20     | 4               | 1,085  | 292 ( 21.14% )           |
| 70-79  | 189             | 34     | 5               | 1,041  | 223 ( 17.57% )           |
| 80-89  | 87              | 34     | 2               | 658    | 121 ( 15.49% )           |
| 90+  | 25              | 5      | 1               | 217    | 30 ( 12.10% )            |
| Missing  | 0               | 0      | 0               | 0      | N/A                      |
| Race   |                 |        |                 |        | •                        |
| American Indian or Alaska Native   | 0               | 0      | 0               | 0      | N/A                      |
| Asian  | 4               | 1      | 0               | 18     | 5 ( 21.74% )             |
| Black or African American  | 52              | 2      | 1               | 326    | 54 ( 14.17% )            |
| Native Hawaiian or Other Pacific Islander                                    | 0               | 0      | 0               | 0      | N/A                      |
| White  | 119             | 27     | 0               | 475    | 146 ( 23.51% )           |
| Other/Mixed/Unknown  | 838             | 89     | 17              | 3,930  | 927 ( 19.02% )           |
| Ethnicity  |                 |        |                 | ,      | , ,                      |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*        |                 |                 |                 |        |                       |
|---|-----------------|-----------------|-----------------|--------|-----------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Res |
|   |                 | Number          |                 |        | Number (Percent)      |
| Hispanic  | 3               | 0               | 0               | 27     | 3 (10%)               |
| Non-Hispanic  | 0               | 0               | 0               | 0      | N/A                   |
| Unknown   | 1,010           | 119             | 18              | 4,722  | 1,129 ( 19.24% )      |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                       |
| Asymptomatic screening (Z11.59)   | 16              | 3               | 0               | 54     | 19 ( 26.03% )         |
| Contact and suspected exposure (Z20.828)  | 230             | 23              | 3               | 913    | 253 ( 21.64% )        |
| Pneumonia (see Appendix B)  | 925             | 99              | 17              | 4,034  | 1,024 ( 20.18% )      |
| Other viral pneumonia (J12.89)  | 805             | 54              | 15              | 3,212  | 859 ( 21.02% )        |
| ARDS (J80)  | 227             | 14              | 3               | 1,052  | 241 (18.60%)          |
| Sepsis (see Appendix C)   | 405             | 41              | 9               | 1,859  | 446 (19.27%)          |
| Bronchitis (J20.8 OR J40)   | 12              | 1               | 0               | 117    | 13 ( 10 % )           |
| Respiratory infection (J22 OR J98.8)  | 235             | 20              | 5               | 1,032  | 255 (19.74%)          |
| Cough (RO5)   | 338             | 30              | 9               | 1,592  | 368 (18.69%)          |
| Shortness of breath (R06.2)   | 6               | 1               | 0               | 38     | 7 ( 15.56% )          |
| Fever (R50.9)   | 423             | 42              | 7               | 1,860  | 465 ( 19.94% )        |
| Optional  |                 |                 |                 |        | ` '                   |
| Other COVID Tests   |                 |                 |                 |        |                       |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -      | -                     |
| observed within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |        |                       |
| est performed, at least 1 positive result   | 90              | 3               | 1               | 220    | 93 ( 29.62% )         |
| Test performed, only negative results   | 9               | 6               | 0               | 30     | 15 ( 33.33% )         |
| No test or unknown result   | 694             | 72              | 16              | 3,386  | 766 ( 18.38% )        |
| Antigen test within ±14 days from inpatient admission**                             | -               | -               | _               | -      | · -                   |
| Test performed, at least 1 positive result  | 0               | 0               | 0               | 0      | N/A                   |
| est performed, only negative results  | 0               | 0               | 0               | 0      | N/A                   |
| No test or unknown result   | 1,013           | 119             | 18              | 4,749  | 1,132 ( 19.19% )      |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     | ,               |                 |                 | ,      | , , ,                 |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 118             | 17              | 0               | 0      | 135 ( 100.0% )        |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        | _                     |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 151             | 14              | 2               | 629    | 165 ( 20.73% )        |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        | ,                     |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*   |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 |                 |                 |        |                          |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 208             | 17              | 2               | 781    | 225 ( 22.32% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute    |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]    |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****                                     |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS   | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual       | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA            | -               | -               | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                       | -               | -               | -               | -      | N/A                      |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                       | -               | -               | -               | -      | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                       | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                      | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                         | -               | -               | -               | -      | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                      | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 19              | 1               | 0               | 0      | 20 ( 100.0% )            |
| Probe Detection  |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 434             | 26              | 0               | 0      | 460 ( 100.0% )           |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 560             | 92              | 1               | 0      | 652 ( 99.85% )           |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*                                 |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | -               | -               | -               | -      | N/A                      |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | -               | -               | -               | -      | N/A                      |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | -               | -               | -               | -      | N/A                      |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | -               | -               | -               | -      | N/A                      |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | -               | -               | -               | -      | N/A                      |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | -               | -               | -               | -      | N/A                      |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | -               | -               | -               | -      | N/A                      |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | -               | -               | -               | -      | N/A                      |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | -               | -               | -               | -      | N/A                      |
| Unknown  | 0               | 0               | 0               | 0      | N/A                      |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21* |                            |                               |                             |  |  |
|--|----------------------------|-------------------------------|-----------------------------|--|--|
|  |                            |                               | Sensitivity (95% Confidence |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |
|  |                            | Number (Percent)              |                             |  |  |
| Care Setting of "Primary" Lab Test*****                                      |                            |                               |                             |  |  |
| Total Observed   | 5,899 ( 100.0% )           | 89.49% (87.55%, 91.21%)       | 89.73% (87.81%, 91.44%)     |  |  |
| Inpatient  | 228 ( 3.87% )              | 96.89% (93.70%, 98.74%)       | 95.61% (92.08%, 97.88%)     |  |  |
| Outpatient or Emergency Department   | 209 ( 3.54% )              | 93.75% (89.55%, 96.63%)       | 92.86% (88.49%, 95.95%)     |  |  |
| Other  | 49 ( 0.83% )               | 77.08% (62.69%, 87.97%)       | 90.24% (76.87%, 97.28%)     |  |  |
| Care Setting Reported as Unknown   | 1,777 ( 30.12% )           | 86.48% (83.61%, 89.02%)       | ****                        |  |  |
| Demographics   |                            |                               |                             |  |  |
| Sex  |                            |                               |                             |  |  |
| Female   | 2,521 ( 42.74% )           | 87.76% (84.33%, 90.67%)       | 86.77% (83.27%, 89.77%)     |  |  |
| Male   | 3,378 ( 57.26% )           | 90.59% (88.17%, 92.67%)       | 91.65% (89.32%, 93.62%)     |  |  |
| Other/Missing  | N/A                        | N/A                           | N/A                         |  |  |
| Age at Hospital Admission (Years)  |                            |                               |                             |  |  |
| 0-5  | 49 ( 0.83% )               | N/A                           | N/A                         |  |  |
| 6-17   | 23 ( 0.39% )               | N/A                           | N/A                         |  |  |
| 18-29  | 150 ( 2.54% )              | 90 % (73.47%, 97.89%)         | 87.10% (70.17%, 96.37%)     |  |  |
| 30-39  | 294 ( 4.98% )              | 94.20% (85.82%, 98.40%)       | 95.59% (87.64%, 99.08%)     |  |  |
| 40-49  | 602 ( 10.21% )             | 96.35% (91.69%, 98.80%)       | 92.96% (87.43%, 96.57%)     |  |  |
| 50-59  | 1,102 ( 18.68% )           | 93.91% (90 % , 96.63%)        | 95.58% (92.01%, 97.86%)     |  |  |
| 60-69  | 1,381 ( 23.41% )           | 93.15% (89.62%, 95.77%)       | 94.12% (90.75%, 96.54%)     |  |  |
| 70-79  | 1,269 ( 21.51% )           | 84.75% (79.35%, 89.20%)       | 83.63% (78.15%, 88.20%)     |  |  |
| 80-89  | 781 ( 13.24% )             | 71.90% (63.01%, 79.69%)       | 75.65% (66.77%, 83.17%)     |  |  |
| 90+  | 248 ( 4.20% )              | 83.33% (65.28%, 94.36%)       | 78.13% (60.03%, 90.72%)     |  |  |
| Missing  | N/A                        | N/A                           | N/A                         |  |  |
| Race   |                            |                               |                             |  |  |
| American Indian or Alaska Native   | N/A                        | N/A                           | N/A                         |  |  |
| Asian  | 23 ( 0.39% )               | 80 % (28.36%, 99.49%)         | 80 % (28.36%, 99.49%)       |  |  |
| Black or African American  | 381 ( 6.46% )              | 96.30% (87.25%, 99.55%)       | 69.33% (57.62%, 79.47%)     |  |  |
| Native Hawaiian or Other Pacific Islander                                    | N/A                        | N/A                           | N/A                         |  |  |
| White  | 621 ( 10.53% )             | 81.51% (74.25%, 87.44%)       | 70.83% (63.34%, 77.58%)     |  |  |
| Other/Mixed/Unknown  | 4,874 ( 82.62% )           | 90.40% (88.32%, 92.22%)       | 95.12% (93.48%, 96.45%)     |  |  |
| Ethnicity  | •                          | ŕ                             | ·                           |  |  |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

|   |                            |                               | Sensitivity (95% Confidence |
|---|----------------------------|-------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            | Number (Percent)              |                             |
| Hispanic  | 30 ( 0.51% )               | 100.0% (29.24%, 100.0%)       | 60 % (14.66%, 94.73%)       |
| Non-Hispanic  | N/A                        | N/A                           | N/A                         |
| Unknown   | 5,869 ( 99.49% )           | 89.46% (87.52%, 91.19%)       | 89.86% (87.94%, 91.56%)     |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| Asymptomatic screening (Z11.59)   | 73 ( 1.24% )               | 84.21% (60.42%, 96.62%)       | ****                        |
| Contact and suspected exposure (Z20.828)  | 1,169 ( 19.82% )           | 90.91% (86.67%, 94.15%)       | ****                        |
| Pneumonia (see Appendix B)  | 5,075 ( 86.03% )           | 90.33% (88.36%, 92.07%)       | 95.07% (93.51%, 96.34%)     |
| Other viral pneumonia (J12.89)  | 4,086 ( 69.27% )           | 93.71% ( 91.88% , 95.24% )    | ****                        |
| ARDS (J80)  | 1,296 ( 21.97% )           | 94.19% ( 90.45% , 96.79% )    | ****                        |
| Sepsis (see Appendix C)   | 2,314 (39.23%)             | 90.81% (87.74%, 93.32%)       | 98.30% (96.53%, 99.31%      |
| Bronchitis (J20.8 OR J40)   | 130 ( 2.20% )              | 92.31% (63.97%, 99.81%)       | 100.0% (73.54%, 100.0%      |
| Respiratory infection (J22 OR J98.8)  | 1,292 (21.90%)             | 92.16% (88.15%, 95.14%)       | ****                        |
| Cough (RO5)   | 1,969 (33.38%)             | 91.85% (88.57%, 94.43%)       | 99.12% (97.45%, 99.82%      |
| Shortness of breath (R06.2)   | 45 ( 0.76% )               | 85.71% (42.13%, 99.64%)       | ****                        |
| Fever (R50.9)   | 2,332 ( 39.53% )           | 90.97% (87.99%, 93.41%)       | ****                        |
| Optional  |                            |                               |                             |
| Other COVID Tests   |                            |                               |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                               |                             |
| est performed, at least 1 positive result   | 314 ( 5.32% )              | 96.77% ( 90.86% , 99.33% )    | ****                        |
| est performed, only negative results  | 45 ( 0.76% )               | 60 % ( 32.29% , 83.66% )      | ****                        |
| lo test or unknown result   | 4,168 (70.66%)             | 90.60% (88.31%, 92.57%)       | 94.17% ( 92.22% , 95.75%    |
| Intigen test within ±14 days from inpatient admission**                             | -                          | -                             | -                           |
| est performed, at least 1 positive result   | N/A                        | N/A                           | N/A                         |
| est performed, only negative results  | N/A                        | N/A                           | N/A                         |
| No test or unknown result   | 5,899 ( 100.0% )           | 89.49% (87.55%, 91.21%)       | ****                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            |                               |                             |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)               | 135 ( 2.29% )              | 87.41% (80.61%, 92.49%)       | 76.13% ( 68.63% , 82.60%    |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 796 ( 13.49% )             | 91.52% (86.17%, 95.28%)       | ****                        |
| of breath) OR R50.9 (fever)]  | , ,                        | , , ,                         |                             |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of  | Codes U07.1, B97.29, E | 334.2, J12.81, B97.21*        |                             |
|---|------------------------|-------------------------------|-----------------------------|
|   |                        |                               | Sensitivity (95% Confidence |
|   | Total Patient Count    | PPV (95% Confidence Interval) | Interval)                   |
|   |                        | Number (Percent)              |                             |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 1,008 ( 17.09% )       | 92.44% (88.18%, 95.54%)       | ****                        |
| DR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                        |                               |                             |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]    |                        |                               |                             |
| Primary" Lab Test Product Information****                                     | <u>.</u>               |                               | <u> </u>                    |
| 47377 - SARS_COV_2_NS   | N/A                    | N/A                           | N/A                         |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual       | N/A                    | N/A                           | N/A                         |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA            | N/A                    | N/A                           | N/A                         |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                       | N/A                    | N/A                           | N/A                         |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                       | N/A                    | N/A                           | N/A                         |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                       | N/A                    | N/A                           | N/A                         |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT                                      | N/A                    | N/A                           | N/A                         |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                         | N/A                    | N/A                           | N/A                         |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                      | N/A                    | N/A                           | N/A                         |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 20 ( 0.34% )           | 95 % (75.13% , 99.87%)        | 100.0% (82.35%, 100.0%      |
| obe Detection   |                        |                               |                             |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                    | N/A                           | N/A                         |
| ucleic Acid Amplification Using CDC Primer-Probe Set N1                       | _                      | _                             | <u>.</u>                    |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                    | N/A                           | N/A                         |
| ucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                        |                               |                             |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 460 ( 7.80% )          | 94.35% (91.83%, 96.27%)       | 97.09% (95.08%, 98.44%      |
| AA With Probe Detection   | _                      | _                             |                             |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | N/A                    | N/A                           | N/A                         |
| y NAA With Probe Detection  |                        | _                             | _                           |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                    | N/A                           | N/A                         |
| AA With Probe Detection   |                        |                               |                             |
| 1500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 653 ( 11.07% )         | 85.89% (82.98%, 88.47%)       | 84.46% (81.48%, 87.14%      |
| AA With Probe Detection   |                        |                               |                             |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | N/A                    | N/A                           | N/A                         |
| nmunoassay  |                        | <u>.</u>                      |                             |
| 4507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                    | N/A                           | N/A                         |
| pid Immunoassay   |                        |                               |                             |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*                                 |                     |                               |  |  |  |  |
|--|---------------------|-------------------------------|--|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|  |                     | Number (Percent)              |  |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A                 | N/A                           | N/A                                      |  |  |  |
| Unknown  | N/A                 | N/A                           | N/A                                      |  |  |  |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]* |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          | r               |        | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****  |                 |                 |                 |        | <u> </u>                 |
| Total Observed   | 899             | 78              | 17              | 3,811  | 977 ( 20.33% )           |
| Inpatient  | 197             | 5               | 3               | N/A    | 202                      |
| Outpatient or Emergency Department   | 179             | 8               | 1               | N/A    | 187                      |
| Other  | 32              | 6               | 1               | N/A    | 38                       |
| Care Setting Reported as Unknown   | 491             | 59              | 12              | N/A    | 550                      |
| Demographics   |                 |                 |                 | ·      |                          |
| Sex  |                 |                 |                 |        |                          |
| Female   | 336             | 33              | 9               | 1,568  | 369 ( 18.96% )           |
| Male   | 563             | 45              | 8               | 2,243  | 608 ( 21.27% )           |
| Other/Missing  | 0               | 0               | 0               | 0      | N/A                      |
| Age at Hospital Admission (Years)  |                 |                 |                 |        |                          |
| 0-5  | 0               | 0               | 0               | 13     | 0 (0.00%)                |
| 6-17   | 0               | 0               | 0               | 7      | 0 (0.00%)                |
| 18-29  | 24              | 3               | 1               | 75     | 27 ( 26.21% )            |
| 30-39  | 56              | 2               | 2               | 183    | 58 ( 23.87% )            |
| 40-49  | 116             | 3               | 1               | 401    | 119 ( 22.84% )           |
| 50-59  | 200             | 6               | 2               | 755    | 206 ( 21.39% )           |
| 60-69  | 244             | 11              | 3               | 904    | 255 ( 21.94% )           |
| 70-79  | 174             | 28              | 5               | 834    | 202 ( 19.40% )           |
| 80-89  | 67              | 22              | 2               | 498    | 89 (15.11%)              |
| 90+  | 18              | 3               | 1               | 141    | 21 ( 12.88% )            |
| Missing  | 0               | 0               | 0               | 0      | N/A                      |
| Race   |                 |                 |                 |        | ,                        |
| American Indian or Alaska Native   | 0               | 0               | 0               | 0      | N/A                      |
| Asian  | 3               | 1               | 0               | 15     | 4 ( 21.05% )             |
| Black or African American  | 44              | 1               | 1               | 253    | 45 ( 15.05% )            |
| Native Hawaiian or Other Pacific Islander  | 0               | 0               | 0               | 0      | N/A                      |
| White  | 99              | 19              | 0               | 331    | 118 ( 26.28% )           |
| Other/Mixed/Unknown  | 753             | 57              | 16              | 3,212  | 810 ( 20.06% )           |
| Ethnicity  |                 |                 |                 | •      | . ,                      |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [P                            | m 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]* |                 |                 |        |                         |  |
|---|--|-----------------|-----------------|--------|-------------------------|--|
|   | Lab Positive***  | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resul |  |
|   |  | Number          |                 |        | Number (Percent)        |  |
| Hispanic  | 3  | 0               | 0               | 20     | 3 ( 13.04% )            |  |
| Non-Hispanic  | 0  | 0               | 0               | 0      | N/A                     |  |
| Unknown   | 896  | 78              | 17              | 3,791  | 974 ( 20.37% )          |  |
| Codes Observed During Inpatient Stay  |  |                 |                 |        |                         |  |
| Asymptomatic screening (Z11.59)   | 14   | 2               | 0               | 46     | 16 ( 25.81% )           |  |
| Contact and suspected exposure (Z20.828)  | 208  | 18              | 2               | 805    | 226 ( 21.88% )          |  |
| Pneumonia (see Appendix B)  | 897  | 78              | 17              | 3,788  | 975 ( 20.40% )          |  |
| Other viral pneumonia (J12.89)  | 793  | 54              | 15              | 3,152  | 847 ( 21.10% )          |  |
| ARDS (J80)  | 225  | 14              | 3               | 1,033  | 239 (18.75%)            |  |
| Sepsis (see Appendix C)   | 383  | 31              | 9               | 1,662  | 414 ( 19.86% )          |  |
| Bronchitis (J20.8 OR J40)   | 11   | 1               | 0               | 84     | 12 ( 12.50% )           |  |
| Respiratory infection (J22 OR J98.8)  | 208  | 19              | 5               | 867    | 227 ( 20.66% )          |  |
| Cough (RO5)   | 302  | 18              | 8               | 1,322  | 320 ( 19.39% )          |  |
| Shortness of breath (R06.2)   | 6  | 0               | 0               | 28     | 6 ( 17.65% )            |  |
| Fever (R50.9)   | 384  | 28              | 6               | 1,579  | 412 ( 20.63% )          |  |
| Optional  |  |                 |                 | ,      |                         |  |
| Other COVID Tests   |  |                 |                 |        |                         |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -  | -               | -               | -      | -                       |  |
| observed within -7 days prior to hospitalization through end of patient record**    |  |                 |                 |        |                         |  |
| Test performed, at least 1 positive result  | 80   | 3               | 1               | 187    | 83 ( 30.63% )           |  |
| Test performed, only negative results   | 9  | 1               | 0               | 21     | 10 ( 32.26% )           |  |
| No test or unknown result   | 629  | 51              | 15              | 2,778  | 680 ( 19.58% )          |  |
| Antigen test within ±14 days from inpatient admission**                             | -  | -               | -               | -      | ` <u>-</u>              |  |
| Test performed, at least 1 positive result  | 0  | 0               | 0               | 0      | N/A                     |  |
| Test performed, only negative results   | 0  | 0               | 0               | 0      | N/A                     |  |
| No test or unknown result   | 899  | 78              | 17              | 3,811  | 977 ( 20.33% )          |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |  |                 |                 |        |                         |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 100  | 13              | 0               | 0      | 113 ( 100.0% )          |  |
| Codes Observed During Inpatient Stay  |  |                 |                 |        |                         |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 133  | 10              | 1               | 557    | 143 ( 20.40% )          |  |
| of breath) OR R50.9 (fever)]  |  |                 |                 |        |                         |  |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]* |                 |                 |                 |        |                         |
|--|-----------------|-----------------|-----------------|--------|-------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resul |
|  |                 | Number          |                 |        | Number (Percent)        |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 197             | 17              | 2               | 744    | 214 ( 22.29% )          |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  |                 |                 |                 |        |                         |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                 |                 |                 |        |                         |
| "Primary" Lab Test Product Information****   |                 |                 |                 |        |                         |
| 847377 - SARS_COV_2_NS   | -               | -               | -               | -      | N/A                     |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | -               | -               | -               | -      | N/A                     |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | -               | -               | -               | -      | N/A                     |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | -               | -               | -               | -      | N/A                     |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | -               | -               | -               | -      | N/A                     |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | -               | -               | -               | -      | N/A                     |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT  | -               | -               | -               | -      | N/A                     |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | -               | -               | -               | -      | N/A                     |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | -               | -               | -               | -      | N/A                     |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 18              | 1               | 0               | 0      | 19 ( 100.0% )           |
| Probe Detection  |                 |                 |                 |        |                         |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                     |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1   |                 |                 |                 |        |                         |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                     |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2   |                 |                 |                 |        |                         |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By  | 383             | 7               | 0               | 0      | 390 ( 100.0% )          |
| NAA With Probe Detection   |                 |                 |                 |        |                         |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | -               | -               | -               | -      | N/A                     |
| By NAA With Probe Detection  |                 |                 |                 |        |                         |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                     |
| NAA With Probe Detection   |                 |                 |                 |        |                         |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By  | 498             | 70              | 1               | 0      | 568 ( 99.82% )          |
| NAA With Probe Detection   |                 |                 |                 |        |                         |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | -               | -               | -               | -      | N/A                     |
| Immunoassay  |                 |                 |                 |        |                         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By   | -               | -               | -               | -      | N/A                     |
| Rapid Immunoassay  |                 |                 |                 |        |                         |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]* |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                             | -               | -               | -               | -      | N/A                      |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection                    | -               | -               | -               | -      | N/A                      |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection                 | -               | -               | -               | -      | N/A                      |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection             | -               | -               | -               | -      | N/A                      |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                                      | -               | -               | -               | -      | N/A                      |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                                      | -               | -               | -               | -      | N/A                      |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                            | -               | -               | -               | -      | N/A                      |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection                    | -               | -               | -               | -      | N/A                      |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                                | -               | -               | -               | -      | N/A                      |
| Unknown  | 0               | 0               | 0               | 0      | N/A                      |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Tare Setting of "Primary" Lab Test*****  Otal Observed  Inpatient Outpatient or Emergency Department Other Care Setting Reported as Unknown  Demographics  ex Female Male Other/Missing age at Hospital Admission (Years) 0-5 6-17 18-29 30-39 40-49 50-59 60-69 70-79 | Total Patient Count Number (Percent)  4,805 ( 100.0% ) 205 ( 4.27% ) 188 ( 3.91% ) 39 ( 0.81% ) 1,387 ( 28.87% )  1,946 ( 40.50% ) 2,859 ( 59.50% ) N/A  13 ( 0.27% ) 7 ( 0.15% ) 103 ( 2.14% ) | 92.02% (90.14%, 93.64%) 97.52% (94.32%, 99.19%) 95.72% (91.74%, 98.14%) 84.21% (68.75%, 93.98%) 89.27% (86.38%, 91.73%)  91.06% (87.67%, 93.76%) 92.60% (90.22%, 94.55%) N/A N/A N/A             | Sensitivity (95% Confidence Interval)  cent  79.63% (77.16%, 81.94% 86.40% (81.26%, 90.57% 85.24% (79.71%, 89.74% 78.05% (62.39%, 89.44% ******  75.34% (71.06%, 79.27% 82.43% (79.36%, 85.21% N/A N/A N/A N/A |
|--|---|--|--|
| otal Observed Inpatient Outpatient or Emergency Department Other Care Setting Reported as Unknown  Demographics ex Female Male Other/Missing age at Hospital Admission (Years) 0-5 6-17 18-29 30-39 40-49 50-59 60-69  | 4,805 ( 100.0% ) 205 ( 4.27% ) 188 ( 3.91% ) 39 ( 0.81% ) 1,387 ( 28.87% )  1,946 ( 40.50% ) 2,859 ( 59.50% ) N/A  13 ( 0.27% ) 7 ( 0.15% )   | 92.02% (90.14%, 93.64%)<br>97.52% (94.32%, 99.19%)<br>95.72% (91.74%, 98.14%)<br>84.21% (68.75%, 93.98%)<br>89.27% (86.38%, 91.73%)<br>91.06% (87.67%, 93.76%)<br>92.60% (90.22%, 94.55%)<br>N/A | 79.63% (77.16%, 81.94%<br>86.40% (81.26%, 90.57%<br>85.24% (79.71%, 89.74%<br>78.05% (62.39%, 89.44%<br>******  75.34% (71.06%, 79.27%<br>82.43% (79.36%, 85.21%<br>N/A  |
| otal Observed Inpatient Outpatient or Emergency Department Other Care Setting Reported as Unknown  Demographics ex Female Male Other/Missing age at Hospital Admission (Years) 0-5 6-17 18-29 30-39 40-49 50-59 60-69  | 205 ( 4.27% )<br>188 ( 3.91% )<br>39 ( 0.81% )<br>1,387 ( 28.87% )<br>1,946 ( 40.50% )<br>2,859 ( 59.50% )<br>N/A<br>13 ( 0.27% )<br>7 ( 0.15% )  | 97.52% (94.32%, 99.19%)<br>95.72% (91.74%, 98.14%)<br>84.21% (68.75%, 93.98%)<br>89.27% (86.38%, 91.73%)<br>91.06% (87.67%, 93.76%)<br>92.60% (90.22%, 94.55%)<br>N/A                            | 86.40% (81.26%, 90.57%<br>85.24% (79.71%, 89.74%<br>78.05% (62.39%, 89.44%<br>******  75.34% (71.06%, 79.27%<br>82.43% (79.36%, 85.21%<br>N/A  N/A   |
| Inpatient Outpatient or Emergency Department Other Care Setting Reported as Unknown  Demographics  ex Female Male Other/Missing age at Hospital Admission (Years) 0-5 6-17 18-29 30-39 40-49 50-59 60-69   | 205 ( 4.27% )<br>188 ( 3.91% )<br>39 ( 0.81% )<br>1,387 ( 28.87% )<br>1,946 ( 40.50% )<br>2,859 ( 59.50% )<br>N/A<br>13 ( 0.27% )<br>7 ( 0.15% )  | 97.52% (94.32%, 99.19%)<br>95.72% (91.74%, 98.14%)<br>84.21% (68.75%, 93.98%)<br>89.27% (86.38%, 91.73%)<br>91.06% (87.67%, 93.76%)<br>92.60% (90.22%, 94.55%)<br>N/A                            | 86.40% (81.26%, 90.57%<br>85.24% (79.71%, 89.74%<br>78.05% (62.39%, 89.44%<br>******  75.34% (71.06%, 79.27%<br>82.43% (79.36%, 85.21%<br>N/A  N/A   |
| Outpatient or Emergency Department Other Care Setting Reported as Unknown  Demographics  ex Female Male Other/Missing age at Hospital Admission (Years) 0-5 6-17 18-29 30-39 40-49 50-59 60-69   | 188 ( 3.91% )<br>39 ( 0.81% )<br>1,387 ( 28.87% )<br>1,946 ( 40.50% )<br>2,859 ( 59.50% )<br>N/A<br>13 ( 0.27% )<br>7 ( 0.15% )   | 95.72% (91.74%, 98.14%)<br>84.21% (68.75%, 93.98%)<br>89.27% (86.38%, 91.73%)<br>91.06% (87.67%, 93.76%)<br>92.60% (90.22%, 94.55%)<br>N/A   | 85.24% ( 79.71% , 89.74% 78.05% ( 62.39% , 89.44% ******  75.34% ( 71.06% , 79.27% 82.43% ( 79.36% , 85.21% N/A N/A  |
| Other Care Setting Reported as Unknown  Demographics  ex Female Male Other/Missing age at Hospital Admission (Years) 0-5 6-17 18-29 30-39 40-49 50-59 60-69  | 39 ( 0.81% )<br>1,387 ( 28.87% )<br>1,946 ( 40.50% )<br>2,859 ( 59.50% )<br>N/A<br>13 ( 0.27% )<br>7 ( 0.15% )  | 84.21% (68.75%, 93.98%)<br>89.27% (86.38%, 91.73%)<br>91.06% (87.67%, 93.76%)<br>92.60% (90.22%, 94.55%)<br>N/A  | 78.05% (62.39%, 89.44%<br>******  75.34% (71.06%, 79.27%<br>82.43% (79.36%, 85.21%<br>N/A  N/A   |
| Care Setting Reported as Unknown  Demographics  ex  Female  Male  Other/Missing age at Hospital Admission (Years)  0-5  6-17  18-29  30-39  40-49  50-59  60-69  | 1,387 (28.87%)  1,946 (40.50%) 2,859 (59.50%) N/A  13 ( 0.27%) 7 ( 0.15%)   | 89.27% (86.38%, 91.73%)  91.06% (87.67%, 93.76%)  92.60% (90.22%, 94.55%)  N/A  N/A  | 75.34% (71.06%, 79.27%<br>82.43% (79.36%, 85.21%<br>N/A  |
| Pemographics ex  Female  Male  Other/Missing age at Hospital Admission (Years)  0-5  6-17  18-29  30-39  40-49  50-59  60-69   | 1,946 ( 40.50% )<br>2,859 ( 59.50% )<br>N/A<br>13 ( 0.27% )<br>7 ( 0.15% )  | 89.27% (86.38%, 91.73%)  91.06% (87.67%, 93.76%)  92.60% (90.22%, 94.55%)  N/A  N/A  | 75.34% (71.06%, 79.27%<br>82.43% (79.36%, 85.21%<br>N/A  |
| ex Female Male Other/Missing age at Hospital Admission (Years) 0-5 6-17 18-29 30-39 40-49 50-59 60-69  | 2,859 ( 59.50% )<br>N/A<br>13 ( 0.27% )<br>7 ( 0.15% )  | 92.60% ( 90.22% , 94.55% )<br>N/A<br>N/A   | 82.43% ( 79.36% , 85.21%<br>N/A<br>N/A   |
| Female Male Other/Missing age at Hospital Admission (Years) 0-5 6-17 18-29 30-39 40-49 50-59 60-69   | 2,859 ( 59.50% )<br>N/A<br>13 ( 0.27% )<br>7 ( 0.15% )  | 92.60% ( 90.22% , 94.55% )<br>N/A<br>N/A   | 82.43% ( 79.36% , 85.21%<br>N/A<br>N/A   |
| Male Other/Missing age at Hospital Admission (Years) 0-5 6-17 18-29 30-39 40-49 50-59 60-69  | 2,859 ( 59.50% )<br>N/A<br>13 ( 0.27% )<br>7 ( 0.15% )  | 92.60% ( 90.22% , 94.55% )<br>N/A<br>N/A   | 82.43% ( 79.36% , 85.21%<br>N/A<br>N/A   |
| Other/Missing age at Hospital Admission (Years)  0-5  6-17  18-29  30-39  40-49  50-59  60-69  | N/A<br>13 ( 0.27% )<br>7 ( 0.15% )  | N/A  | N/A  |
| nge at Hospital Admission (Years)  0-5  6-17  18-29  30-39  40-49  50-59  60-69  | 13 ( 0.27% )<br>7 ( 0.15% )   | N/A  | N/A  |
| 0-5<br>6-17<br>18-29<br>30-39<br>40-49<br>50-59<br>60-69   | 7 ( 0.15% )   |  | · · · · · · · · · · · · · · · · · · ·  |
| 6-17<br>18-29<br>30-39<br>40-49<br>50-59<br>60-69  | 7 ( 0.15% )   |  |  |
| 18-29<br>30-39<br>40-49<br>50-59<br>60-69  | ` '   | N/A  | N/A  |
| 30-39<br>40-49<br>50-59<br>60-69   | 103 ( 2.14% )   |  |  |
| 40-49<br>50-59<br>60-69  | •   | 88.89% (70.84%, 97.65%)  | 77.42% (58.90%, 90.41%   |
| 50-59<br>60-69   | 243 ( 5.06% )   | 96.55% (88.09%, 99.58%)  | 82.35% (71.20%, 90.53%   |
| 60-69  | 521 ( 10.84% )  | 97.48% (92.81%, 99.48%)  | 81.69% (74.33%, 87.68%   |
|  | 963 ( 20.04% )  | 97.09% (93.77%, 98.92%)  | 88.50% (83.60%, 92.35%   |
| 70-79  | 1,162 ( 24.18% )  | 95.69% (92.41%, 97.83%)  | 84.43% (79.73%, 88.41%   |
| , , , ,  | 1,041 (21.66%)  | 86.14% (80.59%, 90.59%)  | 76.99% (70.95%, 82.31%   |
| 80-89  | 589 ( 12.26% )  | 75.28% ( 65 % , 83.81% )   | 58.26% (48.70%, 67.39%   |
| 90+  | 163 ( 3.39% )   | 85.71% (63.66%, 96.95%)  | 56.25% (37.66%, 73.64%   |
| Missing  | N/A   | N/A  | N/A  |
| ace  | ,   | •  | ,  |
| American Indian or Alaska Native   | N/A   | N/A  | N/A  |
| Asian  | 19 ( 0.40% )  | 75 % ( 19.41% , 99.37% )   | 60 % (14.66%, 94.73%)  |
| Black or African American  | 299 ( 6.22% )   | 97.78% (88.23%, 99.94%)  | 58.67% (46.70%, 69.92%   |
| Native Hawaiian or Other Pacific Islander  | N/A   | N/A  | N/A  |
| White  | 449 ( 9.34% )   | 83.90% ( 76 % , 90.02% )   | 58.93% (51.09%, 66.45%   |
| Other/Mixed/Unknown  | 4,038 ( 84.04% )  | 92.96% (90.98%, 94.63%)  | 85.47% (82.97%, 87.73%   |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

|   |                            |                               | Sensitivity (95% Confidence |  |  |
|---|----------------------------|-------------------------------|-----------------------------|--|--|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |
|   | Number (Percent) Pe        |                               |                             |  |  |
| Hispanic  | 23 ( 0.48% )               | 100.0% (29.24%, 100.0%)       | 60 % (14.66%, 94.73%)       |  |  |
| Non-Hispanic  | N/A                        | N/A                           | N/A                         |  |  |
| Unknown   | 4782 ( 99.52% )            | 91.99% (90.11%, 93.62%)       | 79.72% (77.24%, 82.03%      |  |  |
| Codes Observed During Inpatient Stay  |                            |                               |                             |  |  |
| Asymptomatic screening (Z11.59)   | 62 ( 1.29% )               | 87.50% (61.65%, 98.45%)       | 93.33% (68.05%, 99.83%      |  |  |
| Contact and suspected exposure (Z20.828)  | 1,033 ( 21.50% )           | 92.04% (87.70%, 95.21%)       | 95.41% (91.73%, 97.78%      |  |  |
| Pneumonia (see Appendix B)  | 4,780 ( 99.48% )           | 92 % ( 90.12% , 93.63% )      | 92.19% ( 90.32% , 93.80%    |  |  |
| Other viral pneumonia (J12.89)  | 4,014 (83.54%)             | 93.62% (91.76%, 95.17%)       | 99.62% ( 98.90% , 99.92%    |  |  |
| ARDS (J80)  | 1,275 ( 26.53% )           | 94.14% (90.37%, 96.76%)       | ****                        |  |  |
| Sepsis (see Appendix C)   | 2,085 ( 43.39% )           | 92.51% (89.54%, 94.86%)       | 92.96% (90.05%, 95.24%      |  |  |
| Bronchitis (J20.8 OR J40)   | 96 (2%)                    | 91.67% (61.52%, 99.79%)       | 91.67% (61.52%, 99.79%      |  |  |
| despiratory infection (J22 OR J98.8)  | 1,099 ( 22.87% )           | 91.63% (87.24%, 94.89%)       | ****                        |  |  |
| Cough (R05)   | 1,650 ( 34.34% )           | 94.38% (91.26%, 96.63%)       | 88.56% (84.70%, 91.74%      |  |  |
| shortness of breath (R06.2)   | 34 ( 0.71% )               | 100.0% (54.07%, 100.0%)       | ****                        |  |  |
| ever (R50.9)  | 1,997 ( 41.56% )           | 93.20% (90.33%, 95.44%)       | 93.89% (91.11%, 96.01%      |  |  |
| Optional  |                            |                               |                             |  |  |
| Other COVID Tests   |                            |                               |                             |  |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |  |  |
| bserved within -7 days prior to hospitalization through end of patient record**     |                            |                               |                             |  |  |
| est performed, at least 1 positive result   | 271 (5.64%)                | 96.39% (89.80%, 99.25%)       | ****                        |  |  |
| est performed, only negative results  | 31 ( 0.65% )               | 90 % (55.50%, 99.75%)         | ****                        |  |  |
| Io test or unknown result   | 3,473 ( 72.28% )           | 92.50% ( 90.26% , 94.37% )    | 85.35% (82.58%, 87.82%      |  |  |
| Intigen test within ±14 days from inpatient admission**                             | -                          | -                             | -                           |  |  |
| est performed, at least 1 positive result   | N/A                        | N/A                           | N/A                         |  |  |
| est performed, only negative results  | N/A                        | N/A                           | N/A                         |  |  |
| No test or unknown result   | 4805 ( 100.0% )            | 92.02% (90.14%, 93.64%)       | ****                        |  |  |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection                      |                            |                               |                             |  |  |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)               | 113 ( 2.35% )              | 88.50% (81.13%, 93.73%)       | 64.52% ( 56.44% , 72.03%    |  |  |
| Codes Observed During Inpatient Stay  |                            |                               |                             |  |  |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 701 ( 14.59% )             | 93.01% (87.52%, 96.60%)       | 96.38% (91.75%, 98.81%      |  |  |
| of breath) OR R50.9 (fever)]  | , ,                        | , , ,                         | ,                           |  |  |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07   | .1 OR B97.29] and [Pne     | eumonia** OR ARDS (J80)]*     |                             |
|--|----------------------------|-------------------------------|-----------------------------|
|  |                            |                               | Sensitivity (95% Confidence |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|  | Number (Percent)           | Per                           | cent                        |
| 0.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                     | 960 ( 19.98% )             | 92.06% (87.59%, 95.30%)       | ****                        |
| R J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                     |                            |                               |                             |
| spiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]                      |                            |                               |                             |
| rimary" Lab Test Product Information****   |                            |                               |                             |
| 7377 - SARS_COV_2_NS   | N/A                        | N/A                           | N/A                         |
| 008 - Blood Count; Blood Smear, Microscopic Examination Without Manual                         | N/A                        | N/A                           | N/A                         |
| 635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA                              | N/A                        | N/A                           | N/A                         |
| 635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | N/A                        | N/A                           | N/A                         |
| 635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | N/A                        | N/A                           | N/A                         |
| 635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A                        | N/A                           | N/A                         |
| 635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A                        | N/A                           | N/A                         |
| 635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | N/A                        | N/A                           | N/A                         |
| 635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | N/A                        | N/A                           | N/A                         |
| 306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA Withobe Detection        | 19 ( 0.40% )               | 94.74% (73.97%, 99.87%)       | 94.74% (73.97%, 99.87%      |
| 307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                     | N/A                        | N/A                           | N/A                         |
| cleic Acid Amplification Using CDC Primer-Probe Set N1   | ,                          | ,                             | ,                           |
| 308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                     | N/A                        | N/A                           | N/A                         |
| cleic Acid Amplification Using CDC Primer-Probe Set N2   | ,                          | ,                             | ,                           |
| 309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By A With Probe Detection | 390 ( 8.12% )              | 98.21% (96.34%, 99.28%)       | 85.68% ( 82.09% , 88.80%    |
| 314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                     | N/A                        | N/A                           | N/A                         |
| NAA With Probe Detection   |                            |                               |                             |
| 316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                     | N/A                        | N/A                           | N/A                         |
| AA With Probe Detection  | •                          | ·                             | •                           |
| 500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By A With Probe Detection | 569 ( 11.84% )             | 87.68% (84.69%, 90.27%)       | 75.11% (71.64%, 78.36%      |
| 505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By                      | N/A                        | N/A                           | N/A                         |
| munoassay  |                            |                               | ,                           |
| 507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                   | / N/A                      | N/A                           | N/A                         |
| pid Immunoassay  | 7                          | ,                             |                             |



Table 1d. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]* |                     |                               |  |  |  |
|--|---------------------|-------------------------------|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |
|  | Number (Percent)    | Per                           | cent                                     |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With       | N/A                 | N/A                           | N/A                                      |  |  |
| Probe Detection  |                     |                               |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By       | N/A                 | N/A                           | N/A                                      |  |  |
| NAA With Probe Detection   |                     |                               |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen       | N/A                 | N/A                           | N/A                                      |  |  |
| By NAA With Probe Detection  |                     |                               |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory            | N/A                 | N/A                           | N/A                                      |  |  |
| Specimen By NAA With Probe Detection   |                     |                               |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By            | N/A                 | N/A                           | N/A                                      |  |  |
| Immunoassay  |                     |                               |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By            | N/A                 | N/A                           | N/A                                      |  |  |
| Immunoassay  |                     |                               |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With          | N/A                 | N/A                           | N/A                                      |  |  |
| Non-Probe Detection  |                     |                               |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By       | N/A                 | N/A                           | N/A                                      |  |  |
| NAA With Probe Detection   |                     |                               |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With          | N/A                 | N/A                           | N/A                                      |  |  |
| Probe Detection  |                     |                               |  |  |  |
| Unknown  | N/A                 | N/A                           | N/A                                      |  |  |

<sup>\*</sup>Includes only the first algorithm-qualifying inpatient stay per algorithm per patient.

Includes one test result per encounter - positive if patient had at least one positive NAA result; negative if all NAA results are negative (during test window, from any type of specimen/site).

<sup>\*\*</sup> COVID NAA, antibody, and antigen tests are identified using LOINCs or any other identifier available in the data.

<sup>\*\*\*</sup>Any NAA result in 14 days prior through 14 days after inpatient encounter during which the COVID diagnosis codes were recorded.

<sup>&</sup>quot;Primary" test result will be the first positive molecular test within the ±14-day window, or the last negative molecular test within the ±14-day window among patients with no positive test.

<sup>\*\*\*\*</sup>Only the "primary" lab test, as defined above, is described

<sup>\*\*\*\*\*</sup>Sensitivity not calculated because algorithm cohort NAA-positive patient count is larger than laboratory result cohort NAA-positive patient count. This is a result of a different visit being used to describe characteristics among the lab-based cohort and the algorithm-based cohort.

<sup>\*\*\*\*\*\*</sup>Sum across care settings does not equal total observed because care setting was not reported for some patients.



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Care Setting of "Primary" Lab Test\*\*\*\*\* **Total Observed** 1.742 2,815 2.419 4,437 Inpatient 384 0 544 0 **Outpatient or Emergency Department** 451 0 405 0 Other 0 53 180 Care Setting Reported as Unknown 525 2,482 715 3,855 **Demographics** Sex Female 741 1,183 1,366 2,343 Male 1,001 1,632 1,053 2,094 Other/Missing 0 0 0 0 Age at Hospital Admission (Years) 0-5 43 1 1 24 6-17 6 7 42 85 18-29 182 319 44 84 30-39 107 185 343 580 40-49 180 299 207 449 50-59 381 680 364 822 60-69 463 795 419 847 70-79 304 427 407 652 80-89 192 254 314 472 90+ 64 83 117 168 Missing 0 0 0 0 Race American Indian or Alaska Native 0 0 0 0 Asian 7 7 3 3 Black or African American 77 79 69 73 Native Hawaiian or Other Pacific Islander 0 0 0 0 White 375 377 164 165 Other/Mixed/Unknown 1,972 1,494 2,564 3,984

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Ethnicity



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Hispanic 8 8 9 9 Non-Hispanic 0 0 0 0 Unknown 1,734 2,807 2,410 4,428 **Codes Observed During Inpatient Stay** Asymptomatic screening (Z11.59) 10 23 156 268 Contact and suspected exposure (Z20.828) 315 502 381 737 Pneumonia (see Appendix B) 1.463 2.370 688 1.523 Other viral pneumonia (J12.89) 1.327 158 641 2,164 ARDS (J80) 240 408 41 116 Sepsis (see Appendix C) 551 879 395 853 Bronchitis (J20.8 OR J40) 20 28 23 45 Respiratory infection (J22 OR J98.8) 30 181 342 114 Cough (R05) 432 693 269 613 Shortness of breath (R06.2) 6 7 17 31 Fever (R50.9) 372 496 824 851 Optional **Other COVID Tests** Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) observed within -7 days prior to hospitalization through end of patient record\*\* Test performed, at least 1 positive result 142 0 25 0 Test performed, only negative results 9 0 62 0 No test or unknown result 1.262 2.482 1.760 3.855 Antigen test within ±14 days from inpatient admission\*\* Test performed, at least 1 positive result 0 0 0 0 Test performed, only negative results 0 0 0 0 No test or unknown result 2,482 3,855 1,413 1.847 Codes Observed Within ±5 Days of Diagnostic Specimen Collection Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426) 237 361 196 521 **Codes Observed During Inpatient Stay** 

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Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness 166 269 196 392 of breath) OR R50.9 (fever)] Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) 275 439 58 178 OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] "Primary" Lab Test Product Information\*\*\*\* 847377 - SARS COV 2 NS 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA 87635R - SARS-CoV-2, NAA (COVID-19), POCT 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19) 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With 57 127 60 125 **Probe Detection** 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By 0 2 0 1 Nucleic Acid Amplification Using CDC Primer-Probe Set N1 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By 0 2 0 1 Nucleic Acid Amplification Using CDC Primer-Probe Set N2 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA 615 1.020 1.022 2,057 With Probe Detection 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen 3 3 By NAA With Probe Detection 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By 0 5 0 2 NAA With Probe Detection 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA 1.070 1.664 1.327 2.238 With Probe Detection 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By

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**Immunoassay** 



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Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With **Probe Detection** 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By 0 5 NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen 0 2 By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By **Immunoassay** 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection

0

0

0

94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By

94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With

NAA With Probe Detection

Probe Detection Unknown

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Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*       |                 |        |                 |        |                          |  |
|---|-----------------|--------|-----------------|--------|--------------------------|--|
|   |                 |        |                 |        | 5                        |  |
|   | Lab Positive*** |        | Lab, No Results | No Lab | Patients with Lab Result |  |
| Cours Coassing of University I also Toosaxxxxx          |                 | Number | ·               |        | Number (Percent)         |  |
| Care Setting of "Primary" Lab Test*****  Total Observed | 4.647           | 262    | 22              | 0.470  | 1.015 / 17.000/ )        |  |
|   | 1,647           | 268    | 33              | 9,173  | 1,915 ( 17.22% )         |  |
| Inpatient   | 377             | 31     | 12              | N/A    | 408                      |  |
| Outpatient or Emergency Department                      | 435             | 50     | 4               | N/A    | 485                      |  |
| Other   | 49              | 15     | 2               | N/A    | 64                       |  |
| Care Setting Reported as Unknown                        | 786             | 172    | 15              | N/A    | 958                      |  |
| Demographics  |                 |        |                 |        |                          |  |
| Sex   |                 |        |                 |        | / /                      |  |
| Female  | 692             | 117    | 13              | 4,295  | 809 ( 15.81% )           |  |
| Male  | 955             | 151    | 20              | 4,878  | 1,106 ( 18.42% )         |  |
| Other/Missing   | 0               | 0      | 0               | 0      | N/A                      |  |
| Age at Hospital Admission (Years)                       |                 |        |                 |        |                          |  |
| 0-5   | 0               | 0      | 0               | 12     | 0 (0.00%)                |  |
| 6-17  | 5               | 1      | 0               | 28     | 6 ( 17.65% )             |  |
| 18-29   | 37              | 7      | 1               | 180    | 44 ( 19.56% )            |  |
| 30-39   | 97              | 11     | 5               | 365    | 108 ( 22.59% )           |  |
| 40-49   | 178             | 14     | 1               | 674    | 192 ( 22.15% )           |  |
| 50-59   | 370             | 48     | 9               | 1,396  | 418 ( 22.93% )           |  |
| 60-69   | 444             | 61     | 8               | 1,957  | 505 ( 20.45% )           |  |
| 70-79   | 279             | 63     | 3               | 2,052  | 342 ( 14.27% )           |  |
| 80-89   | 176             | 39     | 4               | 1,781  | 215 ( 10.75% )           |  |
| 90+   | 61              | 24     | 2               | 728    | 85 ( 10.43% )            |  |
| Missing   | 0               | 0      | 0               | 0      | N/A                      |  |
| Race  |                 |        |                 |        |                          |  |
| American Indian or Alaska Native                        | 0               | 0      | 0               | 2      | 0 (0.00%)                |  |
| Asian   | 7               | 0      | 0               | 40     | 7 ( 14.89% )             |  |
| Black or African American                               | 68              | 16     | 1               | 771    | 84 ( 9.81% )             |  |
| Native Hawaiian or Other Pacific Islander               | 0               | 0      | 0               | 1      | 0 (0.00%)                |  |
| White   | 139             | 48     | 0               | 1,372  | 187 ( 11.99% )           |  |
| Other/Mixed/Unknown                                     | 1,433           | 204    | 32              | 6,987  | 1,637 ( 18.91% )         |  |
| Ethnicity   |                 |        |                 |        |                          |  |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*  |                 |                 |                 |        |                        |
|--|-----------------|-----------------|-----------------|--------|------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu |
|  | Number          |                 |                 |        | Number (Percent)       |
| Hispanic   | 7               | 2               | 0               | 63     | 9 ( 12.50% )           |
| Non-Hispanic   | 0               | 0               | 0               | 0      | N/A                    |
| Unknown  | 1,640           | 266             | 33              | 9,110  | 1,906 ( 17.25% )       |
| odes Observed During Inpatient Stay  |                 |                 |                 |        |                        |
| symptomatic screening (Z11.59)   | 8               | 12              | 0               | 118    | 20 ( 14.49% )          |
| ontact and suspected exposure (Z20.828)  | 308             | 72              | 14              | 1,806  | 380 ( 17.27% )         |
| neumonia (see Appendix B)  | 1,424           | 200             | 30              | 7,148  | 1,624 ( 18.45% )       |
| Other viral pneumonia (J12.89)   | 1,314           | 133             | 28              | 5,899  | 1,447 ( 19.62% )       |
| RDS (J80)  | 238             | 27              | 6               | 1,142  | 265 ( 18.75% )         |
| epsis (see Appendix C)   | 527             | 83              | 11              | 2,705  | 610 ( 18.34% )         |
| ronchitis (J20.8 OR J40)   | 18              | 1               | 0               | 102    | 19 ( 15.70% )          |
| espiratory infection (J22 OR J98.8)  | 183             | 19              | 3               | 1,069  | 202 ( 15.86% )         |
| Cough (RO5)  | 422             | 44              | 7               | 1,888  | 466 ( 19.74% )         |
| hortness of breath (R06.2)   | 6               | 2               | 0               | 60     | 8 ( 11.76% )           |
| ever (R50.9)   | 484             | 78              | 9               | 2,331  | 562 ( 19.37% )         |
| Optional Opt |                 |                 |                 | ·      | <u> </u>               |
| Other COVID Tests  |                 |                 |                 |        |                        |
| ntibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing)   | -               | -               | -               | -      | -                      |
| bserved within -7 days prior to hospitalization through end of patient record**  |                 |                 |                 |        |                        |
| est performed, at least 1 positive result  | 176             | 17              | 3               | 289    | 193 ( 39.79% )         |
| est performed, only negative results   | 9               | 9               | 1               | 55     | 18 ( 24.32% )          |
| Io test or unknown result  | 1,180           | 166             | 28              | 5,871  | 1,346 ( 18.58% )       |
| ntigen test within ±14 days from inpatient admission**   | -               | -               | -               | -      | -                      |
| est performed, at least 1 positive result  | 0               | 0               | 0               | 0      | N/A                    |
| est performed, only negative results   | 0               | 0               | 0               | 0      | N/A                    |
| Io test or unknown result  | 1,647           | 268             | 33              | 9,173  | 1,915 ( 17.22% )       |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection   | ,               |                 |                 |        |                        |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)  | 329             | 68              | 2               | 0      | 397 ( 99.50% )         |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 1: Inpati   | Algorithm 1: Inpatient (IP) Stay with Code U07.1* |                 |                 |        |                          |  |
|---|---|-----------------|-----------------|--------|--------------------------|--|
|   | Lab Positive***                                   | Lah Nagatiya*** | Lab, No Results | No Lab | Patients with Lab Result |  |
|   | Lab Positive                                      | Number          | Lab, No Results | NO Lab | Number (Percent)         |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 162   | 31              | 7               | 965    | 193 ( 16.57% )           |  |
| of breath) OR R50.9 (fever)]  | -0-   | <u> </u>        | •               |        | 200 ( 20.07,0 )          |  |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 277   | 38              | 12              | 1,405  | 315 ( 18.19% )           |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |   |                 |                 |        |                          |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |   |                 |                 |        |                          |  |
| "Primary" Lab Test Product Information****  |   |                 |                 |        |                          |  |
| 847377 - SARS_COV_2_NS  | -   | -               | -               | -      | N/A                      |  |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | -   | -               | -               | -      | N/A                      |  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | -   | -               | -               | -      | N/A                      |  |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | -   | -               | -               | -      | N/A                      |  |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | -   | -               | -               | -      | N/A                      |  |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -   | -               | -               | -      | N/A                      |  |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -   | -               | -               | -      | N/A                      |  |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | -   | -               | -               | -      | N/A                      |  |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | -   | -               | -               | -      | N/A                      |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 55  | 6               | 0               | 0      | 61 ( 100.0% )            |  |
| Probe Detection   |   |                 |                 |        |                          |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0   | 0               | 0               | 0      | N/A                      |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1  |   |                 |                 |        |                          |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N2 | 0   | 0               | 0               | 0      | N/A                      |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   | 598   | 48              | 0               | 0      | 646 ( 100.0% )           |  |
| NAA With Probe Detection  |   |                 |                 |        |                          |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  |   |                 |                 |        | N/A                      |  |
| By NAA With Probe Detection   |   |                 |                 |        |                          |  |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By NAA With Probe Detection                                 | 0   | 0               | 0               | 0      | N/A                      |  |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 994   | 214             | 2               | 0      | 1,208 ( 99.83% )         |  |
| NAA With Probe Detection  | 23.   |                 | <u>-</u>        | •      | _,,                      |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -   | _               | _               | _      | N/A                      |  |
| Immunoassay   |   |                 |                 |        | ,                        |  |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*                              |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 |                 |                 |        |                          |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | 0               | 0               | 0               | 0      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | -               | -               | -               | -      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        | •                        |
| Unknown  | 0               | 0               | 0               | 0      | N/A                      |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm                                 | 1: Inpatient (IP) Stay with Code | U07.1*                          |                             |
|---|----------------------------------|---------------------------------|-----------------------------|
|   |                                  | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b>       | (95% Confidence Interval)       | Interval)                   |
|   |                                  | Number (Percent)                |                             |
| Care Setting of "Primary" Lab Test*****   |                                  |                                 |                             |
| Total Observed                            | 11,121 ( 100.0% )                | 86.01% (84.37%, 87.53%)         | 94.55% (93.37%, 95.57%)     |
| Inpatient                                 | 420 ( 3.78% )                    | 92.40% (89.39%, 94.78%)         | 98.18% (96.28%, 99.26%)     |
| Outpatient or Emergency Department        | 489 ( 4.40% )                    | 89.69% (86.63%, 92.25%)         | 96.45% (94.30%, 97.96%)     |
| Other                                     | 66 ( 0.59% )                     | 76.56% (64.31%, 86.25%)         | 92.45% (81.79%, 97.91%)     |
| Care Setting Reported as Unknown          | 3,931 ( 35.35% )                 | 82.05% (79.47%, 84.43%)         | ****                        |
| Demographics                              |                                  |                                 |                             |
| Sex                                       | 5,117 ( 46.01% )                 |                                 |                             |
| Female                                    |                                  | 85.54% (82.92%, 87.89%)         | 93.39% (91.35%, 95.07%)     |
| Male                                      | 6,004 ( 53.99% )                 | 86.35% (84.18%, 88.32%)         | 95.40% (93.92%, 96.62%)     |
| Other/Missing                             | N/A                              | N/A                             | N/A                         |
| Age at Hospital Admission (Years)         |                                  |                                 |                             |
| 0-5                                       | 12 ( 0.11% )                     | N/A                             | N/A                         |
| 6-17                                      | 34 ( 0.31% )                     | 83.33% (35.88%, 99.58%)         | 83.33% (35.88%, 99.58%)     |
| 18-29                                     | 225 ( 2.02% )                    | 84.09% (69.93%, 93.36%)         | 84.09% (69.93%, 93.36%)     |
| 30-39                                     | 478 ( 4.30% )                    | 89.81% (82.51%, 94.80%)         | 90.65% (83.48%, 95.43%)     |
| 40-49                                     | 867 ( 7.80% )                    | 92.71% (88.07%, 95.96%)         | 98.89% (96.04%, 99.87%)     |
| 50-59                                     | 1,823 ( 16.39% )                 | 88.52% (85.06%, 91.41%)         | 97.11% (94.89%, 98.55%)     |
| 60-69                                     | 2,470 ( 22.21% )                 | 87.92% (84.76%, 90.63%)         | 95.90% (93.67%, 97.51%)     |
| 70-79                                     | 2,397 ( 21.55% )                 | 81.58% (77.06%, 85.54%)         | 91.78% (88.10%, 94.61%)     |
| 80-89                                     | 2,000 ( 17.98% )                 | 81.86% (76.05%, 86.77%)         | 91.67% (86.82%, 95.16%)     |
| 90+                                       | 815 ( 7.33% )                    | 71.76% (60.96%, 81%)            | 95.31% (86.91%, 99.02%)     |
| Missing                                   | N/A                              | N/A                             | N/A                         |
| Race                                      |                                  |                                 |                             |
| American Indian or Alaska Native          | 2 ( 0.02% )                      | N/A                             | N/A                         |
| Asian                                     | 47 ( 0.42% )                     | 100.0% (59.04%, 100.0%)         | 100.0% (59.04%, 100.0%)     |
| Black or African American                 | 856 ( 7.70% )                    | 80.95% (70.92%, 88.70%)         | 88.31% (78.97%, 94.51%)     |
| Native Hawaiian or Other Pacific Islander | 1 ( 0.01% )                      | N/A                             | N/A                         |
| White                                     | 1,559 ( 14.02% )                 | 74.33% (67.45%, 80.43%)         | 84.76% (78.32%, 89.89%)     |
| Other/Mixed/Unknown                       | 8,656 ( 77.83% )                 | 87.54% (85.84%, 89.10%)         | 95.92% (94.79%, 96.86%)     |
| Ethnicity                                 |                                  |                                 |                             |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

|   |                            | Positive Predictive Value (PPV)       | Sensitivity (95% Confidence           |  |  |  |
|---|----------------------------|---------------------------------------|---------------------------------------|--|--|--|
|   | <b>Total Patient Count</b> | (95% Confidence Interval)             | Interval)                             |  |  |  |
|   |                            | Number (Percent)                      |                                       |  |  |  |
| Hispanic  | 72 ( 0.65% )               | 77.78% (39.99%, 97.19%)               | 87.50% (47.35%, 99.68%)               |  |  |  |
| Non-Hispanic  | N/A                        | N/A                                   | N/A                                   |  |  |  |
| Unknown   | 1,1049 ( 99.35% )          | 86.04% (84.41%, 87.57%)               | 94.58% (93.41%, 95.60%)               |  |  |  |
| Codes Observed During Inpatient Stay  |                            |                                       |                                       |  |  |  |
| Asymptomatic screening (Z11.59)   | 138 ( 1.24% )              | 40 % (19.12%, 63.95%)                 | 80 % (44.39%, 97.48%)                 |  |  |  |
| Contact and suspected exposure (Z20.828)  | 2,200 ( 19.78% )           | 81.05% (76.74%, 84.87%)               | 97.78% (95.48%, 99.10%)               |  |  |  |
| Pneumonia (see Appendix B)  | 8,802 ( 79.15% )           | 87.68% (85.99%, 89.24%)               | 97.33% (96.37%, 98.10%)               |  |  |  |
| Other viral pneumonia (J12.89)  | 7,374 ( 66.31% )           | 90.81% (89.20%, 92.25%)               | 99.02% ( 98.33% , 99.48% )            |  |  |  |
| ARDS (J80)  | 1,413 ( 12.71% )           | 89.81% (85.52%, 93.18%)               | 99.17% ( 97.02% , 99.90% )            |  |  |  |
| Sepsis (see Appendix C)   | 3,326 ( 29.91% )           | 86.39% (83.41%, 89.01%)               | 95.64% (93.59%, 97.19%)               |  |  |  |
| Bronchitis (J20.8 OR J40)   | 121 ( 1.09% )              | 94.74% (73.97%, 99.87%)               | 90 % (68.30%, 98.77%)                 |  |  |  |
| Respiratory infection (J22 OR J98.8)  | 1,274 ( 11.46% )           | 90.59% (85.70%, 94.24%)               | ****                                  |  |  |  |
| Cough (RO5)   | 2,361 (21.23%)             | 90.56% (87.53%, 93.06%)               | 97.69% (95.78%, 98.88%)               |  |  |  |
| Shortness of breath (R06.2)   | 68 ( 0.61% )               | 75 % ( 34.91% , 96.81% )              | 100.0% (54.07%, 100.0%)               |  |  |  |
| Fever (R50.9)   | 2,902 ( 26.09% )           | 86.12% (82.98%, 88.87%)               | 97.58% (95.81%, 98.74%)               |  |  |  |
| Optional  |                            | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · |  |  |  |
| Other COVID Tests   |                            |                                       |                                       |  |  |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                                     | -                                     |  |  |  |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                                       |                                       |  |  |  |
| Test performed, at least 1 positive result  | 485 ( 4.36% )              | 91.19% (86.27%, 94.78%)               | ****                                  |  |  |  |
| Test performed, only negative results   | 74 ( 0.67% )               | 50 % ( 26.02% , 73.98% )              | 100.0% (66.37%, 100.0%)               |  |  |  |
| No test or unknown result   | 7,245 (65.15%)             | 87.67% (85.79%, 89.38%)               | 93.50% (92 %, 94.80%)                 |  |  |  |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                                     | -                                     |  |  |  |
| Fest performed, at least 1 positive result  | N/A                        | N/A                                   | N/A                                   |  |  |  |
| Fest performed, only negative results   | N/A                        | N/A                                   | N/A                                   |  |  |  |
| No test or unknown result   | 11,121 ( 100.0% )          | 86.01% (84.37%, 87.53%)               | ****                                  |  |  |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            | · · · · · · · · · · · · · · · · · · · |                                       |  |  |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 399 ( 3.59% )              | 82.87% ( 78.80% , 86.45% )            | 91.14% (87.72%, 93.86%)               |  |  |  |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*   |                     |  |  |  |  |  |  |
|---|---------------------|--|--|--|--|--|--|
|   | Total Patient Count | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |  |
|   |                     | Number (Percent)   |  |  |  |  |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 1,165 ( 10.48% )    | 83.94% ( 77.98% , 88.82% )                                   | 97.59% ( 93.95% , 99.34% )               |  |  |  |  |
| of breath) OR R50.9 (fever)]  |                     |  |  |  |  |  |  |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 1,732 ( 15.57% )    | 87.94% (83.82%, 91.32%)                                      | ****                                     |  |  |  |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                     |  |  |  |  |  |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                     |  |  |  |  |  |  |
| "Primary" Lab Test Product Information****  |                     |  |  |  |  |  |  |
| 847377 - SARS_COV_2_NS  | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 37635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 37635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 37635R - SARS-CoV-2, NAA (COVID-19), POCT   | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 37635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 37635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 61 ( 0.55% )        | 90.16% (79.81%, 96.30%)                                      | 96.49% (87.89%, 99.57%)                  |  |  |  |  |
| Probe Detection   |                     |  |  |  |  |  |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                 | N/A  | N/A                                      |  |  |  |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1  |                     |  |  |  |  |  |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA With Probe Detection                                    | 646 ( 5.81% )       | 92.57% ( 90.27% , 94.47% )                                   | 97.24% ( 95.61% , 98.38% )               |  |  |  |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen By NAA With Probe Detection                              | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By NAA With Probe Detection                                 | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA With Probe Detection                                    | 1,210 ( 10.88% )    | 82.28% (80.01%, 84.40%)                                      | 92.90% (91.19%, 94.36%)                  |  |  |  |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By Immunoassay   | N/A                 | N/A  | N/A                                      |  |  |  |  |

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Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*  |                     |  |  |  |  |  |  |
|--|---------------------|--|--|--|--|--|--|
|  | Total Patient Count | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |  |
|  |                     | Number (Percent)   |  |  |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay             | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By                                      | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                                      | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                                    | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By                                 | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                                    | N/A                 | N/A  | N/A                                      |  |  |  |  |
| Unknown  | N/A                 | N/A  | N/A                                      |  |  |  |  |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

|   | Algorithm 2: IP Stay with Any of Codes U07.1, B97.29* |                 |                 |                 |          |                          |
|---|---|-----------------|-----------------|-----------------|----------|--------------------------|
|   |   | Lab Positive*** | Lab Negative*** | Lah No Posults  | No Lab   | Patients with Lab Result |
|   |   | Lab Positive    | Number          | Lab, No Results | INO Lab  | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****   |   |                 | Number          |                 |          | Number (Percent)         |
| Total Observed                            |   | 1,650           | 273             | 33              | 9,288    | 1,923 ( 17.10% )         |
| Inpatient                                 |   | 377             | 33              | 12              | N/A      | 410                      |
| Outpatient or Emergency Department        |   | 435             | 51              | 4               | N/A      | 486                      |
| Other                                     |   | 49              | 15              | 2               | N/A      | 64                       |
| Care Setting Reported as Unknown          |   | 789             | 174             | _<br>15         | N/A      | 963                      |
| Demographics                              |   |                 |                 |                 | <u> </u> |                          |
| Sex                                       |   |                 |                 |                 |          |                          |
| Female                                    |   | 695             | 120             | 13              | 4,345    | 815 ( 15.75% )           |
| Male                                      |   | 955             | 153             | 20              | 4,943    | 1,108 ( 18.25% )         |
| Other/Missing                             |   | 0               | 0               | 0               | 0        | N/A                      |
| Age at Hospital Admission (Years)         |   |                 |                 |                 |          | •                        |
| 0-5                                       |   | 0               | 0               | 0               | 12       | 0 (0.00%)                |
| 6-17                                      |   | 5               | 1               | 0               | 28       | 6 ( 17.65% )             |
| 18-29                                     |   | 37              | 7               | 1               | 185      | 44 ( 19.13% )            |
| 30-39                                     |   | 97              | 12              | 5               | 367      | 109 ( 22.66% )           |
| 40-49                                     |   | 178             | 14              | 1               | 681      | 192 ( 21.97% )           |
| 50-59                                     |   | 370             | 48              | 9               | 1,419    | 418 ( 22.64% )           |
| 60-69                                     |   | 445             | 64              | 8               | 1,979    | 509 ( 20.39% )           |
| 70-79                                     |   | 281             | 64              | 3               | 2,078    | 345 ( 14.22% )           |
| 80-89                                     |   | 176             | 39              | 4               | 1,805    | 215 ( 10.62% )           |
| 90+                                       |   | 61              | 24              | 2               | 734      | 85 ( 10.35% )            |
| Missing                                   |   | 0               | 0               | 0               | 0        | `N/A                     |
| Race                                      |   |                 |                 |                 |          | •                        |
| American Indian or Alaska Native          |   | 0               | 0               | 0               | 2        | 0 (0.00%)                |
| Asian                                     |   | 7               | 0               | 0               | 41       | 7 ( 14.58% )             |
| Black or African American                 |   | 69              | 16              | 1               | 785      | 85 ( 9.76% )             |
| Native Hawaiian or Other Pacific Islander |   | 0               | 0               | 0               | 1        | 0 (0.00%)                |
| White                                     |   | 140             | 48              | 0               | 1,381    | 188 ( 11.98% )           |
| Other/Mixed/Unknown                       |   | 1,434           | 209             | 32              | 7,078    | 1,643 ( 18.77% )         |
| Ethnicity                                 |   |                 |                 |                 |          |                          |

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Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 2: IP Stay w  |                 |                 |                 |        |                        |
|---|-----------------|-----------------|-----------------|--------|------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu |
|   | Number          |                 |                 |        | Number (Percent)       |
| Hispanic  | 7               | 2               | 0               | 63     | 9 ( 12.50% )           |
| Non-Hispanic  | 0               | 0               | 0               | 0      | N/A                    |
| Unknown   | 1,643           | 271             | 33              | 9,225  | 1,914 ( 17.13% )       |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                        |
| Asymptomatic screening (Z11.59)   | 8               | 12              | 0               | 120    | 20 ( 14.29% )          |
| Contact and suspected exposure (Z20.828)  | 308             | 75              | 14              | 1,837  | 383 (17.14%)           |
| Pneumonia (see Appendix B)  | 1,426           | 202             | 30              | 7,223  | 1,628 ( 18.33% )       |
| Other viral pneumonia (J12.89)  | 1,315           | 134             | 28              | 5,937  | 1,449 ( 19.54% )       |
| ARDS (J80)  | 238             | 27              | 6               | 1,147  | 265 (18.69%)           |
| Sepsis (see Appendix C)   | 528             | 87              | 11              | 2,730  | 615 ( 18.33% )         |
| Bronchitis (J20.8 OR J40)   | 18              | 1               | 0               | 104    | 19 ( 15.45% )          |
| Respiratory infection (J22 OR J98.8)  | 183             | 19              | 3               | 1,072  | 202 ( 15.82% )         |
| Cough (RO5)   | 422             | 45              | 7               | 1,904  | 467 (19.64%)           |
| Shortness of breath (R06.2)   | 6               | 2               | 0               | 60     | 8 ( 11.76% )           |
| Fever (R50.9)   | 484             | 81              | 9               | 2,354  | 565 ( 19.30% )         |
| Optional  |                 |                 |                 |        |                        |
| Other COVID Tests   |                 |                 |                 |        |                        |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -      | -                      |
| observed within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |        |                        |
| est performed, at least 1 positive result   | 176             | 17              | 3               | 291    | 193 (39.63%)           |
| est performed, only negative results  | 9               | 9               | 1               | 55     | 18 ( 24.32% )          |
| No test or unknown result   | 1,180           | 170             | 28              | 5,955  | 1,350 ( 18.41% )       |
| Antigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -      | -                      |
| est performed, at least 1 positive result   | 0               | 0               | 0               | 0      | N/A                    |
| est performed, only negative results  | 0               | 0               | 0               | 0      | N/A                    |
| No test or unknown result   | 1,650           | 273             | 33              | 9,288  | 1,923 ( 17.10% )       |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 |        |                        |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 331             | 68              | 2               | 0      | 399 ( 99.50% )         |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*   |                 |                        |                 |         |   |
|---|-----------------|------------------------|-----------------|---------|---|
|   | Lab Dasitive*** | ab                     | Lob No Dazulta  | No.1 sh | Detients with Lab Dazult                  |
|   | Lab Positive*** | Lab Negative*** Number | Lab, No Results | No Lab  | Patients with Lab Result Number (Percent) |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 162             | 33                     | 7               | 978     | 195 ( 16.53% )                            |
| of breath) OR R50.9 (fever)]  | 102             | 33                     | ,               | 370     | 155 (10.5570)                             |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 277             | 38                     | 12              | 1,417   | 315 ( 18.06% )                            |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                        |                 | _,      | 7-5 ( -5.55),                             |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                        |                 |         |   |
| "Primary" Lab Test Product Information****  |                 |                        |                 |         |   |
| 847377 - SARS_COV_2_NS  | -               | -                      | -               | -       | N/A                                       |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | -               | -                      | -               | -       | N/A                                       |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | -               | -                      | -               | -       | N/A                                       |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | -               | -                      | -               | -       | N/A                                       |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | -               | -                      | -               | -       | N/A                                       |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -               | -                      | -               | -       | N/A                                       |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -               | -                      | -               | -       | N/A                                       |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | -               | -                      | -               | -       | N/A                                       |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | -               | -                      | -               | -       | N/A                                       |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 55              | 6                      | 0               | 0       | 61 ( 100.0% )                             |
| Probe Detection   |                 |                        |                 |         |   |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0                      | 0               | 0       | N/A                                       |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1  |                 |                        |                 |         |   |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N2 | 0               | 0                      | 0               | 0       | N/A                                       |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   | 598             | 48                     | 0               | 0       | 646 ( 100.0% )                            |
| NAA With Probe Detection  |                 |                        |                 |         | ,   |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | -               | -                      | -               | -       | N/A                                       |
| By NAA With Probe Detection   |                 |                        |                 |         | ·   |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0                      | 0               | 0       | N/A                                       |
| NAA With Probe Detection  |                 |                        |                 |         | ·   |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 997             | 219                    | 2               | 0       | 1,216 ( 99.84% )                          |
| NAA With Probe Detection  |                 |                        |                 |         | , , ,                                     |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -               | -                      | -               | -       | N/A                                       |
| Immunoassay   |                 |                        |                 |         |   |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                          |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 |                 |                 |        |                          |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | 0               | 0               | 0               | 0      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | -               | -               | -               | -      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        | •                        |
| Unknown  | 0               | 0               | 0               | 0      | N/A                      |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Total Patient Count | PPV (95% Confidence Interval)  | Sensitivity (95% Confidence   |
|---------------------|--|---|
| Total Patient Count | PPV (95% Confidence Interval)  | 14  |
|                     |  | Interval)   |
|                     | Number (Percent)   |   |
|                     |  |   |
| 11,244 ( 100.0% )   | 85.80% (84.16%, 87.33%)  | 94.72% ( 93.56% , 95.72% )  |
| 422 ( 3.75% )       | 91.95% (88.88%, 94.39%)  | 98.18% (96.28%, 99.26%)   |
| 490 ( 4.36% )       | 89.51% (86.43%, 92.09%)  | 96.45% (94.30%, 97.96%)   |
| 66 ( 0.59% )        | 76.56% (64.31%, 86.25%)  | 92.45% (81.79%, 97.91%)   |
| 3,965 ( 35.26% )    | 81.93% ( 79.35% , 84.31% )   | ****  |
|                     |  |   |
|                     |  |   |
| 5,173 ( 46.01% )    | 85.28% (82.65%, 87.64%)  | 93.79% (91.81%, 95.42%)   |
| 6,071 ( 53.99% )    | 86.19% (84.02%, 88.17%)  | 95.40% (93.92%, 96.62%)   |
| N/A                 | N/A  | N/A   |
|                     |  |   |
| 12 ( 0.11% )        | N/A  | N/A   |
| 34 ( 0.30% )        | 83.33% (35.88%, 99.58%)  | 83.33% (35.88%, 99.58%)   |
| 230 ( 2.05% )       | 84.09% (69.93%, 93.36%)  | 84.09% (69.93%, 93.36%)   |
| 481 ( 4.28% )       | 88.99% (81.56%, 94.18%)  | 90.65% (83.48%, 95.43%)   |
| 874 ( 7.77% )       | 92.71% (88.07%, 95.96%)  | 98.89% (96.04%, 99.87%)   |
| 1,846 ( 16.42% )    | 88.52% (85.06%, 91.41%)  | 97.11% (94.89%, 98.55%)   |
| 2,496 ( 22.20% )    | 87.43% (84.23%, 90.18%)  | 96.11% (93.93%, 97.68%)   |
| 2,426 ( 21.58% )    | 81.45% (76.94%, 85.41%)  | 92.43% (88.86%, 95.14%)   |
| 2,024 ( 18 % )      | 81.86% (76.05%, 86.77%)  | 91.67% (86.82%, 95.16%)   |
| 821 (7.30%)         | 71.76% (60.96%, 81%)   | 95.31% (86.91%, 99.02%)   |
| N/A                 | N/A  | N/A   |
|                     |  |   |
| 2 ( 0.02% )         | N/A  | N/A   |
| 48 ( 0.43% )        | 100.0% (59.04%, 100.0%)  | 100.0% (59.04%, 100.0%)   |
| 871 (7.75%)         | 81.18% (71.24%, 88.84%)  | 89.61% ( 80.55% , 95.41% )  |
| 1 ( 0.01% )         | N/A  | N/A   |
| 1,569 ( 13.95% )    | 74.47% (67.61%, 80.54%)  | 85.37% (79.01%, 90.39%)   |
| 8,753 ( 77.85% )    | 87.28% (85.57%, 88.85%)  | 95.98% ( 94.86% , 96.92% )  |
|                     |  |   |
|                     | 422 ( 3.75% ) 490 ( 4.36% ) 66 ( 0.59% ) 3,965 ( 35.26% )  5,173 ( 46.01% ) 6,071 ( 53.99% ) N/A  12 ( 0.11% ) 34 ( 0.30% ) 230 ( 2.05% ) 481 ( 4.28% ) 874 ( 7.77% ) 1,846 ( 16.42% ) 2,496 ( 22.20% ) 2,426 ( 21.58% ) 2,024 ( 18 % ) 821 ( 7.30% ) N/A  2 ( 0.02% ) 48 ( 0.43% ) 871 ( 7.75% ) 1 ( 0.01% ) 1,569 ( 13.95% ) | 11,244 (100.0%) 85.80% (84.16%, 87.33%) 422 (3.75%) 91.95% (88.88%, 94.39%) 490 (4.36%) 89.51% (86.43%, 92.09%) 66 (0.59%) 76.56% (64.31%, 86.25%) 3,965 (35.26%) 81.93% (79.35%, 84.31%)  5,173 (46.01%) 85.28% (82.65%, 87.64%) 6,071 (53.99%) 86.19% (84.02%, 88.17%) N/A N/A  12 (0.11%) N/A  34 (0.30%) 83.33% (35.88%, 99.58%) 230 (2.05%) 84.09% (69.93%, 93.36%) 481 (4.28%) 88.99% (81.56%, 94.18%) 874 (7.77%) 92.71% (88.07%, 95.96%) 1,846 (16.42%) 88.52% (85.06%, 91.41%) 2,496 (22.20%) 87.43% (84.23%, 90.18%) 2,426 (21.58%) 81.45% (76.94%, 85.41%) 2,024 (18%) 81.86% (76.05%, 86.77%) 821 (7.30%) 71.76% (60.96%, 81%) N/A  2 (0.02%) N/A  48 (0.43%) 100.0% (59.04%, 100.0%) 871 (7.75%) 81.18% (71.24%, 88.84%) 1 (0.01%) N/A  1,569 (13.95%) 74.47% (67.61%, 80.54%) |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

|   |                            |                               | Sensitivity (95% Confidence |
|---|----------------------------|-------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            | Number (Percent)              |                             |
| Hispanic  | 72 ( 0.64% )               | 77.78% (39.99%, 97.19%)       | 87.50% (47.35%, 99.68%)     |
| Non-Hispanic  | N/A                        | N/A                           | N/A                         |
| Unknown   | 11,172 ( 99.36% )          | 85.84% (84.20%, 87.37%)       | 94.75% (93.60%, 95.75%)     |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| Asymptomatic screening (Z11.59)   | 140 ( 1.25% )              | 40 % (19.12%, 63.95%)         | 80 % (44.39%, 97.48%)       |
| Contact and suspected exposure (Z20.828)  | 2,234 ( 19.87% )           | 80.42% (76.08%, 84.27%)       | 97.78% (95.48%, 99.10%)     |
| Pneumonia (see Appendix B)  | 8,881 (78.98%)             | 87.59% (85.89%, 89.16%)       | 97.47% (96.53%, 98.21%)     |
| Other viral pneumonia (J12.89)  | 7,414 ( 65.94% )           | 90.75% (89.14%, 92.19%)       | 99.10% ( 98.43% , 99.53% )  |
| ARDS (J80)  | 1,418 ( 12.61% )           | 89.81% (85.52%, 93.18%)       | 99.17% (97.02%, 99.90%)     |
| Sepsis (see Appendix C)   | 3,356 ( 29.85% )           | 85.85% (82.85%, 88.51%)       | 95.83% (93.80%, 97.34%)     |
| Bronchitis (J20.8 OR J40)   | 123 ( 1.09% )              | 94.74% (73.97%, 99.87%)       | 90 % (68.30%, 98.77%)       |
| Respiratory infection (J22 OR J98.8)  | 1,277 ( 11.36% )           | 90.59% (85.70%, 94.24%)       | ****                        |
| Cough (RO5)   | 2,378 ( 21.15% )           | 90.36% (87.32%, 92.88%)       | 97.69% (95.78%, 98.88%)     |
| Shortness of breath (R06.2)   | 68 ( 0.60% )               | 75 % ( 34.91% , 96.81% )      | 100.0% (54.07%, 100.0%)     |
| Fever (R50.9)   | 2,928 ( 26.04% )           | 85.66% (82.50%, 88.45%)       | 97.58% (95.81%, 98.74%)     |
| Optional  |                            |                               |                             |
| Other COVID Tests   |                            |                               |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                               |                             |
| Test performed, at least 1 positive result  | 487 ( 4.33% )              | 91.19% (86.27%, 94.78%)       | ****                        |
| est performed, only negative results  | 74 ( 0.66% )               | 50 % ( 26.02% , 73.98% )      | 100.0% (66.37%, 100.0%)     |
| No test or unknown result   | 7,333 ( 65.22% )           | 87.41% (85.52%, 89.13%)       | 93.50% (92 %, 94.80%)       |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                             | -                           |
| est performed, at least 1 positive result   | N/A                        | N/A                           | N/A                         |
| est performed, only negative results  | N/A                        | N/A                           | N/A                         |
| No test or unknown result   | 11,244 ( 100.0% )          | 85.80% (84.16%, 87.33%)       | ****                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            |                               |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 401 ( 3.57% )              | 82.96% ( 78.90% , 86.52% )    | 91.69% (88.35%, 94.32%      |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*   |                            |                                      |                             |  |  |  |
|---|----------------------------|--------------------------------------|-----------------------------|--|--|--|
|   |                            |                                      | Sensitivity (95% Confidence |  |  |  |
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval)        | Interval)                   |  |  |  |
|   |                            | Number (Percent)                     |                             |  |  |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness                                     | 1,180 ( 10.49% )           | 83.08% (77.06%, 88.06%)              | 97.59% (93.95%, 99.34%)     |  |  |  |
| of breath) OR R50.9 (fever)]  |                            |                                      |                             |  |  |  |
| 220.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                                      | 1,744 ( 15.51% )           | 87.94% (83.82%, 91.32%)              | ****                        |  |  |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                                       |                            |                                      |                             |  |  |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]                                       |                            |                                      |                             |  |  |  |
| Primary" Lab Test Product Information****   | <u> </u>                   |                                      |                             |  |  |  |
| 847377 - SARS_COV_2_NS  | N/A                        | N/A                                  | N/A                         |  |  |  |
| 35008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | N/A                        | N/A                                  | N/A                         |  |  |  |
| 37635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | N/A                        | N/A                                  | N/A                         |  |  |  |
| 37635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | N/A                        | N/A                                  | N/A                         |  |  |  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | N/A                        | N/A                                  | N/A                         |  |  |  |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A                        | N/A                                  | N/A                         |  |  |  |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT<br>7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                 | N/A                        | N/A                                  | N/A                         |  |  |  |
| 7635Y - SARS-COV-2, Qualitative, Rapid NAA (COVID-19)<br>7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test | N/A                        | N/A                                  | N/A                         |  |  |  |
| 14306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With                                      | N/A                        | N/A                                  | N/A                         |  |  |  |
| Probe Detection   | 61 ( 0.54% )               | 90.16% (79.81%, 96.30%)              | 96.49% (87.89%, 99.57%)     |  |  |  |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                                       | N/A                        | N/A                                  | N/A                         |  |  |  |
| Jucleic Acid Amplification Using CDC Primer-Probe Set N1  | N/A                        | IN/A                                 | NA                          |  |  |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                                      | N/A                        | N/A                                  | N/A                         |  |  |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2  | 14/73                      | 1477                                 | 14//                        |  |  |  |
| 04309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   | 646 (5.75%)                | 92.57% ( 90.27% , 94.47% )           | 97.24% (95.61%, 98.38%)     |  |  |  |
| IAA With Probe Detection  | 0.0(0.707)                 | 5_15,75 (55. <u>1</u> .75, 5.1.17,5) | 57.12 .7c (55.62,7c)        |  |  |  |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                                       | N/A                        | N/A                                  | N/A                         |  |  |  |
| y NAA With Probe Detection  | ,                          | •                                    | ,                           |  |  |  |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                                       | N/A                        | N/A                                  | N/A                         |  |  |  |
| AA With Probe Detection   | •                          | ·                                    | ,                           |  |  |  |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By  | 1,218 ( 10.83% )           | 81.99% ( 79.71% , 84.11% )           | 93.18% (91.50%, 94.61%)     |  |  |  |
| IAA With Probe Detection  | . , ,                      | ,                                    | · ,                         |  |  |  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | N/A                        | N/A                                  | N/A                         |  |  |  |
| mmunoassay  |                            |                                      |                             |  |  |  |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                          |                            |                               |                             |  |  |  |
|--|----------------------------|-------------------------------|-----------------------------|--|--|--|
|  |                            |                               | Sensitivity (95% Confidence |  |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |  |
|  |                            | Number (Percent)              |                             |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                        | N/A                           | N/A                         |  |  |  |
| Rapid Immunoassay  |                            |                               |                             |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | N/A                        | N/A                           | N/A                         |  |  |  |
| Probe Detection  |                            |                               |                             |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | N/A                        | N/A                           | N/A                         |  |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | N/A                        | N/A                           | N/A                         |  |  |  |
| By NAA With Probe Detection  |                            |                               |                             |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | N/A                        | N/A                           | N/A                         |  |  |  |
| Specimen By NAA With Probe Detection   |                            |                               |                             |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | N/A                        | N/A                           | N/A                         |  |  |  |
| Immunoassay  |                            |                               |                             |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | N/A                        | N/A                           | N/A                         |  |  |  |
| Immunoassay  |                            |                               |                             |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | N/A                        | N/A                           | N/A                         |  |  |  |
| Non-Probe Detection  |                            |                               |                             |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                         |  |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | N/A                        | N/A                           | N/A                         |  |  |  |
| Probe Detection  |                            |                               |                             |  |  |  |
| Unknown  | N/A                        | N/A                           | N/A                         |  |  |  |

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Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2* |                 |                 |                 |         |                          |
|--|-----------------|-----------------|-----------------|---------|--------------------------|
|  | Lab Positive*** | Lah Negative*** | Lab, No Results | No Lab  | Patients with Lab Result |
|  | Las i ositive   | Number          |                 | 110 200 | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****                      |                 |                 |                 |         | Trainiber (Fereent)      |
| Total Observed   | 1,657           | 283             | 33              | 9,404   | 1,940 ( 17.05% )         |
| Inpatient  | 379             | 34              | 12              | N/A     | 413                      |
| Outpatient or Emergency Department                           | 436             | 53              | 4               | N/A     | 489                      |
| Other  | 49              | 15              | 2               | N/A     | 64                       |
| Care Setting Reported as Unknown                             | 793             | 181             | 15              | N/A     | 974                      |
| Demographics   |                 |                 |                 | ,       |                          |
| Sex  |                 |                 |                 |         |                          |
| Female   | 699             | 126             | 13              | 4,397   | 825 ( 15.76% )           |
| Male   | 958             | 157             | 20              | 5,007   | 1,115 ( 18.15% )         |
| Other/Missing  | 0               | 0               | 0               | 0       | N/A                      |
| Age at Hospital Admission (Years)                            |                 |                 |                 |         |                          |
| 0-5  | 1               | 0               | 0               | 14      | 1 (6.67%)                |
| 6-17   | 5               | 1               | 0               | 28      | 6 ( 17.65% )             |
| 18-29  | 37              | 7               | 1               | 188     | 44 ( 18.88% )            |
| 30-39  | 97              | 13              | 5               | 372     | 110 ( 22.59% )           |
| 40-49  | 179             | 16              | 1               | 689     | 195 ( 22.03% )           |
| 50-59  | 370             | 48              | 9               | 1,429   | 418 ( 22.52% )           |
| 60-69  | 448             | 68              | 8               | 2,005   | 516 ( 20.40% )           |
| 70-79  | 282             | 65              | 3               | 2,103   | 347 ( 14.15% )           |
| 80-89  | 177             | 41              | 4               | 1,832   | 218 ( 10.61% )           |
| 90+  | 61              | 24              | 2               | 744     | 85 ( 10.23% )            |
| Missing  | 0               | 0               | 0               | 0       | N/A                      |
| Race   |                 |                 |                 |         |                          |
| American Indian or Alaska Native                             | 0               | 0               | 0               | 2       | 0 (0.00%)                |
| Asian  | 7               | 0               | 0               | 41      | 7 ( 14.58% )             |
| Black or African American                                    | 69              | 17              | 1               | 798     | 86 ( 9.72% )             |
| Native Hawaiian or Other Pacific Islander                    | 0               | 0               | 0               | 1       | 0 (0.00%)                |
| White  | 141             | 48              | 0               | 1,406   | 189 ( 11.85% )           |
| Other/Mixed/Unknown  | 1,440           | 218             | 32              | 7,156   | 1,658 ( 18.74% )         |
| Ethnicity  |                 |                 |                 |         |                          |

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Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu |
|---|-----------------|-----------------|-----------------|--------|------------------------|
|   |                 | Number          |                 |        | Number (Percent)       |
| Hispanic  | 7               | 2               | 0               | 63     | 9 ( 12.50% )           |
| Non-Hispanic  | 0               | 0               | 0               | 0      | N/A                    |
| Unknown   | 1,650           | 281             | 33              | 9,341  | 1,931 ( 17.08% )       |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                        |
| Asymptomatic screening (Z11.59)   | 8               | 12              | 0               | 124    | 20 ( 13.89% )          |
| Contact and suspected exposure (Z20.828)  | 308             | 78              | 14              | 1,853  | 386 ( 17.13% )         |
| Pneumonia (see Appendix B)  | 1,430           | 209             | 30              | 7,290  | 1,639 ( 18.29% )       |
| Other viral pneumonia (J12.89)  | 1,318           | 135             | 28              | 5,945  | 1,453 ( 19.57% )       |
| ARDS (J80)  | 238             | 27              | 6               | 1,147  | 265 (18.69%)           |
| Sepsis (see Appendix C)   | 531             | 89              | 11              | 2,747  | 620 ( 18.35% )         |
| Bronchitis (J20.8 OR J40)   | 18              | 1               | 0               | 106    | 19 ( 15.20% )          |
| Respiratory infection (J22 OR J98.8)  | 183             | 19              | 3               | 1,072  | 202 ( 15.82% )         |
| Cough (R05)   | 423             | 47              | 7               | 1,926  | 470 (19.56%)           |
| Shortness of breath (R06.2)   | 6               | 2               | 0               | 62     | 8 ( 11.43% )           |
| Fever (R50.9)   | 486             | 84              | 9               | 2,378  | 570 ( 19.28% )         |
| Optional  |                 |                 |                 |        |                        |
| Other COVID Tests   |                 |                 |                 |        |                        |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -      | -                      |
| observed within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |        |                        |
| est performed, at least 1 positive result   | 176             | 17              | 3               | 293    | 193 (39.47%)           |
| est performed, only negative results  | 9               | 9               | 1               | 56     | 18 ( 24 % )            |
| No test or unknown result   | 1,184           | 178             | 28              | 6,021  | 1,362 ( 18.38% )       |
| Antigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -      | -                      |
| est performed, at least 1 positive result   | 0               | 0               | 0               | 0      | N/A                    |
| est performed, only negative results  | 0               | 0               | 0               | 0      | N/A                    |
| No test or unknown result   | 1,657           | 283             | 33              | 9,404  | 1,940 ( 17.05% )       |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 |        |                        |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)               | 333             | 70              | 2               | 0      | 403 ( 99.51% )         |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*  |                 |                 |                 |         |                          |
|---|-----------------|-----------------|-----------------|---------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab  | Patients with Lab Result |
|   | Lab Positive    | Number          | Lab, No Results | INO Lab | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 162             | 34              | 7               | 989     | 196 ( 16.44% )           |
| of breath) OR R50.9 (fever)]  |                 | •               | •               |         |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 277             | 39              | 12              | 1,420   | 316 ( 18.08% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 | •       | ,                        |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |         |                          |
| "Primary" Lab Test Product Information****  |                 |                 |                 |         |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -       | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | -               | -               | -               | -       | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | -               | -               | -               | -       | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | -               | -               | -               | -       | N/A                      |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | -               | -               | -               | -       | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -               | -               | -               | -       | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -               | -               | -               | -       | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | -               | -               | -               | -       | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | -               | -               | -               | -       | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 55              | 6               | 0               | 0       | 61 ( 100.0% )            |
| Probe Detection   |                 |                 |                 |         |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0       | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1  |                 |                 |                 |         |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N2 | 0               | 0               | 0               | 0       | N/A                      |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   | 601             | 51              | 0               | 0       | 652 ( 100.0% )           |
| NAA With Probe Detection  |                 |                 |                 |         | . ,                      |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | -               | -               | -               | -       | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |         |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By NAA With Probe Detection                                 | 0               | 0               | 0               | 0       | N/A                      |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 1,001           | 226             | 2               | 0       | 1,227 ( 99.84% )         |
| NAA With Probe Detection  | _,              |                 | _               | -       | , ( )                    |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -               | -               | _               | -       | N/A                      |
| Immunoassay   |                 |                 |                 |         | •                        |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                   |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 |                 |                 |        |                          |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | 0               | 0               | 0               | 0      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | -               | -               | -               | -      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| Unknown  | 0               | 0               | 0               | 0      | N/A                      |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorith                                  | m 3: IP Stay with Any of Codes U07.1, E | 397.29, B34.2*                |                             |
|---|---|-------------------------------|-----------------------------|
|   |   |                               | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b>              | PPV (95% Confidence Interval) | Interval)                   |
|   |   | Number (Percent)              |                             |
| Care Setting of "Primary" Lab Test*****   |   |                               |                             |
| Total Observed                            | 11,377 ( 100.0% )                       | 85.41% (83.76%, 86.95%)       | 95.12% ( 94 % , 96.08% )    |
| Inpatient                                 | 425 ( 3.74% )                           | 91.77% (88.69%, 94.23%)       | 98.70% (96.99%, 99.58%)     |
| Outpatient or Emergency Department        | 493 ( 4.33% )                           | 89.16% (86.06%, 91.78%)       | 96.67% (94.57%, 98.13%)     |
| Other                                     | 66 ( 0.58% )                            | 76.56% (64.31%, 86.25%)       | 92.45% (81.79%, 97.91%)     |
| Care Setting Reported as Unknown          | 4,023 ( 35.36% )                        | 81.42% (78.83%, 83.81%)       | ****                        |
| Demographics                              |   |                               |                             |
| Sex                                       |   |                               |                             |
| Female                                    | 5,235 ( 46.01% )                        | 84.73% (82.09%, 87.11%)       | 94.33% (92.42%, 95.88%)     |
| Male                                      | 6,142 ( 53.99% )                        | 85.92% (83.74%, 87.91%)       | 95.70% (94.26%, 96.87%)     |
| Other/Missing                             | N/A                                     | N/A                           | N/A                         |
| Age at Hospital Admission (Years)         |   |                               |                             |
| 0-5                                       | 15 ( 0.13% )                            | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50%, 100.0%)     |
| 6-17                                      | 34 ( 0.30% )                            | 83.33% (35.88%, 99.58%)       | 83.33% (35.88%, 99.58%)     |
| 18-29                                     | 233 ( 2.05% )                           | 84.09% (69.93%, 93.36%)       | 84.09% (69.93%, 93.36%)     |
| 30-39                                     | 487 ( 4.28% )                           | 88.18% (80.64%, 93.55%)       | 90.65% (83.48%, 95.43%)     |
| 40-49                                     | 885 ( 7.78% )                           | 91.79% (87.02%, 95.24%)       | 99.44% (96.94%, 99.99%)     |
| 50-59                                     | 1,856 ( 16.31% )                        | 88.52% (85.06%, 91.41%)       | 97.11% (94.89%, 98.55%)     |
| 60-69                                     | 2,529 ( 22.23% )                        | 86.82% (83.59%, 89.62%)       | 96.76% (94.71%, 98.18%)     |
| 70-79                                     | 2,453 ( 21.56% )                        | 81.27% (76.76%, 85.24%)       | 92.76% (89.25%, 95.41%)     |
| 80-89                                     | 2,054 ( 18.05% )                        | 81.19% (75.36%, 86.15%)       | 92.19% (87.44%, 95.56%)     |
| 90+                                       | 831 ( 7.30% )                           | 71.76% (60.96%, 81%)          | 95.31% (86.91%, 99.02%)     |
| Missing                                   | N/A                                     | N/A                           | N/A                         |
| Race                                      |   |                               |                             |
| American Indian or Alaska Native          | 2 ( 0.02% )                             | N/A                           | N/A                         |
| Asian                                     | 48 ( 0.42% )                            | 100.0% (59.04%, 100.0%)       | 100.0% (59.04%, 100.0%)     |
| Black or African American                 | 885 ( 7.78% )                           | 80.23% (70.25%, 88.04%)       | 89.61% (80.55%, 95.41%)     |
| Native Hawaiian or Other Pacific Islander | 1 ( 0.01% )                             | N/A                           | N/A                         |
| White                                     | 1,595 ( 14.02% )                        | 74.60% (67.78%, 80.64%)       | 85.98% (79.70%, 90.90%)     |
| Other/Mixed/Unknown                       | 8,846 (77.75%)                          | 86.85% (85.13%, 88.44%)       | 96.39% (95.31%, 97.27%)     |
| Ethnicity                                 |   |                               |                             |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

|   |                     |                               | Sensitivity (95% Confidence |
|---|---------------------|-------------------------------|-----------------------------|
|   | Total Patient Count | PPV (95% Confidence Interval) | Interval)                   |
|   |                     | Number (Percent)              |                             |
| Hispanic  | 72 ( 0.63% )        | 77.78% (39.99%, 97.19%)       | 87.50% (47.35%, 99.68%      |
| Non-Hispanic  | N/A                 | N/A                           | N/A                         |
| Unknown   | 11,305 ( 99.37% )   | 85.45% (83.80%, 86.99%)       | 95.16% (94.04%, 96.12%      |
| Codes Observed During Inpatient Stay  |                     |                               |                             |
| Asymptomatic screening (Z11.59)   | 144 ( 1.27% )       | 40 % (19.12%, 63.95%)         | 80 % (44.39%, 97.48%)       |
| Contact and suspected exposure (Z20.828)  | 2,253 ( 19.80% )    | 79.79% ( 75.44% , 83.69% )    | 97.78% ( 95.48% , 99.10%    |
| Pneumonia (see Appendix B)  | 8,959 ( 78.75% )    | 87.25% (85.54%, 88.83%)       | 97.74% ( 96.85% , 98.44%    |
| Other viral pneumonia (J12.89)  | 7,426 ( 65.27% )    | 90.71% (89.10%, 92.15%)       | 99.32% ( 98.72% , 99.69%    |
| ARDS (J80)  | 1,418 ( 12.46% )    | 89.81% (85.52%, 93.18%)       | 99.17% ( 97.02% , 99.90%    |
| Sepsis (see Appendix C)   | 3,378 ( 29.69% )    | 85.65% (82.64%, 88.31%)       | 96.37% (94.45%, 97.77%      |
| Bronchitis (J20.8 OR J40)   | 125 ( 1.10% )       | 94.74% (73.97%, 99.87%)       | 90 % (68.30%, 98.77%)       |
| Respiratory infection (J22 OR J98.8)  | 1,277 ( 11.22% )    | 90.59% (85.70%, 94.24%)       | ****                        |
| Cough (RO5)   | 2,403 ( 21.12% )    | 90 % (86.92%, 92.56%)         | 97.92% (96.08%, 99.04%      |
| Shortness of breath (R06.2)   | 70 ( 0.62% )        | 75 % ( 34.91% , 96.81% )      | 100.0% (54.07%, 100.0%      |
| Fever (R50.9)   | 2,957 ( 25.99% )    | 85.26% (82.08%, 88.07%)       | 97.98% (96.32%, 99.03%      |
| Optional  |                     |                               |                             |
| Other COVID Tests   |                     |                               |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                   | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                     |                               |                             |
| Test performed, at least 1 positive result  | 489 ( 4.30% )       | 91.19% (86.27%, 94.78%)       | ****                        |
| Test performed, only negative results   | 75 ( 0.66% )        | 50 % ( 26.02% , 73.98% )      | 100.0% (66.37%, 100.0%      |
| No test or unknown result   | 7,411 (65.14%)      | 86.93% (85.02%, 88.68%)       | 93.82% (92.35%, 95.08%      |
| Antigen test within ±14 days from inpatient admission**                             | -                   | <u>-</u>                      | -                           |
| Fest performed, at least 1 positive result  | N/A                 | N/A                           | N/A                         |
| Test performed, only negative results   | N/A                 | N/A                           | N/A                         |
| No test or unknown result   | 11,377 ( 100.0% )   | 85.41% (83.76%, 86.95%)       | ****                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                     |                               |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 405 ( 3.56% )       | 82.63% ( 78.57% , 86.20% )    | 92.24% (88.99%, 94.78%      |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 3: IP Stay with  | Any of Codes U07.1, B | 897.29, B34.2*                |  |
|--|-----------------------|-------------------------------|--|
|  | Total Patient Count   | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|  |                       | Number (Percent)              |  |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness  | 1,192 ( 10.48% )      | 82.65% (76.61%, 87.68%)       | 97.59% ( 93.95% , 99.34% )               |
| of breath) OR R50.9 (fever)]   |                       |                               |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 1,748 ( 15.36% )      | 87.66% (83.52%, 91.07%)       | ****                                     |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  |                       |                               |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                       |                               |  |
| Primary" Lab Test Product Information****  |                       |                               |  |
| 47377 - SARS_COV_2_NS  | N/A                   | N/A                           | N/A                                      |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | N/A                   | N/A                           | N/A                                      |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | N/A                   | N/A                           | N/A                                      |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | N/A                   | N/A                           | N/A                                      |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | N/A                   | N/A                           | N/A                                      |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | N/A                   | N/A                           | N/A                                      |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT   | N/A                   | N/A                           | N/A                                      |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | N/A                   | N/A                           | N/A                                      |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | N/A                   | N/A                           | N/A                                      |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With robe Detection   | 61 ( 0.54% )          | 90.16% (79.81%, 96.30%)       | 96.49% (87.89%, 99.57%)                  |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By lucleic Acid Amplification Using CDC Primer-Probe Set N1 | N/A                   | N/A                           | N/A                                      |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By lucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                   | N/A                           | N/A                                      |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By AA With Probe Detection                                     | 652 ( 5.73% )         | 92.18% (89.84%, 94.12%)       | 97.72% (96.21%, 98.75%)                  |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen y NAA With Probe Detection                               | N/A                   | N/A                           | N/A                                      |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By AA With Probe Detection                                  | N/A                   | N/A                           | N/A                                      |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By  AA With Probe Detection                                    | 1,229 ( 10.80% )      | 81.58% (79.30%, 83.71%)       | 93.55% (91.91%, 94.95%)                  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | N/A                   | N/A                           | N/A                                      |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 3: IP Stay with  | Any of Codes U07.1, E      | 397.29, B34.2*                | Sensitivity (95% Confidence |
|--|----------------------------|-------------------------------|-----------------------------|
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|  |                            | Number (Percent)              |                             |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay           | N/A                        | N/A                           | N/A                         |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection               | N/A                        | N/A                           | N/A                         |
| 4533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By IAA With Probe Detection       | N/A                        | N/A                           | N/A                         |
| 4534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen y NAA With Probe Detection     | N/A                        | N/A                           | N/A                         |
| 4559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory pecimen By NAA With Probe Detection | N/A                        | N/A                           | N/A                         |
| 4563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By                                     | N/A                        | N/A                           | N/A                         |
| 4564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                                     | N/A                        | N/A                           | N/A                         |
| 4565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                                   | N/A                        | N/A                           | N/A                         |
| 4641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By                                | N/A                        | N/A                           | N/A                         |
| 4759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With robe Detection                    | N/A                        | N/A                           | N/A                         |
| Inknown  | N/A                        | N/A                           | N/A                         |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21* |                 |                 |                 |         |                          |
|--|-----------------|-----------------|-----------------|---------|--------------------------|
|  | Lab Positive*** | Lah Nagatiya*** | Lab, No Results | No Lab  | Patients with Lab Result |
|  | Lab Positive    | Number          |                 | INO Lab | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****                                      |                 | Number          |                 |         | Number (Percent)         |
| Total Observed   | 1,661           | 287             | 33              | 9,461   | 1,948 ( 17.02% )         |
| Inpatient  | 379             | 36              | 12              | N/A     | 415                      |
| Outpatient or Emergency Department   | 439             | 53              | 4               | N/A     | 492                      |
| Other  | 49              | 15              | 2               | N/A     | 64                       |
| Care Setting Reported as Unknown   | 794             | 183             | 15              | N/A     | 977                      |
| Demographics   | ,,,,            |                 |                 | ,       | <u> </u>                 |
| Sex  |                 |                 |                 |         |                          |
| Female   | 703             | 127             | 13              | 4,424   | 830 ( 15.76% )           |
| Male   | 958             | 160             | 20              | 5,037   | 1,118 ( 18.11% )         |
| Other/Missing  | 0               | 0               | 0               | 0       | N/A                      |
| Age at Hospital Admission (Years)  |                 |                 |                 |         | ·                        |
| 0-5  | 1               | 0               | 0               | 14      | 1 (6.67%)                |
| 6-17   | 5               | 1               | 0               | 28      | 6 ( 17.65% )             |
| 18-29  | 37              | 8               | 1               | 189     | 45 ( 19.15% )            |
| 30-39  | 98              | 13              | 5               | 375     | 111 ( 22.61% )           |
| 40-49  | 179             | 16              | 1               | 691     | 195 ( 21.98% )           |
| 50-59  | 371             | 49              | 9               | 1,437   | 420 ( 22.51% )           |
| 60-69  | 449             | 68              | 8               | 2,017   | 517 ( 20.34% )           |
| 70-79  | 282             | 66              | 3               | 2,114   | 348 ( 14.12% )           |
| 80-89  | 178             | 42              | 4               | 1,848   | 220 ( 10.62% )           |
| 90+  | 61              | 24              | 2               | 748     | 85 ( 10.18% )            |
| Missing  | 0               | 0               | 0               | 0       | N/A                      |
| Race   |                 |                 |                 |         |                          |
| American Indian or Alaska Native   | 0               | 0               | 0               | 2       | 0 (0.00%)                |
| Asian  | 7               | 0               | 0               | 41      | 7 ( 14.58% )             |
| Black or African American  | 69              | 17              | 1               | 808     | 86 ( 9.61% )             |
| Native Hawaiian or Other Pacific Islander                                    | 0               | 0               | 0               | 1       | 0 (0.00%)                |
| White  | 142             | 48              | 0               | 1,415   | 190 ( 11.84% )           |
| Other/Mixed/Unknown  | 1,443           | 222             | 32              | 7,194   | 1,665 ( 18.73% )         |
| Ethnicity  |                 |                 |                 |         |                          |

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Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu                |
|---|-----------------|-----------------|-----------------|--------|---------------------------------------|
|   |                 | Number          |                 |        | Number (Percent)                      |
| Hispanic  | 7               | 2               | 0               | 63     | 9 ( 12.50% )                          |
| Non-Hispanic  | 0               | 0               | 0               | 0      | N/A                                   |
| Unknown   | 1,654           | 285             | 33              | 9,398  | 1,939 ( 17.05% )                      |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                                       |
| Asymptomatic screening (Z11.59)   | 8               | 13              | 0               | 125    | 21 ( 14.38% )                         |
| Contact and suspected exposure (Z20.828)  | 308             | 79              | 14              | 1,862  | 387 (17.10%)                          |
| Pneumonia (see Appendix B)  | 1,434           | 212             | 30              | 7,338  | 1,646 ( 18.26% )                      |
| Other viral pneumonia (J12.89)  | 1,318           | 135             | 28              | 5,949  | 1,453 (19.56%)                        |
| ARDS (J80)  | 238             | 27              | 6               | 1,149  | 265 (18.66%)                          |
| Sepsis (see Appendix C)   | 532             | 92              | 11              | 2,761  | 624 (18.37%)                          |
| Bronchitis (J20.8 OR J40)   | 18              | 1               | 0               | 107    | 19 ( 15.08% )                         |
| lespiratory infection (J22 OR J98.8)  | 183             | 19              | 3               | 1,072  | 202 ( 15.82% )                        |
| Cough (RO5)   | 425             | 48              | 7               | 1,933  | 473 (19.60%)                          |
| hortness of breath (R06.2)  | 6               | 2               | 0               | 62     | 8 ( 11.43% )                          |
| Fever (R50.9)   | 486             | 86              | 9               | 2,388  | 572 ( 19.27% )                        |
| Optional  |                 |                 |                 |        |                                       |
| Other COVID Tests   |                 |                 |                 |        |                                       |
| Intibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -      | -                                     |
| bserved within -7 days prior to hospitalization through end of patient record**     |                 |                 |                 |        |                                       |
| est performed, at least 1 positive result   | 178             | 17              | 3               | 295    | 195 (39.55%)                          |
| est performed, only negative results  | 9               | 9               | 1               | 57     | 18 ( 23.68% )                         |
| lo test or unknown result   | 1,185           | 182             | 28              | 6,045  | 1,367 ( 18.37% )                      |
| Antigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -      | -                                     |
| est performed, at least 1 positive result   | 0               | 0               | 0               | 0      | N/A                                   |
| est performed, only negative results  | 0               | 0               | 0               | 0      | N/A                                   |
| No test or unknown result   | 1,661           | 287             | 33              | 9,461  | 1,948 ( 17.02% )                      |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 |        | · · · · · · · · · · · · · · · · · · · |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 334             | 70              | 2               | 0      | 404 ( 99.51% )                        |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*  |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 162             | 35              | 7               | 994    | 197 ( 16.44% )           |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 277             | 39              | 12              | 1,423  | 316 ( 18.05% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****  |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | -               | -               | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | -               | -               | -               | -      | N/A                      |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | -               | -               | -               | -      | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | -               | -               | -               | -      | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 55              | 6               | 0               | 0      | 61 ( 100.0% )            |
| Probe Detection   |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1  |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N2 | 0               | 0               | 0               | 0      | N/A                      |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   | 602             | 5.4             | •               | •      | CEC / 400 00/ )          |
| NAA With Probe Detection  | 602             | 54              | 0               | 0      | 656 ( 100.0% )           |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  |                 |                 |                 |        | 21/2                     |
| By NAA With Probe Detection   | -               | -               | -               | -      | N/A                      |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0      | 21/2                     |
| NAA With Probe Detection  | 0               | 0               | 0               | 0      | N/A                      |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 4 004           | 227             | 2               | 0      | 4 224 / 00 049/ \        |
| NAA With Probe Detection  | 1,004           | 227             | 2               | 0      | 1,231 ( 99.84% )         |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   |                 |                 |                 |        | N1 / A                   |
| Immunoassay   | -               | -               | -               | -      | N/A                      |
| iiiiiiuiioassay   |                 |                 |                 |        |                          |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21\* Lab Positive\*\*\* Lab Negative\*\*\* Lab, No Results No Lab **Patients with Lab Result Number (Percent)** Number 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By N/A Rapid Immunoassay 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With N/A **Probe Detection** 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By 0 0 0 N/A NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen 0 0 0 N/A By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory N/A Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By N/A NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A **Probe Detection** Unknown 0 0 0 0 N/A

cder ssq wp003



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| 760.10                                    | Stay with Any of Codes U07.1, B97.29, E |                               | Consistivity (OF9/ Confidence         |
|---|---|-------------------------------|---------------------------------------|
|   | Total Patient Count                     | PPV (95% Confidence Interval) | Sensitivity (95% Confidence Interval) |
|   | Total Fatient Count                     | Number (Percent)              | intervalj                             |
| Care Setting of "Primary" Lab Test*****   |   | Number (Percent)              |                                       |
| Total Observed                            | 11,442 ( 100.0% )                       | 85.27% (83.61%, 86.81%)       | 95.35% ( 94.25% , 96.29% )            |
| Inpatient                                 | 427 ( 3.73% )                           | 91.33% (88.19%, 93.85%)       | 98.70% (96.99%, 99.58%)               |
| Outpatient or Emergency Department        | 496 ( 4.33% )                           | 89.23% (86.15%, 91.83%)       | 97.34% ( 95.40% , 98.62% )            |
| Other                                     | 66 ( 0.58% )                            | 76.56% ( 64.31% , 86.25% )    | 92.45% (81.79%, 97.91%)               |
| Care Setting Reported as Unknown          | 4,056 ( 35.45% )                        | 81.27% ( 78.68% , 83.67% )    | ****                                  |
| Demographics                              | ,,,,,                                   |                               |                                       |
| Sex                                       |   |                               |                                       |
| Female                                    | 5,267 ( 46.03% )                        | 84.70% (82.07%, 87.08%)       | 94.87% (93.03%, 96.35%)               |
| Male                                      | 6,175 ( 53.97% )                        | 85.69% (83.50%, 87.69%)       | 95.70% (94.26%, 96.87%)               |
| Other/Missing                             | N/A                                     | N/A                           | N/A                                   |
| Age at Hospital Admission (Years)         |   |                               |                                       |
| 0-5                                       | 15 ( 0.13% )                            | 100.0% ( 2.50%, 100.0%)       | 100.0% ( 2.50% , 100.0% )             |
| 6-17                                      | 34 ( 0.30% )                            | 83.33% (35.88%, 99.58%)       | 83.33% (35.88%, 99.58%)               |
| 18-29                                     | 235 ( 2.05% )                           | 82.22% (67.95%, 92%)          | 84.09% (69.93%, 93.36%)               |
| 30-39                                     | 491 ( 4.29% )                           | 88.29% (80.81%, 93.61%)       | 91.59% (84.63%, 96.08%)               |
| 40-49                                     | 887 (7.75%)                             | 91.79% (87.02%, 95.24%)       | 99.44% ( 96.94% , 99.99%              |
| 50-59                                     | 1,866 ( 16.31% )                        | 88.33% (84.87%, 91.24%)       | 97.38% ( 95.23% , 98.73%              |
| 60-69                                     | 2,542 ( 22.22% )                        | 86.85% (83.63%, 89.64%)       | 96.98% ( 94.98% , 98.34%              |
| 70-79                                     | 2,465 ( 21.54% )                        | 81.03% (76.51%, 85.02%)       | 92.76% (89.25%, 95.41%)               |
| 80-89                                     | 2,072 ( 18.11% )                        | 80.91% (75.08%, 85.88%)       | 92.71% (88.07%, 95.96%)               |
| 90+                                       | 835 ( 7.30% )                           | 71.76% (60.96%, 81%)          | 95.31% (86.91%, 99.02%)               |
| Missing                                   | N/A                                     | N/A                           | N/A                                   |
| Race                                      |   |                               |                                       |
| American Indian or Alaska Native          | 2 ( 0.02% )                             | N/A                           | N/A                                   |
| Asian                                     | 48 ( 0.42% )                            | 100.0% (59.04%, 100.0%)       | 100.0% (59.04%, 100.0%)               |
| Black or African American                 | 895 ( 7.82% )                           | 80.23% (70.25%, 88.04%)       | 89.61% (80.55%, 95.41%)               |
| Native Hawaiian or Other Pacific Islander | 1 ( 0.01% )                             | N/A                           | N/A                                   |
| White                                     | 1,605 ( 14.03% )                        | 74.74% (67.94%, 80.75%)       | 86.59% (80.40%, 91.40%)               |
| Other/Mixed/Unknown                       | 8,891 (77.70%)                          | 86.67% (84.94%, 88.26%)       | 96.59% (95.54%, 97.45%                |
| Ethnicity                                 |   | •                             |                                       |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

|   |                     |                               | Sensitivity (95% Confidence |
|---|---------------------|-------------------------------|-----------------------------|
|   | Total Patient Count | PPV (95% Confidence Interval) | Interval)                   |
|   |                     | Number (Percent)              |                             |
| Hispanic  | 72 ( 0.63% )        | 77.78% (39.99%, 97.19%)       | 87.50% (47.35%, 99.68%)     |
| Non-Hispanic  | N/A                 | N/A                           | N/A                         |
| Unknown   | 11,370 ( 99.37% )   | 85.30% (83.65%, 86.85%)       | 95.39% ( 94.29% , 96.33% )  |
| Codes Observed During Inpatient Stay  |                     |                               |                             |
| Asymptomatic screening (Z11.59)   | 146 ( 1.28% )       | 38.10% (18.11%, 61.56%)       | 80 % (44.39%, 97.48%)       |
| Contact and suspected exposure (Z20.828)  | 2,263 ( 19.78% )    | 79.59% ( 75.22% , 83.49% )    | 97.78% ( 95.48% , 99.10% )  |
| Pneumonia (see Appendix B)  | 9,014 ( 78.78% )    | 87.12% (85.41%, 88.70%)       | 98.02% (97.17%, 98.67%)     |
| Other viral pneumonia (J12.89)  | 7,430 ( 64.94% )    | 90.71% (89.10%, 92.15%)       | 99.32% ( 98.72% , 99.69% )  |
| ARDS (J80)  | 1,420 ( 12.41% )    | 89.81% (85.52%, 93.18%)       | 99.17% (97.02%, 99.90%)     |
| Sepsis (see Appendix C)   | 3,396 ( 29.68% )    | 85.26% (82.23%, 87.95%)       | 96.55% (94.67%, 97.91%)     |
| Bronchitis (J20.8 OR J40)   | 126 ( 1.10% )       | 94.74% (73.97%, 99.87%)       | 90 % (68.30%, 98.77%)       |
| Respiratory infection (J22 OR J98.8)  | 1,277 ( 11.16% )    | 90.59% (85.70%, 94.24%)       | ****                        |
| Cough (R05)   | 2,413 ( 21.09% )    | 89.85% (86.77%, 92.42%)       | 98.38% (96.69%, 99.35%)     |
| Shortness of breath (R06.2)   | 70 ( 0.61% )        | 75 % ( 34.91% , 96.81% )      | 100.0% (54.07%, 100.0%)     |
| Fever (R50.9)   | 2,969 ( 25.95% )    | 84.97% (81.77%, 87.79%)       | 97.98% (96.32%, 99.03%)     |
| Optional  |                     |                               |                             |
| Other COVID Tests   |                     |                               |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                   | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                     |                               |                             |
| Test performed, at least 1 positive result  | 493 ( 4.31% )       | 91.28% (86.41%, 94.84%)       | ****                        |
| Test performed, only negative results   | 76 ( 0.66% )        | 50 % ( 26.02% , 73.98% )      | 100.0% (66.37%, 100.0%)     |
| No test or unknown result   | 7,440 (65.02%)      | 86.69% (84.77%, 88.44%)       | 93.90% (92.43%, 95.16%)     |
| Antigen test within ±14 days from inpatient admission**                             | -                   | -<br>-                        | · -                         |
| Test performed, at least 1 positive result  | N/A                 | N/A                           | N/A                         |
| Fest performed, only negative results   | N/A                 | N/A                           | N/A                         |
| No test or unknown result   | 11,442 ( 100.0% )   | 85.27% (83.61%, 86.81%)       | ****                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                     |                               |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 406 ( 3.55% )       | 82.67% ( 78.62% , 86.24% )    | 92.52% (89.30%, 95.01%)     |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of O  | Codes U07.1, B97.29, E | 334.2, J12.81, B97.21*        |                             |
|---|------------------------|-------------------------------|-----------------------------|
|   |                        |                               | Sensitivity (95% Confidence |
|   | Total Patient Count    | PPV (95% Confidence Interval) | Interval)                   |
|   |                        | Number (Percent)              |                             |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness                                     | 1,198 ( 10.47% )       | 82.23% (76.17%, 87.30%)       | 97.59% (93.95%, 99.34%)     |
| of breath) OR R50.9 (fever)]  |                        |                               |                             |
| (20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                                      | 1,751 ( 15.30% )       | 87.66% (83.52%, 91.07%)       | ****                        |
| DR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                                       |                        |                               |                             |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                        |                               |                             |
| Primary" Lab Test Product Information****   |                        |                               |                             |
| 47377 - SARS_COV_2_NS   | N/A                    | N/A                           | N/A                         |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A                    | N/A                           | N/A                         |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | N/A                    | N/A                           | N/A                         |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | N/A                    | N/A                           | N/A                         |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | N/A                    | N/A                           | N/A                         |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA<br>7635R - SARS-CoV-2, NAA (COVID-19), POCT               | N/A                    | N/A                           | N/A                         |
| 7635T - SARS-COV-2, NAA (COVID-19), POCT  | N/A                    | N/A                           | N/A                         |
| 7635Y - SARS-COV-2, Qualitative, Rapid NAA (COVID-19)<br>7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test | N/A                    | N/A                           | N/A                         |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With                                       | N/A                    | N/A                           | N/A                         |
| robe Detection  | 61 ( 0.53% )           | 90.16% (79.81%, 96.30%)       | 96.49% (87.89%, 99.57%)     |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                                       | N/A                    | N/A                           | N/A                         |
| lucleic Acid Amplification Using CDC Primer-Probe Set N1  | NA                     | IN/A                          | N/A                         |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                                       | N/A                    | N/A                           | N/A                         |
| lucleic Acid Amplification Using CDC Primer-Probe Set N2  | .,,,,                  | .47.                          | 14,71                       |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By  | 656 ( 5.73% )          | 91.77% (89.40%, 93.76%)       | 97.89% ( 96.41% , 98.87% )  |
| IAA With Probe Detection  | ,                      | ,,,                           |                             |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                                       | N/A                    | N/A                           | N/A                         |
| y NAA With Probe Detection  | ,                      | •                             | ,                           |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                                       | N/A                    | N/A                           | N/A                         |
| AA With Probe Detection   |                        | ·                             |                             |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By  | 1,233 ( 10.78% )       | 81.56% ( 79.28% , 83.69% )    | 93.83% ( 92.22% , 95.20% )  |
| AA With Probe Detection   | ,                      | ,                             | • •                         |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | N/A                    | N/A                           | N/A                         |
| nmunoassay  |                        |                               |                             |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of   | Codes U07.1, B97.29, E | 334.2, J12.81, B97.21*        |                             |
|--|------------------------|-------------------------------|-----------------------------|
|  |                        | DDV/050/ O (C.)               | Sensitivity (95% Confidence |
|  | Total Patient Count    | PPV (95% Confidence Interval) | Interval)                   |
| OAFOZ 1 CARC Col/ 2 (COl/ID 10) Inc. Ab [processed] In Corum Diagna Or Placed Du                                   |                        | Number (Percent)              |                             |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay                   | N/A                    | N/A                           | N/A                         |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                       | N/A                    | N/A                           | N/A                         |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection              | N/A                    | N/A                           | N/A                         |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection           | N/A                    | N/A                           | N/A                         |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection       | N/A                    | N/A                           | N/A                         |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By  | N/A                    | N/A                           | N/A                         |
| Immunoassay<br>94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By<br>Immunoassay              | N/A                    | N/A                           | N/A                         |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                      | N/A                    | N/A                           | N/A                         |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By                                       | N/A                    | N/A                           | N/A                         |
| NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection | N/A                    | N/A                           | N/A                         |
| Unknown  | N/A                    | N/A                           | N/A                         |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]* |                 |                 |                 |        |                       |
|--|-----------------|-----------------|-----------------|--------|-----------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Res |
|  |                 | Number          | •               |        | Number (Percent)      |
| Care Setting of "Primary" Lab Test*****  |                 |                 |                 |        |                       |
| Total Observed   | 1,439           | 209             | 30              | 7,334  | 1,648 ( 18.29% )      |
| Inpatient  | 334             | 18              | 12              | N/A    | 352                   |
| Outpatient or Emergency Department   | 388             | 41              | 3               | N/A    | 429                   |
| Other  | 46              | 11              | 1               | N/A    | 57                    |
| Care Setting Reported as Unknown   | 671             | 139             | 14              | N/A    | 810                   |
| Demographics   |                 |                 |                 |        |                       |
| Sex  |                 |                 |                 |        |                       |
| Female   | 572             | 81              | 12              | 3,299  | 653 ( 16.47% )        |
| Male   | 867             | 128             | 18              | 4,035  | 995 ( 19.71% )        |
| Other/Missing  | 0               | 0               | 0               | 0      | N/A                   |
| Age at Hospital Admission (Years)  |                 |                 |                 |        |                       |
| 0-5  | 0               | 0               | 0               | 3      | 0 (0.00%)             |
| 6-17   | 2               | 0               | 0               | 12     | 2 ( 14.29% )          |
| 18-29  | 25              | 6               | 1               | 115    | 31 ( 21.09% )         |
| 30-39  | 73              | 6               | 4               | 259    | 79 ( 23.10% )         |
| 40-49  | 156             | 11              | 1               | 567    | 167 ( 22.72% )        |
| 50-59  | 335             | 34              | 8               | 1,193  | 369 ( 23.50% )        |
| 60-69  | 397             | 54              | 8               | 1,632  | 451 ( 21.57% )        |
| 70-79  | 246             | 50              | 3               | 1,641  | 296 ( 15.26% )        |
| 80-89  | 153             | 32              | 3               | 1,375  | 185 ( 11.84% )        |
| 90+  | 52              | 16              | 2               | 537    | 68 ( 11.20% )         |
| Missing  | 0               | 0               | 0               | 0      | N/A                   |
| Race   |                 |                 |                 |        | ·                     |
| American Indian or Alaska Native   | 0               | 0               | 0               | 2      | 0 (0.00%)             |
| Asian  | 6               | 0               | 0               | 29     | 6 ( 17.14% )          |
| Black or African American  | 57              | 15              | 1               | 584    | 72 ( 10.96% )         |
| Native Hawaiian or Other Pacific Islander  | 0               | 0               | 0               | 1      | 0 (0.00%)             |
| White  | 108             | 37              | 0               | 998    | 145 ( 12.69% )        |
| Other/Mixed/Unknown  | 1,268           | 157             | 29              | 5,720  | 1,425 ( 19.86% )      |
| Ethnicity  |                 |                 |                 |        |                       |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu                |  |  |
|--|-----------------|-----------------|-----------------|--------|---------------------------------------|--|--|
|  |                 | Number          |                 |        | Number (Percent)                      |  |  |
| Hispanic   | 7               | 2               | 0               | 49     | 9 ( 15.52% )                          |  |  |
| Non-Hispanic   | 0               | 0               | 0               | 0      | N/A                                   |  |  |
| Unknown  | 1,432           | 207             | 30              | 7,285  | 1,639 (18.30%)                        |  |  |
| Codes Observed During Inpatient Stay   |                 |                 |                 |        |                                       |  |  |
| Asymptomatic screening (Z11.59)  | 5               | 8               | 0               | 91     | 13 ( 12.50% )                         |  |  |
| Contact and suspected exposure (Z20.828)   | 287             | 57              | 13              | 1,565  | 344 ( 17.90% )                        |  |  |
| neumonia (see Appendix B)  | 1,432           | 204             | 30              | 7,271  | 1,636 (18.31%)                        |  |  |
| Other viral pneumonia (J12.89)   | 1,321           | 136             | 28              | 5,979  | 1,457 ( 19.52% )                      |  |  |
| RDS (J80)  | 240             | 27              | 6               | 1,157  | 267 ( 18.67% )                        |  |  |
| epsis (see Appendix C)   | 510             | 72              | 10              | 2,466  | 582 ( 19.03% )                        |  |  |
| ronchitis (J20.8 OR J40)   | 13              | 0               | 0               | 79     | 13 ( 14.13% )                         |  |  |
| espiratory infection (J22 OR J98.8)  | 165             | 16              | 3               | 868    | 181 ( 17.21% )                        |  |  |
| ough (R05)   | 387             | 39              | 7               | 1,625  | 426 ( 20.70% )                        |  |  |
| hortness of breath (R06.2)   | 6               | 2               | 0               | 53     | 8 ( 13.11% )                          |  |  |
| ever (R50.9)   | 456             | 62              | 9               | 2,016  | 518 ( 20.37% )                        |  |  |
| ptional  |                 |                 |                 |        |                                       |  |  |
| ther COVID Tests   |                 |                 |                 |        |                                       |  |  |
| ntibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -      | -                                     |  |  |
| bserved within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |        |                                       |  |  |
| est performed, at least 1 positive result  | 154             | 14              | 3               | 261    | 168 (38.89%)                          |  |  |
| est performed, only negative results   | 9               | 7               | 1               | 38     | 16 ( 29.09% )                         |  |  |
| o test or unknown result   | 1,048           | 126             | 25              | 4,843  | 1,174 ( 19.43% )                      |  |  |
| ntigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -      | · · · · · · · · · · · · · · · · · · · |  |  |
| est performed, at least 1 positive result  | 0               | 0               | 0               | 0      | N/A                                   |  |  |
| est performed, only negative results   | 0               | 0               | 0               | 0      | N/A                                   |  |  |
| lo test or unknown result  | 1,439           | 209             | 30              | 7,334  | 1,648 ( 18.29% )                      |  |  |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection                     | ·               |                 |                 |        | · · · · ·                             |  |  |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 276             | 46              | 1               | 0      | 322 ( 99.69% )                        |  |  |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]*              |                 |                 |                 |        |                          |  |
|---|-----------------|-----------------|-----------------|--------|--------------------------|--|
|   | Lab Positive*** | Lah Negative*** | Lab, No Results | No Lab | Patients with Lab Result |  |
|   | Lab Positive    | Number          | Lab, No Results | NO Lab | Number (Percent)         |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 154             | 24              | 7               | 848    | 178 ( 17.23% )           |  |
| of breath) OR R50.9 (fever)]  | -5 .            |                 | •               | 0.0    |                          |  |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 275             | 37              | 12              | 1,382  | 312 ( 18.29% )           |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 | ,      | ,                        |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |  |
| "Primary" Lab Test Product Information****  |                 |                 |                 |        |                          |  |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |  |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | -               | -               | -               | -      | N/A                      |  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | -               | -               | -               | -      | N/A                      |  |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | -               | -               | -               | -      | N/A                      |  |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | -               | -               | -               | -      | N/A                      |  |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -               | -               | -               | -      | N/A                      |  |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -               | -               | -               | -      | N/A                      |  |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | -               | -               | -               | -      | N/A                      |  |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | -               | -               | -               | -      | N/A                      |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | 52              | 6               | 0               | 0      | 58 ( 100.0% )            |  |
| Probe Detection   |                 |                 |                 |        |                          |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0      | N/A                      |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1  |                 |                 |                 |        |                          |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N2 | 0               | 0               | 0               | 0      | N/A                      |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   | 534             | 35              | 0               | 0      | 569 ( 100.0% )           |  |
| NAA With Probe Detection  | 554             | 33              | U               | U      | 309 ( 100.0% )           |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | _               | _               | _               | _      | N/A                      |  |
| By NAA With Probe Detection   |                 |                 |                 |        | N/A                      |  |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | 0               | 0               | 0               | 0      | N/A                      |  |
| NAA With Probe Detection  | U               | U               | U               | U      | N/A                      |  |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 853             | 168             | 2               | 0      | 1,021 ( 99.80% )         |  |
| NAA With Probe Detection  | 0,5             | 100             | 2               | U      | 1,021 ( 33.00/0 )        |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | _               | _               | _               | _      | N/A                      |  |
| Immunoassay   |                 |                 |                 |        | N/A                      |  |
| ,   |                 |                 |                 |        |                          |  |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia\*\* OR Acute Respiratory Distress Syndrome (ARDS) (J80)]\* Lab Positive\*\*\* Lab Negative\*\*\* Lab, No Results No Lab **Patients with Lab Result Number (Percent)** Number 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By N/A Rapid Immunoassay 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With N/A **Probe Detection** 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By 0 0 0 N/A NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen 0 0 0 N/A By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory N/A Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By N/A NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A **Probe Detection** Unknown 0 0 0 0 N/A

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Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

|   |  |                               | Sensitivity (95% Confidence |
|---|--|-------------------------------|-----------------------------|
|   | Total Patient Count  | PPV (95% Confidence Interval) | Interval)                   |
|   | Number (Percent)   |                               | cent                        |
| Care Setting of "Primary" Lab Test*****   | The state of the s |                               |                             |
| Total Observed                            | 9,012 ( 100.0% )   | 87.32% (85.61%, 88.89%)       | 82.61% (80.74%, 84.36%      |
| Inpatient                                 | 364 ( 4.04% )  | 94.89% (92.04%, 96.94%)       | 86.98% (83.20%, 90.18%      |
| Outpatient or Emergency Department        | 432 ( 4.79% )  | 90.44% (87.26%, 93.05%)       | 86.03% (82.48%, 89.10%      |
| Other                                     | 58 ( 0.64% )   | 80.70% (68.09%, 89.95%)       | 86.79% (74.66%, 94.52%      |
| Care Setting Reported as Unknown          | 3,016 ( 33.47% )   | 82.84% ( 80.06% , 85.37% )    | ****                        |
| Demographics                              |  |                               |                             |
| Sex                                       |  |                               |                             |
| Female                                    | 3,964 ( 43.99% )   | 87.60% (84.82%, 90.03%)       | 77.19% (74 %, 80.17%)       |
| Male                                      | 5,048 ( 56.01% )   | 87.14% (84.89%, 89.15%)       | 86.61% (84.35%, 88.66%      |
| Other/Missing                             | N/A  | N/A                           | N/A                         |
| Age at Hospital Admission (Years)         |  |                               |                             |
| 0-5                                       | 3 ( 0.03% )  | N/A                           | N/A                         |
| 6-17                                      | 14 ( 0.16% )   | 100.0% (15.81%, 100.0%)       | 33.33% ( 4.33% , 77.72%     |
| 18-29                                     | 147 ( 1.63% )  | 80.65% (62.53%, 92.55%)       | 56.82% (41.03%, 71.65%      |
| 30-39                                     | 342 ( 3.79% )  | 92.41% (84.20%, 97.16%)       | 68.22% (58.52%, 76.89%      |
| 40-49                                     | 735 ( 8.16% )  | 93.41% (88.52%, 96.67%)       | 86.67% (80.81%, 91.27%      |
| 50-59                                     | 1,570 ( 17.42% )   | 90.79% (87.36%, 93.53%)       | 87.93% (84.23%, 91.02%      |
| 60-69                                     | 2,091 ( 23.20% )   | 88.03% (84.67%, 90.88%)       | 85.75% (82.22%, 88.80%      |
| 70-79                                     | 1,940 ( 21.53% )   | 83.11% (78.34%, 87.19%)       | 80.92% (76.05%, 85.18%      |
| 80-89                                     | 1,563 ( 17.34% )   | 82.70% (76.47%, 87.86%)       | 79.69% (73.30%, 85.14%      |
| 90+                                       | 607 ( 6.74% )  | 76.47% ( 64.62% , 85.91% )    | 81.25% (69.54%, 89.92%      |
| Missing                                   | N/A  | N/A                           | N/A                         |
| Race                                      |  |                               |                             |
| American Indian or Alaska Native          | 2 ( 0.02% )  | N/A                           | N/A                         |
| Asian                                     | 35 ( 0.39% )   | 100.0% (54.07%, 100.0%)       | 85.71% (42.13%, 99.64%      |
| Black or African American                 | 657 (7.29%)  | 79.17% (67.98%, 87.84%)       | 74.03% (62.77%, 83.36%      |
| Native Hawaiian or Other Pacific Islander | 1 ( 0.01% )  | N/A                           | N/A                         |
| White                                     | 1,143 ( 12.68% )   | 74.48% (66.58%, 81.35%)       | 65.85% ( 58.05% , 73.07%    |
| Other/Mixed/Unknown                       | 7,174 ( 79.60% )   | 88.98% (87.24%, 90.56%)       | 84.87% (82.95%, 86.65%      |
| Ethnicity                                 | , , ,  |                               | ,                           |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

|   | Total Patient Count                   | DDV (00% Confidence Interval) | Sensitivity (95% Confidence Interval) |  |
|---|---------------------------------------|-------------------------------|---------------------------------------|--|
|   | Number (Percent)                      | PPV (95% Confidence Interval) | ercent                                |  |
| Hispanic  | 58 ( 0.64% )                          | 77.78% ( 39.99% , 97.19% )    | 87.50% (47.35%, 99.68%                |  |
| Non-Hispanic  | N/A                                   | N/A                           | N/A                                   |  |
| Unknown   | 8,954 ( 99.36% )                      | 87.37% (85.66%, 88.94%)       | 82.58% (80.72%, 84.34%                |  |
| Codes Observed During Inpatient Stay  | 0,334 (33.30%)                        | 07.3770 (03.0070, 00.3470)    | 02.3070 (00.7270, 04.3470             |  |
| Asymptomatic screening (Z11.59)   | 104 ( 1.15% )                         | 38.46% (13.86%, 68.42%)       | 50 % (18.71%, 81.29%)                 |  |
| Contact and suspected exposure (Z20.828)  | 1,922 ( 21.33% )                      | 83.43% (79.07%, 87.20%)       | 91.11% (87.41%, 94.01%                |  |
| Pneumonia (see Appendix B)  | 8,937 ( 99.17% )                      | 87.53% ( 85.83% , 89.09% )    | 97.88% (97.01%, 98.56%                |  |
| Other viral pneumonia (J12.89)  | 7,464 ( 82.82% )                      | 90.67% ( 89.05% , 92.11% )    | 99.55% (99.02%, 99.83%                |  |
| ARDS (J80)  | 1,430 ( 15.87% )                      | 89.89% (85.63%, 93.23%)       | 100.0% (98.47%, 100.0%                |  |
| Sepsis (see Appendix C)   | 3,058 ( 33.93% )                      | 87.63% (84.68%, 90.19%)       | 92.56% (90.04%, 94.61%                |  |
| Bronchitis (J20.8 OR J40)   | 92 ( 1.02% )                          | 100.0% (75.29%, 100.0%)       | 65 % (40.78%, 84.61%)                 |  |
| Respiratory infection (J22 OR J98.8)  | 1,052 ( 11.67% )                      | 91.16% ( 86.04% , 94.86% )    | 91.16% (86.04%, 94.86%                |  |
| Cough (RO5)   | 2,058 ( 22.84% )                      | 90.85% (87.70%, 93.41%)       | 89.58% (86.31%, 92.30%                |  |
| Shortness of breath (R06.2)   | 61 ( 0.68% )                          | 75 % (34.91%, 96.81%)         | 100.0% (54.07%, 100.0%                |  |
| Fever (R50.9)   | 2,543 ( 28.22% )                      | 88.03% ( 84.92% , 90.70% )    | 91.94% (89.18%, 94.18%                |  |
| Optional  | <u> </u>                              | , ,                           |                                       |  |
| Other COVID Tests   |                                       |                               |                                       |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                                     | -                             | -                                     |  |
| observed within -7 days prior to hospitalization through end of patient record**    |                                       |                               |                                       |  |
| Fest performed, at least 1 positive result  | 432 ( 4.79% )                         | 91.67% (86.41%, 95.37%)       | ****                                  |  |
| Fest performed, only negative results   | 55 ( 0.61% )                          | 56.25% (29.88%, 80.25%)       | 100.0% (66.37%, 100.0%                |  |
| No test or unknown result   | 6,042 ( 67.04% )                      | 89.27% (87.35%, 90.98%)       | 83.04% ( 80.86% , 85.07%              |  |
| Antigen test within ±14 days from inpatient admission**                             | -                                     | <u>-</u>                      | · - · ·                               |  |
| Fest performed, at least 1 positive result  | N/A                                   | N/A                           | N/A                                   |  |
| est performed, only negative results  | N/A                                   | N/A                           | N/A                                   |  |
| No test or unknown result   | 9,012 ( 100.0% )                      | 87.32% (85.61%, 88.89%)       | ****                                  |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     | · · · · · · · · · · · · · · · · · · · |                               |                                       |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 323 ( 3.58% )                         | 85.71% (81.41%, 89.35%)       | 76.45% (71.73%, 80.74%                |  |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.2   | 1 OR B97.29] and [Pne      | umonia** OR ARDS (J80)]*      |                             |  |
|--|----------------------------|-------------------------------|-----------------------------|--|
|  |                            |                               | Sensitivity (95% Confidence |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |
|  | Number (Percent)           | Percent                       |                             |  |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness  | 1,033 ( 11.46% )           | 86.52% (80.61%, 91.17%)       | 92.77% (87.71%, 96.21%)     |  |
| of breath) OR R50.9 (fever)]   |                            |                               |                             |  |
| 220.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 1,706 ( 18.93% )           | 88.14% (84.03%, 91.51%)       | 100.0% (98.67%, 100.0%)     |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  |                            |                               |                             |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                            |                               |                             |  |
| Primary" Lab Test Product Information****  |                            |                               |                             |  |
| 847377 - SARS_COV_2_NS   | N/A                        | N/A                           | N/A                         |  |
| 35008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A                        | N/A                           | N/A                         |  |
| 37635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | N/A                        | N/A                           | N/A                         |  |
| 37635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | N/A                        | N/A                           | N/A                         |  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | N/A                        | N/A                           | N/A                         |  |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | N/A                        | N/A                           | N/A                         |  |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT   | N/A                        | N/A                           | N/A                         |  |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | N/A                        | N/A                           | N/A                         |  |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | N/A                        | N/A                           | N/A                         |  |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With robe Detection   | 58 ( 0.64% )               | 89.66% (78.83%, 96.11%)       | 91.23% (80.70%, 97.09%)     |  |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Jucleic Acid Amplification Using CDC Primer-Probe Set N1 | N/A                        | N/A                           | N/A                         |  |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Jucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                        | N/A                           | N/A                         |  |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By  AA With Probe Detection                                    | 569 ( 6.31% )              | 93.85% (91.55%, 95.68%)       | 86.83% (83.90%, 89.40%      |  |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen y NAA With Probe Detection                               | N/A                        | N/A                           | N/A                         |  |
| 1316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                        | N/A                           | N/A                         |  |
| AA With Probe Detection 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By AA With Probe Detection             | 1,023 ( 11.35% )           | 83.55% (81.13%, 85.77%)       | 79.72% (77.18%, 82.09%      |  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | N/A                        | N/A                           | N/A                         |  |



Table 1e. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between April 1, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]*  |                            |                               |                             |  |  |
|---|----------------------------|-------------------------------|-----------------------------|--|--|
|   |                            |                               | Sensitivity (95% Confidence |  |  |
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |
|   | Number (Percent)           | Per                           | cent                        |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By      | N/A                        | N/A                           | N/A                         |  |  |
| Rapid Immunoassay   |                            |                               |                             |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With        | N/A                        | N/A                           | N/A                         |  |  |
| Probe Detection   |                            |                               |                             |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By        | N/A                        | N/A                           | N/A                         |  |  |
| NAA With Probe Detection  |                            |                               |                             |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen        | N/A                        | N/A                           | N/A                         |  |  |
| By NAA With Probe Detection   |                            |                               |                             |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory             | N/A                        | N/A                           | N/A                         |  |  |
| Specimen By NAA With Probe Detection  |                            |                               |                             |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay | N/A                        | N/A                           | N/A                         |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By             | N/A                        | N/A                           | N/A                         |  |  |
| Immunoassay   | ,                          | ,                             | ,                           |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With           | N/A                        | N/A                           | N/A                         |  |  |
| Non-Probe Detection   | ,                          | ,                             | •                           |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By        | N/A                        | N/A                           | N/A                         |  |  |
| NAA With Probe Detection  | •                          | ·                             | ·                           |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With           | N/A                        | N/A                           | N/A                         |  |  |
| Probe Detection   | •                          | •                             | •                           |  |  |
| Unknown   | N/A                        | N/A                           | N/A                         |  |  |

<sup>\*</sup>Includes only the first algorithm-qualifying inpatient stay per algorithm per patient.

Includes one test result per encounter - positive if patient had at least one positive NAA result; negative if all NAA results are negative (during test window, from any type of specimen/site).

<sup>\*\*</sup> COVID NAA, antibody, and antigen tests are identified using LOINCs or any other identifier available in the data.

<sup>\*\*\*</sup>Any NAA result in 14 days prior through 14 days after inpatient encounter during which the COVID diagnosis codes were recorded.

<sup>&</sup>quot;Primary" test result will be the first positive molecular test within the ±14-day window, or the last negative molecular test within the ±14-day window among patients with no positive test.

<sup>\*\*\*\*</sup>Only the "primary" lab test, as defined above, is described

<sup>\*\*\*\*\*</sup>Sensitivity not calculated because algorithm cohort NAA-positive patient count is larger than laboratory result cohort NAA-positive patient count. This is a result of a different visit being used to describe characteristics among the lab-based cohort and the algorithm-based cohort.

<sup>\*\*\*\*\*\*</sup>Sum across care settings does not equal total observed because care setting was not reported for some patients.



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Care Setting of "Primary" Lab Tes\*\*\*\* **Total Observed** 47,974 2.241 3,663 25.192 Inpatient 194 0 0 3,958 **Outpatient or Emergency Department** 1,069 0 5,102 0 Other 0 0 59 985 Care Setting Reported as Unknown 247 2,987 6,009 38,832 **Demographics** Sex Female 1,004 26,837 1,751 14,268 Male 1,912 10,924 1,237 21,137 Other/Missing 0 0 0 0 Age at Hospital Admission (Years) 0-5 4 13 165 359 6-17 11 32 412 825 18-29 334 1,675 3,910 115 30-39 199 408 2.899 5,988 40-49 308 530 1.882 4,617 50-59 495 820 3,218 7,991 60-69 498 749 5,065 9,747 70-79 359 465 5,573 8,325 80-89 189 237 3,347 4,802 90+ 63 75 956 1,410 Missing 0 0 0 0 Race American Indian or Alaska Native 4 11 11 4 Asian 7 7 59 59 Black or African American 99 99 736 737 Native Hawaiian or Other Pacific Islander 0 0 0 0 White 394 398 6,312 6,314 Other/Mixed/Unknown 1,737 3,155 18,075 40,853

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Ethnicity



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Hispanic 20 20 96 96 Non-Hispanic 0 1 Unknown 2.220 3.642 25.096 47.878 **Codes Observed During Inpatient Stay** Asymptomatic screening (Z11.59) 40 149 2,033 4,520 Contact and suspected exposure (Z20.828) 317 486 2,474 5,888 Pneumonia (see Appendix B) 1,685 2,184 3,090 6,719 Other viral pneumonia (J12.89) 1.418 1.823 398 1.657 ARDS (J80) 125 174 242 437 Sepsis (see Appendix C) 510 790 1,923 5,177 Bronchitis (J20.8 OR J40) 25 41 47 130 Respiratory infection (J22 OR J98.8) 117 159 68 267 Cough (R05) 351 485 836 2,275 Shortness of breath (R06.2) 6 10 77 267 Fever (R50.9) 429 662 1.645 4.440 Optional **Other COVID Tests** Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) observed within -7 days prior to hospitalization through end of patient record\*\* Test performed, at least 1 positive result 58 0 58 0 Test performed, only negative results 13 0 417 0 No test or unknown result 1.498 2.987 15.579 38.832 Antigen test within ±14 days from inpatient admission\*\* Test performed, at least 1 positive result 0 1 0 0 Test performed, only negative results 1 0 26 0 No test or unknown result 2.987 16.028 38.832 1.567 Codes Observed Within ±5 Days of Diagnostic Specimen Collection Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426) 1.486 433 10.950 5.228 **Codes Observed During Inpatient Stay** Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness 763 153 225 1,883 of breath) OR R50.9 (fever)]

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Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) 245 323 607 152 OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] "Primary" Lab Test Product Information\*\*\*\* 847377 - SARS COV 2 NS 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA 87635R - SARS-CoV-2, NAA (COVID-19), POCT 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19) 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With 3 36 305 534 Probe Detection 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By 0 0 0 1 Nucleic Acid Amplification Using CDC Primer-Probe Set N1 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By O 0 0 1 Nucleic Acid Amplification Using CDC Primer-Probe Set N2 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA 280 600 7.031 15,096 With Probe Detection 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen 0 0 1 2 By NAA With Probe Detection 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By 1 1 5 15 NAA With Probe Detection 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA 1.944 3.005 17.321 31.649 With Probe Detection 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By **Immunoassay** 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay

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Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With **Probe Detection** 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By 2 2 92 94 NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen 4 5 205 268 By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory 0 3 49 53 Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By **Immunoassay** 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With 7 11 160 238 Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By 0 0 1 1 NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With 0 0 2 2 **Probe Detection** 

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Unknown



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Alg                                       | orithm 1: Inpatient (IP) Stay with ( | Code U07.1*     |                 |        |                          |
|---|--------------------------------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive***                      | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                                      | Number          |                 |        | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****   |                                      |                 |                 |        | Training (Ferreing)      |
| Total Observed                            | 2,086                                | 878             | 27              | 19,676 | 2,964 ( 13.08% )         |
| Inpatient                                 | 189                                  | 59              | 4               | N/A    | 248                      |
| Outpatient or Emergency Department        | 1,021                                | 288             | 11              | N/A    | 1,309                    |
| Other                                     | ,<br>59                              | 30              | 5               | N/A    | 89                       |
| Care Setting Reported as Unknown          | 817                                  | 501             | 7               | N/A    | 1,318                    |
| Demographics                              |                                      |                 |                 |        | ,                        |
| Sex                                       |                                      |                 |                 |        |                          |
| Female                                    | 922                                  | 443             | 9               | 9,593  | 1,365 ( 12.45% )         |
| Male                                      | 1,164                                | 435             | 18              | 10,083 | 1,599 ( 13.67% )         |
| Other/Missing                             | 0                                    | 0               | 0               | 0      | N/A                      |
| Age at Hospital Admission (Years)         |                                      |                 |                 |        |                          |
| 0-5                                       | 3                                    | 4               | 0               | 73     | 7 (8.75%)                |
| 6-17                                      | 10                                   | 4               | 1               | 125    | 14 ( 10 % )              |
| 18-29                                     | 109                                  | 63              | 1               | 855    | 172 ( 16.73% )           |
| 30-39                                     | 185                                  | 72              | 3               | 1,238  | 257 ( 17.16% )           |
| 40-49                                     | 291                                  | 92              | 1               | 1,990  | 383 (16.13%)             |
| 50-59                                     | 476                                  | 141             | 4               | 3,242  | 617 (15.97%)             |
| 60-69                                     | 472                                  | 165             | 8               | 4,018  | 637 ( 13.66% )           |
| 70-79                                     | 323                                  | 181             | 5               | 3,917  | 504 ( 11.39% )           |
| 80-89                                     | 165                                  | 116             | 3               | 3,020  | 281 ( 8.50% )            |
| 90+                                       | 52                                   | 40              | 1               | 1,198  | 92 ( 7.13% )             |
| Missing                                   | 0                                    | 0               | 0               | 0      | N/A                      |
| Race                                      |                                      |                 |                 |        |                          |
| American Indian or Alaska Native          | 4                                    | 0               | 0               | 13     | 4 ( 23.53% )             |
| Asian                                     | 6                                    | 6               | 0               | 42     | 12 ( 22.22% )            |
| Black or African American                 | 94                                   | 40              | 0               | 994    | 134 ( 11.88% )           |
| Native Hawaiian or Other Pacific Islander | 0                                    | 0               | 0               | 0      | N/A                      |
| White                                     | 339                                  | 201             | 0               | 2,752  | 540 ( 16.40% )           |
| Other/Mixed/Unknown                       | 1,643                                | 631             | 27              | 15,875 | 2,274 ( 12.51% )         |
| Ethnicity                                 |                                      |                 |                 |        |                          |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 1: Inpati   | ient (IP) Stay with ( | Code U07.1*     |                 |        |   |
|---|-----------------------|-----------------|-----------------|--------|---|
|   | Lab Positive***       | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resul                       |
|   |                       | Number          |                 |        | Number (Percent)                              |
| Hispanic  | 20                    | 3               | 0               | 100    | 23 ( 18.70% )                                 |
| Non-Hispanic  | 1                     | 0               | 0               | 1      | 1 (50 %)                                      |
| Unknown   | 2,065                 | 875             | 27              | 19,575 | 2,940 (13.04%)                                |
| Codes Observed During Inpatient Stay  |                       |                 |                 |        |   |
| Asymptomatic screening (Z11.59)   | 30                    | 28              | 1               | 390    | 58 ( 12.92% )                                 |
| Contact and suspected exposure (Z20.828)  | 283                   | 172             | 6               | 3,267  | 455 ( 12.20% )                                |
| Pneumonia (see Appendix B)  | 1,634                 | 537             | 21              | 13,327 | 2,171 ( 13.99% )                              |
| Other viral pneumonia (J12.89)  | 1,409                 | 347             | 20              | 10,682 | 1,756 ( 14.10% )                              |
| ARDS (J80)  | 162                   | 40              | 3               | 1,340  | 202 ( 13.07% )                                |
| Sepsis (see Appendix C)   | 481                   | 215             | 6               | 4,633  | 696 ( 13.05% )                                |
| Bronchitis (J20.8 OR J40)   | 24                    | 7               | 0               | 211    | 31 (12.81%)                                   |
| Respiratory infection (J22 OR J98.8)  | 113                   | 32              | 1               | 958    | 145 ( 13.13% )                                |
| Cough (R05)   | 341                   | 118             | 3               | 2,699  | 459 ( 14.52% )                                |
| Shortness of breath (R06.2)   | 6                     | 2               | 0               | 80     | 8 ( 9.09% )                                   |
| Fever (R50.9)   | 408                   | 188             | 5               | 3,406  | 596 ( 14.87% )                                |
| <b>Optional</b>   |                       |                 |                 | ·      | , , , , , , , , , , , , , , , , , , ,         |
| Other COVID Tests   |                       |                 |                 |        |   |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                     | -               | -               | -      | -   |
| observed within -7 days prior to hospitalization through end of patient record**    |                       |                 |                 |        |   |
| Test performed, at least 1 positive result  | 71                    | 25              | 0               | 228    | 96 ( 29.63% )                                 |
| Test performed, only negative results   | 15                    | 15              | 0               | 90     | 30 ( 25 % )                                   |
| No test or unknown result   | 1,403                 | 519             | 26              | 14,064 | 1,922 ( 12 % )                                |
| Antigen test within ±14 days from inpatient admission**                             | -                     | -               | -               | -      | -   |
| Test performed, at least 1 positive result  | 4                     | 0               | 0               | 1      | 4 ( 80 % )                                    |
| Test performed, only negative results   | 3                     | 1               | 0               | 2      | 4 ( 66.67% )                                  |
| No test or unknown result   | 2,079                 | 877             | 27              | 19,673 | 2,956 ( 13.05% )                              |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     | •                     |                 |                 | ,      | , <u>, , , , , , , , , , , , , , , , , , </u> |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,416                 | 444             | 11              | 0      | 1,860 ( 99.41% )                              |
| Codes Observed During Inpatient Stay  |                       |                 |                 |        |   |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 141                   | 89              | 2               | 1,407  | 230 ( 14.03% )                                |
| of breath) OR R50.9 (fever)]  |                       |                 |                 | -      | . ,   |

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Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*                              |                 |                 |                 |         |                          |  |
|--|-----------------|-----------------|-----------------|---------|--------------------------|--|
|  | Lab Positive*** | Lab Negative*** | Lah No Results  | No Lab  | Patients with Lab Result |  |
|  | Lab i Ositive   | Number          | Lub, No Results | 140 Lub | Number (Percent)         |  |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 228             | 89              | 5               | 2,068   | 317 ( 13.26% )           |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute    |                 |                 | _               | _,,,,,  | (,                       |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]    |                 |                 |                 |         |                          |  |
| "Primary" Lab Test Product Information****                                     |                 |                 |                 |         |                          |  |
| 847377 - SARS_COV_2_NS   | -               | -               | -               | -       | N/A                      |  |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual       | -               | -               | -               | -       | N/A                      |  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA            | -               | -               | -               | -       | N/A                      |  |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                       | -               | -               | -               | -       | N/A                      |  |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                       | -               | -               | -               | -       | N/A                      |  |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                       | -               | -               | -               | -       | N/A                      |  |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                      | -               | -               | -               | -       | N/A                      |  |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                         | -               | -               | -               | -       | N/A                      |  |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                      | -               | -               | -               | -       | N/A                      |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 3               | 2               | 0               | 0       | 5 ( 100.0% )             |  |
| Probe Detection  |                 |                 |                 |         |                          |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0       | N/A                      |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                 |                 |                 |         |                          |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0       | N/A                      |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                 |                 |                 |         |                          |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 256             | 85              | 5               | 0       | 341 ( 98.55% )           |  |
| NAA With Probe Detection   |                 |                 |                 |         |                          |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | 0               | 0               | 0               | 0       | N/A                      |  |
| By NAA With Probe Detection  |                 |                 |                 |         |                          |  |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 1               | 0               | 0               | 0       | 1 ( 100.0% )             |  |
| NAA With Probe Detection   |                 |                 |                 |         |                          |  |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 1,814           | 784             | 3               | 0       | 2,598 ( 99.88% )         |  |
| NAA With Probe Detection   |                 |                 |                 |         |                          |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | -               | -               | -               | -       | N/A                      |  |
| Immunoassay  |                 |                 |                 |         |                          |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -       | N/A                      |  |
| Rapid Immunoassay  |                 |                 |                 |         |                          |  |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*                            |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By | 2               | 3               | 0               | 0      | 5 ( 100.0% )             |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen | 4               | 2               | 0               | 0      | 6 ( 100.0% )             |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory      | 0               | 0               | 0               | 0      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By      | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By      | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | 6               | 1               | 0               | 0      | 7 ( 100.0% )             |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | 0               | 0               | 0               | 0      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | 0               | 0               | 0               | 0      | N/A                      |
| Probe Detection  |                 |                 |                 |        | •                        |
| Unknown  | 0               | 0               | 0               | 0      | N/A                      |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

|   | Algorithm 1: Inpatient (IP) Stay with Code | Positive Predictive Value (PPV)         | Sensitivity (95% Confidence |
|---|--|---|-----------------------------|
|   | Tatal Ballant Count                        | · · ·                                   | • •                         |
|   | Total Patient Count                        | (95% Confidence Interval)               | Interval)                   |
|   |  | Number (Percent)                        |                             |
| Care Setting of "Primary" Lab Test*****   |  |   |                             |
| Total Observed                            | 22,667 ( 100.0% )                          | 70.38% ( 68.70% , 72.02% )              | 93.08% (91.95%, 94.10%)     |
| Inpatient                                 | 252 ( 1.11% )                              | 76.21% (70.41%, 81.37%)                 | 97.42% (94.09%, 99.16%)     |
| Outpatient or Emergency Department        | 1,320 ( 5.82% )                            | 78 % ( 75.65% , 80.22% )                | 95.51% (94.09%, 96.67%)     |
| Other                                     | 94 ( 0.41% )                               | 66.29% (55.49%, 75.97%)                 | 100.0% (93.94%, 100.0%)     |
| Care Setting Reported as Unknown          | 6,619 ( 29.20% )                           | 61.99% (59.30%, 64.62%)                 | ****                        |
| Demographics                              |  |   |                             |
| Sex                                       |  |   |                             |
| Female                                    | 10,967 ( 48.38% )                          | 67.55% ( 64.99% , 70.03% )              | 91.83% (89.96%, 93.45%)     |
| Male                                      | 11,700 ( 51.62% )                          | 72.80% ( 70.54% , 74.96% )              | 94.10% (92.64%, 95.35%)     |
| Other/Missing                             | N/A  | N/A                                     | N/A                         |
| Age at Hospital Admission (Years)         |  |   |                             |
| 0-5                                       | 80 ( 0.35% )                               | 42.86% ( 9.90% , 81.59% )               | 75 % (19.41%, 99.37%)       |
| 6-17                                      | 140 ( 0.62% )                              | 71.43% (41.90%, 91.61%)                 | 90.91% (58.72%, 99.77%)     |
| 18-29                                     | 1,028 ( 4.54% )                            | 63.37% (55.70%, 70.57%)                 | 94.78% (88.99%, 98.06%)     |
| 30-39                                     | 1,498 ( 6.61% )                            | 71.98% (66.07%, 77.39%)                 | 92.96% (88.48%, 96.10%)     |
| 40-49                                     | 2,374 ( 10.47% )                           | 75.98% (71.38%, 80.17%)                 | 94.48% (91.31%, 96.75%)     |
| 50-59                                     | 3,863 ( 17.04% )                           | 77.15% (73.63%, 80.41%)                 | 96.16% ( 94.07% , 97.67%    |
| 60-69                                     | 4,663 ( 20.57% )                           | 74.10% (70.51%, 77.46%)                 | 94.78% (92.44%, 96.56%)     |
| 70-79                                     | 4,426 ( 19.53% )                           | 64.09% (59.73%, 68.28%)                 | 89.97% (86.39%, 92.88%)     |
| 80-89                                     | 3,304 ( 14.58% )                           | 58.72% (52.72%, 64.53%)                 | 87.30% (81.70%, 91.69%      |
| 90+                                       | 1,291 ( 5.70% )                            | 56.52% (45.78%, 66.83%)                 | 82.54% (70.90%, 90.95%)     |
| Missing                                   | N/A  | N/A                                     | N/A                         |
| Race                                      | ·  | •                                       |                             |
| American Indian or Alaska Native          | 17 ( 0.07% )                               | 100.0% (39.76%, 100.0%)                 | 100.0% (39.76%, 100.0%)     |
| Asian                                     | 54 ( 0.24% )                               | 50 % ( 21.09% , 78.91% )                | 85.71% (42.13%, 99.64%      |
| Black or African American                 | 1,128 ( 4.98% )                            | 70.15% (61.64%, 77.74%)                 | 94.95% (88.61%, 98.34%      |
| Native Hawaiian or Other Pacific Islander | N/A  | N/A                                     | N/A                         |
| White                                     | 3,292 ( 14.52% )                           | 62.78% ( 58.55% , 66.87% )              | 86.04% ( 82.22% , 89.31%    |
| Other/Mixed/Unknown                       | 18,176 ( 80.19% )                          | 72.25% ( 70.36% , 74.08% )              | 94.59% (93.42%, 95.61%      |
| ithnicity                                 | -, - (30.2075)                             | , | ( ,,,                       |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 1: Inpati   | ent (IP) Stay with Code    |                                 |                             |
|---|----------------------------|---------------------------------|-----------------------------|
|   |                            | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b> | (95% Confidence Interval)       | Interval)                   |
|   |                            | Number (Percent)                |                             |
| Hispanic  | 123 ( 0.54% )              | 86.96% (66.41%, 97.22%)         | 100.0% (83.16%, 100.0%      |
| Non-Hispanic  | 2 ( 0.01% )                | 100.0% ( 2.50%, 100.0%)         | 100.0% ( 2.50% , 100.0%     |
| Unknown   | 22,542 ( 99.45% )          | 70.24% (68.55%, 71.89%)         | 93.02% (91.88%, 94.04%      |
| Codes Observed During Inpatient Stay  |                            |                                 |                             |
| Asymptomatic screening (Z11.59)   | 449 ( 1.98% )              | 51.72% (38.22%, 65.05%)         | 75 % (58.80%, 87.31%)       |
| Contact and suspected exposure (Z20.828)  | 3,728 ( 16.45% )           | 62.20% (57.56%, 66.67%)         | 89.27% (85.34%, 92.46%      |
| Pneumonia (see Appendix B)  | 15,519 (68.47%)            | 75.26% (73.39%, 77.07%)         | 96.97% (96.04%, 97.74%      |
| Other viral pneumonia (J12.89)  | 12,458 ( 54.96% )          | 80.24% (78.30%, 82.08%)         | 99.37% ( 98.80% , 99.71%    |
| ARDS (J80)  | 1,545 ( 6.82% )            | 80.20% (74.03%, 85.46%)         | 93.10% (88.26%, 96.39%      |
| Sepsis (see Appendix C)   | 5,335 ( 23.54% )           | 69.11% (65.53%, 72.53%)         | 94.31% (91.94%, 96.16%      |
| Bronchitis (J20.8 OR J40)   | 242 ( 1.07% )              | 77.42% (58.90%, 90.41%)         | 96 % (79.65%, 99.90%)       |
| Respiratory infection (J22 OR J98.8)  | 1,104 ( 4.87% )            | 77.93% ( 70.30% , 84.39% )      | 96.58% (91.48%, 99.06%      |
| Cough (R05)   | 3,161 (13.95%)             | 74.29% ( 70.04% , 78.23% )      | 97.15% (94.82%, 98.63%      |
| Shortness of breath (R06.2)   | 88 ( 0.39% )               | 75 % (34.91%, 96.81%)           | 100.0% (54.07%, 100.0%      |
| Fever (R50.9)   | 4,007 ( 17.68% )           | 68.46% (64.56%, 72.17%)         | 95.10% (92.61%, 96.94%      |
| Optional  |                            |                                 |                             |
| Other COVID Tests   |                            |                                 |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                               | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                                 |                             |
| Fest performed, at least 1 positive result  | 324 ( 1.43% )              | 73.96% (64%, 82.38%)            | ****                        |
| Fest performed, only negative results   | 120 ( 0.53% )              | 50 % (31.30%, 68.70%)           | ****                        |
| No test or unknown result   | 16,012 ( 70.64% )          | 73 % (70.95%, 74.97%)           | 93.66% (92.30%, 94.84%      |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                               | · -                         |
| Fest performed, at least 1 positive result  | 5 ( 0.02% )                | 100.0% (39.76%, 100.0%)         | ****                        |
| Test performed, only negative results   | 6 ( 0.03% )                | 75 % (19.41% , 99.37% )         | ****                        |
| No test or unknown result   | 22,656 ( 99.95% )          | 70.33% (68.65%, 71.97%)         | ****                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            | ,                               |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,871 ( 8.25% )            | 76.13% (74.12%, 78.05%)         | 95.29% ( 94.09% , 96.31%    |
| Codes Observed During Inpatient Stay  |                            |                                 |                             |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 1,639 ( 7.23% )            | 61.30% ( 54.68% , 67.63% )      | 92.16% ( 86.70% , 95.88%    |
| of breath) OR R50.9 (fever)]  | _,005 ( 7.2570 )           | 22.2270 (33370)                 | 2=.=0/0 (00.70/0, 33.00/0   |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 1: Inpatie  | ent (IP) Stay with Code    | e U07.1*                        |                             |
|---|----------------------------|---------------------------------|-----------------------------|
|   |                            | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b> | (95% Confidence Interval)       | Interval)                   |
|   |                            | Number (Percent)                |                             |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 2,390 ( 10.54% )           | 71.92% (66.63%, 76.80%)         | 93.06% (89.12%, 95.91%)     |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                            |                                 |                             |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]    |                            |                                 |                             |
| Primary" Lab Test Product Information****                                     |                            |                                 |                             |
| 47377 - SARS_COV_2_NS   | N/A                        | N/A                             | N/A                         |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual       | N/A                        | N/A                             | N/A                         |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA            | N/A                        | N/A                             | N/A                         |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                       | N/A                        | N/A                             | N/A                         |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                       | N/A                        | N/A                             | N/A                         |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                       | N/A                        | N/A                             | N/A                         |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT                                      | N/A                        | N/A                             | N/A                         |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                         | N/A                        | N/A                             | N/A                         |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                      | N/A                        | N/A                             | N/A                         |
| 1306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 5 ( 0.02% )                | 60 % (14.66%, 94.73%)           | 100.0% ( 29.24% , 100.0%    |
| obe Detection   |                            |                                 |                             |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                             | N/A                         |
| ucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                            |                                 |                             |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                             | N/A                         |
| ucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                            |                                 |                             |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 346 ( 1.53% )              | 75.07% ( 70.13% , 79.58% )      | 91.43% (87.51%, 94.43%      |
| AA With Probe Detection   |                            |                                 |                             |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | N/A                        | N/A                             | N/A                         |
| y NAA With Probe Detection  |                            |                                 |                             |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 1(0%)                      | 100.0% ( 2.50% , 100.0% )       | 100.0% ( 2.50% , 100.0% )   |
| AA With Probe Detection   |                            |                                 |                             |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 2,601 ( 11.47% )           | 69.82% ( 68.02% , 71.58% )      | 93.31% ( 92.11% , 94.38%    |
| AA With Probe Detection   |                            |                                 |                             |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | N/A                        | N/A                             | N/A                         |
| nmunoassay  |                            |                                 |                             |
| 4507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                        | N/A                             | N/A                         |
| pid Immunoassay   |                            |                                 |                             |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*  |                     |  |  |  |  |
|--|---------------------|--|--|--|--|
|  | Total Patient Count | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |
|  | Number (Percent)    |  |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With                             | N/A                 | N/A  | N/A                                      |  |  |
| Probe Detection  |                     |  |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By                             | 5 ( 0.02% )         | 40 % ( 5.27% , 85.34% )                                      | 100.0% (15.81%, 100.0%)                  |  |  |
| NAA With Probe Detection   |                     |  |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection | 6 ( 0.03% )         | 66.67% (22.28%, 95.67%)                                      | 100.0% (39.76%, 100.0%)                  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory                                  | N/A                 | N/A  | N/A                                      |  |  |
| Specimen By NAA With Probe Detection   |                     |  |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                      | N/A                 | N/A  | N/A                                      |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                      | N/A                 | N/A  | N/A                                      |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection            | 7 ( 0.03%)          | 85.71% (42.13%, 99.64%)                                      | 85.71% (42.13%, 99.64%)                  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By                             | N/A                 | N/A  | N/A                                      |  |  |
| NAA With Probe Detection   |                     |  |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                                | N/A                 | N/A  | N/A                                      |  |  |
| Probe Detection  |                     |  |  |  |  |
| Unknown  | N/A                 | N/A  | N/A                                      |  |  |

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Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29* |                 |                 |                 |        |                         |
|---|-----------------|-----------------|-----------------|--------|-------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resul |
|   |                 | Number          |                 |        | Number (Percent)        |
| Care Setting of "Primary" Lab Test*****               |                 |                 |                 |        |                         |
| Total Observed  | 2,089           | 887             | 27              | 19,837 | 2,976 ( 13.03% )        |
| Inpatient   | 189             | 63              | 4               | N/A    | 252                     |
| Outpatient or Emergency Department                    | 1,024           | 288             | 11              | N/A    | 1,312                   |
| Other   | 59              | 30              | 5               | N/A    | 89                      |
| Care Setting Reported as Unknown                      | 817             | 506             | 7               | N/A    | 1,323                   |
| Demographics  |                 |                 |                 |        | ·                       |
| Sex   |                 |                 |                 |        |                         |
| Female  | 924             | 448             | 9               | 9,683  | 1,372 ( 12.40% )        |
| Male  | 1,165           | 439             | 18              | 10,154 | 1,604 ( 13.62% )        |
| Other/Missing   | 0               | 0               | 0               | 0      | N/A                     |
| Age at Hospital Admission (Years)                     |                 |                 |                 |        | •                       |
| 0-5   | 3               | 4               | 0               | 73     | 7 (8.75%)               |
| 6-17  | 10              | 5               | 1               | 130    | 15 ( 10.27% )           |
| 18-29   | 109             | 64              | 1               | 879    | 173 ( 16.43% )          |
| 30-39   | 186             | 72              | 3               | 1,254  | 258 ( 17.03% )          |
| 40-49   | 291             | 92              | 1               | 2,013  | 383 ( 15.98% )          |
| 50-59   | 476             | 143             | 4               | 3,266  | 619 ( 15.92% )          |
| 60-69   | 472             | 167             | 8               | 4,044  | 639 ( 13.62% )          |
| 70-79   | 325             | 181             | 5               | 3,937  | 506 ( 11.38% )          |
| 80-89   | 165             | 118             | 3               | 3,035  | 283 ( 8.52% )           |
| 90+   | 52              | 41              | 1               | 1,206  | 93 ( 7.15% )            |
| Missing   | 0               | 0               | 0               | 0      | N/A                     |
| Race  |                 |                 |                 |        | •                       |
| American Indian or Alaska Native                      | 4               | 0               | 0               | 13     | 4 ( 23.53% )            |
| Asian   | 6               | 6               | 0               | 42     | 12 ( 22.22% )           |
| Black or African American                             | 94              | 40              | 0               | 995    | 134 ( 11.87% )          |
| Native Hawaiian or Other Pacific Islander             | 0               | 0               | 0               | 0      | N/A                     |
| White   | 339             | 202             | 0               | 2,762  | 541 ( 16.38% )          |
| Other/Mixed/Unknown                                   | 1,646           | 639             | 27              | 16,025 | 2,285 ( 12.46% )        |
| Ethnicity   |                 |                 |                 |        |                         |

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Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                               |                 |                 |                 |        |                         |  |
|---|-----------------|-----------------|-----------------|--------|-------------------------|--|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resul |  |
|   | Number          |                 |                 |        | Number (Percent)        |  |
| Hispanic  | 20              | 3               | 0               | 100    | 23 ( 18.70% )           |  |
| Non-Hispanic  | 1               | 0               | 0               | 1      | 1 (50 %)                |  |
| Unknown   | 2,068           | 884             | 27              | 19,736 | 2,952 ( 13 % )          |  |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                         |  |
| Asymptomatic screening (Z11.59)   | 30              | 29              | 1               | 399    | 59 ( 12.85% )           |  |
| Contact and suspected exposure (Z20.828)  | 283             | 175             | 6               | 3,324  | 458 ( 12.09% )          |  |
| Pneumonia (see Appendix B)  | 1,634           | 539             | 21              | 13,384 | 2,173 ( 13.95% )        |  |
| Other viral pneumonia (J12.89)  | 1,409           | 347             | 20              | 10,708 | 1,756 ( 14.07% )        |  |
| ARDS (J80)  | 162             | 40              | 3               | 1,341  | 202 ( 13.07% )          |  |
| Sepsis (see Appendix C)   | 481             | 215             | 6               | 4,671  | 696 ( 12.95% )          |  |
| Bronchitis (J20.8 OR J40)   | 24              | 7               | 0               | 213    | 31 (12.70%)             |  |
| Respiratory infection (J22 OR J98.8)  | 113             | 32              | 1               | 959    | 145 ( 13.12% )          |  |
| Cough (RO5)   | 341             | 119             | 3               | 2,719  | 460 ( 14.46% )          |  |
| Shortness of breath (R06.2)   | 6               | 2               | 0               | 80     | 8 ( 9.09% )             |  |
| Fever (R50.9)   | 408             | 191             | 5               | 3,433  | 599 ( 14.84% )          |  |
| Optional  |                 |                 |                 |        |                         |  |
| Other COVID Tests   |                 |                 |                 |        |                         |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -      | -                       |  |
| observed within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |        |                         |  |
| Test performed, at least 1 positive result  | 71              | 25              | 0               | 228    | 96 ( 29.63% )           |  |
| Test performed, only negative results   | 15              | 15              | 0               | 91     | 30 ( 24.79% )           |  |
| No test or unknown result   | 1,406           | 526             | 26              | 14,212 | 1,932 ( 11.95% )        |  |
| Antigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -      | -                       |  |
| Test performed, at least 1 positive result  | 4               | 0               | 0               | 1      | 4 ( 80 % )              |  |
| Test performed, only negative results   | 3               | 1               | 0               | 2      | 4 ( 66.67% )            |  |
| No test or unknown result   | 2,082           | 886             | 27              | 19,834 | 2,968 ( 13 % )          |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 |        |                         |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,419           | 449             | 11              | 0      | 1,868 ( 99.41% )        |  |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                         |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 141             | 90              | 2               | 1,426  | 231 ( 13.92% )          |  |
| of breath) OR R50.9 (fever)]  |                 |                 |                 | •      | , ,                     |  |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                          |                 |                 |                 |         |                          |
|--|-----------------|-----------------|-----------------|---------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | Lah No Results  | No Lab  | Patients with Lab Result |
|  | Lub i ositive   | Number          | Lab, No Results | 140 Lub | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 228             | 89              | 5               | 2,084   | 317 ( 13.18% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute    |                 |                 | _               | _,,     | ( )                      |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]    |                 |                 |                 |         |                          |
| "Primary" Lab Test Product Information****                                     |                 |                 |                 |         |                          |
| 847377 - SARS_COV_2_NS   | -               | -               | -               | -       | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual       | -               | -               | -               | -       | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA            | -               | -               | -               | -       | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                       | -               | -               | -               | -       | N/A                      |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                       | -               | -               | -               | -       | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                       | -               | -               | -               | -       | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                      | -               | -               | -               | -       | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                         | -               | -               | -               | -       | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                      | -               | -               | -               | -       | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 3               | 2               | 0               | 0       | 5 ( 100.0% )             |
| Probe Detection  |                 |                 |                 |         |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0       | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                 |                 |                 |         |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0       | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                 |                 |                 |         |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 256             | 87              | 6               | 0       | 343 ( 98.28% )           |
| NAA With Probe Detection   |                 |                 |                 |         |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | 0               | 0               | 0               | 0       | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |         |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 1               | 0               | 0               | 0       | 1 ( 100.0% )             |
| NAA With Probe Detection   |                 |                 |                 |         |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 1,817           | 791             | 3               | 0       | 2,608 ( 99.89% )         |
| NAA With Probe Detection   |                 |                 |                 |         |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | -               | -               | -               | -       | N/A                      |
| Immunoassay  |                 |                 |                 |         | /-                       |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -       | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |         |                          |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                        |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 |                 |                 |        |                          |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By | 2               | 3               | 0               | 0      | 5 ( 100.0% )             |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen | 4               | 2               | 0               | 0      | 6 ( 100.0% )             |
| By NAA With Probe Detection  |                 |                 |                 |        | . ,                      |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory      | 0               | 0               | 0               | 0      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        | •                        |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By      | -               | -               | -               | _      | N/A                      |
| Immunoassay  |                 |                 |                 |        | •                        |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By      | -               | _               | _               | _      | N/A                      |
| Immunoassay  |                 |                 |                 |        | .,                       |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | 6               | 1               | 0               | 0      | 7 ( 100.0% )             |
| Non-Probe Detection  | · ·             | _               | ·               | · ·    | . ( _55.5/5 /            |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | 0               | 0               | 0               | 0      | N/A                      |
| NAA With Probe Detection   | · ·             | · ·             | ·               | · ·    | ,,.                      |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | 0               | 0               | 0               | 0      | N/A                      |
| Probe Detection  | · ·             | · ·             | J               | J      | ,,,                      |
| Unknown  | 0               | 0               | 0               | 0      | N/A                      |

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Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

|   | n 2: IP Stay with Any of Codes U07. | ·                         | C                           |
|---|-------------------------------------|---------------------------|-----------------------------|
|   |                                     |                           | Sensitivity (95% Confidence |
|   | Total Patient Count                 | •                         | Interval)                   |
|   |                                     | Number (Percent)          |                             |
| are Setting of "Primary" Lab Test*****    |                                     |                           |                             |
| otal Observed                             | 22,840 ( 100.0% )                   | 70.19% (68.52%, 71.83%)   | 93.22% (92.10%, 94.22%)     |
| Inpatient                                 | 256 ( 1.12% )                       | 75 % (69.18% , 80.22%)    | 97.42% (94.09%, 99.16%)     |
| Outpatient or Emergency Department        | 1,323 ( 5.79% )                     | 78.05% (75.71%, 80.26%)   | 95.79% (94.41%, 96.91%)     |
| Other                                     | 94 ( 0.41% )                        | 66.29% (55.49%, 75.97%)   | 100.0% (93.94%, 100.0%)     |
| Care Setting Reported as Unknown          | 6,636 ( 29.05% )                    | 61.75% (59.07%, 64.38%)   | ****                        |
| emographics                               |                                     |                           |                             |
| ex  |                                     |                           |                             |
| Female                                    | 11,064 ( 48.44% )                   | 67.35% (64.79%, 69.83%)   | 92.03% (90.18%, 93.63%)     |
| Male                                      | 11,776 ( 51.56% )                   | 72.63% (70.38%, 74.80%)   | 94.18% (92.73%, 95.42%)     |
| Other/Missing                             | N/A                                 | N/A                       | N/A                         |
| ge at Hospital Admission (Years)          |                                     |                           |                             |
| 0-5                                       | 80 ( 0.35% )                        | 42.86% ( 9.90% , 81.59% ) | 75 % (19.41%, 99.37%)       |
| 6-17                                      | 146 ( 0.64% )                       | 66.67% (38.38%, 88.18%)   | 90.91% (58.72%, 99.77%)     |
| 18-29                                     | 1,053 ( 4.61% )                     | 63.01% (55.35%, 70.21%)   | 94.78% (88.99%, 98.06%)     |
| 30-39                                     | 1,515 ( 6.63% )                     | 72.09% (66.19%, 77.48%)   | 93.47% (89.09%, 96.48%)     |
| 40-49                                     | 2,397 ( 10.49% )                    | 75.98% (71.38%, 80.17%)   | 94.48% (91.31%, 96.75%)     |
| 50-59                                     | 3,889 (17.03%)                      | 76.90% (73.37%, 80.16%)   | 96.16% (94.07%, 97.67%)     |
| 60-69                                     | 4,691 ( 20.54% )                    | 73.87% (70.28%, 77.23%)   | 94.78% (92.44%, 96.56%)     |
| 70-79                                     | 4,448 ( 19.47% )                    | 64.23% (59.88%, 68.41%)   | 90.53% (87.02%, 93.35%)     |
| 80-89                                     | 3,321 ( 14.54% )                    | 58.30% (52.32%, 64.11%)   | 87.30% (81.70%, 91.69%)     |
| 90+                                       | 1,300 ( 5.69% )                     | 55.91% (45.24%, 66.20%)   | 82.54% (70.90%, 90.95%)     |
| Missing                                   | N/A                                 | N/A                       | N/A                         |
| ace                                       |                                     |                           |                             |
| American Indian or Alaska Native          | 17 ( 0.07% )                        | 100.0% (39.76%, 100.0%)   | 100.0% (39.76%, 100.0%)     |
| Asian                                     | 54 ( 0.24% )                        | 50 % (21.09% , 78.91% )   | 85.71% ( 42.13% , 99.64% )  |
| Black or African American                 | 1,129 ( 4.94% )                     | 70.15% (61.64%, 77.74%)   | 94.95% (88.61%, 98.34%)     |
| Native Hawaiian or Other Pacific Islander | N/A                                 | N/A                       | N/A                         |
| White                                     | 3,303 ( 14.46% )                    | 62.66% (58.43%, 66.75%)   | 86.04% (82.22%, 89.31%)     |
| Willie                                    |                                     |                           | , , , , ,                   |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 2: IP Stay v  | vith Any of Codes U07.     | 1, B97.29*                    |                             |
|---|----------------------------|-------------------------------|-----------------------------|
|   |                            |                               | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            | Number (Percent)              |                             |
| Hispanic  | 123 ( 0.54% )              | 86.96% (66.41%, 97.22%)       | 100.0% (83.16%, 100.0%      |
| Non-Hispanic  | 2 ( 0.01% )                | 100.0% ( 2.50%, 100.0%)       | 100.0% ( 2.50%, 100.0%)     |
| Unknown   | 22,715 (99.45%)            | 70.05% (68.37%, 71.70%)       | 93.15% (92.02%, 94.17%      |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| Asymptomatic screening (Z11.59)   | 459 ( 2.01% )              | 50.85% (37.50%, 64.11%)       | 75 % (58.80%, 87.31%)       |
| Contact and suspected exposure (Z20.828)  | 3,788 ( 16.58% )           | 61.79% (57.17%, 66.26%)       | 89.27% (85.34%, 92.46%      |
| Pneumonia (see Appendix B)  | 15,578 ( 68.20% )          | 75.20% (73.32%, 77%)          | 96.97% (96.04%, 97.74%      |
| Other viral pneumonia (J12.89)  | 12,484 ( 54.66% )          | 80.24% (78.30%, 82.08%)       | 99.37% ( 98.80% , 99.71%    |
| ARDS (J80)  | 1,546 ( 6.77% )            | 80.20% (74.03%, 85.46%)       | 93.10% (88.26%, 96.39%      |
| Sepsis (see Appendix C)   | 5,373 ( 23.52% )           | 69.11% (65.53%, 72.53%)       | 94.31% (91.94%, 96.16%      |
| Bronchitis (J20.8 OR J40)   | 244 ( 1.07% )              | 77.42% (58.90%, 90.41%)       | 96 % (79.65%, 99.90%)       |
| Respiratory infection (J22 OR J98.8)  | 1,105 ( 4.84% )            | 77.93% ( 70.30% , 84.39% )    | 96.58% (91.48%, 99.06%      |
| Cough (R05)   | 3,182 ( 13.93% )           | 74.13% (69.87%, 78.07%)       | 97.15% ( 94.82% , 98.63%    |
| Shortness of breath (R06.2)   | 88 ( 0.39% )               | 75 % (34.91%, 96.81%)         | 100.0% (54.07%, 100.0%      |
| Fever (R50.9)   | 4,037 ( 17.68% )           | 68.11% (64.22%, 71.83%)       | 95.10% ( 92.61% , 96.94%    |
| Optional  | <u> </u>                   |                               |                             |
| Other COVID Tests   |                            |                               |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                               |                             |
| est performed, at least 1 positive result   | 324 ( 1.42% )              | 73.96% ( 64 % , 82.38% )      | ****                        |
| est performed, only negative results  | 121 ( 0.53% )              | 50 % (31.30%, 68.70%)         | ****                        |
| No test or unknown result   | 16,170 ( 70.80% )          | 72.77% ( 70.73% , 74.75% )    | 93.86% ( 92.52% , 95.02%    |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                             | · -                         |
| est performed, at least 1 positive result   | 5 ( 0.02% )                | 100.0% (39.76%, 100.0%)       | ****                        |
| est performed, only negative results  | 6 ( 0.03% )                | 75 % (19.41% , 99.37% )       | ****                        |
| No test or unknown result   | 22,829 ( 99.95% )          | 70.15% (68.47%, 71.79%)       | ****                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            | ,                             |                             |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)               | 1,879 ( 8.23% )            | 75.96% ( 73.96% , 77.89% )    | 95.49% ( 94.31% , 96.49%    |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| 720.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 1,659 ( 7.26% )            | 61.04% ( 54.42% , 67.37% )    | 92.16% ( 86.70% , 95.88%    |
| of breath) OR R50.9 (fever)]  | , ( )                      |                               | ( , , ,                     |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 2: IP Stay v  | vith Any of Codes U07.     | .1, B97.29*                   |                             |
|---|----------------------------|-------------------------------|-----------------------------|
|   |                            |                               | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            | Number (Percent)              |                             |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 2,406 ( 10.53% )           | 71.92% (66.63%, 76.80%)       | 93.06% (89.12%, 95.91%)     |
| PR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                            |                               |                             |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]    |                            |                               |                             |
| Primary" Lab Test Product Information****                                     |                            |                               |                             |
| 47377 - SARS_COV_2_NS   | N/A                        | N/A                           | N/A                         |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual       | N/A                        | N/A                           | N/A                         |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA            | N/A                        | N/A                           | N/A                         |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                       | N/A                        | N/A                           | N/A                         |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                       | N/A                        | N/A                           | N/A                         |
| '635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                       | N/A                        | N/A                           | N/A                         |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT                                      | N/A                        | N/A                           | N/A                         |
| '635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                         | N/A                        | N/A                           | N/A                         |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                      | N/A                        | N/A                           | N/A                         |
| 1306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 5 ( 0.02% )                | 60 % (14.66%, 94.73%)         | 100.0% (29.24%, 100.0%      |
| obe Detection   |                            |                               |                             |
| I307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                         |
| ucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                            |                               |                             |
| I308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                         |
| ucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                            |                               |                             |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 349 ( 1.53% )              | 74.64% (69.68%, 79.16%)       | 91.43% (87.51%, 94.43%      |
| AA With Probe Detection   |                            |                               |                             |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | N/A                        | N/A                           | N/A                         |
| / NAA With Probe Detection  |                            |                               |                             |
| 1316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 1(0%)                      | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50% , 100.0%)    |
| AA With Probe Detection   |                            |                               |                             |
| 1500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 2,611 ( 11.43% )           | 69.67% (67.87%, 71.43%)       | 93.47% ( 92.28% , 94.53%    |
| AA With Probe Detection   |                            |                               |                             |
| 1505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | N/A                        | N/A                           | N/A                         |
| nmunoassay  |                            |                               |                             |
| 4507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                        | N/A                           | N/A                         |
| apid Immunoassay  |                            |                               |                             |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                        |                     |                               |  |  |  |  |
|--|---------------------|-------------------------------|--|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|  |                     | Number (Percent)              |  |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With | N/A                 | N/A                           | N/A                                      |  |  |  |
| Probe Detection  |                     |                               |  |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By | 5 ( 0.02% )         | 40 % ( 5.27% , 85.34% )       | 100.0% (15.81%, 100.0%)                  |  |  |  |
| NAA With Probe Detection   |                     |                               |  |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen | 6 ( 0.03% )         | 66.67% ( 22.28% , 95.67% )    | 100.0% (39.76%, 100.0%)                  |  |  |  |
| By NAA With Probe Detection  |                     |                               |  |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory      | N/A                 | N/A                           | N/A                                      |  |  |  |
| Specimen By NAA With Probe Detection   |                     |                               |  |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By      | N/A                 | N/A                           | N/A                                      |  |  |  |
| Immunoassay  |                     |                               |  |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By      | N/A                 | N/A                           | N/A                                      |  |  |  |
| Immunoassay  | •                   | ,                             | ·  |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | 7 ( 0.03% )         | 85.71% ( 42.13% , 99.64% )    | 85.71% (42.13%, 99.64%)                  |  |  |  |
| Non-Probe Detection  | ,                   | ,                             | ,  |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | N/A                 | N/A                           | N/A                                      |  |  |  |
| NAA With Probe Detection   | ,                   | ,                             | ,  |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | N/A                 | N/A                           | N/A                                      |  |  |  |
| Probe Detection  | ,                   | ,                             | <b>,</b>                                 |  |  |  |
| Unknown  | N/A                 | N/A                           | N/A                                      |  |  |  |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2* |                 |                 |                 |        |                        |  |
|--|-----------------|-----------------|-----------------|--------|------------------------|--|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu |  |
|  |                 | Number          |                 |        | Number (Percent)       |  |
| Care Setting of "Primary" Lab Test*****                      |                 |                 |                 |        |                        |  |
| Total Observed   | 2,092           | 904             | 27              | 19,968 | 2,996 ( 13.03% )       |  |
| Inpatient  | 189             | 66              | 4               | N/A    | 255                    |  |
| Outpatient or Emergency Department                           | 1,025           | 288             | 11              | N/A    | 1,313                  |  |
| Other  | 59              | 34              | 5               | N/A    | 93                     |  |
| Care Setting Reported as Unknown                             | 819             | 516             | 7               | N/A    | 1,335                  |  |
| Demographics   |                 |                 |                 | ,      | ·                      |  |
| Sex  |                 |                 |                 |        |                        |  |
| Female   | 925             | 457             | 9               | 9,735  | 1,382 ( 12.42% )       |  |
| Male   | 1,167           | 447             | 18              | 10,233 | 1,614 ( 13.60% )       |  |
| Other/Missing  | 0               | 0               | 0               | 0      | N/A                    |  |
| Age at Hospital Admission (Years)                            |                 |                 |                 |        |                        |  |
| 0-5  | 3               | 4               | 0               | 74     | 7 ( 8.64% )            |  |
| 6-17   | 10              | 5               | 1               | 133    | 15 ( 10.07% )          |  |
| 18-29  | 109             | 64              | 1               | 884    | 173 ( 16.35% )         |  |
| 30-39  | 187             | 73              | 3               | 1,259  | 260 ( 17.08% )         |  |
| 40-49  | 291             | 93              | 1               | 2,021  | 384 ( 15.96% )         |  |
| 50-59  | 476             | 144             | 4               | 3,288  | 620 ( 15.85% )         |  |
| 60-69  | 472             | 172             | 8               | 4,066  | 644 (13.65%)           |  |
| 70-79  | 327             | 187             | 5               | 3,969  | 514 ( 11.45% )         |  |
| 80-89  | 165             | 121             | 3               | 3,059  | 286 ( 8.54% )          |  |
| 90+  | 52              | 41              | 1               | 1,215  | 93 ( 7.10% )           |  |
| Missing  | 0               | 0               | 0               | 0      | N/A                    |  |
| Race   |                 |                 |                 |        |                        |  |
| American Indian or Alaska Native                             | 4               | 0               | 0               | 13     | 4 ( 23.53% )           |  |
| Asian  | 6               | 6               | 0               | 43     | 12 (21.82%)            |  |
| Black or African American                                    | 95              | 41              | 0               | 1,005  | 136 ( 11.92% )         |  |
| Native Hawaiian or Other Pacific Islander                    | 0               | 0               | 0               | 0      | N/A                    |  |
| White  | 339             | 207             | 0               | 2,781  | 546 ( 16.41% )         |  |
| Other/Mixed/Unknown  | 1,648           | 650             | 27              | 16,126 | 2,298 ( 12.45% )       |  |
| Ethnicity  |                 |                 |                 |        |                        |  |

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Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 3: IP Stay with   | Any of Codes U07 | .1, B97.29, B34.2* |                 |        |   |
|---|------------------|--------------------|-----------------|--------|---|
|   | Lab Positive***  | Lab Negative***    | Lab, No Results | No Lab | Patients with Lab Resu                  |
|   |                  | Number             | ·               |        | Number (Percent)                        |
| Hispanic  | 20               | 3                  | 0               | 101    | 23 ( 18.55% )                           |
| Non-Hispanic  | 1                | 0                  | 0               | 1      | 1 (50 %)                                |
| Unknown   | 2,071            | 901                | 27              | 19,866 | 2,972 ( 13 % )                          |
| Codes Observed During Inpatient Stay  | ·                |                    |                 |        | · · · · · · · · · · · · · · · · · · ·   |
| Asymptomatic screening (Z11.59)   | 30               | 30                 | 1               | 404    | 60 ( 12.90% )                           |
| Contact and suspected exposure (Z20.828)  | 284              | 179                | 6               | 3,350  | 463 ( 12.12% )                          |
| Pneumonia (see Appendix B)  | 1,637            | 547                | 21              | 13,434 | 2,184 ( 13.97% )                        |
| Other viral pneumonia (J12.89)  | 1,409            | 348                | 20              | 10,711 | 1,757 ( 14.07% )                        |
| ARDS (J80)  | 162              | 40                 | 3               | 1,343  | 202 ( 13.05% )                          |
| Sepsis (see Appendix C)   | 481              | 220                | 6               | 4,698  | 701 (12.97%)                            |
| Bronchitis (J20.8 OR J40)   | 24               | 7                  | 0               | 213    | 31 (12.70%)                             |
| Respiratory infection (J22 OR J98.8)  | 113              | 32                 | 1               | 960    | 145 ( 13.11% )                          |
| Cough (RO5)   | 342              | 122                | 3               | 2,736  | 464 ( 14.49% )                          |
| Shortness of breath (R06.2)   | 6                | 2                  | 0               | 80     | 8 ( 9.09% )                             |
| Fever (R50.9)   | 409              | 196                | 5               | 3,457  | 605 ( 14.88% )                          |
| Optional  |                  |                    |                 |        | · ·                                     |
| Other COVID Tests   |                  |                    |                 |        |   |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                | -                  | -               | -      | -                                       |
| observed within -7 days prior to hospitalization through end of patient record**    |                  |                    |                 |        |   |
| Test performed, at least 1 positive result  | 71               | 25                 | 0               | 228    | 96 ( 29.63% )                           |
| Test performed, only negative results   | 15               | 15                 | 0               | 92     | 30 ( 24.59% )                           |
| No test or unknown result   | 1,407            | 535                | 26              | 14,304 | 1,942 ( 11.93% )                        |
| Antigen test within ±14 days from inpatient admission**                             | -                | -                  | -               | -      | -                                       |
| Test performed, at least 1 positive result  | 4                | 0                  | 0               | 1      | 4 ( 80 % )                              |
| Test performed, only negative results   | 3                | 1                  | 0               | 2      | 4 ( 66.67% )                            |
| No test or unknown result   | 2,085            | 903                | 27              | 19,965 | 2,988 ( 13 % )                          |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     | ,                |                    |                 |        | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,421            | 456                | 11              | 0      | 1,877 ( 99.42% )                        |
| Codes Observed During Inpatient Stay  |                  |                    |                 |        |   |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 142              | 91                 | 2               | 1,440  | 233 ( 13.91% )                          |
| of breath) OR R50.9 (fever)]  |                  |                    |                 | •      | , ,                                     |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                   |                 |                 |                 |        |                          |  |
|--|-----------------|-----------------|-----------------|--------|--------------------------|--|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |  |
|  |                 | Number          |                 |        | Number (Percent)         |  |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 228             | 90              | 5               | 2,086  | 318 ( 13.20% )           |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute    |                 |                 |                 |        |                          |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]    |                 |                 |                 |        |                          |  |
| "Primary" Lab Test Product Information****                                     |                 |                 |                 |        |                          |  |
| 847377 - SARS_COV_2_NS   | -               | -               | -               | -      | N/A                      |  |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual       | -               | -               | -               | -      | N/A                      |  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA            | -               | -               | -               | -      | N/A                      |  |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                       | -               | -               | -               | -      | N/A                      |  |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                       | -               | -               | -               | -      | N/A                      |  |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                       | -               | -               | -               | -      | N/A                      |  |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                      | -               | -               | -               | -      | N/A                      |  |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                         | -               | -               | -               | -      | N/A                      |  |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                      | -               | -               | -               | -      | N/A                      |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 3               | 2               | 0               | 0      | 5 ( 100.0% )             |  |
| Probe Detection  |                 |                 |                 |        |                          |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                 |                 |                 |        |                          |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                 |                 |                 |        |                          |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 256             | 92              | 6               | 0      | 348 ( 98.31% )           |  |
| NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | 0               | 0               | 0               | 0      | N/A                      |  |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |  |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 1               | 0               | 0               | 0      | 1 ( 100.0% )             |  |
| NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 1,820           | 803             | 3               | 0      | 2,623 ( 99.89% )         |  |
| NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | -               | -               | -               | -      | N/A                      |  |
| Immunoassay  |                 |                 |                 |        |                          |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |  |
| Rapid Immunoassay  |                 |                 |                 |        |                          |  |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                 |                 |                 |                 |        |                          |  |
|--|-----------------|-----------------|-----------------|--------|--------------------------|--|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |  |
|  |                 | Number          |                 |        | Number (Percent)         |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With | -               | -               | -               | -      | N/A                      |  |
| Probe Detection  |                 |                 |                 |        |                          |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By | 2               | 3               | 0               | 0      | 5 ( 100.0% )             |  |
| NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen | 4               | 2               | 0               | 0      | 6 ( 100.0% )             |  |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory      | 0               | 0               | 0               | 0      | N/A                      |  |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By      | -               | -               | -               | -      | N/A                      |  |
| Immunoassay  |                 |                 |                 |        |                          |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By      | -               | -               | -               | -      | N/A                      |  |
| Immunoassay  |                 |                 |                 |        |                          |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | 6               | 1               | 0               | 0      | 7 ( 100.0% )             |  |
| Non-Probe Detection  |                 |                 |                 |        | ,                        |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | 0               | 0               | 0               | 0      | N/A                      |  |
| NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | 0               | 0               | 0               | 0      | N/A                      |  |
| Probe Detection  |                 |                 |                 |        | •                        |  |
| Unknown  | 0               | 0               | 0               | 0      | N/A                      |  |

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Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

|   | hm 3: IP Stay with Any of Codes U07.1, E |                               | Sensitivity (95% Confidence             |
|---|--|-------------------------------|---|
|   | Total Patient Count                      | PPV (95% Confidence Interval) | Interval)                               |
|   | Total Fatient Count                      | Number (Percent)              | micrivary                               |
| Care Setting of "Primary" Lab Test*****   |  | Number (Fercent)              |   |
| Total Observed                            | 22,991 ( 100.0% )                        | 69.83% ( 68.15% , 71.47% )    | 93.35% ( 92.24% , 94.35% )              |
| Inpatient                                 | 259 ( 1.13% )                            | 74.12% (68.28%, 79.38%)       | 97.42% ( 94.09% , 99.16% )              |
| Outpatient or Emergency Department        | 1,324 ( 5.76% )                          | 78.07% ( 75.73% , 80.28% )    | 95.88% (94.51%, 96.99%)                 |
| Other                                     | 98 ( 0.43% )                             | 63.44% (52.81%, 73.19%)       | 100.0% (93.94%, 100.0%)                 |
| Care Setting Reported as Unknown          | 6,686 ( 29.08% )                         | 61.35% (58.68%, 63.97%)       | ****                                    |
| Demographics                              | ,  | ,                             |   |
| Sex                                       |  |                               |   |
| Female                                    | 11,126 ( 48.39% )                        | 66.93% (64.38%, 69.41%)       | 92.13% (90.29%, 93.72%)                 |
| Male                                      | 11,865 ( 51.61% )                        | 72.30% (70.05%, 74.48%)       | 94.34% ( 92.90% , 95.56% )              |
| Other/Missing                             | N/A                                      | N/A                           | N/A                                     |
| Age at Hospital Admission (Years)         |  |                               |   |
| 0-5                                       | 81 ( 0.35% )                             | 42.86% ( 9.90% , 81.59% )     | 75 % (19.41%, 99.37%)                   |
| 6-17                                      | 149 ( 0.65%)                             | 66.67% (38.38%, 88.18%)       | 90.91% (58.72%, 99.77%)                 |
| 18-29                                     | 1,058 ( 4.60% )                          | 63.01% (55.35%, 70.21%)       | 94.78% (88.99%, 98.06%)                 |
| 30-39                                     | 1,522 ( 6.62% )                          | 71.92% (66.04%, 77.30%)       | 93.97% (89.70%, 96.85%)                 |
| 40-49                                     | 2,406 ( 10.46% )                         | 75.78% (71.18%, 79.98%)       | 94.48% (91.31%, 96.75%)                 |
| 50-59                                     | 3,912 ( 17.02% )                         | 76.77% (73.25%, 80.04%)       | 96.16% ( 94.07% , 97.67% )              |
| 60-69                                     | 4,718 ( 20.52% )                         | 73.29% (69.70%, 76.67%)       | 94.78% ( 92.44% , 96.56% )              |
| 70-79                                     | 4,488 ( 19.52% )                         | 63.62% (59.29%, 67.79%)       | 91.09% (87.65%, 93.82%)                 |
| 80-89                                     | 3,348 ( 14.56% )                         | 57.69% (51.74%, 63.49%)       | 87.30% (81.70%, 91.69%)                 |
| 90+                                       | 1,309 ( 5.69% )                          | 55.91% (45.24%, 66.20%)       | 82.54% (70.90%, 90.95%)                 |
| Missing                                   | N/A                                      | N/A                           | N/A                                     |
| Race                                      | ·  | ,                             | ·                                       |
| American Indian or Alaska Native          | 17 ( 0.07% )                             | 100.0% (39.76%, 100.0%)       | 100.0% (39.76%, 100.0%)                 |
| Asian                                     | 55 ( 0.24% )                             | 50 % (21.09% , 78.91% )       | 85.71% ( 42.13% , 99.64% )              |
| Black or African American                 | 1,141 ( 4.96% )                          | 69.85% (61.40%, 77.42%)       | 95.96% (89.98%, 98.89%)                 |
| Native Hawaiian or Other Pacific Islander | N/A                                      | N/A                           | N/A                                     |
| White                                     | 3,327 ( 14.47% )                         | 62.09% ( 57.87% , 66.17% )    | 86.04% ( 82.22% , 89.31% )              |
| Other/Mixed/Unknown                       | 18,451 ( 80.25% )                        | 71.71% (69.82%, 73.55%)       | 94.88% (93.73%, 95.87%)                 |
| ithnicity                                 | , (=====,                                | , , , , , ,                   | , |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 3: IP Stay with   | Any of Codes UU7.1, B | 597.29, B34.2°                          |                             |
|---|-----------------------|---|-----------------------------|
|   |                       |   | Sensitivity (95% Confidence |
|   | Total Patient Count   | PPV (95% Confidence Interval)           | Interval)                   |
|   |                       | Number (Percent)                        |                             |
| Hispanic  | 124 ( 0.54% )         | 86.96% (66.41%, 97.22%)                 | 100.0% (83.16%, 100.0%)     |
| Non-Hispanic  | 2 ( 0.01% )           | 100.0% ( 2.50%, 100.0%)                 | 100.0% ( 2.50%, 100.0%)     |
| Unknown   | 22,865 ( 99.45% )     | 69.68% (68%,71.33%)                     | 93.29% (92.17%, 94.29%)     |
| Codes Observed During Inpatient Stay  |                       |   |                             |
| Asymptomatic screening (Z11.59)   | 465 ( 2.02% )         | 50 % (36.81%, 63.19%)                   | 75 % (58.80%, 87.31%)       |
| Contact and suspected exposure (Z20.828)  | 3,819 ( 16.61% )      | 61.34% (56.73%, 65.80%)                 | 89.59% (85.69%, 92.73%)     |
| Pneumonia (see Appendix B)  | 15,639 ( 68.02% )     | 74.95% (73.08%, 76.76%)                 | 97.15% (96.24%, 97.89%)     |
| Other viral pneumonia (J12.89)  | 12,488 ( 54.32% )     | 80.19% (78.25%, 82.03%)                 | 99.37% (98.80%, 99.71%)     |
| ARDS (J80)  | 1,548 ( 6.73% )       | 80.20% (74.03%, 85.46%)                 | 93.10% (88.26%, 96.39%)     |
| Sepsis (see Appendix C)   | 5,405 ( 23.51% )      | 68.62% (65.04%, 72.04%)                 | 94.31% (91.94%, 96.16%)     |
| Bronchitis (J20.8 OR J40)   | 244 ( 1.06% )         | 77.42% (58.90%, 90.41%)                 | 96 % (79.65%, 99.90%)       |
| Respiratory infection (J22 OR J98.8)  | 1,106 ( 4.81% )       | 77.93% ( 70.30% , 84.39% )              | 96.58% (91.48%, 99.06%)     |
| Cough (R05)   | 3,203 ( 13.93% )      | 73.71% (69.45%, 77.66%)                 | 97.44% (95.19%, 98.82%)     |
| Shortness of breath (R06.2)   | 88 ( 0.38% )          | 75 % ( 34.91% , 96.81% )                | 100.0% (54.07%, 100.0%)     |
| Fever (R50.9)   | 4,067 ( 17.69% )      | 67.60% (63.71%, 71.32%)                 | 95.34% ( 92.89% , 97.13%    |
| Optional  |                       |   |                             |
| Other COVID Tests   |                       |   |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | 324 ( 1.41% )         | 73.96% ( 64 % , 82.38% )                | ****                        |
| observed within -7 days prior to hospitalization through end of patient record**    |                       |   |                             |
| Test performed, at least 1 positive result  | 122 ( 0.53% )         | 50 % (31.30%, 68.70%)                   | ****                        |
| Test performed, only negative results   | 16,272 ( 70.78% )     | 72.45% (70.41%, 74.43%)                 | 93.93% ( 92.59% , 95.08% )  |
| No test or unknown result   | -                     | - · · · · · · · · · · · · · · · · · · · | · - · ·                     |
| Antigen test within ±14 days from inpatient admission**                             | 5 ( 0.02% )           | 100.0% (39.76%, 100.0%)                 | ****                        |
| Fest performed, at least 1 positive result  | 6 ( 0.03% )           | 75 % ( 19.41% , 99.37% )                | ****                        |
| Test performed, only negative results   | 22,980 ( 99.95% )     | 69.78% ( 68.10% , 71.42% )              | ****                        |
| No test or unknown result   | -                     | -                                       | -                           |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                       |   |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,888 ( 8.21% )       | 75.71% (73.70%, 77.63%)                 | 95.63% ( 94.46% , 96.61% )  |
| Codes Observed During Inpatient Stay  |                       |   |                             |
| 720.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 1,675 ( 7.29% )       | 60.94% ( 54.36% , 67.25% )              | 92.81% (87.50%, 96.36%      |
| of breath) OR R50.9 (fever)]  | , , /                 | ,,,                                     | ,,                          |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*   |                            |                               |                             |  |  |
|--|----------------------------|-------------------------------|-----------------------------|--|--|
|  |                            |                               | Sensitivity (95% Confidence |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |
|  |                            | Number (Percent)              |                             |  |  |
| 0.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 2,409 ( 10.48% )           | 71.70% (66.40%, 76.58%)       | 93.06% (89.12%, 95.91%      |  |  |
| R J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                            |                               |                             |  |  |
| spiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                            |                               |                             |  |  |
| rimary" Lab Test Product Information****   |                            |                               |                             |  |  |
| 7377 - SARS_COV_2_NS   | N/A                        | N/A                           | N/A                         |  |  |
| 008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A                        | N/A                           | N/A                         |  |  |
| 635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | N/A                        | N/A                           | N/A                         |  |  |
| 635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | N/A                        | N/A                           | N/A                         |  |  |
| 635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | N/A                        | N/A                           | N/A                         |  |  |
| 635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A                        | N/A                           | N/A                         |  |  |
| 635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A                        | N/A                           | N/A                         |  |  |
| 635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | N/A                        | N/A                           | N/A                         |  |  |
| 635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | 5 ( 0.02% )                | 60 % (14.66%, 94.73%)         | 100.0% (29.24%, 100.0%      |  |  |
| 306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | N/A                        | N/A                           | N/A                         |  |  |
| obe Detection  |                            |                               |                             |  |  |
| 307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N1 | N/A                        | N/A                           | N/A                         |  |  |
| 308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N2 | 354 ( 1.54% )              | 73.56% (68.60%, 78.12%)       | 91.43% (87.51%, 94.43%      |  |  |
| 309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By  | N/A                        | N/A                           | N/A                         |  |  |
| AA With Probe Detection  |                            |                               |                             |  |  |
| 314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen NAA With Probe Detection                                | 1(0%)                      | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50% , 100.0%     |  |  |
| 316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 2,626 ( 11.42% )           | 69.39% (67.58%, 71.15%)       | 93.62% ( 92.44% , 94.67%    |  |  |
| AA With Probe Detection  | 1-                         |                               |                             |  |  |
| 500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By A With Probe Detection                                     | N/A                        | N/A                           | N/A                         |  |  |
| 505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By munoassay  | N/A                        | N/A                           | N/A                         |  |  |
| 507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By   | N/A                        | N/A                           | N/A                         |  |  |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*   |                     |                               |  |  |  |  |
|--|---------------------|-------------------------------|--|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|  |                     | Number (Percent)              |  |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With                                 | 5 ( 0.02% )         | 40 % ( 5.27% , 85.34% )       | 100.0% (15.81%, 100.0%)                  |  |  |  |
| Probe Detection  |                     |                               |  |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | 6 ( 0.03% )         | 66.67% ( 22.28% , 95.67% )    | 100.0% (39.76%, 100.0%)                  |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | 7 ( 0.03% )         | 85.71% (42.13%, 99.64%)       | 85.71% (42.13%, 99.64%)                  |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A                 | N/A                           | N/A                                      |  |  |  |
| Unknown  | N/A                 | N/A                           | N/A                                      |  |  |  |

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Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 4: II                           | P Stay with Any of Codes U07.1, B97 | .29, B34.2, J12.81, B | 97.21*          |        |                        |
|---|-------------------------------------|-----------------------|-----------------|--------|------------------------|
|   | Lab Positive***                     | Lab Negative***       | Lab, No Results | No Lab | Patients with Lab Resu |
|   |                                     | Number                |                 |        | Number (Percent)       |
| Care Setting of "Primary" Lab Test*****   |                                     |                       |                 |        |                        |
| Total Observed                            | 2,097                               | 909                   | 27              | 20,026 | 3,006 ( 13.04% )       |
| Inpatient                                 | 190                                 | 66                    | 4               | N/A    | 256                    |
| Outpatient or Emergency Department        | 1,027                               | 290                   | 11              | N/A    | 1,317                  |
| Other                                     | 59                                  | 34                    | 5               | N/A    | 93                     |
| Care Setting Reported as Unknown          | 821                                 | 519                   | 7               | N/A    | 1,340                  |
| Demographics                              |                                     |                       |                 |        |                        |
| Sex                                       |                                     |                       |                 |        |                        |
| Female                                    | 927                                 | 461                   | 9               | 9,767  | 1,388 ( 12.43% )       |
| Male                                      | 1,170                               | 448                   | 18              | 10,259 | 1,618 ( 13.60% )       |
| Other/Missing                             | 0                                   | 0                     | 0               | 0      | N/A                    |
| Age at Hospital Admission (Years)         |                                     |                       |                 |        |                        |
| 0-5                                       | 3                                   | 4                     | 0               | 74     | 7 (8.64%)              |
| 6-17                                      | 10                                  | 5                     | 1               | 133    | 15 ( 10.07% )          |
| 18-29                                     | 110                                 | 65                    | 1               | 887    | 175 ( 16.46% )         |
| 30-39                                     | 187                                 | 73                    | 3               | 1,259  | 260 (17.08%)           |
| 40-49                                     | 291                                 | 93                    | 1               | 2,023  | 384 ( 15.95% )         |
| 50-59                                     | 478                                 | 144                   | 4               | 3,297  | 622 ( 15.86% )         |
| 60-69                                     | 473                                 | 174                   | 8               | 4,073  | 647 (13.68%)           |
| 70-79                                     | 328                                 | 188                   | 5               | 3,979  | 516 (11.47%)           |
| 80-89                                     | 165                                 | 121                   | 3               | 3,080  | 286 ( 8.49% )          |
| 90+                                       | 52                                  | 42                    | 1               | 1,221  | 94 (7.14%)             |
| Missing                                   | 0                                   | 0                     | 0               | 0      | N/A                    |
| Race                                      |                                     |                       |                 |        |                        |
| American Indian or Alaska Native          | 4                                   | 0                     | 0               | 13     | 4 ( 23.53% )           |
| Asian                                     | 6                                   | 6                     | 0               | 43     | 12 ( 21.82% )          |
| Black or African American                 | 95                                  | 42                    | 0               | 1,007  | 137 ( 11.98% )         |
| Native Hawaiian or Other Pacific Islander | 0                                   | 0                     | 0               | 0      | N/A                    |
| White                                     | 339                                 | 207                   | 0               | 2,793  | 546 ( 16.35% )         |
| Other/Mixed/Unknown                       | 1,653                               | 654                   | 27              | 16,170 | 2,307 ( 12.47% )       |
| Ethnicity                                 |                                     |                       |                 |        |                        |

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Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of  | Codes U07.1, B97. | 29, B34.2, J12.81, B | 97.21*          |        |   |
|---|-------------------|----------------------|-----------------|--------|---|
|   | Lab Positive***   | Lab Negative***      | Lab, No Results | No Lab | Patients with Lab Resu                  |
|   |                   | Number               |                 |        | Number (Percent)                        |
| Hispanic  | 20                | 3                    | 0               | 101    | 23 ( 18.55% )                           |
| Non-Hispanic  | 1                 | 0                    | 0               | 1      | 1 (50 %)                                |
| Unknown   | 2,076             | 906                  | 27              | 19,924 | 2,982 ( 13 % )                          |
| Codes Observed During Inpatient Stay  | ,                 |                      |                 |        | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| Asymptomatic screening (Z11.59)   | 30                | 30                   | 1               | 405    | 60 ( 12.88% )                           |
| Contact and suspected exposure (Z20.828)  | 284               | 181                  | 6               | 3,357  | 465 ( 12.15% )                          |
| Pneumonia (see Appendix B)  | 1,642             | 551                  | 21              | 13,479 | 2,193 ( 13.97% )                        |
| Other viral pneumonia (J12.89)  | 1,409             | 348                  | 20              | 10,712 | 1,757 ( 14.07% )                        |
| ARDS (J80)  | 163               | 40                   | 3               | 1,343  | 203 ( 13.11% )                          |
| Sepsis (see Appendix C)   | 481               | 222                  | 6               | 4,707  | 703 ( 12.98% )                          |
| Bronchitis (J20.8 OR J40)   | 24                | 7                    | 0               | 213    | 31 ( 12.70% )                           |
| Respiratory infection (J22 OR J98.8)  | 113               | 32                   | 1               | 960    | 145 ( 13.11% )                          |
| Cough (RO5)   | 342               | 122                  | 3               | 2,741  | 464 ( 14.46% )                          |
| Shortness of breath (R06.2)   | 6                 | 2                    | 0               | 80     | 8 ( 9.09% )                             |
| Fever (R50.9)   | 410               | 197                  | 5               | 3,464  | 607 ( 14.89% )                          |
| Optional  |                   |                      |                 |        | ,                                       |
| Other COVID Tests   |                   |                      |                 |        |   |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                 | -                    | -               | -      | -                                       |
| observed within -7 days prior to hospitalization through end of patient record**    |                   |                      |                 |        |   |
| Test performed, at least 1 positive result  | 71                | 25                   | 0               | 228    | 96 ( 29.63% )                           |
| Test performed, only negative results   | 15                | 15                   | 0               | 93     | 30 ( 24.39% )                           |
| No test or unknown result   | 1,412             | 539                  | 26              | 14,342 | 1,951 ( 11.96% )                        |
| Antigen test within ±14 days from inpatient admission**                             | -                 | -                    | -               | -      | · · · · ·                               |
| Test performed, at least 1 positive result  | 4                 | 0                    | 0               | 1      | 4 (80%)                                 |
| Test performed, only negative results   | 3                 | 1                    | 0               | 2      | 4 ( 66.67% )                            |
| No test or unknown result   | 2,090             | 908                  | 27              | 20,023 | 2,998 ( 13.01% )                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     | ,                 |                      |                 | ,      | ,                                       |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,422             | 458                  | 11              | 0      | 1,880 ( 99.42% )                        |
| Codes Observed During Inpatient Stay  |                   |                      |                 |        |   |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 142               | 92                   | 2               | 1,444  | 234 ( 13.93% )                          |
| of breath) OR R50.9 (fever)]  |                   |                      |                 | •      | , ,                                     |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of   | Codes U07.1, B97.2 | 29, B34.2, J12.81, B | 97.21*          |        |                          |
|--|--------------------|----------------------|-----------------|--------|--------------------------|
|  | Lab Positive***    | Lab Negative***      | Lab, No Results | No Lab | Patients with Lab Result |
|  |                    | Number               |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 228                | 90                   | 5               | 2,085  | 318 ( 13.21% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute    |                    |                      |                 | •      | , ,                      |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]    |                    |                      |                 |        |                          |
| "Primary" Lab Test Product Information****                                     |                    |                      |                 |        |                          |
| 847377 - SARS_COV_2_NS   | -                  | -                    | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual       | -                  | -                    | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA            | -                  | -                    | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                       | -                  | -                    | -               | -      | N/A                      |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                       | -                  | -                    | -               | -      | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                       | -                  | -                    | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                      | -                  | -                    | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                         | -                  | -                    | -               | -      | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                      | -                  | -                    | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 3                  | 2                    | 0               | 0      | 5 ( 100.0% )             |
| Probe Detection  |                    |                      |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0                  | 0                    | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                       |                    |                      |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0                  | 0                    | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                       |                    |                      |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 258                | 94                   | 6               | 0      | 352 ( 98.32% )           |
| NAA With Probe Detection   |                    |                      |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | 0                  | 0                    | 0               | 0      | N/A                      |
| By NAA With Probe Detection  |                    |                      |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 1                  | 0                    | 0               | 0      | 1 ( 100.0% )             |
| NAA With Probe Detection   |                    |                      |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 1,823              | 806                  | 3               | 0      | 2,629 ( 99.89% )         |
| NAA With Probe Detection   |                    |                      |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | -                  | -                    | -               | -      | N/A                      |
| Immunoassay  |                    |                      |                 |        |                          |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -                  | -                    | -               | -      | N/A                      |
| Rapid Immunoassay  |                    |                      |                 |        |                          |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21\* Lab Positive\*\*\* Lab Negative\*\*\* Lab, No Results No Lab **Patients with Lab Result** Number **Number (Percent)** 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With N/A **Probe Detection** 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By 2 0 3 0 5 (100.0%) NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen 2 0 0 6 (100.0%) By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory 0 N/A 0 0 0 Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With 6 1 0 0 7 (100.0%) Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By 0 0 0 0 N/A NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With 0 0 0 0 N/A **Probe Detection** Unknown 0 0 0 0 N/A

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Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

|   |                            |                               | Sensitivity (95% Confidence |
|---|----------------------------|-------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   | Total Patient Count        |                               | intervali                   |
| Care Setting of "Primary" Lab Test*****   |                            | Number (Percent)              |                             |
| otal Observed                             | 22.050 / 400.00/ \         | CO 700/ / CO 000/ 74 400/ \   | 02.570/ / 02.400/ 04.550/ ) |
| Inpatient                                 | 23,059 ( 100.0% )          | 69.76% (68.08%, 71.40%)       | 93.57% (92.48%, 94.55%)     |
| •   | 260 ( 1.13% )              | 74.22% (68.40%, 79.46%)       | 97.94% (94.81%, 99.44%)     |
| Outpatient or Emergency Department Other  | 1,328 ( 5.76% )            | 77.98% (75.64%, 80.19%)       | 96.07% (94.73%, 97.15%)     |
| Care Setting Reported as Unknown          | 98 ( 0.42% )               | 63.44% (52.81%, 73.19%)       | 100.0% (93.94%, 100.0%)     |
| Demographics                              | 6,710 ( 29.10% )           | 61.27% ( 58.60% , 63.89% )    | ****                        |
| ex  |                            |                               |                             |
| Female                                    | 11 164 / 40 440/ \         | 66 700/ 164 249/ 60 269/      | 02 220/ / 00 540/ 02 000/ \ |
| Male                                      | 11,164 ( 48.41% )          | 66.79% (64.24%, 69.26%)       | 92.33% (90.51%, 93.90%)     |
| Other/Missing                             | 11,895 ( 51.59% )          | 72.31% (70.06%, 74.48%)       | 94.58% (93.17%, 95.78%)     |
| ge at Hospital Admission (Years)          | N/A                        | N/A                           | N/A                         |
| 0-5                                       | 04 ( 0.35%)                | 42.050/ / 0.000/ .04.500/ )   | 75.0/ / 40.440/             |
| 6-17                                      | 81 ( 0.35% )               | 42.86% ( 9.90% , 81.59% )     | 75 % (19.41%, 99.37%)       |
| 18-29                                     | 149 ( 0.65% )              | 66.67% (38.38%, 88.18%)       | 90.91% (58.72%, 99.77%)     |
| 30-39                                     | 1,063 ( 4.61% )            | 62.86% (55.24%, 70.03%)       | 95.65% (90.15%, 98.57%)     |
|   | 1,522 ( 6.60% )            | 71.92% (66.04%, 77.30%)       | 93.97% (89.70%, 96.85%)     |
| 40-49                                     | 2,408 ( 10.44% )           | 75.78% (71.18%, 79.98%)       | 94.48% (91.31%, 96.75%)     |
| 50-59                                     | 3,923 ( 17.01% )           | 76.85% (73.33%, 80.11%)       | 96.57% (94.56%, 97.99%)     |
| 60-69                                     | 4,728 ( 20.50% )           | 73.11% (69.51%, 76.49%)       | 94.98% (92.68%, 96.73%)     |
| 70-79                                     | 4,500 ( 19.52% )           | 63.57% (59.25%, 67.73%)       | 91.36% (87.97%, 94.06%)     |
| 80-89                                     | 3,369 ( 14.61% )           | 57.69% (51.74%, 63.49%)       | 87.30% (81.70%, 91.69%)     |
| 90+<br>Mining                             | 1,316 ( 5.71% )            | 55.32% (44.71%, 65.59%)       | 82.54% (70.90%, 90.95%)     |
| Missing                                   | N/A                        | N/A                           | N/A                         |
| dace                                      |                            |                               |                             |
| American Indian or Alaska Native          | 17 ( 0.07% )               | 100.0% (39.76%, 100.0%)       | 100.0% (39.76%, 100.0%)     |
| Asian                                     | 55 ( 0.24% )               | 50 % (21.09%, 78.91%)         | 85.71% (42.13%, 99.64%)     |
| Black or African American                 | 1,144 ( 4.96% )            | 69.34% (60.90%, 76.93%)       | 95.96% (89.98%, 98.89%)     |
| Native Hawaiian or Other Pacific Islander | N/A                        | N/A                           | N/A                         |
| White Other/Mixed/Unknown                 | 3,339 ( 14.48% )           | 62.09% (57.87%, 66.17%)       | 86.04% (82.22%, 89.31%)     |
|   | 18,504 ( 80.25% )          | 71.65% (69.76%, 73.48%)       | 95.16% (94.05%, 96.12%)     |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

|   |                                       |                               | Sensitivity (95% Confidence             |
|---|---------------------------------------|-------------------------------|---|
|   | <b>Total Patient Count</b>            | PPV (95% Confidence Interval) | Interval)                               |
|   |                                       | Number (Percent)              |   |
| Hispanic  | 124 ( 0.54% )                         | 86.96% (66.41%, 97.22%)       | 100.0% (83.16%, 100.0%)                 |
| Non-Hispanic  | 2 ( 0.01% )                           | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50%, 100.0%)                 |
| Unknown   | 22,933 (99.45%)                       | 69.62% (67.93%, 71.27%)       | 93.51% (92.41%, 94.50%)                 |
| Codes Observed During Inpatient Stay  |                                       |                               |   |
| Asymptomatic screening (Z11.59)   | 466 ( 2.02% )                         | 50 % (36.81%, 63.19%)         | 75 % (58.80%, 87.31%)                   |
| Contact and suspected exposure (Z20.828)  | 3,828 ( 16.60% )                      | 61.08% (56.48%, 65.53%)       | 89.59% (85.69%, 92.73%                  |
| Pneumonia (see Appendix B)  | 15,693 ( 68.06% )                     | 74.87% (73 % , 76.68%)        | 97.45% (96.58%, 98.15%                  |
| Other viral pneumonia (J12.89)  | 12,489 (54.16%)                       | 80.19% (78.25%, 82.03%)       | 99.37% ( 98.80% , 99.71%                |
| ARDS (J80)  | 1,549 ( 6.72% )                       | 80.30% (74.15%, 85.53%)       | 93.68% (88.97%, 96.80%                  |
| Sepsis (see Appendix C)   | 5,416 (23.49%)                        | 68.42% (64.84%, 71.84%)       | 94.31% (91.94%, 96.16%                  |
| Bronchitis (J20.8 OR J40)   | 244 ( 1.06% )                         | 77.42% (58.90%, 90.41%)       | 96 % (79.65%, 99.90%)                   |
| Respiratory infection (J22 OR J98.8)  | 1,106 ( 4.80% )                       | 77.93% ( 70.30% , 84.39% )    | 96.58% (91.48%, 99.06%                  |
| lough (R05)   | 3,208 (13.91%)                        | 73.71% (69.45%, 77.66%)       | 97.44% (95.19%, 98.82%                  |
| hortness of breath (R06.2)  | 88 ( 0.38% )                          | 75 % ( 34.91% , 96.81% )      | 100.0% (54.07%, 100.0%                  |
| Fever (R50.9)   | 4,076 ( 17.68% )                      | 67.55% (63.66%, 71.26%)       | 95.57% ( 93.17% , 97.31%                |
| Optional  | · · · · · · · · · · · · · · · · · · · |                               | •                                       |
| Other COVID Tests   |                                       |                               |   |
| Intibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                                     | -                             | -                                       |
| bserved within -7 days prior to hospitalization through end of patient record**     |                                       |                               |   |
| est performed, at least 1 positive result   | 324 ( 1.41% )                         | 73.96% ( 64 % , 82.38% )      | ****                                    |
| est performed, only negative results  | 123 ( 0.53% )                         | 50 % (31.30%, 68.70%)         | ****                                    |
| lo test or unknown result   | 16,319 ( 70.77% )                     | 72.37% ( 70.33% , 74.35% )    | 94.26% ( 92.96% , 95.38%                |
| Antigen test within ±14 days from inpatient admission**                             | -                                     | -                             | · -                                     |
| est performed, at least 1 positive result   | 5 ( 0.02% )                           | 100.0% (39.76%, 100.0%)       | ****                                    |
| est performed, only negative results  | 6 ( 0.03% )                           | 75 % ( 19.41% , 99.37% )      | ****                                    |
| No test or unknown result   | 23,048 ( 99.95% )                     | 69.71% (68.03%, 71.35%)       | ****                                    |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                                       |                               |   |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)               | 1,891 ( 8.20% )                       | 75.64% ( 73.63% , 77.56% )    | 95.69% ( 94.53% , 96.67%                |
| Codes Observed During Inpatient Stay  |                                       |                               |   |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness       | 1,680 ( 7.29% )                       | 60.68% (54.11%, 66.98%)       | 92.81% (87.50%, 96.36%                  |
| of breath) OR R50.9 (fever)]  | ,,                                    | ( = , = = = -, ,              | ( = ====, , , , , , , , , , , , , , , , |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of  | Codes U07.1, B97.29, E | 334.2, J12.81, B97.21*        |                             |
|---|------------------------|-------------------------------|-----------------------------|
|   |                        |                               | Sensitivity (95% Confidence |
|   | Total Patient Count    | PPV (95% Confidence Interval) | Interval)                   |
|   |                        | Number (Percent)              |                             |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 2,408 ( 10.44% )       | 71.70% (66.40%, 76.58%)       | 93.06% (89.12%, 95.91%      |
| R J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute    |                        |                               |                             |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]    |                        |                               |                             |
| Primary" Lab Test Product Information****                                     |                        |                               |                             |
| 47377 - SARS_COV_2_NS   | N/A                    | N/A                           | N/A                         |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual       | N/A                    | N/A                           | N/A                         |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA            | N/A                    | N/A                           | N/A                         |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                       | N/A                    | N/A                           | N/A                         |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                       | N/A                    | N/A                           | N/A                         |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                       | N/A                    | N/A                           | N/A                         |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT                                      | N/A                    | N/A                           | N/A                         |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                         | N/A                    | N/A                           | N/A                         |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                      | N/A                    | N/A                           | N/A                         |
| 1306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 5 ( 0.02% )            | 60 % (14.66%, 94.73%)         | 100.0% (29.24%, 100.0%      |
| robe Detection  |                        |                               | ,                           |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                    | N/A                           | N/A                         |
| ucleic Acid Amplification Using CDC Primer-Probe Set N1                       | ·                      | ·                             | ,                           |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                    | N/A                           | N/A                         |
| ucleic Acid Amplification Using CDC Primer-Probe Set N2                       | •                      | •                             | •                           |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By      | 358 ( 1.55% )          | 73.30% (68.35%, 77.85%)       | 92.14% (88.35%, 95.01%      |
| AA With Probe Detection   | ,                      | , , ,                         | ,                           |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | N/A                    | N/A                           | N/A                         |
| y NAA With Probe Detection  | ·                      | ·                             | •                           |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 1(0%)                  | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50% , 100.0%     |
| AA With Probe Detection   | , ,                    | , , ,                         | ,                           |
| 1500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By      | 2,632 ( 11.41% )       | 69.34% ( 67.54% , 71.10% )    | 93.78% ( 92.61% , 94.81%    |
| AA With Probe Detection   | , ( :-/0 )             | ,,,,                          | 11                          |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By    | N/A                    | N/A                           | N/A                         |
| nmunoassay  | ,                      | ,                             | ,                           |
| 1507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                    | N/A                           | N/A                         |
| apid Immunoassay  | ,                      | ,                             | ,                           |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 4: IP Stay with Any of   | Codes U07.1, B97.29, E | B34.2, J12.81, B97.21*        |  |
|--|------------------------|-------------------------------|--|
|  | Total Patient Count    | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|  |                        | Number (Percent)              |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With | N/A                    | N/A                           | N/A                                      |
| Probe Detection  |                        |                               |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By | 5 ( 0.02% )            | 40 % ( 5.27% , 85.34% )       | 100.0% (15.81%, 100.0%)                  |
| NAA With Probe Detection   |                        | ,                             |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen | 6 ( 0.03% )            | 66.67% ( 22.28% , 95.67% )    | 100.0% (39.76%, 100.0%)                  |
| By NAA With Probe Detection  | , ,                    | ,                             | , , ,                                    |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory      | N/A                    | N/A                           | N/A                                      |
| Specimen By NAA With Probe Detection   | •                      | ,                             | ·  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By      | N/A                    | N/A                           | N/A                                      |
| Immunoassay  | ·                      | •                             | •  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By      | N/A                    | N/A                           | N/A                                      |
| Immunoassay  | •                      | ,                             | ·  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | 7 ( 0.03% )            | 85.71% (42.13%, 99.64%)       | 85.71% (42.13%, 99.64%)                  |
| Non-Probe Detection  | ,                      | ,                             | , , ,                                    |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By | N/A                    | N/A                           | N/A                                      |
| NAA With Probe Detection   | •                      | ,                             | ,  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With    | N/A                    | N/A                           | N/A                                      |
| Probe Detection  | ,                      | ,                             | ,  |
| Unknown  | N/A                    | N/A                           | N/A                                      |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.1    |                 |        |                 |        |                        |
|---|-----------------|--------|-----------------|--------|------------------------|
|   | Lab Positive*** |        | Lab, No Results | No Lab | Patients with Lab Resu |
| Care Setting of "Primary" Lab Test*****   |                 | Number |                 |        | Number (Percent)       |
| Total Observed                            | 1,653           | 546    | 23              | 13,654 | 2,199 ( 13.85% )       |
| Inpatient                                 | 125             | 35     | 4               | N/A    | 160                    |
| Outpatient or Emergency Department        | 875             | 195    | 9               | N/A    | 1,070                  |
| Other                                     | 40              | 22     | 4               | N/A    | 62                     |
| Care Setting Reported as Unknown          | 613             | 294    | 6               | N/A    | 907                    |
| Demographics                              | 013             | 234    | <u> </u>        | IN/A   | 507                    |
| Sex                                       |                 |        |                 |        |                        |
| Female                                    | 691             | 255    | 5               | 6,218  | 946 ( 13.20% )         |
| Male                                      | 962             | 291    | 18              | 7,436  | 1,253 ( 14.39% )       |
| Other/Missing                             | 0               | 0      | 0               | 0      | N/A                    |
| Age at Hospital Admission (Years)         | -               | _      | -               |        |                        |
| 0-5                                       | 0               | 0      | 0               | 9      | N/A                    |
| 6-17                                      | 3               | 4      | 1               | 31     | 7 ( 17.95% )           |
| 18-29                                     | 66              | 30     | 0               | 381    | 96 ( 20.13% )          |
| 30-39                                     | 137             | 35     | 2               | 764    | 172 ( 18.34% )         |
| 40-49                                     | 249             | 58     | 1               | 1,491  | 307 ( 17.07% )         |
| 50-59                                     | 413             | 99     | 3               | 2,484  | 512 ( 17.07% )         |
| 60-69                                     | 379             | 115    | 8               | 2,992  | 494 ( 14.14% )         |
| 70-79                                     | 254             | 118    | 4               | 2,723  | 372 ( 12 % )           |
| 80-89                                     | 118             | 65     | 3               | 2,013  | 183 ( 8.32% )          |
| 90+                                       | 34              | 22     | 1               | 766    | 56 ( 6.80% )           |
| Missing                                   | 0               | 0      | 0               | 0      | N/A                    |
| Race                                      |                 |        |                 |        | ,                      |
| American Indian or Alaska Native          | 0               | 0      | 0               | 9      | 0 (0.00%)              |
| Asian                                     | 5               | 4      | 0               | 33     | 9 ( 21.43% )           |
| Black or African American                 | 72              | 26     | 0               | 654    | 98 ( 13.03% )          |
| Native Hawaiian or Other Pacific Islander | 0               | 0      | 0               | 0      | N/A                    |
| White                                     | 254             | 115    | 0               | 1,813  | 369 ( 16.91% )         |
| Other/Mixed/Unknown                       | 1,322           | 401    | 23              | 11,145 | 1,723 ( 13.37% )       |
| Ethnicity                                 | ·               |        |                 | -      | ,                      |

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Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]* |                 |                 |                 |          |                        |  |
|--|-----------------|-----------------|-----------------|----------|------------------------|--|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab   | Patients with Lab Resu |  |
|  |                 | Number          |                 |          | Number (Percent)       |  |
| Hispanic   | 16              | 3               | 0               | 73       | 19 ( 20.65% )          |  |
| Non-Hispanic   | 1               | 0               | 0               | 1        | 1 (50 %)               |  |
| Unknown  | 1,636           | 543             | 23              | 13,580   | 2,179 (13.81%)         |  |
| Codes Observed During Inpatient Stay   |                 |                 |                 |          |                        |  |
| Asymptomatic screening (Z11.59)  | 19              | 14              | 0               | 209      | 33 ( 13.64% )          |  |
| Contact and suspected exposure (Z20.828)   | 252             | 134             | 6               | 2,525    | 386 (13.23%)           |  |
| Pneumonia (see Appendix B)   | 1,649           | 545             | 22              | 13,577   | 2,194 ( 13.89% )       |  |
| Other viral pneumonia (J12.89)   | 1,420           | 349             | 21              | 10,844   | 1,769 ( 14 % )         |  |
| ARDS (J80)   | 162             | 40              | 3               | 1,353    | 202 ( 12.97% )         |  |
| Sepsis (see Appendix C)  | 442             | 173             | 7               | 3,989    | 615 ( 13.34% )         |  |
| Bronchitis (J20.8 OR J40)  | 18              | 3               | 1               | 153      | 21 ( 12 % )            |  |
| Respiratory infection (J22 OR J98.8)   | 92              | 20              | 1               | 711      | 112 (13.59%)           |  |
| Cough (R05)  | 293             | 100             | 3               | 2,186    | 393 ( 15.22% )         |  |
| Shortness of breath (R06.2)  | 4               | 1               | 0               | 57       | 5 ( 8.06% )            |  |
| Fever (R50.9)  | 354             | 140             | 5               | 2,717    | 494 ( 15.36% )         |  |
| Optional   |                 |                 |                 |          |                        |  |
| Other COVID Tests  |                 |                 |                 |          |                        |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing)                                      |                 |                 |                 |          |                        |  |
| observed within -7 days prior to hospitalization through end of patient record**   |                 |                 |                 |          |                        |  |
| Test performed, at least 1 positive result   | 61              | 18              | 0               | 169      | 79 ( 31.85% )          |  |
| Test performed, only negative results  | 11              | 10              | 0               | 57       | 21 ( 26.92% )          |  |
| No test or unknown result  | 1,130           | 327             | 22              | 9,889    | 1,457 ( 12.82% )       |  |
| Antigen test within ±14 days from inpatient admission**  | <i>.</i><br>-   | -               | -               | -        | -                      |  |
| Test performed, at least 1 positive result   | 4               | 0               | 0               | 1        | 4 ( 80 % )             |  |
| Test performed, only negative results  | 2               | 1               | 0               | 1        | 3 (75 %)               |  |
| No test or unknown result  | 1,647           | 545             | 23              | 13,652   | 2,192 ( 13.81% )       |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection  | ,               |                 |                 | <u> </u> | , , ,                  |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)   | 1,177           | 299             | 9               | 0        | 1,476 ( 99.39% )       |  |
| Codes Observed During Inpatient Stay   |                 |                 |                 |          |                        |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness  | 122             | 75              | 2               | 1,143    | 197 ( 14.68% )         |  |
| of breath) OR R50.9 (fever)]   |                 |                 |                 |          | •                      |  |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]* |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 228             | 89              | 5               | 2,047  | 317 ( 13.38% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  |                 |                 |                 | •      | , ,                      |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****   |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS   | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | -               | -               | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | -               | -               | -               | -      | N/A                      |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | -               | -               | -               | -      | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT  | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | -               | -               | -               | -      | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | 2               | 0               | 0               | 0      | 2 ( 100.0% )             |
| Probe Detection  |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1   |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 0               | 0               | 0               | 0      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2   |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By  | 160             | 52              | 4               | 0      | 212 ( 98.15% )           |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | 0               | 0               | 0               | 0      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | 1               | 0               | 0               | 0      | 1 ( 100.0% )             |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By  | 1,484           | 488             | 2               | 0      | 1,972 ( 99.90% )         |
| NAA With Probe Detection   |                 |                 |                 |        | _                        |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By   | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia\*\* OR Acute Respiratory Distress Syndrome (ARDS) (J80)]\* Lab Positive\*\*\* Lab Negative\*\*\* Lab, No Results No Lab **Patients with Lab Result** Number Number (Percent) 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With N/A **Probe Detection** 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By 2 0 3 0 5 (100.0%) NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen 1 1 0 0 2 (100.0%) By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory 0 N/A 0 0 0 Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With 3 1 0 0 4 (100.0%) Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By 0 0 0 0 N/A NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With 0 0 0 0 N/A **Probe Detection** Unknown 0 0 0 0 N/A

cder ssq wp003



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

|   |                            |                               | Sensitivity (95% Confidence |
|---|----------------------------|-------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   | Number (Percent)           | Per                           | cent                        |
| re Setting of "Primary" Lab Test*****     |                            |                               |                             |
| tal Observed                              | 15,876 ( 100.0% )          | 75.17% ( 73.31% , 76.96% )    | 73.76% (71.89%, 75.57%)     |
| Inpatient                                 | 164 ( 1.03% )              | 78.13% (70.91%, 84.27%)       | 64.43% (57.26%, 71.16%)     |
| Outpatient or Emergency Department        | 1,079 ( 6.80% )            | 81.78% (79.33%, 84.05%)       | 81.85% (79.41%, 84.12%)     |
| Other                                     | 66 ( 0.42% )               | 64.52% (51.34%, 76.26%)       | 67.80% (54.36%, 79.38%)     |
| Care Setting Reported as Unknown          | 4,452 ( 28.04% )           | 67.59% (64.43%, 70.63%)       | ****                        |
| emographics                               |                            |                               |                             |
| X   |                            |                               |                             |
| Female                                    | 7,169 ( 45.16% )           | 73.04% (70.10%, 75.85%)       | 68.82% (65.86%, 71.68%)     |
| Male                                      | 8,707 ( 54.84% )           | 76.78% (74.34%, 79.09%)       | 77.77% (75.35%, 80.06%)     |
| Other/Missing                             | N/A                        | N/A                           | N/A                         |
| ge at Hospital Admission (Years)          |                            |                               |                             |
| 0-5                                       | 9 ( 0.06% )                | N/A                           | N/A                         |
| 6-17                                      | 39 ( 0.25% )               | 42.86% ( 9.90% , 81.59% )     | 27.27% ( 6.02% , 60.97% )   |
| 18-29                                     | 477 ( 3 % )                | 68.75% (58.48%, 77.82%)       | 57.39% (47.83%, 66.56%)     |
| 30-39                                     | 938 ( 5.91% )              | 79.65% (72.85%, 85.40%)       | 68.84% (61.91%, 75.21%)     |
| 40-49                                     | 1,799 ( 11.33% )           | 81.11% (76.27%, 85.33%)       | 80.84% (76 %, 85.09%)       |
| 50-59                                     | 2,999 ( 18.89% )           | 80.66% ( 76.97% , 84 % )      | 83.43% (79.86%, 86.60%)     |
| 60-69                                     | 3,494 ( 22.01% )           | 76.72% (72.74%, 80.38%)       | 76.10% (72.11%, 79.79%)     |
| 70-79                                     | 3,099 ( 19.52% )           | 68.28% ( 63.28% , 72.98% )    | 70.75% (65.75%, 75.41%)     |
| 80-89                                     | 2,199 ( 13.85% )           | 64.48% (57.08%, 71.40%)       | 62.43% (55.11%, 69.36%)     |
| 90+                                       | 823 ( 5.18% )              | 60.71% (46.75%, 73.50%)       | 53.97% (40.94%, 66.61%)     |
| Missing                                   | N/A                        | N/A                           | N/A                         |
| nce                                       |                            |                               |                             |
| American Indian or Alaska Native          | 9 ( 0.06% )                | N/A                           | N/A                         |
| Asian                                     | 42 ( 0.26% )               | 55.56% (21.20%, 86.30%)       | 71.43% (29.04%, 96.33%      |
| Black or African American                 | 752 ( 4.74% )              | 73.47% (63.59%, 81.88%)       | 72.73% (62.85%, 81.20%)     |
| Native Hawaiian or Other Pacific Islander | N/A                        | N/A                           | N/A                         |
| White                                     | 2,182 ( 13.74% )           | 68.83% (63.84%, 73.53%)       | 64.47% (59.52%, 69.20%      |
| Other/Mixed/Unknown                       | 12,891 ( 81.20% )          | 76.73% ( 74.66% , 78.70% )    | 76.11% (74.03%, 78.10%      |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

|  | .1 OR B97.29] and [Pne     |                               | Sensitivity (95% Confidence |
|--|----------------------------|-------------------------------|-----------------------------|
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|  | Number (Percent)           |                               | cent                        |
| Hispanic   | 92 ( 0.58% )               | 84.21% (60.42%, 96.62%)       | 80 % (56.34%, 94.27%)       |
| Non-Hispanic   | 2 ( 0.01% )                | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50% , 100.0%)    |
| Unknown  | 15,782 ( 99.41% )          | 75.08% (73.21%, 76.88%)       | 73.69% (71.81%, 75.52%      |
| Codes Observed During Inpatient Stay   | , \                        |                               | ,                           |
| symptomatic screening (Z11.59)   | 242 ( 1.52% )              | 57.58% (39.22%, 74.52%)       | 47.50% (31.51%, 63.87%      |
| Contact and suspected exposure (Z20.828)   | 2,917 ( 18.37% )           | 65.28% ( 60.30% , 70.03% )    | 79.50% (74.63%, 83.80%      |
| neumonia (see Appendix B)  | 15,793 ( 99.48% )          | 75.16% ( 73.30% , 76.96% )    | 97.86% (97.05%, 98.50%      |
| other viral pneumonia (J12.89)   | 12,634 ( 79.58% )          | 80.27% ( 78.34% , 82.10% )    | ****                        |
| RDS (J80)  | 1,558 ( 9.81% )            | 80.20% (74.03%, 85.46%)       | 93.10% (88.26%, 96.39%      |
| epsis (see Appendix C)   | 4,611 (29.04%)             | 71.87% (68.14%, 75.39%)       | 86.67% (83.41%, 89.50%      |
| Fronchitis (J20.8 OR J40)  | 175 ( 1.10% )              | 85.71% (63.66%, 96.95%)       | 72 % (50.61%, 87.93%)       |
| espiratory infection (J22 OR J98.8)  | 824 ( 5.19% )              | 82.14% (73.78%, 88.74%)       | 78.63% (70.09%, 85.67%      |
| ough (R05)   | 2,582 ( 16.26% )           | 74.55% (69.95%, 78.79%)       | 83.48% (79.17%, 87.21%      |
| hortness of breath (R06.2)   | 62 ( 0.39% )               | 80 % ( 28.36% , 99.49% )      | 66.67% (22.28%, 95.67%      |
| ever (R50.9)   | 3,216 ( 20.26% )           | 71.66% ( 67.46% , 75.60% )    | 82.52% (78.59%, 85.99%      |
| Optional Opt | <u> </u>                   | · · ·                         | ,                           |
| ther COVID Tests   |                            |                               |                             |
| ntibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing)   | -                          | -                             | -                           |
| bserved within -7 days prior to hospitalization through end of patient record**  |                            |                               |                             |
| est performed, at least 1 positive result  | 248 ( 1.56% )              | 77.22% (66.40%, 85.90%)       | ****                        |
| est performed, only negative results   | 78 ( 0.49% )               | 52.38% (29.78%, 74.29%)       | 84.62% (54.55%, 98.08%      |
| Io test or unknown result  | 11,368 ( 71.60% )          | 77.56% (75.33%, 79.68%)       | 75.43% (73.17%, 77.60%      |
| Intigen test within ±14 days from inpatient admission**  | -                          | · -                           | · -                         |
| est performed, at least 1 positive result  | 5 ( 0.03% )                | 100.0% (39.76%, 100.0%)       | ****                        |
| est performed, only negative results   | 4 ( 0.03% )                | 66.67% ( 9.43% , 99.16% )     | ****                        |
| lo test or unknown result  | 15,867 ( 99.94% )          | 75.14% (73.27%, 76.93%)       | ****                        |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection   | , , , , ,                  | ,                             |                             |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)  | 1,485 ( 9.35% )            | 79.74% (77.60%, 81.77%)       | 79.21% (77.05%, 81.24%      |
| Codes Observed During Inpatient Stay   |                            |                               |                             |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 1,342 ( 8.45% )            | 61.93% (54.76%, 68.74%)       | 79.74% ( 72.49% , 85.80%    |
| f breath) OR R50.9 (fever)]  | _,5 ( 55,0 )               |                               | 1211 1/2 (12112/2) 05100/0  |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]* |                            |                               |                             |  |  |
|--|----------------------------|-------------------------------|-----------------------------|--|--|
|  |                            |                               | Sensitivity (95% Confidence |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |
|  | Number (Percent)           | Per                           | cent                        |  |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)        | 2,369 ( 14.92% )           | 71.92% (66.63%, 76.80%)       | 93.06% (89.12%, 95.91%      |  |  |
| R J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute         |                            |                               |                             |  |  |
| spiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]          |                            |                               |                             |  |  |
| Primary" Lab Test Product Information****  |                            |                               |                             |  |  |
| .7377 - SARS_COV_2_NS  | N/A                        | N/A                           | N/A                         |  |  |
| 008 - Blood Count; Blood Smear, Microscopic Examination Without Manual             | N/A                        | N/A                           | N/A                         |  |  |
| 635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA                  | N/A                        | N/A                           | N/A                         |  |  |
| 635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                             | N/A                        | N/A                           | N/A                         |  |  |
| 635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                             | N/A                        | N/A                           | N/A                         |  |  |
| 635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                             | N/A                        | N/A                           | N/A                         |  |  |
| 635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A                        | N/A                           | N/A                         |  |  |
| 635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                               | N/A                        | N/A                           | N/A                         |  |  |
| 635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                            | N/A                        | N/A                           | N/A                         |  |  |
| 306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With         | 2 ( 0.01% )                | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16%     |  |  |
| obe Detection  |                            |                               |                             |  |  |
| 307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By         | N/A                        | N/A                           | N/A                         |  |  |
| cleic Acid Amplification Using CDC Primer-Probe Set N1                             |                            |                               |                             |  |  |
| 308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By         | N/A                        | N/A                           | N/A                         |  |  |
| cleic Acid Amplification Using CDC Primer-Probe Set N2                             |                            |                               |                             |  |  |
| 309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By            | 216 ( 1.36% )              | 75.47% (69.11%, 81.11%)       | 57.14% (51.12%, 63.01%      |  |  |
| AA With Probe Detection  |                            |                               |                             |  |  |
| 314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen         | N/A                        | N/A                           | N/A                         |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |
| 316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By         | 1 ( 0.01% )                | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50% , 100.0%     |  |  |
| A With Probe Detection   |                            |                               |                             |  |  |
| 500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By            | 1,974 ( 12.43% )           | 75.25% ( 73.29% , 77.14% )    | 76.34% ( 74.38% , 78.21%    |  |  |
| A With Probe Detection   |                            |                               |                             |  |  |
| 505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By          | N/A                        | N/A                           | N/A                         |  |  |
| munoassay  |                            |                               |                             |  |  |
| 507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By       | N/A                        | N/A                           | N/A                         |  |  |
| pid Immunoassay  |                            |                               |                             |  |  |



Table 1f. Aggregated Baseline Table for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between May 1, 2020 and September 25, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]* |                            |                               |                             |  |  |  |
|--|----------------------------|-------------------------------|-----------------------------|--|--|--|
|  |                            |                               | Sensitivity (95% Confidence |  |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |  |
|  | Number (Percent)           | Per                           | cent                        |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With       | N/A                        | N/A                           | N/A                         |  |  |  |
| Probe Detection  |                            |                               |                             |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By       | 5 ( 0.03% )                | 40 % ( 5.27% , 85.34% )       | 100.0% (15.81%, 100.0%)     |  |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen       | 2 ( 0.01% )                | 50 % ( 1.26% , 98.74% )       | 25 % ( 0.63% , 80.59% )     |  |  |  |
| By NAA With Probe Detection  |                            |                               |                             |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory            | N/A                        | N/A                           | N/A                         |  |  |  |
| Specimen By NAA With Probe Detection   |                            |                               |                             |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By            | N/A                        | N/A                           | N/A                         |  |  |  |
| Immunoassay  |                            |                               |                             |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By            | N/A                        | N/A                           | N/A                         |  |  |  |
| Immunoassay  |                            |                               |                             |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With          | 4 ( 0.03% )                | 75 % (19.41%, 99.37%)         | 42.86% ( 9.90% , 81.59% )   |  |  |  |
| Non-Probe Detection  |                            |                               |                             |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By       | N/A                        | N/A                           | N/A                         |  |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With          | N/A                        | N/A                           | N/A                         |  |  |  |
| Probe Detection  |                            |                               |                             |  |  |  |
| Unknown  | N/A                        | N/A                           | N/A                         |  |  |  |

<sup>\*</sup>Includes only the first algorithm-qualifying inpatient stay per algorithm per patient.

Includes one test result per encounter - positive if patient had at least one positive NAA result; negative if all NAA results are negative (during test window, from any type of specimen/site).

<sup>\*\*</sup> COVID NAA, antibody, and antigen tests are identified using LOINCs or any other identifier available in the data.

<sup>\*\*\*</sup>Any NAA result in 14 days prior through 14 days after inpatient encounter during which the COVID diagnosis codes were recorded.

<sup>&</sup>quot;Primary" test result will be the first positive molecular test within the ±14-day window, or the last negative molecular test within the ±14-day window among patients with no positive test.

<sup>\*\*\*\*</sup>Only the "primary" lab test, as defined above, is described

<sup>\*\*\*\*\*</sup>Sensitivity not calculated because algorithm cohort NAA-positive patient count is larger than laboratory result cohort NAA-positive patient count. This is a result of a different visit being used to describe characteristics among the lab-based cohort and the algorithm-based cohort.

<sup>\*\*\*\*\*\*</sup>Sum across care settings does not equal total observed because care setting was not reported for some patients.



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Care Setting of "Primary" Lab Test\*\*\*\*\* **Total Observed** Inpatient **Outpatient or Emergency Department** Other Care Setting Reported as Unknown **Demographics** Sex Female Male Other/Missing Age at Hospital Admission (Years) 0-5 6-17 18-29 30-39 40-49 50-59 60-69 70-79 80-89 90+ Missing Race American Indian or Alaska Native Asian Black or African American Native Hawaiian or Other Pacific Islander White Other/Mixed/Unknown 

cder\_ssq\_wp003

Ethnicity



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | <b>Patients Positive</b> | Lab Tests Positive | <b>Patients Negative</b> | Lab Tests Negative |  |
|---|--------------------------|--------------------|--------------------------|--------------------|--|
|   | Number                   |                    |                          |                    |  |
| Hispanic  | 50                       | 63                 | 48                       | 58                 |  |
| Non-Hispanic  | 256                      | 324                | 608                      | 700                |  |
| Unknown   | 89                       | 96                 | 142                      | 173                |  |
| Codes Observed During Inpatient Stay  |                          |                    |                          |                    |  |
| Asymptomatic screening (Z11.59)   | 12                       | 14                 | 25                       | 26                 |  |
| Contact and suspected exposure (Z20.828)  | 68                       | 93                 | 159                      | 206                |  |
| neumonia (see Appendix B)   | 275                      | 428                | 310                      | 378                |  |
| Other viral pneumonia (J12.89)  | 275                      | 373                | 21                       | 26                 |  |
| ARDS (J80)  | 100                      | 135                | 14                       | 18                 |  |
| epsis (see Appendix C)  | 135                      | 219                | 256                      | 308                |  |
| ronchitis (J20.8 OR J40)  | 10                       | 13                 | 9                        | 14                 |  |
| espiratory infection (J22 OR J98.8)   | 32                       | 43                 | 11                       | 14                 |  |
| Cough (RO5)   | 63                       | 80                 | 102                      | 130                |  |
| hortness of breath (R06.2)  | 1                        | 2                  | 6                        | 9                  |  |
| Fever (R50.9)   | 93                       | 116                | 109                      | 133                |  |
| <b>Optional</b>   |                          |                    |                          |                    |  |
| Other COVID Tests   |                          |                    |                          |                    |  |
| intibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                        | -                  | -                        | -                  |  |
| bserved within -7 days prior to hospitalization through end of patient record**     |                          |                    |                          |                    |  |
| est performed, at least 1 positive result   | 6                        | 7                  | 0                        | 0                  |  |
| est performed, only negative results  | 0                        | 0                  | 10                       | 12                 |  |
| lo test or unknown result   | 150                      | 168                | 544                      | 597                |  |
| antigen test within ±14 days from inpatient admission**                             | -                        | -                  | -                        | -                  |  |
| est performed, at least 1 positive result   | 0                        | 0                  | 0                        | 0                  |  |
| est performed, only negative results  | 0                        | 0                  | 0                        | 0                  |  |
| No test or unknown result   | 33                       | 38                 | 397                      | 435                |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                          |                    |                          |                    |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 241                      | 320                | 376                      | 481                |  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness 23 29 28 34 of breath) OR R50.9 (fever)] Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) 39 48 8 9 OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] "Primary" Lab Test Product Information\*\*\*\* 847377 - SARS COV 2 NS 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA 17 17 24 24 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR 107 120 134 150 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA 87635R - SARS-CoV-2, NAA (COVID-19), POCT 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19) 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With **Probe Detection** 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N1 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N2 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA With Probe Detection 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen By NAA With Probe Detection 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By NAA With Probe Detection 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA 2 52 69 With Probe Detection 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By

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**Immunoassay** 



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason)

| All Nucleic Acid Amplification (NAA) Lab Tests. COVID NAA Test Within 114 L           | 4 Days from Hospital Admission Date for impatient (IP) Stay (Admitted for Arry Reason) |                    |                   |                    |  |
|---|--|--------------------|-------------------|--------------------|--|
|   | Patients Positive  | Lab Tests Positive | Patients Negative | Lab Tests Negative |  |
|   |  | Nun                | nber              |                    |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By        | -  | -                  | -                 | -                  |  |
| Rapid Immunoassay   |  |                    |                   |                    |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With          | -  | -                  | -                 | -                  |  |
| Probe Detection   |  |                    |                   |                    |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By          | -  | -                  | -                 | -                  |  |
| NAA With Probe Detection  |  |                    |                   |                    |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen          | -  | -                  | -                 | -                  |  |
| By NAA With Probe Detection   |  |                    |                   |                    |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory               | 0  | 0                  | 0                 | 0                  |  |
| Specimen By NAA With Probe Detection  |  |                    |                   |                    |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By               | -  | -                  | -                 | -                  |  |
| Immunoassay   |  |                    |                   |                    |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By               | -  | -                  | -                 | -                  |  |
| Immunoassay 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With |  |                    |                   |                    |  |
| Non-Probe Detection   | -  | -                  | -                 | -                  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By          |  |                    |                   |                    |  |
| NAA With Probe Detection  | -  | -                  | -                 | -                  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With             | _  | _                  | _                 | _                  |  |
| Probe Detection   |  |                    |                   |                    |  |
| Unknown   | 31   | 32                 | 345               | 366                |  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1* |                 |                   |                 |         |                          |
|---|-----------------|-------------------|-----------------|---------|--------------------------|
|   | Lab Positive*** | · Lab Negative*** | Lab, No Results | No Lab  | Patients with Lab Result |
|   | Lab Positive    | Number            |                 | INO Lab | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****           |                 | Number            |                 |         | Number (Fercent)         |
| Total Observed                                    | 226             | 5                 | 0               | 49      | 231 ( 82.50% )           |
| Inpatient   | 93              | 3                 | 0               | N/A     | 96                       |
| Outpatient or Emergency Department                | 50              | 2                 | 0               | N/A     | 52                       |
| Other   | 3               | 0                 | 0               | N/A     | 3                        |
| Care Setting Reported as Unknown                  | 27              | 0                 | 0               | N/A     | 27                       |
| Demographics                                      |                 | -                 | -               | ,       |                          |
| Sex   |                 |                   |                 |         |                          |
| Female  | 86              | 2                 | 0               | 19      | 88 ( 82.24% )            |
| Male  | 140             | 3                 | 0               | 24      | 143 (85.63%)             |
| Other/Missing                                     | 0               | 0                 | 0               | 0       | N/A                      |
| Age at Hospital Admission (Years)                 |                 |                   |                 |         | ,                        |
| 0-5   | 0               | 0                 | 0               | 0       | N/A                      |
| 6-17  | 0               | 0                 | 0               | 0       | N/A                      |
| 18-29   | 2               | 0                 | 0               | 0       | 2 ( 100.0% )             |
| 30-39   | 6               | 1                 | 0               | 4       | 7 (63.64%)               |
| 40-49   | 21              | 0                 | 0               | 3       | 21 (87.50%)              |
| 50-59   | 53              | 2                 | 0               | 7       | 55 (88.71%)              |
| 60-69   | 60              | 2                 | 0               | 9       | 62 ( 87.32% )            |
| 70-79   | 47              | 0                 | 0               | 12      | 47 ( 79.66% )            |
| 80-89   | 29              | 0                 | 0               | 7       | 29 ( 80.56% )            |
| 90+   | 8               | 0                 | 0               | 1       | 8 ( 88.89% )             |
| Missing   | 0               | 0                 | 0               | 0       | N/A                      |
| Race  |                 |                   |                 |         |                          |
| American Indian or Alaska Native                  | 1               | 0                 | 0               | 0       | 1 ( 100.0% )             |
| Asian   | 20              | 1                 | 0               | 3       | 21 (87.50%)              |
| Black or African American                         | 69              | 1                 | 0               | 24      | 70 ( 74.47% )            |
| Native Hawaiian or Other Pacific Islander         | 1               | 0                 | 0               | 0       | 1 ( 100.0% )             |
| White   | 94              | 2                 | 0               | 7       | 96 ( 93.20% )            |
| Other/Mixed/Unknown                               | 41              | 1                 | 0               | 9       | 42 ( 82.35% )            |
| Ethnicity   |                 |                   |                 |         |                          |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*                                   |                 |                 |                 |        |                        |
|---|-----------------|-----------------|-----------------|--------|------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu |
|   |                 | Number          |                 |        | Number (Percent)       |
| Hispanic  | 28              | 0               | 0               | 3      | 28 ( 90.32% )          |
| Non-Hispanic  | 144             | 4               | 0               | 18     | 148 (89.16%)           |
| Unknown   | 54              | 1               | 0               | 22     | 55 (71.43%)            |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        | ·                      |
| Asymptomatic screening (Z11.59)   | 8               | 0               | 0               | 3      | 8 ( 72.73% )           |
| Contact and suspected exposure (Z20.828)  | 46              | 4               | 0               | 10     | 50 (83.33%)            |
| Pneumonia (see Appendix B)  | 165             | 5               | 0               | 29     | 170 (85.43%)           |
| Other viral pneumonia (J12.89)  | 180             | 5               | 0               | 33     | 185 ( 84.86% )         |
| ARDS (J80)  | 88              | 2               | 0               | 10     | 90 ( 90 % )            |
| Sepsis (see Appendix C)   | 100             | 2               | 0               | 15     | 102 (87.18%)           |
| Bronchitis (J20.8 OR J40)   | 3               | 0               | 0               | 0      | 3 (100.0%)             |
| Respiratory infection (J22 OR J98.8)  | 16              | 0               | 0               | 3      | 16 (84.21%)            |
| Cough (RO5)   | 37              | 1               | 0               | 9      | 38 ( 80.85% )          |
| Shortness of breath (R06.2)   | 1               | 0               | 0               | 0      | 1 ( 100.0% )           |
| Fever (R50.9)   | 60              | 2               | 0               | 11     | 62 ( 84.93% )          |
| Optional  |                 |                 |                 |        |                        |
| Other COVID Tests   |                 |                 |                 |        |                        |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -      | -                      |
| observed within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |        |                        |
| est performed, at least 1 positive result   | 2               | 0               | 0               | 0      | 2 ( 100.0% )           |
| est performed, only negative results  | 0               | 0               | 0               | 0      | N/A                    |
| No test or unknown result   | 90              | 1               | 0               | 32     | 91 ( 73.98% )          |
| Antigen test within ±14 days from inpatient admission**                             | -               | _               | -               | _      | -                      |
| est performed, at least 1 positive result   | 0               | 0               | 0               | 0      | N/A                    |
| est performed, only negative results  | 0               | 0               | 0               | 0      | N/A                    |
| No test or unknown result   | 22              | 0               | 0               | 0      | 22 ( 100.0% )          |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 | -      | (                      |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 140             | 4               | 0               | 3      | 144 ( 97.96% )         |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*                             |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 17              | 1               | 0               | 4      | 18 ( 81.82% )            |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 32              | 1               | 0               | 11     | 33 ( 75 % )              |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****                                    |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 2               | -               | -               | -      | 2 ( 100.0% )             |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 68              | 1               | -               | -      | 69 ( 100.0% )            |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | -               | -               | -               | -      | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | -               | -               | -               | -      | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | -               | -               | -               | -      | N/A                      |
| Probe Detection   |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By     | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By     | 2               | 0               | 0               | 0      | 2 ( 100.0% )             |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*                              |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 |                 |                 |        |                          |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 0               | 0               | 0               | 0      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| Unknown  | 20              | 0               | 0               | 0      | 20 ( 100.0% )            |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Algorithm 1: Inpatient (IP) Stay with Code | e U07.1*                        |                             |  |  |
|---|--|---------------------------------|-----------------------------|--|--|
|   |  | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |  |  |
|   | <b>Total Patient Count</b>                 | (95% Confidence Interval)       | Interval)                   |  |  |
|   |  | Number (Percent)                |                             |  |  |
| Care Setting of "Primary" Lab Test*****   |  |                                 |                             |  |  |
| Total Observed                            | 280 ( 100.0% )                             | 97.84% ( 95.02% , 99.29% )      | 57.22% (52.17%, 62.15%)     |  |  |
| Inpatient                                 | 96 ( 34.29% )                              | 96.88% (91.14%, 99.35%)         | 53.76% (46.03%, 61.35%)     |  |  |
| Outpatient or Emergency Department        | 52 ( 18.57% )                              | 96.15% (86.79%, 99.53%)         | 41.32% (32.45%, 50.63%)     |  |  |
| Other                                     | 3 ( 1.07% )                                | 100.0% (29.24%, 100.0%)         | 50 % (11.81%, 88.19%)       |  |  |
| Care Setting Reported as Unknown          | 27 ( 9.64% )                               | 100.0% (87.23%, 100.0%)         | 62.79% (46.73%, 77.02%)     |  |  |
| Demographics                              |  |                                 |                             |  |  |
| Sex                                       |  |                                 |                             |  |  |
| Female                                    | 107 ( 38.21% )                             | 97.73% (92.03%, 99.72%)         | 50.89% (43.10%, 58.65%)     |  |  |
| Male                                      | 167 ( 59.64% )                             | 97.90% (93.99%, 99.57%)         | 61.95% (55.27%, 68.30%)     |  |  |
| Other/Missing                             | N/A  | N/A                             | N/A                         |  |  |
| Age at Hospital Admission (Years)         |  |                                 |                             |  |  |
| 0-5                                       | N/A  | N/A                             | N/A                         |  |  |
| 6-17                                      | N/A  | N/A                             | N/A                         |  |  |
| 18-29                                     | 2 ( 0.71% )                                | 100.0% (15.81%, 100.0%)         | 22.22% ( 2.81% , 60.01% )   |  |  |
| 30-39                                     | 11 ( 3.93% )                               | 85.71% (42.13%, 99.64%)         | 37.50% (15.20%, 64.57%)     |  |  |
| 40-49                                     | 24 ( 8.57% )                               | 100.0% (83.89%, 100.0%)         | 48.84% (33.31%, 64.54%)     |  |  |
| 50-59                                     | 62 ( 22.14% )                              | 96.36% (87.47%, 99.56%)         | 62.35% (51.18%, 72.64%)     |  |  |
| 60-69                                     | 71 ( 25.36% )                              | 96.77% (88.83%, 99.61%)         | 61.22% (50.85%, 70.90%)     |  |  |
| 70-79                                     | 59 ( 21.07% )                              | 100.0% (92.45%, 100.0%)         | 55.29% (44.11%, 66.09%)     |  |  |
| 80-89                                     | 36 ( 12.86% )                              | 100.0% (88.06%, 100.0%)         | 65.91% (50.08%, 79.51%)     |  |  |
| 90+                                       | 9 ( 3.21% )                                | 100.0% (63.06%, 100.0%)         | 57.14% (28.86%, 82.34%)     |  |  |
| Missing                                   | N/A  | N/A                             | N/A                         |  |  |
| Race                                      | ·  | ·                               |                             |  |  |
| American Indian or Alaska Native          | 1 ( 0.36% )                                | 100.0% ( 2.50% , 100.0% )       | 33.33% ( 0.84% , 90.57% )   |  |  |
| Asian                                     | 24 ( 8.57% )                               | 95.24% (76.18%, 99.88%)         | 71.43% (51.33%, 86.78%)     |  |  |
| Black or African American                 | 94 ( 33.57% )                              | 98.57% ( 92.30% , 99.96% )      | 58.47% (49.04%, 67.47%)     |  |  |
| Native Hawaiian or Other Pacific Islander | 1 ( 0.36% )                                | 100.0% ( 2.50% , 100.0% )       | 50 % ( 1.26% , 98.74% )     |  |  |
| White                                     | 103 ( 36.79% )                             | 97.92% (92.68%, 99.75%)         | 54.02% (46.32%, 61.59%)     |  |  |
| Other/Mixed/Unknown                       | 51 ( 18.21% )                              | 97.62% (87.43%, 99.94%)         | 58.57% (46.17%, 70.23%)     |  |  |
| Ethnicity                                 |  |                                 |                             |  |  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | ient (IP) Stay with Code | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |  |
|---|--------------------------|---------------------------------|-----------------------------|--|
|   | Total Patient Count      | (95% Confidence Interval)       | Interval)                   |  |
|   |                          | Number (Percent)                |                             |  |
| Hispanic  | 31 ( 11.07% )            | 100.0% (87.66%, 100.0%)         | 56 % (41.25%, 70.01%)       |  |
| Non-Hispanic  | 166 ( 59.29% )           | 97.30% (93.22%, 99.26%)         | 56.25% (49.94%, 62.42%      |  |
| Unknown   | 77 ( 27.50% )            | 98.18% (90.28%, 99.95%)         | 60.67% (49.75%, 70.87%      |  |
| Codes Observed During Inpatient Stay  |                          | · ·                             | ,                           |  |
| Asymptomatic screening (Z11.59)   | 11 ( 3.93% )             | 100.0% (63.06%, 100.0%)         | 66.67% (34.89%, 90.08%      |  |
| Contact and suspected exposure (Z20.828)  | 60 (21.43%)              | 92 % ( 80.77% , 97.78% )        | 67.65% (55.21%, 78.49%      |  |
| Pneumonia (see Appendix B)  | 199 (71.07%)             | 97.06% ( 93.27% , 99.04% )      | 60 % (53.95%, 65.84%)       |  |
| Other viral pneumonia (J12.89)  | 218 ( 77.86% )           | 97.30% (93.81%, 99.12%)         | 65.45% (59.51%, 71.06%      |  |
| ARDS (J80)  | 100 (35.71%)             | 97.78% (92.20%, 99.73%)         | 88 % (79.98%, 93.64%)       |  |
| Sepsis (see Appendix C)   | 117 (41.79%)             | 98.04% (93.10%, 99.76%)         | 74.07% (65.83%, 81.23%      |  |
| Bronchitis (J20.8 OR J40)   | 3 ( 1.07% )              | 100.0% (29.24%, 100.0%)         | 30 % ( 6.67% , 65.25% )     |  |
| Respiratory infection (J22 OR J98.8)  | 19 ( 6.79%)              | 100.0% (79.41%, 100.0%)         | 50 % (31.89%, 68.11%)       |  |
| Cough (R05)   | 47 (16.79%)              | 97.37% (86.19%, 99.93%)         | 58.73% (45.62%, 70.99%      |  |
| Shortness of breath (R06.2)   | 1 ( 0.36% )              | 100.0% ( 2.50% , 100.0% )       | 100.0% ( 2.50% , 100.0%)    |  |
| Fever (R50.9)   | 73 ( 26.07% )            | 96.77% (88.83%, 99.61%)         | 64.52% (53.91%, 74.17%      |  |
| Optional  |                          |                                 |                             |  |
| Other COVID Tests   |                          |                                 |                             |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                        | -                               | -                           |  |
| observed within -7 days prior to hospitalization through end of patient record**    |                          |                                 |                             |  |
| Test performed, at least 1 positive result  | 2 ( 0.71% )              | 100.0% (15.81%, 100.0%)         | 33.33% ( 4.33% , 77.72%)    |  |
| Test performed, only negative results   | N/A                      | N/A                             | N/A                         |  |
| No test or unknown result   | 123 (43.93%)             | 98.90% ( 94.03% , 99.97% )      | 60 % (51.69%, 67.90%)       |  |
| Antigen test within ±14 days from inpatient admission**                             | -                        | -                               | -                           |  |
| est performed, at least 1 positive result   | N/A                      | N/A                             | N/A                         |  |
| est performed, only negative results  | N/A                      | N/A                             | N/A                         |  |
| No test or unknown result   | 22 ( 7.86% )             | 100.0% (84.56%, 100.0%)         | 66.67% (48.17%, 82.04%      |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                          |                                 |                             |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 147 ( 52.50% )           | 97.22% (93.04%, 99.24%)         | 58.09% (51.59%, 64.39%      |  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 1: Inpati   | ent (IP) Stay with Code | e U07.1*                        |                             |
|---|-------------------------|---------------------------------|-----------------------------|
|   |                         | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |
|   | Total Patient Count     | (95% Confidence Interval)       | Interval)                   |
|   |                         | Number (Percent)                |                             |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness  | 22 ( 7.86% )            | 94.44% (72.71%, 99.86%)         | 73.91% (51.59%, 89.77%)     |
| f breath) OR R50.9 (fever)]   |                         |                                 |                             |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 44 ( 15.71% )           | 96.97% (84.24%, 99.92%)         | 82.05% (66.47%, 92.46%)     |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                         |                                 |                             |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  Primary" Lab Test Product Information**** |                         |                                 |                             |
| •   |                         | 21/2                            |                             |
| 47377 - SARS_COV_2_NS<br>5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual                      | N/A                     | N/A                             | N/A                         |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | N/A                     | N/A                             | N/A                         |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 2 ( 0.71% )             | 100.0% (15.81%, 100.0%)         | 11.76% ( 1.46% , 36.44% )   |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | 69 ( 24.64% )           | 98.55% (92.19%, 99.96%)         | 63.55% (53.69%, 72.64%)     |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A<br>N/A              | N/A<br>N/A                      | N/A<br>N/A                  |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A<br>N/A              | N/A<br>N/A                      | N/A<br>N/A                  |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | N/A                     | N/A<br>N/A                      | N/A                         |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | N/A                     | N/A<br>N/A                      | N/A<br>N/A                  |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | N/A                     | N/A                             | N/A                         |
| robe Detection  | N/A                     | N/A                             | 14/7                        |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                     | N/A                             | N/A                         |
| ucleic Acid Amplification Using CDC Primer-Probe Set N1   | 14/71                   | 14//                            | 14/71                       |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                     | N/A                             | N/A                         |
| ucleic Acid Amplification Using CDC Primer-Probe Set N2   |                         | ,                               |                             |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By  | N/A                     | N/A                             | N/A                         |
| AA With Probe Detection   | •                       | ,                               | •                           |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | N/A                     | N/A                             | N/A                         |
| y NAA With Probe Detection  |                         |                                 |                             |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                     | N/A                             | N/A                         |
| AA With Probe Detection   |                         |                                 |                             |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By  | 2 ( 0.71% )             | 100.0% (15.81%, 100.0%)         | 100.0% (15.81%, 100.0%)     |
| AA With Probe Detection   |                         |                                 |                             |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | N/A                     | N/A                             | N/A                         |
| nmunoassay  |                         |                                 |                             |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*  |                     |  |  |  |  |
|--|---------------------|--|--|--|--|
|  | Total Patient Count | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |
|  |                     | Number (Percent)   |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay             | N/A                 | N/A  | N/A                                      |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                 | N/A  | N/A                                      |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A                 | N/A  | N/A                                      |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                 | N/A  | N/A                                      |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | N/A                 | N/A  | N/A                                      |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A  | N/A                                      |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A  | N/A                                      |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A                 | N/A  | N/A                                      |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                 | N/A  | N/A                                      |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A                 | N/A  | N/A                                      |  |  |
| Unknown  | 20 ( 7.14% )        | 100.0% (83.16%, 100.0%)                                      | 64.52% ( 45.37% , 80.77% )               |  |  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29* |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   |                 |                 |                 |        |                          |
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****               |                 |                 |                 |        |                          |
| Total Observed  | 351             | 21              | 4               | 96     | 372 ( 78.81% )           |
| Inpatient   | 141             | 14              | 0               | N/A    | 155                      |
| Outpatient or Emergency Department                    | 83              | 3               | 0               | N/A    | 86                       |
| Other   | 5               | 0               | 1               | N/A    | 5                        |
| Care Setting Reported as Unknown                      | 38              | 2               | 0               | N/A    | 40                       |
| Demographics  |                 |                 |                 |        |                          |
| Sex   |                 |                 |                 |        |                          |
| Female  | 147             | 9               | 3               | 41     | 156 ( 78 % )             |
| Male  | 204             | 12              | 1               | 37     | 216 ( 85.04% )           |
| Other/Missing   | 0               | 0               | 0               | 0      | N/A                      |
| Age at Hospital Admission (Years)                     |                 |                 |                 |        |                          |
| 0-5   | 0               | 0               | 0               | 3      | 0 (0.00%)                |
| 6-17  | 0               | 0               | 0               | 0      | N/A                      |
| 18-29   | 6               | 1               | 0               | 2      | 7 ( 77.78% )             |
| 30-39   | 14              | 2               | 1               | 5      | 16 (72.73%)              |
| 40-49   | 39              | 3               | 0               | 12     | 42 (77.78%)              |
| 50-59   | 80              | 5               | 2               | 10     | 85 ( 87.63% )            |
| 60-69   | 88              | 4               | 0               | 15     | 92 ( 85.98% )            |
| 70-79   | 74              | 4               | 0               | 19     | 78 ( 80.41% )            |
| 80-89   | 38              | 1               | 0               | 9      | 39 (81.25%)              |
| 90+   | 12              | 0               | 1               | 1      | 12 ( 85.71% )            |
| Missing   | 0               | 0               | 0               | 0      | N/A                      |
| Race  | -               | -               | -               | -      | ,                        |
| American Indian or Alaska Native                      | 2               | 0               | 0               | 0      | 2 ( 100.0% )             |
| Asian   | 27              | 1               | 0               | 6      | 28 ( 82.35% )            |
| Black or African American                             | 106             | 4               | 0               | 35     | 110 ( 75.86% )           |
| Native Hawaiian or Other Pacific Islander             | 2               | 0               | 0               | 0      | 2 ( 100.0% )             |
| White   | 151             | 13              | 3               | 21     | 164 (87.23%)             |
| Other/Mixed/Unknown                                   | 63              | 3               | 1               | 16     | 66 ( 79.52% )            |
| Ethnicity   |                 |                 |                 |        | , ,                      |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| 07.1, B97.29*   |                 |        |                                       |
|-----------------|-----------------|--------|---------------------------------------|
| Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu                |
| Number          |                 |        | Number (Percent)                      |
| 1               | 0               | 8      | 45 ( 84.91% )                         |
| 16              | 4               | 33     | 242 (86.74%)                          |
| 4               | 0               | 37     | 85 ( 69.67% )                         |
|                 |                 |        | · · · · · · · · · · · · · · · · · · · |
| 0               | 0               | 4      | 10 ( 71.43% )                         |
| 7               | 0               | 13     | 66 (83.54%)                           |
| 15              | 1               | 41     | 262 (86.18%)                          |
| 8               | 3               | 48     | 274 (84.31%)                          |
| 2               | 1               | 13     | 102 (87.93%)                          |
| 8               | 0               | 22     | 132 (85.71%)                          |
| 0               | 1               | 1      | 9 ( 81.82% )                          |
| 0               | 0               | 3      | 30 ( 90.91% )                         |
| 3               | 0               | 14     | 60 (81.08%)                           |
| 0               | 0               | 0      | 1 (100.0%)                            |
| 3               | 0               | 19     | 85 (81.73%)                           |
|                 |                 |        | · ,                                   |
|                 |                 |        |                                       |
| -               | -               | -      | -                                     |
|                 |                 |        |                                       |
| 0               | 0               | 1      | 6 (85.71%)                            |
| 0               | 0               | 0      | N/A                                   |
| 5               | 1               | 50     | 143 (73.71%)                          |
| -               | -               | -      | · -                                   |
| 0               | 0               | 0      | N/A                                   |
| 0               | 0               | 0      | N/A                                   |
| 1               | 1               | 1      | 34 ( 94.44% )                         |
|                 |                 |        |                                       |
| 15              | 1               | 4      | 226 ( 97.84% )                        |
|                 | 15              | 15 1   | 15 1 4                                |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                         |                 |                 |                 |         |                          |
|---|-----------------|-----------------|-----------------|---------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab  | Patients with Lab Result |
|   | Lab i ositive   | Number          | Lub, No Nesures | 140 Lub | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 21              | 1               | 0               | 7       | 22 ( 75.86% )            |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |         | , ,                      |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 39              | 1               | 0               | 12      | 40 ( 76.92% )            |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |         |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |         |                          |
| "Primary" Lab Test Product Information****                                    |                 |                 |                 |         |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -       | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -               | -               | -               | -       | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 14              | 1               | -               | -       | 15 ( 100.0% )            |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 97              | 3               | -               | -       | 100 ( 100.0% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | -               | -               | -               | -       | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -               | -               | -               | -       | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -               | -               | -               | -       | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | -               | -               | -               | -       | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -               | -               | -               | -       | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | -               | -               | -               | -       | N/A                      |
| Probe Detection   |                 |                 |                 |         |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -       | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                 |                 |                 |         |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -       | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                 |                 |                 |         |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By     | -               | -               | -               | -       | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |         |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | -               | -               | -               | -       | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |         |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -       | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |         |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By     | 2               | 0               | 0               | 0       | 2 ( 100.0% )             |
| NAA With Probe Detection  |                 |                 |                 |         |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -               | -               | -               | -       | N/A                      |
| Immunoassay   |                 |                 |                 |         |                          |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                          |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 |                 |                 |        |                          |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 0               | 0               | 0               | 0      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection  |                 |                 |                 |        | _                        |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 | _               |        | / / >                    |
| Unknown  | 31              | 1               | 1               | 1      | 32 ( 94.12% )            |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29* |                            |                               |                             |
|---|----------------------------|-------------------------------|-----------------------------|
|   |                            |                               | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            | Number (Percent)              |                             |
| Care Setting of "Primary" Lab Test*****               |                            |                               |                             |
| Total Observed  | 472 ( 100.0% )             | 94.35% (91.50%, 96.47%)       | 88.86% (85.34%, 91.79%)     |
| Inpatient   | 155 ( 32.84% )             | 90.97% (85.31%, 94.97%)       | 81.50% (74.90%, 86.99%)     |
| Outpatient or Emergency Department                    | 86 ( 18.22% )              | 96.51% (90.14%, 99.27%)       | 68.60% (59.53%, 76.73%)     |
| Other   | 6 ( 1.27% )                | 100.0% (47.82%, 100.0%)       | 83.33% (35.88%, 99.58%)     |
| Care Setting Reported as Unknown                      | 41 ( 8.69% )               | 95 % (83.08%, 99.39%)         | 88.37% (74.92%, 96.11%)     |
| Demographics  |                            |                               |                             |
| Sex   |                            |                               |                             |
| Female  | 200 ( 42.37% )             | 94.23% (89.33%, 97.33%)       | 86.98% (80.96%, 91.66%)     |
| Male  | 254 ( 53.81% )             | 94.44% (90.50%, 97.10%)       | 90.27% (85.63%, 93.80%)     |
| Other/Missing   | N/A                        | N/A                           | N/A                         |
| Age at Hospital Admission (Years)                     |                            |                               |                             |
| 0-5   | 3 ( 0.64% )                | N/A                           | N/A                         |
| 6-17  | N/A                        | N/A                           | N/A                         |
| 18-29   | 9 ( 1.91% )                | 85.71% (42.13%, 99.64%)       | 66.67% (29.93%, 92.51%)     |
| 30-39   | 22 ( 4.66% )               | 87.50% (61.65%, 98.45%)       | 87.50% (61.65%, 98.45%)     |
| 40-49   | 54 ( 11.44% )              | 92.86% (80.52%, 98.50%)       | 90.70% (77.86%, 97.41%)     |
| 50-59   | 97 ( 20.55% )              | 94.12% (86.80%, 98.06%)       | 94.12% (86.80%, 98.06%)     |
| 60-69   | 107 ( 22.67% )             | 95.65% (89.24%, 98.80%)       | 89.80% (82.03%, 95%)        |
| 70-79   | 97 ( 20.55% )              | 94.87% (87.39%, 98.59%)       | 87.06% ( 78.02% , 93.36% )  |
| 80-89   | 48 ( 10.17% )              | 97.44% (86.52%, 99.94%)       | 86.36% (72.65%, 94.83%)     |
| 90+   | 14 ( 2.97% )               | 100.0% (73.54%, 100.0%)       | 85.71% (57.19%, 98.22%)     |
| Missing   | N/A                        | N/A                           | N/A                         |
| Race  |                            |                               |                             |
| American Indian or Alaska Native                      | 2 ( 0.42% )                | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )   |
| Asian   | 34 ( 7.20% )               | 96.43% (81.65%, 99.91%)       | 96.43% (81.65%, 99.91%)     |
| Black or African American                             | 145 (30.72%)               | 96.36% ( 90.95% , 99 % )      | 89.83% (82.91%, 94.63%)     |
| Native Hawaiian or Other Pacific Islander             | 2 ( 0.42% )                | 100.0% (15.81%, 100.0%)       | 100.0% (15.81%, 100.0%)     |
| White   | 188 ( 39.83% )             | 92.07% (86.83%, 95.71%)       | 86.78% (80.83%, 91.43%)     |
| Other/Mixed/Unknown                                   | 83 ( 17.58% )              | 95.45% (87.29%, 99.05%)       | 90 % (80.48%, 95.88%)       |
| Ethnicity   |                            |                               |                             |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Total Dations Count | DDV (OF9) Confidence Internal) | Sensitivity (95% Confidence             |
|---|---------------------|--------------------------------|---|
|   | Total Patient Count | PPV (95% Confidence Interval)  | Interval)                               |
| Hispanic  | 52 / 44 220/ \      | Number (Percent)               | 00.0/ / 75.500/ 05.470/ )               |
| ·   | 53 ( 11.23% )       | 97.78% (88.23%, 99.94%)        | 88 % (75.69%, 95.47%)                   |
| Non-Hispanic<br>Unknown   | 279 ( 59.11% )      | 93.39% (89.49%, 96.17%)        | 88.28% (83.69%, 91.95%                  |
| Codes Observed During Inpatient Stay  | 122 ( 25.85% )      | 95.29% (88.39%, 98.70%)        | 91.01% (83.05%, 96.04%)                 |
| Asymptomatic screening (Z11.59)   | 44/2070/            | 100.00/ / 50.450/ 100.00/ )    | 02 220/ / 54 500/ 07 040/               |
| · ·   | 14 ( 2.97% )        | 100.0% (69.15%, 100.0%)        | 83.33% (51.59%, 97.91%                  |
| Contact and suspected exposure (Z20.828)  | 79 ( 16.74% )       | 89.39% (79.36%, 95.63%)        | 86.76% (76.36%, 93.77%)                 |
| Pneumonia (see Appendix B)  | 304 ( 64.41% )      | 94.27% (90.73%, 96.76%)        | 89.82% (85.62%, 93.13%                  |
| Other viral pneumonia (J12.89)  | 325 ( 68.86% )      | 97.08% (94.33%, 98.73%)        | 96.73% (93.88%, 98.49%                  |
| ARDS (J80)  | 116 ( 24.58% )      | 98.04% (93.10%, 99.76%)        | 100.0% (96.38%, 100.0%                  |
| Sepsis (see Appendix C)   | 154 ( 32.63% )      | 93.94% (88.41%, 97.35%)        | 91.85% (85.89%, 95.86%                  |
| Bronchitis (J20.8 OR J40)   | 11 ( 2.33% )        | 100.0% (66.37%, 100.0%)        | 90 % (55.50%, 99.75%)                   |
| Respiratory infection (J22 OR J98.8)  | 33 ( 6.99% )        | 100.0% (88.43%, 100.0%)        | 93.75% ( 79.19% , 99.23%                |
| Cough (RO5)   | 74 ( 15.68% )       | 95 % (86.08%, 98.96%)          | 90.48% ( 80.41% , 96.42%                |
| Shortness of breath (R06.2)   | 1 ( 0.21% )         | 100.0% ( 2.50% , 100.0% )      | 100.0% ( 2.50%, 100.0%)                 |
| Fever (R50.9)   | 104 ( 22.03% )      | 96.47% (90.03%, 99.27%)        | 88.17% ( 79.82% , 93.95%                |
| Optional  |                     |                                |   |
| Other COVID Tests   |                     |                                |   |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                   | -                              | -                                       |
| observed within -7 days prior to hospitalization through end of patient record**    |                     |                                |   |
| Fest performed, at least 1 positive result  | 7 ( 1.48% )         | 100.0% (54.07%, 100.0%)        | 100.0% (54.07%, 100.0%                  |
| Test performed, only negative results   | N/A                 | N/A                            | N/A                                     |
| No test or unknown result   | 194 (41.10%)        | 96.50% ( 92.03% , 98.86% )     | 92 % (86.44%, 95.80%)                   |
| Antigen test within ±14 days from inpatient admission**                             | -                   | - · ·                          | <u>-</u>                                |
| Test performed, at least 1 positive result  | N/A                 | N/A                            | N/A                                     |
| Test performed, only negative results   | N/A                 | ,<br>N/A                       | N/A                                     |
| No test or unknown result   | 36 ( 7.63% )        | 97.06% ( 84.67% , 99.93% )     | 100.0% (89.42%, 100.0%                  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     | , ,                 | , , ,                          | , |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 231 ( 48.94% )      | 93.36% ( 89.29% , 96.24% )     | 87.55% ( 82.71% , 91.44%                |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 2: IP Stay v  | with Any of Codes U07. | .1, B97.29*                   |  |
|---|------------------------|-------------------------------|--|
|   | Total Patient Count    | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|   |                        | Number (Percent)              |  |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 29 ( 6.14% )           | 95.45% (77.16%, 99.88%)       | 91.30% (71.96%, 98.93%)                  |
| of breath) OR R50.9 (fever)]  |                        |                               |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 52 ( 11.02% )          | 97.50% (86.84%, 99.94%)       | 100.0% ( 90.97% , 100.0% )               |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                        |                               |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                        |                               |  |
| Primary" Lab Test Product Information****   |                        |                               |  |
| 47377 - SARS_COV_2_NS   | N/A                    | N/A                           | N/A                                      |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A                    | N/A                           | N/A                                      |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | 15 ( 3.18% )           | 93.33% (68.05%, 99.83%)       | 82.35% ( 56.57% , 96.20% )               |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 100 ( 21.19% )         | 97 % ( 91.48% , 99.38% )      | 90.65% (83.48%, 95.43%)                  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | N/A                    | N/A                           | N/A                                      |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A                    | N/A                           | N/A                                      |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A                    | N/A                           | N/A                                      |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | N/A                    | N/A                           | N/A                                      |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | N/A                    | N/A                           | N/A                                      |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With robe Detection  | N/A                    | N/A                           | N/A                                      |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N1 | N/A                    | N/A                           | N/A                                      |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                    | N/A                           | N/A                                      |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By AA With Probe Detection                                    | N/A                    | N/A                           | N/A                                      |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen y NAA With Probe Detection                              | N/A                    | N/A                           | N/A                                      |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By AA With Probe Detection                                 | N/A                    | N/A                           | N/A                                      |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By AA With Probe Detection                                    | 2 ( 0.42% )            | 100.0% (15.81%, 100.0%)       | 100.0% (15.81%, 100.0%)                  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By mmunoassay   | N/A                    | N/A                           | N/A                                      |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*  |                     |                               |  |  |  |
|--|---------------------|-------------------------------|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |
|  |                     | Number (Percent)              |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay             | N/A                 | N/A                           | N/A                                      |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                 | N/A                           | N/A                                      |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                 | N/A                           | N/A                                      |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | N/A                 | N/A                           | N/A                                      |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A                 | N/A                           | N/A                                      |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A                 | N/A                           | N/A                                      |  |  |
| Unknown  | 34 ( 7.20% )        | 96.88% (83.78%, 99.92%)       | 100.0% (88.78%, 100.0%)                  |  |  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2* |                 |                 |                   |        |                         |
|--|-----------------|-----------------|-------------------|--------|-------------------------|
|  | Lab Positive*** | Lab Negative*** | k Lab, No Results | No Lab | Patients with Lab Resul |
|  |                 | Numbe           | r                 |        | Number (Percent)        |
| Care Setting of "Primary" Lab Test*****                      |                 |                 |                   |        |                         |
| Total Observed   | 353             | 24              | 4                 | 100    | 377 ( 78.38% )          |
| Inpatient  | 141             | 15              | 0                 | N/A    | 156                     |
| Outpatient or Emergency Department                           | 84              | 3               | 0                 | N/A    | 87                      |
| Other  | 5               | 0               | 1                 | N/A    | 5                       |
| Care Setting Reported as Unknown                             | 39              | 3               | 0                 | N/A    | 42                      |
| Demographics   |                 |                 |                   |        |                         |
| Sex  |                 |                 |                   |        |                         |
| Female   | 149             | 12              | 3                 | 43     | 161 (77.78%)            |
| Male   | 204             | 12              | 1                 | 39     | 216 (84.38%)            |
| Other/Missing  | 0               | 0               | 0                 | 0      | N/A                     |
| Age at Hospital Admission (Years)                            |                 |                 |                   |        | ·                       |
| 0-5  | 0               | 0               | 0                 | 3      | 0 (0.00%)               |
| 6-17   | 0               | 0               | 0                 | 0      | N/A                     |
| 18-29  | 6               | 1               | 0                 | 2      | 7 ( 77.78% )            |
| 30-39  | 14              | 2               | 1                 | 5      | 16 (72.73%)             |
| 40-49  | 39              | 3               | 0                 | 12     | 42 (77.78%)             |
| 50-59  | 80              | 6               | 2                 | 12     | 86 ( 86 % )             |
| 60-69  | 89              | 4               | 0                 | 15     | 93 ( 86.11% )           |
| 70-79  | 75              | 5               | 0                 | 21     | 80 ( 79.21% )           |
| 80-89  | 38              | 1               | 0                 | 9      | 39 (81.25%)             |
| 90+  | 12              | 1               | 1                 | 1      | 13 ( 86.67% )           |
| Missing  | 0               | 0               | 0                 | 0      | N/A                     |
| Race   |                 |                 |                   |        | ,                       |
| American Indian or Alaska Native                             | 2               | 0               | 0                 | 1      | 2 ( 66.67% )            |
| Asian  | 27              | 1               | 0                 | 6      | 28 ( 82.35% )           |
| Black or African American                                    | 107             | 4               | 0                 | 36     | 111 ( 75.51% )          |
| Native Hawaiian or Other Pacific Islander                    | 2               | 0               | 0                 | 0      | 2 ( 100.0% )            |
| White  | 152             | 16              | 3                 | 22     | 168 ( 87.05% )          |
| Other/Mixed/Unknown  | 63              | 3               | 1                 | 17     | 66 ( 78.57% )           |
| Ethnicity  |                 |                 |                   |        |                         |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resul |  |
|---|-----------------|-----------------|-----------------|--------|-------------------------|--|
|   |                 | Number          |                 |        | Number (Percent)        |  |
| Hispanic  | 44              | 1               | 0               | 8      | 45 ( 84.91% )           |  |
| Non-Hispanic  | 227             | 18              | 4               | 34     | 245 ( 86.57% )          |  |
| Unknown   | 82              | 5               | 0               | 40     | 87 ( 68.50% )           |  |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                         |  |
| Asymptomatic screening (Z11.59)   | 10              | 0               | 0               | 4      | 10 (71.43%)             |  |
| Contact and suspected exposure (Z20.828)  | 60              | 8               | 0               | 14     | 68 (82.93%)             |  |
| Pneumonia (see Appendix B)  | 248             | 17              | 1               | 43     | 265 (85.76%)            |  |
| Other viral pneumonia (J12.89)  | 266             | 8               | 3               | 49     | 274 ( 84.05% )          |  |
| ARDS (J80)  | 100             | 2               | 1               | 13     | 102 (87.93%)            |  |
| Sepsis (see Appendix C)   | 124             | 9               | 0               | 24     | 133 (84.71%)            |  |
| Bronchitis (J20.8 OR J40)   | 9               | 0               | 1               | 1      | 9 (81.82%)              |  |
| Respiratory infection (J22 OR J98.8)  | 30              | 0               | 0               | 3      | 30 (90.91%)             |  |
| Cough (RO5)   | 57              | 3               | 0               | 14     | 60 (81.08%)             |  |
| Shortness of breath (R06.2)   | 1               | 0               | 0               | 1      | 1 (50%)                 |  |
| Fever (R50.9)   | 82              | 3               | 0               | 19     | 85 (81.73%)             |  |
| Optional  |                 |                 |                 |        |                         |  |
| Other COVID Tests   |                 |                 |                 |        |                         |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -      | -                       |  |
| observed within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |        |                         |  |
| est performed, at least 1 positive result   | 6               | 0               | 0               | 1      | 6 ( 85.71% )            |  |
| est performed, only negative results  | 0               | 0               | 0               | 0      | N/A                     |  |
| No test or unknown result   | 139             | 6               | 1               | 53     | 145 (72.86%)            |  |
| Antigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -      | -                       |  |
| est performed, at least 1 positive result   | 0               | 0               | 0               | 0      | N/A                     |  |
| est performed, only negative results  | 0               | 0               | 0               | 0      | N/A                     |  |
| No test or unknown result   | 33              | 1               | 1               | 1      | 34 ( 94.44% )           |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 |        |                         |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 212             | 17              | 1               | 4      | 229 ( 97.86% )          |  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                  |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 21              | 1               | 0               | 7      | 22 ( 75.86% )            |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 39              | 1               | 0               | 12     | 40 ( 76.92% )            |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****                                    |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 14              | 1               | -               | -      | 15 ( 100.0% )            |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 98              | 4               | -               | -      | 102 ( 100.0% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | -               | -               | -               | -      | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | -               | -               | -               | -      | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | -               | -               | -               | -      | N/A                      |
| Probe Detection   |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By     | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By     | 2               | 0               | 0               | 0      | 2 ( 100.0% )             |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                   |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 |                 |                 |        |                          |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 0               | 0               | 0               | 0      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| Unknown  | 31              | 1               | 1               | 1      | 32 ( 94.12% )            |

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Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   |                            |                               | Sensitivity (95% Confidence |
|---|----------------------------|-------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            | Number (Percent)              |                             |
| Care Setting of "Primary" Lab Test*****   |                            | Training (Constitution)       |                             |
| Total Observed                            | 481 ( 100.0% )             | 93.63% ( 90.68% , 95.88% )    | 89.37% ( 85.90% , 92.23% )  |
| Inpatient                                 | 156 ( 32.43% )             | 90.38% (84.64%, 94.52%)       | 81.50% (74.90%, 86.99%)     |
| Outpatient or Emergency Department        | 87 ( 18.09% )              | 96.55% (90.25%, 99.28%)       | 69.42% ( 60.39% , 77.47% )  |
| Other                                     | 6 ( 1.25% )                | 100.0% (47.82%, 100.0%)       | 83.33% (35.88%, 99.58%)     |
| Care Setting Reported as Unknown          | 43 ( 8.94%)                | 92.86% (80.52%, 98.50%)       | 90.70% (77.86%, 97.41%)     |
| Demographics                              |                            |                               | ·                           |
| Sex                                       |                            |                               |                             |
| Female                                    | 207 ( 43.04% )             | 92.55% (87.34%, 96.09%)       | 88.17% (82.32%, 92.62%)     |
| Male                                      | 256 ( 53.22% )             | 94.44% (90.50%, 97.10%)       | 90.27% (85.63%, 93.80%)     |
| Other/Missing                             | N/A                        | N/A                           | N/A                         |
| Age at Hospital Admission (Years)         |                            |                               |                             |
| 0-5                                       | 3 ( 0.62% )                | N/A                           | N/A                         |
| 6-17                                      | N/A                        | N/A                           | N/A                         |
| 18-29                                     | 9 ( 1.87% )                | 85.71% (42.13%, 99.64%)       | 66.67% (29.93%, 92.51%)     |
| 30-39                                     | 22 ( 4.57% )               | 87.50% (61.65%, 98.45%)       | 87.50% (61.65%, 98.45%)     |
| 40-49                                     | 54 ( 11.23% )              | 92.86% (80.52%, 98.50%)       | 90.70% (77.86%, 97.41%)     |
| 50-59                                     | 100 ( 20.79% )             | 93.02% (85.43%, 97.40%)       | 94.12% (86.80%, 98.06%)     |
| 60-69                                     | 108 ( 22.45% )             | 95.70% (89.35%, 98.82%)       | 90.82% (83.28%, 95.71%)     |
| 70-79                                     | 101 ( 21 % )               | 93.75% (86.01%, 97.94%)       | 88.24% (79.43%, 94.21%)     |
| 80-89                                     | 48 ( 9.98% )               | 97.44% (86.52%, 99.94%)       | 86.36% (72.65%, 94.83%)     |
| 90+                                       | 15 ( 3.12% )               | 92.31% (63.97%, 99.81%)       | 85.71% (57.19%, 98.22%)     |
| Missing                                   | N/A                        | N/A                           | N/A                         |
| Race                                      |                            |                               |                             |
| American Indian or Alaska Native          | 3 ( 0.62% )                | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )   |
| Asian                                     | 34 ( 7.07% )               | 96.43% (81.65%, 99.91%)       | 96.43% (81.65%, 99.91%)     |
| Black or African American                 | 147 ( 30.56% )             | 96.40% (91.03%, 99.01%)       | 90.68% (83.93%, 95.25%)     |
| Native Hawaiian or Other Pacific Islander | 2 ( 0.42% )                | 100.0% (15.81%, 100.0%)       | 100.0% (15.81%, 100.0%)     |
| White                                     | 193 ( 40.12% )             | 90.48% ( 84.99% , 94.46% )    | 87.36% (81.49%, 91.90%)     |
| Other/Mixed/Unknown                       | 84 ( 17.46% )              | 95.45% (87.29%, 99.05%)       | 90 % (80.48%, 95.88%)       |
| Ethnicity                                 |                            |                               |                             |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|  |                            |                               | Sensitivity (95% Confidence |
|--|----------------------------|-------------------------------|-----------------------------|
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|  |                            | Number (Percent)              |                             |
| Hispanic   | 53 ( 11.02% )              | 97.78% (88.23%, 99.94%)       | 88 % (75.69%, 95.47%)       |
| Non-Hispanic   | 283 (58.84%)               | 92.65% (88.64%, 95.59%)       | 88.67% (84.14%, 92.28%)     |
| Unknown  | 127 ( 26.40% )             | 94.25% (87.10%, 98.11%)       | 92.13% (84.46%, 96.78%)     |
| Codes Observed During Inpatient Stay   |                            |                               |                             |
| Asymptomatic screening (Z11.59)  | 14 ( 2.91% )               | 100.0% (69.15%, 100.0%)       | 83.33% (51.59%, 97.91%)     |
| Contact and suspected exposure (Z20.828)   | 82 ( 17.05% )              | 88.24% ( 78.13% , 94.78% )    | 88.24% ( 78.13% , 94.78% )  |
| neumonia (see Appendix B)  | 309 (64.24%)               | 93.58% (89.93%, 96.22%)       | 90.18% (86.04%, 93.43%)     |
| Other viral pneumonia (J12.89)   | 326 (67.78%)               | 97.08% (94.33%, 98.73%)       | 96.73% ( 93.88% , 98.49% )  |
| RDS (J80)  | 116 ( 24.12% )             | 98.04% (93.10%, 99.76%)       | 100.0% (96.38%, 100.0%)     |
| epsis (see Appendix C)   | 157 ( 32.64% )             | 93.23% (87.54%, 96.86%)       | 91.85% (85.89%, 95.86%)     |
| ronchitis (J20.8 OR J40)   | 11 ( 2.29% )               | 100.0% (66.37%, 100.0%)       | 90 % (55.50%, 99.75%)       |
| espiratory infection (J22 OR J98.8)  | 33 ( 6.86% )               | 100.0% (88.43%, 100.0%)       | 93.75% (79.19%, 99.23%)     |
| ough (R05)   | 74 ( 15.38% )              | 95 % (86.08%, 98.96%)         | 90.48% ( 80.41% , 96.42%    |
| hortness of breath (R06.2)   | 2 ( 0.42% )                | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50% , 100.0% )   |
| ever (R50.9)   | 104 (21.62%)               | 96.47% (90.03%, 99.27%)       | 88.17% ( 79.82% , 93.95% )  |
| Optional   |                            |                               |                             |
| Other COVID Tests  |                            |                               |                             |
| ntibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |
| bserved within -7 days prior to hospitalization through end of patient record**    |                            |                               |                             |
| est performed, at least 1 positive result  | 7 ( 1.46% )                | 100.0% (54.07%, 100.0%)       | 100.0% (54.07%, 100.0%)     |
| est performed, only negative results   | N/A                        | N/A                           | N/A                         |
| lo test or unknown result  | 199 (41.37%)               | 95.86% (91.21%, 98.47%)       | 92.67% (87.26%, 96.28%)     |
| Antigen test within ±14 days from inpatient admission**                            | -                          | -                             | · -                         |
| est performed, at least 1 positive result  | N/A                        | N/A                           | N/A                         |
| est performed, only negative results   | N/A                        | N/A                           | N/A                         |
| lo test or unknown result  | 36 ( 7.48% )               | 97.06% (84.67%, 99.93%)       | 100.0% (89.42%, 100.0%)     |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection                     | · ·                        |                               |                             |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 234 ( 48.65% )             | 92.58% ( 88.38% , 95.62% )    | 87.97% (83.18%, 91.79%)     |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*   |                     |                               |                             |  |  |
|--|---------------------|-------------------------------|-----------------------------|--|--|
|  |                     |                               | Sensitivity (95% Confidence |  |  |
|  | Total Patient Count | PPV (95% Confidence Interval) | Interval)                   |  |  |
|  |                     | Number (Percent)              |                             |  |  |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness  | 29 ( 6.03% )        | 95.45% (77.16%, 99.88%)       | 91.30% (71.96%, 98.93%)     |  |  |
| of breath) OR R50.9 (fever)]   |                     |                               |                             |  |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 52 ( 10.81% )       | 97.50% (86.84%, 99.94%)       | 100.0% (90.97%, 100.0%)     |  |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  |                     |                               |                             |  |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                     |                               |                             |  |  |
| Primary" Lab Test Product Information**** 47377 - SARS COV 2 NS  |                     |                               |                             |  |  |
|  | N/A                 | N/A                           | N/A                         |  |  |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA | N/A                 | N/A                           | N/A                         |  |  |
| 7635A - Coronavirus 2019-NCOV Paner (N1, N2, N3), Qualitative, NAA<br>7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR              | 15 ( 3.12% )        | 93.33% (68.05%, 99.83%)       | 82.35% (56.57%, 96.20%)     |  |  |
| 7635M - SARS-COV-2, (COVID-19), KNA, Qualitative K1-FCK  | 102 ( 21.21% )      | 96.08% ( 90.26% , 98.92% )    | 91.59% (84.63%, 96.08%)     |  |  |
| 7635N - SARS-COV-2, Qualitative, NAA (COVID-19), RF Lab<br>7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                         | N/A                 | N/A                           | N/A                         |  |  |
| 7635R - SARS-COV-2, NAA (COVID-19), POCT   | N/A                 | N/A                           | N/A                         |  |  |
| 7635T - SARS-CoV-2, NAA (COVID-15), 1 OCT  | N/A<br>N/A          | N/A<br>N/A                    | N/A<br>N/A                  |  |  |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | N/A<br>N/A          | N/A<br>N/A                    | N/A<br>N/A                  |  |  |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | N/A                 | N/A<br>N/A                    | N/A<br>N/A                  |  |  |
| robe Detection   | N/A                 | IV/A                          | N/A                         |  |  |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                 | N/A                           | N/A                         |  |  |
| lucleic Acid Amplification Using CDC Primer-Probe Set N1   | NA                  | IV/A                          | NA                          |  |  |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                 | N/A                           | N/A                         |  |  |
| lucleic Acid Amplification Using CDC Primer-Probe Set N2   | ,                   | ,                             | ,                           |  |  |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   | N/A                 | N/A                           | N/A                         |  |  |
| AA With Probe Detection  | ,                   | •                             | ,                           |  |  |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | N/A                 | N/A                           | N/A                         |  |  |
| y NAA With Probe Detection   | •                   | ·                             | ,                           |  |  |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                 | N/A                           | N/A                         |  |  |
| AA With Probe Detection  |                     |                               |                             |  |  |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 2 ( 0.42% )         | 100.0% (15.81%, 100.0%)       | 100.0% (15.81%, 100.0%)     |  |  |
| AA With Probe Detection  |                     |                               |                             |  |  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | N/A                 | N/A                           | N/A                         |  |  |
| nmunoassay   |                     |                               |                             |  |  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*   |                     |                               |  |  |  |  |
|--|---------------------|-------------------------------|--|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|  |                     | Number (Percent)              |  |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay             | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A                 | N/A                           | N/A                                      |  |  |  |
| Unknown  | 34 ( 7.07% )        | 96.88% (83.78%, 99.92%)       | 100.0% (88.78%, 100.0%)                  |  |  |  |

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Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21* |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  | Lab Positive*** | Lah Negatiye*** | Lab, No Results | No Lab | Patients with Lab Result |
|  | Lab Positive    | Number          |                 | NO Lab | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****                                      |                 | Number          |                 |        | Number (Percent)         |
| Total Observed   | 358             | 24              | 4               | 101    | 382 ( 78.44% )           |
| Inpatient  | 142             | 15              | 0               | N/A    | 157                      |
| Outpatient or Emergency Department   | 86              | 3               | 0               | N/A    | 89                       |
| Other  | 5               | 0               | 1               | N/A    | 5                        |
| Care Setting Reported as Unknown   | 39              | 3               | 0               | N/A    | 42                       |
| Demographics   | 53              |                 |                 |        | 12                       |
| Sex  |                 |                 |                 |        |                          |
| Female   | 152             | 12              | 3               | 44     | 164 ( 77.73% )           |
| Male   | 206             | 12              | 1               | 39     | 218 ( 84.50% )           |
| Other/Missing  | 0               | 0               | 0               | 0      | N/A                      |
| Age at Hospital Admission (Years)  |                 |                 |                 |        | ,                        |
| 0-5  | 0               | 0               | 0               | 3      | 0 (0.00%)                |
| 6-17   | 0               | 0               | 0               | 0      | N/A                      |
| 18-29  | 6               | 1               | 0               | 2      | 7 ( 77.78% )             |
| 30-39  | 14              | 2               | 1               | 5      | 16 (72.73%)              |
| 40-49  | 39              | 3               | 0               | 12     | 42 (77.78%)              |
| 50-59  | 80              | 6               | 2               | 13     | 86 (85.15%)              |
| 60-69  | 91              | 4               | 0               | 15     | 95 ( 86.36% )            |
| 70-79  | 76              | 5               | 0               | 21     | 81 ( 79.41% )            |
| 80-89  | 39              | 1               | 0               | 9      | 40 (81.63%)              |
| 90+  | 13              | 1               | 1               | 1      | 14 (87.50%)              |
| Missing  | 0               | 0               | 0               | 0      | N/A                      |
| Race   |                 |                 |                 |        |                          |
| American Indian or Alaska Native   | 3               | 0               | 0               | 1      | 3 ( 75 % )               |
| Asian  | 27              | 1               | 0               | 6      | 28 ( 82.35% )            |
| Black or African American  | 107             | 4               | 0               | 36     | 111 ( 75.51% )           |
| Native Hawaiian or Other Pacific Islander                                    | 2               | 0               | 0               | 0      | 2 ( 100.0% )             |
| White  | 155             | 16              | 3               | 23     | 171 ( 86.80% )           |
| Other/Mixed/Unknown  | 64              | 3               | 1               | 17     | 67 ( 78.82% )            |
| Ethnicity  |                 |                 |                 |        |                          |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 4: IP Stay with Any of  | Codes 007.1, B97 | 23, 034.2, J12.01, D | 37.21           |        |                        |  |
|---|------------------|----------------------|-----------------|--------|------------------------|--|
|   | Lab Positive***  | Lab Negative***      | Lab, No Results | No Lab | Patients with Lab Resu |  |
|   | Number           |                      |                 |        | Number (Percent)       |  |
| Hispanic  | 44               | 1                    | 0               | 8      | 45 ( 84.91% )          |  |
| Non-Hispanic  | 231              | 18                   | 4               | 35     | 249 (86.46%)           |  |
| Unknown   | 83               | 5                    | 0               | 40     | 88 ( 68.75% )          |  |
| Codes Observed During Inpatient Stay  |                  |                      |                 |        |                        |  |
| Asymptomatic screening (Z11.59)   | 10               | 0                    | 0               | 4      | 10 ( 71.43% )          |  |
| Contact and suspected exposure (Z20.828)  | 61               | 8                    | 0               | 14     | 69 (83.13%)            |  |
| Pneumonia (see Appendix B)  | 251              | 17                   | 1               | 43     | 268 (85.90%)           |  |
| Other viral pneumonia (J12.89)  | 269              | 8                    | 3               | 49     | 277 (84.19%)           |  |
| ARDS (J80)  | 100              | 2                    | 1               | 13     | 102 (87.93%)           |  |
| Sepsis (see Appendix C)   | 126              | 9                    | 0               | 25     | 135 (84.38%)           |  |
| Bronchitis (J20.8 OR J40)   | 10               | 0                    | 1               | 1      | 10 (83.33%)            |  |
| Respiratory infection (J22 OR J98.8)  | 31               | 0                    | 0               | 3      | 31 (91.18%)            |  |
| Cough (R05)   | 58               | 3                    | 0               | 14     | 61 (81.33%)            |  |
| Shortness of breath (R06.2)   | 1                | 0                    | 0               | 1      | 1 (50%)                |  |
| Fever (R50.9)   | 84               | 3                    | 0               | 19     | 87 ( 82.08% )          |  |
| Optional  |                  |                      |                 |        |                        |  |
| Other COVID Tests   |                  |                      |                 |        |                        |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                | -                    | -               | -      | -                      |  |
| observed within -7 days prior to hospitalization through end of patient record**    |                  |                      |                 |        |                        |  |
| est performed, at least 1 positive result   | 6                | 0                    | 0               | 1      | 6 ( 85.71% )           |  |
| est performed, only negative results  | 0                | 0                    | 0               | 0      | N/A                    |  |
| No test or unknown result   | 139              | 6                    | 1               | 53     | 145 (72.86%)           |  |
| Antigen test within ±14 days from inpatient admission**                             | -                | -                    | -               | -      | -                      |  |
| Test performed, at least 1 positive result  | 0                | 0                    | 0               | 0      | N/A                    |  |
| Test performed, only negative results   | 0                | 0                    | 0               | 0      | N/A                    |  |
| No test or unknown result   | 33               | 1                    | 1               | 1      | 34 ( 94.44% )          |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                  |                      |                 |        |                        |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 215              | 17                   | 1               | 4      | 232 ( 97.89% )         |  |
| Codes Observed During Inpatient Stay  |                  |                      |                 |        |                        |  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*  |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 21              | 1               | 0               | 7      | 22 ( 75.86% )            |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 39              | 1               | 0               | 12     | 40 ( 76.92% )            |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****                                    |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 14              | 1               | -               | -      | 15 ( 100.0% )            |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 98              | 4               | -               | -      | 102 ( 100.0% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | -               | -               | -               | -      | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | -               | -               | -               | -      | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | -               | -               | -               | -      | N/A                      |
| Probe Detection   |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By     | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By     | 2               | 0               | 0               | 0      | 2 ( 100.0% )             |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*   |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 0               | 0               | 0               | 0      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| Unknown  | 31              | 1               | 1               | 1      | 32 ( 94.12% )            |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   |                     |                               | Sensitivity (95% Confidence |
|---|---------------------|-------------------------------|-----------------------------|
|   | Total Patient Count | PPV (95% Confidence Interval) | Interval)                   |
|   | Total Fatient Count | Number (Percent)              | intervalj                   |
| Care Setting of "Primary" Lab Test*****   |                     | Number (Fercent)              |                             |
| Total Observed                            | 487 ( 100.0% )      | 93.72% ( 90.80% , 95.93% )    | 90.63% (87.32%, 93.32%)     |
| Inpatient                                 | 157 ( 32.24% )      | 90.45% (84.73%, 94.55%)       | 82.08% (75.54%, 87.49%)     |
| Outpatient or Emergency Department        | 89 ( 18.28% )       | 96.63% (90.46%, 99.30%)       | 71.07% (62.13%, 78.95%)     |
| Other                                     | 6 ( 1.23% )         | 100.0% (47.82%, 100.0%)       | 83.33% (35.88%, 99.58%)     |
| Care Setting Reported as Unknown          | 43 ( 8.83% )        | 92.86% (80.52%, 98.50%)       | 90.70% (77.86%, 97.41%)     |
| Demographics                              |                     |                               |                             |
| Sex                                       |                     |                               |                             |
| Female                                    | 211 ( 43.33% )      | 92.68% (87.57%, 96.16%)       | 89.94% (84.38%, 94.03%)     |
| Male                                      | 258 ( 52.98% )      | 94.50% (90.58%, 97.12%)       | 91.15% (86.66%, 94.51%)     |
| Other/Missing                             | N/A                 | N/A                           | N/A                         |
| Age at Hospital Admission (Years)         |                     |                               | •                           |
| 0-5                                       | 3 ( 0.62% )         | N/A                           | N/A                         |
| 6-17                                      | N/A                 | N/A                           | N/A                         |
| 18-29                                     | 9 ( 1.85% )         | 85.71% (42.13%, 99.64%)       | 66.67% (29.93%, 92.51%)     |
| 30-39                                     | 22 ( 4.52% )        | 87.50% (61.65%, 98.45%)       | 87.50% (61.65%, 98.45%)     |
| 40-49                                     | 54 (11.09%)         | 92.86% (80.52%, 98.50%)       | 90.70% (77.86%, 97.41%)     |
| 50-59                                     | 101 ( 20.74% )      | 93.02% (85.43%, 97.40%)       | 94.12% (86.80%, 98.06%)     |
| 60-69                                     | 110 ( 22.59% )      | 95.79% (89.57%, 98.84%)       | 92.86% (85.84%, 97.08%)     |
| 70-79                                     | 102 ( 20.94% )      | 93.83% (86.18%, 97.97%)       | 89.41% (80.85%, 95.04%)     |
| 80-89                                     | 49 ( 10.06% )       | 97.50% (86.84%, 99.94%)       | 88.64% (75.44%, 96.21%)     |
| 90+                                       | 16 ( 3.29% )        | 92.86% (66.13%, 99.82%)       | 92.86% (66.13%, 99.82%)     |
| Missing                                   | N/A                 | N/A                           | N/A                         |
| Race                                      |                     |                               |                             |
| American Indian or Alaska Native          | 4 ( 0.82% )         | 100.0% (29.24%, 100.0%)       | 100.0% (29.24%, 100.0%)     |
| Asian                                     | 34 ( 6.98% )        | 96.43% (81.65%, 99.91%)       | 96.43% (81.65%, 99.91%)     |
| Black or African American                 | 147 ( 30.18% )      | 96.40% (91.03%, 99.01%)       | 90.68% (83.93%, 95.25%)     |
| Native Hawaiian or Other Pacific Islander | 2 ( 0.41% )         | 100.0% (15.81%, 100.0%)       | 100.0% (15.81%, 100.0%)     |
| White                                     | 197 ( 40.45% )      | 90.64% (85.25%, 94.56%)       | 89.08% (83.47%, 93.30%)     |
| Other/Mixed/Unknown                       | 85 ( 17.45% )       | 95.52%(87.47%,99.07%)         | 91.43% (82.27%, 96.79%)     |
|   |                     | •                             | ·                           |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence Interval) |
|---|---------------------|-------------------------------|---------------------------------------|
|   | Total Patient Count | Number (Percent)              | intervali                             |
| Hispanic  | 53 ( 10.88% )       | 97.78% ( 88.23% , 99.94% )    | 88 % ( 75.69% , 95.47% )              |
| Non-Hispanic  | 288 ( 59.14% )      | 92.77% (88.82%, 95.66%)       | 90.23% (85.92%, 93.58%)               |
| Unknown   | 128 ( 26.28% )      | 94.32% (87.24%, 98.13%)       | 93.26% (85.90%, 97.49%)               |
| Codes Observed During Inpatient Stay  |                     | 3 ( 37.1 . 7.0 ) 30.12070 )   | 30.2070 (30.3070) 371.370             |
| Asymptomatic screening (Z11.59)   | 14 ( 2.87% )        | 100.0% (69.15%, 100.0%)       | 83.33% (51.59%, 97.91%)               |
| Contact and suspected exposure (Z20.828)  | 83 ( 17.04% )       | 88.41% ( 78.43% , 94.86% )    | 89.71% ( 79.93% , 95.76% )            |
| Pneumonia (see Appendix B)  | 312 (64.07%)        | 93.66% (90.04%, 96.26%)       | 91.27% ( 87.29% , 94.33% )            |
| Other viral pneumonia (J12.89)  | 329 ( 67.56% )      | 97.11% (94.39%, 98.75%)       | 97.82% ( 95.31% , 99.20%              |
| ARDS (J80)  | 116 (23.82%)        | 98.04% (93.10%, 99.76%)       | 100.0% (96.38%, 100.0%                |
| Sepsis (see Appendix C)   | 160 (32.85%)        | 93.33% (87.72%, 96.91%)       | 93.33% (87.72%, 96.91%                |
| Bronchitis (J20.8 OR J40)   | 12 ( 2.46% )        | 100.0% (69.15%, 100.0%)       | 100.0% (69.15%, 100.0%                |
| Respiratory infection (J22 OR J98.8)  | 34 ( 6.98% )        | 100.0% (88.78%, 100.0%)       | 96.88% (83.78%, 99.92%                |
| Cough (R05)   | 75 ( 15.40% )       | 95.08% (86.29%, 98.97%)       | 92.06% ( 82.44% , 97.37%              |
| Shortness of breath (R06.2)   | 2 ( 0.41% )         | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50% , 100.0% )             |
| ever (R50.9)  | 106 (21.77%)        | 96.55% (90.25%, 99.28%)       | 90.32% (82.42%, 95.48%                |
| Optional  |                     |                               |                                       |
| Other COVID Tests   |                     |                               |                                       |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                   | -                             | <del>-</del>                          |
| observed within -7 days prior to hospitalization through end of patient record**    |                     |                               |                                       |
| est performed, at least 1 positive result   | 7 ( 1.44% )         | 100.0% (54.07%, 100.0%)       | 100.0% (54.07%, 100.0%)               |
| est performed, only negative results  | N/A                 | N/A                           | N/A                                   |
| No test or unknown result   | 199 ( 40.86% )      | 95.86% (91.21%, 98.47%)       | 92.67% (87.26%, 96.28%)               |
| Antigen test within ±14 days from inpatient admission**                             | -                   | -                             | -                                     |
| est performed, at least 1 positive result   | N/A                 | N/A                           | N/A                                   |
| est performed, only negative results  | N/A                 | N/A                           | N/A                                   |
| No test or unknown result   | 36 (7.39%)          | 97.06% (84.67%, 99.93%)       | 100.0% (89.42%, 100.0%                |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                     |                               |                                       |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 237 ( 48.67% )      | 92.67% (88.53%, 95.67%)       | 89.21% (84.59%, 92.83%)               |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*                 |                            |                               |                             |  |  |
|--|----------------------------|-------------------------------|-----------------------------|--|--|
|  |                            |                               | Sensitivity (95% Confidence |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |
|  |                            | Number (Percent)              |                             |  |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness                | 29 ( 5.95% )               | 95.45% (77.16%, 99.88%)       | 91.30% (71.96%, 98.93%)     |  |  |
| of breath) OR R50.9 (fever)]   |                            |                               |                             |  |  |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                 | 52 ( 10.68% )              | 97.50% (86.84%, 99.94%)       | 100.0% (90.97%, 100.0%)     |  |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                  |                            |                               |                             |  |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]                  |                            |                               |                             |  |  |
| "Primary" Lab Test Product Information****   |                            |                               |                             |  |  |
| 847377 - SARS_COV_2_NS   | N/A                        | N/A                           | N/A                         |  |  |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual                     | N/A                        | N/A                           | N/A                         |  |  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA                          | 15 ( 3.08% )               | 93.33% (68.05%, 99.83%)       | 82.35% (56.57%, 96.20%)     |  |  |
| 37635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                                     | 102 ( 20.94% )             | 96.08% (90.26%, 98.92%)       | 91.59% (84.63%, 96.08%)     |  |  |
| 37635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                                     | N/A                        | N/A                           | N/A                         |  |  |
| 37635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                                     | N/A                        | N/A                           | N/A                         |  |  |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A                        | N/A                           | N/A                         |  |  |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | N/A                        | N/A                           | N/A                         |  |  |
| 37635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                                    | N/A                        | N/A                           | N/A                         |  |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With Probe Detection | N/A                        | N/A                           | N/A                         |  |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                 | N/A                        | N/A                           | N/A                         |  |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                                     | 14//                       | ,,,                           | ,,,                         |  |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                 | N/A                        | N/A                           | N/A                         |  |  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                                     |                            | ,                             | ,                           |  |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By                    | N/A                        | N/A                           | N/A                         |  |  |
| NAA With Probe Detection   | ,                          | ,                             | ,                           |  |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                 | N/A                        | N/A                           | N/A                         |  |  |
| ly NAA With Probe Detection  | •                          | ·                             | ·                           |  |  |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                 | N/A                        | N/A                           | N/A                         |  |  |
| IAA With Probe Detection   | •                          | •                             | •                           |  |  |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By                    | 2 ( 0.41% )                | 100.0% (15.81%, 100.0%)       | 100.0% (15.81%, 100.0%)     |  |  |
| IAA With Probe Detection   | ,                          | ,                             |                             |  |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By                  | N/A                        | N/A                           | N/A                         |  |  |
| mmunoassay   |                            |                               |                             |  |  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*                                 |                     |                               |  |  |  |  |
|--|---------------------|-------------------------------|--|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|  |                     | Number (Percent)              |  |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay             | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A                 | N/A                           | N/A                                      |  |  |  |
| Unknown  | 34 ( 6.98% )        | 96.88% (83.78%, 99.92%)       | 100.0% (88.78%, 100.0%)                  |  |  |  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]* |                 |                 |                 |        |                         |  |
|--|-----------------|-----------------|-----------------|--------|-------------------------|--|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resul |  |
|  |                 | Number          |                 |        | Number (Percent)        |  |
| Care Setting of "Primary" Lab Test*****  |                 |                 |                 |        |                         |  |
| Total Observed   | 321             | 15              | 4               | 73     | 336 ( 81.36% )          |  |
| Inpatient  | 130             | 8               | 0               | N/A    | 138                     |  |
| Outpatient or Emergency Department   | 80              | 3               | 0               | N/A    | 83                      |  |
| Other  | 3               | 0               | 1               | N/A    | 3                       |  |
| Care Setting Reported as Unknown   | 36              | 2               | 0               | N/A    | 38                      |  |
| Demographics   |                 |                 |                 |        |                         |  |
| Sex  |                 |                 |                 |        |                         |  |
| Female   | 128             | 8               | 3               | 30     | 136 (80.47%)            |  |
| Male   | 193             | 7               | 1               | 32     | 200 ( 85.84% )          |  |
| Other/Missing  | 0               | 0               | 0               | 0      | N/A                     |  |
| Age at Hospital Admission (Years)  |                 |                 |                 |        |                         |  |
| 0-5  | 0               | 0               | 0               | 1      | 0 (0.00%)               |  |
| 6-17   | 0               | 0               | 0               | 0      | N/A                     |  |
| 18-29  | 6               | 1               | 0               | 1      | 7 (87.50%)              |  |
| 30-39  | 13              | 2               | 1               | 5      | 15 (71.43%)             |  |
| 40-49  | 36              | 1               | 0               | 12     | 37 (75.51%)             |  |
| 50-59  | 77              | 3               | 2               | 8      | 80 ( 88.89% )           |  |
| 60-69  | 82              | 4               | 0               | 13     | 86 ( 86.87% )           |  |
| 70-79  | 68              | 2               | 0               | 13     | 70 ( 84.34% )           |  |
| 80-89  | 33              | 1               | 0               | 7      | 34 (82.93%)             |  |
| 90+  | 6               | 0               | 1               | 1      | 6 (75 %)                |  |
| Missing  | 0               | 0               | 0               | 0      | N/A                     |  |
| Race   |                 |                 |                 |        | ·                       |  |
| American Indian or Alaska Native   | 2               | 0               | 0               | 0      | 2 ( 100.0% )            |  |
| Asian  | 25              | 1               | 0               | 6      | 26 (81.25%)             |  |
| Black or African American  | 102             | 4               | 0               | 29     | 106 ( 78.52% )          |  |
| Native Hawaiian or Other Pacific Islander  | 2               | 0               | 0               | 0      | 2 ( 100.0% )            |  |
| White  | 135             | 7               | 3               | 13     | 142 (89.87%)            |  |
| Other/Mixed/Unknown  | 55              | 3               | 1               | 14     | 58 ( 79.45% )           |  |

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Ethnicity



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Lab Dasitive *** | 1 a b N a a a t i * * * * | Lab Na Daggita  | No Leb   | Deticute with Lek Dead            |
|---|------------------|---------------------------|-----------------|----------|-----------------------------------|
|   | Lab Positive***  | Number                    | Lab, No Results | No Lab   | Patients with Lab Resul           |
| Hispanic  | 39               | Number<br>1               | 0               | 5        | Number (Percent)<br>40 ( 88.89% ) |
| Non-Hispanic  |                  |                           | _               |          | ` '                               |
| Unknown   | 208<br>74        | 10                        | 4               | 28<br>29 | 218 ( 87.20% )                    |
| Codes Observed During Inpatient Stay  | 74               | 4                         | 0               | 29       | 78 ( 72.90% )                     |
| Asymptomatic screening (Z11.59)   | 10               | 0                         | 0               | 4        | 10 ( 71.43% )                     |
| Contact and suspected exposure (Z20.828)  | 58               | 4                         | 0               | 12       | 62 (83.78%)                       |
| Pneumonia (see Appendix B)  | 248              | 15                        | 1               | 41       | 263 ( 86.23% )                    |
| Other viral pneumonia (J12.89)  | 267              | 8                         | 3               | 48       | 275 ( 84.36% )                    |
| ARDS (J80)  | 100              | 2                         | 1               | 13       | 102 ( 87.93% )                    |
| Sepsis (see Appendix C)   | 122              | 7                         | 0               | 20       | 129 ( 86.58% )                    |
| Bronchitis (J20.8 OR J40)   | 9                | 0                         | 1               | 0        | 9 ( 90 % )                        |
| Respiratory infection (J22 OR J98.8)  | 25               | 0                         | 0               | 2        | 25 ( 92.59% )                     |
| Cough (RO5)   | 46               | 1                         | 0               | 10       | 47 ( 82.46% )                     |
| Shortness of breath (R06.2)   | 1                | 0                         | 0               | 0        | 1 ( 100.0% )                      |
| Fever (R50.9)   | 76               | 3                         | 0               | 15       | 79 ( 84.04% )                     |
| Optional  |                  |                           |                 |          | •                                 |
| Other COVID Tests   |                  |                           |                 |          |                                   |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                | -                         | -               | -        | -                                 |
| observed within -7 days prior to hospitalization through end of patient record**    |                  |                           |                 |          |                                   |
| Test performed, at least 1 positive result  | 5                | 0                         | 0               | 1        | 5 (83.33%)                        |
| est performed, only negative results  | 0                | 0                         | 0               | 0        | N/A                               |
| No test or unknown result   | 130              | 4                         | 1               | 40       | 134 ( 76.57% )                    |
| Antigen test within ±14 days from inpatient admission**                             | -                | -                         | -               | -        | -                                 |
| est performed, at least 1 positive result   | 0                | 0                         | 0               | 0        | N/A                               |
| est performed, only negative results  | 0                | 0                         | 0               | 0        | N/A                               |
| No test or unknown result   | 27               | 0                         | 1               | 1        | 27 ( 93.10% )                     |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                  |                           |                 |          |                                   |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 201              | 10                        | 1               | 4        | 211 ( 97.69% )                    |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]* |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness  | 21              | 1               | 0               | 6      | 22 ( 78.57% )            |
| of breath) OR R50.9 (fever)]   |                 |                 |                 |        | , ,                      |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 39              | 1               | 0               | 12     | 40 ( 76.92% )            |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****   |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS   | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | 13              | 1               | -               | -      | 14 ( 100.0% )            |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 95              | 3               | -               | -      | 98 ( 100.0% )            |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | -               | -               | -               | -      | N/A                      |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT  | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | -               | -               | -               | -      | N/A                      |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1   |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2   |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By  | 2               | 0               | 0               | 0      | 2 ( 100.0% )             |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia\*\* OR Acute Respiratory Distress Syndrome (ARDS) (J80)]\* Lab Positive\*\*\* Lab Negative\*\*\* Lab, No Results No Lab **Patients with Lab Result Number (Percent)** Number 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By N/A Rapid Immunoassay 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With N/A **Probe Detection** 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By N/A NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen N/A By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory 0 0 0 N/A Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By N/A NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A **Probe Detection** Unknown 25 0 1 1 25 (92.59%)

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Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]* |                     |                               |                             |  |  |
|--|---------------------|-------------------------------|-----------------------------|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence |  |  |
|  | Total Patient Count |                               | Interval)                   |  |  |
|  | Number (Percent)    | Per                           | cent                        |  |  |
| Care Setting of "Primary" Lab Test*****  |                     |                               |                             |  |  |
| Total Observed   | 413 ( 100.0% )      | 95.54% (92.74%, 97.48%)       | 81.27% (77.06%, 84.99%)     |  |  |
| Inpatient  | 138 ( 33.41% )      | 94.20% (88.90%, 97.46%)       | 75.14% (68.02%, 81.39%)     |  |  |
| Outpatient or Emergency Department   | 83 ( 20.10% )       | 96.39% (89.80%, 99.25%)       | 66.12% (56.95%, 74.47%)     |  |  |
| Other  | 4 ( 0.97% )         | 100.0% (29.24%, 100.0%)       | 50 % (11.81%, 88.19%)       |  |  |
| Care Setting Reported as Unknown   | 39 ( 9.44% )        | 94.74% ( 82.25% , 99.36% )    | 83.72% (69.30%, 93.19%)     |  |  |
| Demographics   |                     |                               |                             |  |  |
| Sex  |                     |                               |                             |  |  |
| Female   | 169 ( 40.92% )      | 94.12% (88.74%, 97.43%)       | 75.74% ( 68.56% , 81.99% )  |  |  |
| Male   | 233 ( 56.42% )      | 96.50% (92.92%, 98.58%)       | 85.40% (80.11%, 89.73%)     |  |  |
| Other/Missing  | N/A                 | N/A                           | N/A                         |  |  |
| Age at Hospital Admission (Years)  |                     |                               |                             |  |  |
| 0-5  | 1 ( 0.24% )         | N/A                           | N/A                         |  |  |
| 6-17   | N/A                 | N/A                           | N/A                         |  |  |
| 18-29  | 8 ( 1.94% )         | 85.71% (42.13%, 99.64%)       | 66.67% (29.93%, 92.51%)     |  |  |
| 30-39  | 21 ( 5.08% )        | 86.67% (59.54%, 98.34%)       | 81.25% (54.35%, 95.95%)     |  |  |
| 40-49  | 49 ( 11.86% )       | 97.30% (85.84%, 99.93%)       | 83.72% (69.30%, 93.19%)     |  |  |
| 50-59  | 90 ( 21.79% )       | 96.25% (89.43%, 99.22%)       | 90.59% (82.29%, 95.85%)     |  |  |
| 60-69  | 99 ( 23.97% )       | 95.35% (88.52%, 98.72%)       | 83.67% (74.84%, 90.37%)     |  |  |
| 70-79  | 83 ( 20.10% )       | 97.14% (90.06%, 99.65%)       | 80 % (69.92%, 87.90%)       |  |  |
| 80-89  | 41 ( 9.93% )        | 97.06% (84.67%, 99.93%)       | 75 % (59.66%, 86.81%)       |  |  |
| 90+  | 8 ( 1.94% )         | 100.0% (54.07%, 100.0%)       | 42.86% (17.66%, 71.14%)     |  |  |
| Missing  | N/A                 | N/A                           | N/A                         |  |  |
| Race   | •                   | •                             | ·                           |  |  |
| American Indian or Alaska Native   | 2 ( 0.48% )         | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )   |  |  |
| Asian  | 32 ( 7.75% )        | 96.15% (80.36%, 99.90%)       | 89.29% (71.77%, 97.73%)     |  |  |
| Black or African American  | 135 ( 32.69% )      | 96.23% (90.62%, 98.96%)       | 86.44% (78.92%, 92.05%)     |  |  |
| Native Hawaiian or Other Pacific Islander  | 2 ( 0.48% )         | 100.0% (15.81%, 100.0%)       | 100.0% (15.81%, 100.0%)     |  |  |
| White  | 158 ( 38.26% )      | 95.07% (90.11%, 98%)          | 77.59% (70.66%, 83.55%)     |  |  |
| Other/Mixed/Unknown  | 73 ( 17.68% )       | 94.83% (85.62%, 98.92%)       | 78.57% (67.13%, 87.48%)     |  |  |
| •  | ,                   | ,                             | ,                           |  |  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

|   | Total Patient Count | PPV (95% Confidence Interval)         | Sensitivity (95% Confidence<br>Interval) |
|---|---------------------|---------------------------------------|--|
|   | Number (Percent)    | Per                                   | cent                                     |
| Hispanic  | 45 ( 10.90% )       | 97.50% (86.84%, 99.94%)               | 78 % (64.04%, 88.47%)                    |
| Non-Hispanic  | 250 ( 60.53% )      | 95.41% (91.73%, 97.78%)               | 81.25% (75.92%, 85.84%)                  |
| Unknown   | 107 (25.91%)        | 94.87% (87.39%, 98.59%)               | 83.15% (73.73%, 90.25%)                  |
| Codes Observed During Inpatient Stay  |                     |                                       |  |
| Asymptomatic screening (Z11.59)   | 14 ( 3.39% )        | 100.0% (69.15%, 100.0%)               | 83.33% (51.59%, 97.91%)                  |
| Contact and suspected exposure (Z20.828)  | 74 ( 17.92% )       | 93.55% (84.30%, 98.21%)               | 85.29% (74.61%, 92.72%)                  |
| Pneumonia (see Appendix B)  | 305 (73.85%)        | 94.30% (90.77%, 96.77%)               | 90.18% (86.04%, 93.43%)                  |
| Other viral pneumonia (J12.89)  | 326 ( 78.93% )      | 97.09% (94.35%, 98.74%)               | 97.09% ( 94.35% , 98.74% )               |
| ARDS (J80)  | 116 ( 28.09% )      | 98.04% (93.10%, 99.76%)               | 100.0% (96.38%, 100.0%)                  |
| Sepsis (see Appendix C)   | 149 (36.08%)        | 94.57% (89.14%, 97.79%)               | 90.37% (84.10%, 94.77%)                  |
| Bronchitis (J20.8 OR J40)   | 10 ( 2.42% )        | 100.0% (66.37%, 100.0%)               | 90 % (55.50%, 99.75%)                    |
| Respiratory infection (J22 OR J98.8)  | 27 ( 6.54% )        | 100.0% (86.28%, 100.0%)               | 78.13% (60.03%, 90.72%)                  |
| Cough (R05)   | 57 ( 13.80% )       | 97.87% (88.71%, 99.95%)               | 73.02% ( 60.35% , 83.43% )               |
| shortness of breath (R06.2)   | 1 ( 0.24% )         | 100.0% ( 2.50% , 100.0% )             | 100.0% ( 2.50% , 100.0% )                |
| ever (R50.9)  | 94 ( 22.76% )       | 96.20% (89.30%, 99.21%)               | 81.72% (72.35%, 88.98%)                  |
| Optional  |                     |                                       |  |
| Other COVID Tests   |                     |                                       |  |
| Intibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                   | -                                     | -  |
| bserved within -7 days prior to hospitalization through end of patient record**     |                     |                                       |  |
| est performed, at least 1 positive result   | 6 ( 1.45% )         | 100.0% (47.82%, 100.0%)               | 83.33% (35.88%, 99.58%)                  |
| est performed, only negative results  | N/A                 | N/A                                   | N/A                                      |
| Io test or unknown result   | 175 ( 42.37% )      | 97.01% (92.53%, 99.18%)               | 86.67% (80.16%, 91.66%)                  |
| ntigen test within ±14 days from inpatient admission**                              | -                   | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · ·    |
| est performed, at least 1 positive result   | N/A                 | N/A                                   | N/A                                      |
| est performed, only negative results  | N/A                 | N/A                                   | N/A                                      |
| No test or unknown result   | 29 ( 7.02% )        | 100.0% (87.23%, 100.0%)               | 81.82% (64.54%, 93.02%)                  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                     |                                       |  |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)               | 216 ( 52.30% )      | 95.26% (91.46%, 97.70%)               | 83.40% (78.09%, 87.87%)                  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]*  |                     |                               |                             |  |  |
|---|---------------------|-------------------------------|-----------------------------|--|--|
|   |                     |                               | Sensitivity (95% Confidence |  |  |
|   | Total Patient Count | PPV (95% Confidence Interval) | Interval)                   |  |  |
|   | Number (Percent)    | Per                           | cent                        |  |  |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 28 ( 6.78% )        | 95.45% (77.16%, 99.88%)       | 91.30% (71.96%, 98.93%)     |  |  |
| f breath) OR R50.9 (fever)]   |                     |                               |                             |  |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 52 ( 12.59% )       | 97.50% (86.84%, 99.94%)       | 100.0% (90.97%, 100.0%)     |  |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                     |                               |                             |  |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                     |                               |                             |  |  |
| Primary" Lab Test Product Information****   |                     |                               |                             |  |  |
| 47377 - SARS_COV_2_NS   | N/A                 | N/A                           | N/A                         |  |  |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A                 | N/A                           | N/A                         |  |  |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | 14 ( 3.39% )        | 92.86% (66.13%, 99.82%)       | 76.47% (50.10%, 93.19%)     |  |  |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 98 ( 23.73% )       | 96.94% (91.31%, 99.36%)       | 88.79% (81.23%, 94.07%)     |  |  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | N/A                 | N/A                           | N/A                         |  |  |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A                 | N/A                           | N/A                         |  |  |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A                 | N/A                           | N/A                         |  |  |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | N/A                 | N/A                           | N/A                         |  |  |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | N/A                 | N/A                           | N/A                         |  |  |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With robe Detection  | N/A                 | N/A                           | N/A                         |  |  |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N1 | N/A                 | N/A                           | N/A                         |  |  |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                 | N/A                           | N/A                         |  |  |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By  AA With Probe Detection                                   | N/A                 | N/A                           | N/A                         |  |  |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen y NAA With Probe Detection                              | N/A                 | N/A                           | N/A                         |  |  |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                 | N/A                           | N/A                         |  |  |
| AA With Probe Detection 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By                                    | 2 ( 0.48% )         | 100.0% (15.81%, 100.0%)       | 100.0% (15.81%, 100.0%)     |  |  |
| IAA With Probe Detection<br>4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By<br>mmunoassay                | N/A                 | N/A                           | N/A                         |  |  |



Table 1g. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and March 31, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]*                           |                     |                               |  |  |  |
|--|---------------------|-------------------------------|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |
|  | Number (Percent)    | Per                           | cent                                     |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                               | N/A                 | N/A                           | N/A                                      |  |  |
| Rapid Immunoassay  |                     |                               |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                 | N/A                           | N/A                                      |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                 | N/A                           | N/A                                      |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | N/A                 | N/A                           | N/A                                      |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A                 | N/A                           | N/A                                      |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                                    | N/A                 | N/A                           | N/A                                      |  |  |
| Probe Detection Unknown  | 27 ( 6.54% )        | 100.0% (86.28%, 100.0%)       | 80.65% (62.53%, 92.55%)                  |  |  |

<sup>\*</sup>Includes only the first algorithm-qualifying inpatient stay per algorithm per patient.

Includes one test result per encounter - positive if patient had at least one positive NAA result; negative if all NAA results are negative (during test window, from any type of specimen/site).

<sup>\*\*</sup> COVID NAA, antibody, and antigen tests are identified using LOINCs or any other identifier available in the data.

<sup>\*\*\*</sup>Any NAA result in 14 days prior through 14 days after inpatient encounter during which the COVID diagnosis codes were recorded.

<sup>&</sup>quot;Primary" test result will be the first positive molecular test within the ±14-day window, or the last negative molecular test within the ±14-day window among patients with no positive test.

<sup>\*\*\*\*</sup>Only the "primary" lab test, as defined above, is described

<sup>\*\*\*\*\*</sup>Sensitivity not calculated because algorithm cohort NAA-positive patient count is larger than laboratory result cohort NAA-positive patient count. This is a result of a different visit being used to describe characteristics among the lab-based cohort and the algorithm-based cohort.

<sup>\*\*\*\*\*\*</sup>Sum across care settings does not equal total observed because care setting was not reported for some patients.



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Care Setting of "Primary" Lab Test\*\*\* **Total Observed** 1.026 1.264 2.796 3,556 Inpatient 1,879 2,246 **Outpatient or Emergency Department** Other Care Setting Reported as Unknown **Demographics** Sex Female 1,531 1,937 Male 1,265 1,619 Other/Missing Age at Hospital Admission (Years) 0-5 6-17 18-29 30-39 40-49 50-59 60-69 70-79 80-89 90+ Missing Race American Indian or Alaska Native Asian Black or African American Native Hawaiian or Other Pacific Islander White 1,823 2,349 Other/Mixed/Unknown 

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Ethnicity



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Hispanic 250 291 228 294 Non-Hispanic 503 2,698 677 2.089 Unknown 273 296 479 564 **Codes Observed During Inpatient Stay** Asymptomatic screening (Z11.59) 31 41 535 661 Contact and suspected exposure (Z20.828) 205 276 1,266 1,700 Pneumonia (see Appendix B) 756 1.045 543 824 Other viral pneumonia (J12.89) 808 1,009 91 129 ARDS (J80) 197 60 252 33 Sepsis (see Appendix C) 367 489 590 838 Bronchitis (J20.8 OR J40) 17 18 13 21 Respiratory infection (J22 OR J98.8) 50 60 14 16 Cough (R05) 248 112 150 174 Shortness of breath (R06.2) 3 3 10 16 Fever (R50.9) 173 207 234 334 Optional **Other COVID Tests** Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) observed within -7 days prior to hospitalization through end of patient record\*\* Test performed, at least 1 positive result 19 3 24 4 Test performed, only negative results 0 0 10 13 No test or unknown result 671 759 2.116 2,501 Antigen test within ±14 days from inpatient admission\*\* Test performed, at least 1 positive result 0 0 0 0 Test performed, only negative results 0 0 0 0 No test or unknown result 153 195 1,753 1,466 Codes Observed Within ±5 Days of Diagnostic Specimen Collection Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426) 687 878 1,786 2,398 **Codes Observed During Inpatient Stay** 

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Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness 55 61 102 122 of breath) OR R50.9 (fever)] Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) 133 27 34 150 OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] "Primary" Lab Test Product Information\*\*\*\* 847377 - SARS COV 2 NS 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA 3 3 3 3 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR 441 479 561 631 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab 95 95 55 58 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA 87635R - SARS-CoV-2, NAA (COVID-19), POCT 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19) 11 11 73 73 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With **Probe Detection** 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N1 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N2 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA With Probe Detection 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen By NAA With Probe Detection 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By NAA With Probe Detection 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA 137 177 1.442 1.720 With Probe Detection 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By **Immunoassay** 

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Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason)

| ou you com mospital you. | mosion Date for impati    | ent (ii / ota / (/ tannetea | ioi / iiiy iicasoii,   |
|--------------------------|---------------------------|-----------------------------|--|
| Detients Desitive        | Lab Tasta Dasitiva        | Detients Negative           | Lab Tasta Nagativa   |
| Patients Positive        |                           |                             | Lab Tests Negative   |
|                          | Nun                       | nber                        |  |
| -                        | -                         | -                           | -  |
|                          |                           |                             |  |
| -                        | -                         | -                           | -  |
|                          |                           |                             |  |
| -                        | -                         | -                           | -  |
|                          |                           |                             |  |
| -                        | _                         | _                           | -  |
|                          |                           |                             |  |
| 0                        | 0                         | 0                           | 0  |
| •                        | •                         | •                           | -  |
| -                        | _                         | _                           | -  |
|                          |                           |                             |  |
| -                        | _                         | _                           | -  |
|                          |                           |                             |  |
| _                        | _                         | _                           | _  |
|                          |                           |                             |  |
| _                        | _                         | _                           | _  |
|                          |                           |                             |  |
| _                        | _                         | _                           | _  |
|                          |                           |                             |  |
| 16                       | 18                        | 24                          | 33   |
|                          | Patients Positive  0 1 16 | Patients Positive  Num      | Number           -         -           -         -           -         -           0         0           -         -           -         -           -         -           -         -           -         -           -         -           -         -           -         -           -         -           -         - |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1* |                 |        |                 |        |                          |
|---|-----------------|--------|-----------------|--------|--------------------------|
|   |                 |        |                 |        |                          |
|   | Lab Positive*** |        | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number |                 |        | Number (Percent)         |
| Care Setting of "Primary" Lab Test***             |                 |        |                 |        |                          |
| Total Observed                                    | 990             | 74     | 2               | 210    | 1,064 ( 83.39% )         |
| Inpatient   | 332             | 39     | 1               | N/A    | 371                      |
| Outpatient or Emergency Department                | 295             | 15     | 0               | N/A    | 310                      |
| Other   | 22              | 1      | 0               | N/A    | 23                       |
| Care Setting Reported as Unknown                  | 232             | 19     | 1               | N/A    | 251                      |
| Demographics                                      |                 |        |                 |        |                          |
| Sex   |                 |        |                 |        |                          |
| Female  | 494             | 36     | 0               | 90     | 530 ( 85.48% )           |
| Male  | 496             | 38     | 2               | 104    | 534 ( 83.44% )           |
| Other/Missing                                     | 0               | 0      | 0               | 0      | N/A                      |
| Age at Hospital Admission (Years)                 |                 |        |                 |        |                          |
| 0-5   | 0               | 0      | 0               | 2      | 0 (0.00%)                |
| 6-17  | 1               | 0      | 0               | 0      | 1 ( 100.0% )             |
| 18-29   | 29              | 4      | 0               | 6      | 33 ( 84.62% )            |
| 30-39   | 76              | 2      | 0               | 14     | 78 ( 84.78% )            |
| 40-49   | 106             | 7      | 0               | 16     | 113 (87.60%)             |
| 50-59   | 226             | 13     | 0               | 36     | 239 ( 86.91% )           |
| 60-69   | 236             | 20     | 1               | 43     | 256 ( 85.33% )           |
| 70-79   | 181             | 14     | 1               | 39     | 195 ( 82.98% )           |
| 80-89   | 108             | 10     | 0               | 27     | 118 (81.38%)             |
| 90+   | 27              | 4      | 0               | 11     | 31 (73.81%)              |
| Missing   | 0               | 0      | 0               | 0      | N/A                      |
| Race  | -               | -      | -               | -      | ,                        |
| American Indian or Alaska Native                  | 5               | 0      | 0               | 2      | 5 (71.43%)               |
| Asian   | 68              | 3      | 1               | 8      | 71 (88.75%)              |
| Black or African American                         | 355             | 13     | 1               | 116    | 368 ( 75.88% )           |
| Native Hawaiian or Other Pacific Islander         | 3               | 0      | 0               | 2      | 3 ( 60 % )               |
| White   | 294             | 41     | 0               | 28     | 335 ( 92.29% )           |
| Other/Mixed/Unknown                               | 265             | 17     | 0               | 38     | 282 ( 88.13% )           |
| Ethnicity   |                 |        |                 |        | , ,                      |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*                                   |                 |                 |                 |        |                        |  |
|---|-----------------|-----------------|-----------------|--------|------------------------|--|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu |  |
|   |                 | Number          |                 |        | Number (Percent)       |  |
| Hispanic  | 243             | 8               | 0               | 27     | 251 ( 90.29% )         |  |
| Non-Hispanic  | 483             | 39              | 2               | 46     | 522 ( 91.58% )         |  |
| Unknown   | 264             | 27              | 0               | 121    | 291 ( 70.63% )         |  |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                        |  |
| Asymptomatic screening (Z11.59)   | 29              | 8               | 0               | 8      | 37 ( 82.22% )          |  |
| Contact and suspected exposure (Z20.828)  | 190             | 44              | 0               | 44     | 234 (84.17%)           |  |
| Pneumonia (see Appendix B)  | 744             | 51              | 2               | 149    | 795 ( 84.04% )         |  |
| Other viral pneumonia (J12.89)  | 805             | 31              | 2               | 146    | 836 ( 84.96% )         |  |
| ARDS (J80)  | 195             | 11              | 1               | 30     | 206 ( 86.92% )         |  |
| Sepsis (see Appendix C)   | 359             | 36              | 2               | 76     | 395 (83.51%)           |  |
| Bronchitis (J20.8 OR J40)   | 17              | 0               | 0               | 3      | 17 (85 %)              |  |
| Respiratory infection (J22 OR J98.8)  | 50              | 1               | 1               | 17     | 51 (73.91%)            |  |
| Cough (RO5)   | 108             | 14              | 0               | 29     | 122 ( 80.79% )         |  |
| Shortness of breath (R06.2)   | 3               | 0               | 0               | 0      | 3 (100.0%)             |  |
| Fever (R50.9)   | 169             | 13              | 0               | 50     | 182 ( 78.45% )         |  |
| Optional  |                 |                 |                 |        |                        |  |
| Other COVID Tests   |                 |                 |                 |        |                        |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -      | -                      |  |
| observed within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |        |                        |  |
| est performed, at least 1 positive result   | 19              | 0               | 0               | 3      | 19 (86.36%)            |  |
| est performed, only negative results  | 0               | 0               | 0               | 0      | N/A                    |  |
| No test or unknown result   | 653             | 31              | 2               | 181    | 684 ( 78.89% )         |  |
| Antigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -      | · <u>-</u>             |  |
| est performed, at least 1 positive result   | 0               | 0               | 0               | 0      | N/A                    |  |
| est performed, only negative results  | 0               | 0               | 0               | 0      | N/A                    |  |
| No test or unknown result   | 148             | 5               | 0               | 9      | 153 ( 94.44% )         |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 |        |                        |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 652             | 62              | 1               | 14     | 714 ( 97.94% )         |  |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*   |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 53              | 4               | 0               | 22     | 57 ( 72.15% )            |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 132             | 10              | 0               | 35     | 142 ( 80.23% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****  |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | 2               | -               | -               | -      | 2 ( 100.0% )             |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 424             | 21              | 2               | -      | 445 ( 99.55% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | 87              | 4               | -               | -      | 91 ( 100.0% )            |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | 11              | 1               | -               | -      | 12 ( 100.0% )            |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test<br>94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With | -               | -               | -               | -      | N/A                      |
| Probe Detection   | -               | -               | -               | -      | N/A                      |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  |                 |                 |                 |        |                          |
|   | -               | -               | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By     |                 |                 |                 |        | A1 / A                   |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2  | -               | -               | -               | -      | N/A                      |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   |                 |                 |                 |        | N1 / A                   |
| NAA With Probe Detection  | -               | -               | -               | -      | N/A                      |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  |                 |                 |                 |        | NI/A                     |
| By NAA With Probe Detection   | -               | -               | -               | -      | N/A                      |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  |                 |                 |                 |        | NI/A                     |
| NAA With Probe Detection  | -               | -               | -               | -      | N/A                      |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 135             | 4               | 0               | 0      | 139 ( 100.0% )           |
| NAA With Probe Detection  | 155             | 4               | U               | U      | 139 ( 100.0% )           |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | _               | _               | -               | _      | N/A                      |
| Immunoassay   | -               | -               | _               | -      | 14/74                    |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*   |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   |                 |                 |                 |        |                          |
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By            | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay   |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With              | -               | -               | -               | -      | N/A                      |
| Probe Detection   |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By              | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen              | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory                   | 0               | 0               | 0               | 0      | N/A                      |
| Specimen By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By                   | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                   | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                 | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection   |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By              | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection | -               | -               | -               | -      | N/A                      |
|   | 42              | 4               |                 | 0      | 44/50.070()              |
| Unknown   | 13              | 1               | 0               | 9      | 14 ( 60.87% )            |

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Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| į į                                       | Algorithm 1: Inpatient (IP) Stay with Code | e U07.1*                        |                             |
|---|--|---------------------------------|-----------------------------|
|   |  | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b>                 | (95% Confidence Interval)       | Interval)                   |
|   |  | Number (Percent)                |                             |
| Care Setting of "Primary" Lab Test***     |  |                                 |                             |
| Total Observed                            | 1,276 ( 100.0% )                           | 93.05% ( 91.35% , 94.50% )      | 96.49% (95.18%, 97.53%)     |
| Inpatient                                 | 372 ( 29.15% )                             | 89.49% (85.91%, 92.42%)         | 84.48% (80.51%, 87.91%)     |
| Outpatient or Emergency Department        | 310 ( 24.29% )                             | 95.16% (92.14%, 97.27%)         | 84.29% (80.04%, 87.94%)     |
| Other                                     | 23 ( 1.80% )                               | 95.65% (78.05%, 99.89%)         | 75.86% (56.46%, 89.70%)     |
| Care Setting Reported as Unknown          | 261 ( 20.45% )                             | 92.43% (88.43%, 95.38%)         | 94.31% (90.64%, 96.85%)     |
| Demographics                              |  |                                 |                             |
| Sex                                       |  |                                 |                             |
| Female                                    | 620 ( 48.59% )                             | 93.21% (90.72%, 95.20%)         | 96.86% (94.96%, 98.20%)     |
| Male                                      | 640 ( 50.16% )                             | 92.88% (90.36%, 94.92%)         | 96.12% (94.08%, 97.62%)     |
| Other/Missing                             | N/A  | N/A                             | N/A                         |
| Age at Hospital Admission (Years)         |  |                                 |                             |
| 0-5                                       | 2 ( 0.16% )                                | N/A                             | N/A                         |
| 6-17                                      | 1 ( 0.08% )                                | 100.0% ( 2.50% , 100.0% )       | 100.0% ( 2.50%, 100.0%)     |
| 18-29                                     | 39 ( 3.06% )                               | 87.88% (71.80%, 96.60%)         | 93.55% (78.58%, 99.21%)     |
| 30-39                                     | 92 ( 7.21% )                               | 97.44% (91.04%, 99.69%)         | 95 % (87.69%, 98.62%)       |
| 40-49                                     | 129 ( 10.11% )                             | 93.81% (87.65%, 97.47%)         | 95.50% (89.80%, 98.52%)     |
| 50-59                                     | 275 ( 21.55% )                             | 94.56% (90.88%, 97.07%)         | 96.17% (92.85%, 98.23%)     |
| 60-69                                     | 300 ( 23.51% )                             | 92.19% (88.19%, 95.16%)         | 98.33% (95.79%, 99.54%)     |
| 70-79                                     | 235 ( 18.42% )                             | 92.82% (88.25%, 96.02%)         | 95.77% (91.83%, 98.16%)     |
| 80-89                                     | 145 ( 11.36% )                             | 91.53% (84.97%, 95.86%)         | 97.30% (92.30%, 99.44%)     |
| 90+                                       | 42 ( 3.29% )                               | 87.10% (70.17%, 96.37%)         | 96.43% (81.65%, 99.91%)     |
| Missing                                   | N/A  | N/A                             | N/A                         |
| Race                                      |  |                                 |                             |
| American Indian or Alaska Native          | 7 ( 0.55% )                                | 100.0% (47.82%, 100.0%)         | 100.0% (47.82%, 100.0%)     |
| Asian                                     | 80 ( 6.27% )                               | 95.77% (88.14%, 99.12%)         | 95.77% (88.14%, 99.12%)     |
| Black or African American                 | 485 ( 38.01% )                             | 96.47% (94.03%, 98.11%)         | 98.07% (96.06%, 99.22%)     |
| Native Hawaiian or Other Pacific Islander | 5 ( 0.39% )                                | 100.0% (29.24%, 100.0%)         | 100.0% (29.24%, 100.0%)     |
| White                                     | 363 ( 28.45% )                             | 87.76% (83.76%, 91.07%)         | 94.84% (91.75%, 97.02%)     |
| Other/Mixed/Unknown                       | 320 ( 25.08% )                             | 93.97% (90.52%, 96.45%)         | 96.36% (93.41%, 98.24%)     |
| Ethnicity                                 |  |                                 |                             |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   |                     | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |  |  |
|---|---------------------|---------------------------------|-----------------------------|--|--|
|   | Total Patient Count | (95% Confidence Interval)       | Interval)                   |  |  |
|   |                     | Number (Percent)                |                             |  |  |
| Hispanic  | 278 ( 21.79% )      | 96.81% (93.82%, 98.61%)         | 97.20% ( 94.32% , 98.87%    |  |  |
| Non-Hispanic  | 570 ( 44.67% )      | 92.53% (89.93%, 94.63%)         | 96.02% ( 93.93% , 97.55%    |  |  |
| Unknown   | 412 ( 32.29% )      | 90.72% (86.79%, 93.80%)         | 96.70% ( 93.83% , 98.48%    |  |  |
| Codes Observed During Inpatient Stay  |                     |                                 |                             |  |  |
| Asymptomatic screening (Z11.59)   | 45 ( 3.53% )        | 78.38% (61.79%, 90.17%)         | 93.55% (78.58%, 99.21%      |  |  |
| Contact and suspected exposure (Z20.828)  | 278 ( 21.79% )      | 81.20% ( 75.59% , 85.99% )      | 92.68% (88.22%, 95.85%      |  |  |
| Pneumonia (see Appendix B)  | 946 (74.14%)        | 93.58% (91.65%, 95.19%)         | 98.41% (97.24%, 99.18%      |  |  |
| Other viral pneumonia (J12.89)  | 984 (77.12%)        | 96.29% (94.78%, 97.47%)         | 99.63% (98.92%, 99.92%      |  |  |
| ARDS (J80)  | 237 ( 18.57% )      | 94.66% (90.65%, 97.30%)         | 98.98% (96.38%, 99.88%      |  |  |
| Sepsis (see Appendix C)   | 473 ( 37.07% )      | 90.89% (87.61%, 93.53%)         | 97.82% (95.75%, 99.05%      |  |  |
| Bronchitis (J20.8 OR J40)   | 20 ( 1.57% )        | 100.0% (80.49%, 100.0%)         | 100.0% (80.49%, 100.0%      |  |  |
| Respiratory infection (J22 OR J98.8)  | 69 ( 5.41% )        | 98.04% (89.55%, 99.95%)         | 100.0% (92.89%, 100.0%      |  |  |
| Cough (RO5)   | 151 ( 11.83% )      | 88.52% (81.50%, 93.58%)         | 96.43% (91.11%, 99.02%      |  |  |
| Shortness of breath (R06.2)   | 3 ( 0.24% )         | 100.0% (29.24%, 100.0%)         | 100.0% (29.24%, 100.0%      |  |  |
| Fever (R50.9)   | 232 ( 18.18% )      | 92.86% (88.10%, 96.14%)         | 97.69% (94.19%, 99.37%      |  |  |
| Optional  |                     |                                 |                             |  |  |
| Other COVID Tests   |                     |                                 |                             |  |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                   | -                               | -                           |  |  |
| observed within -7 days prior to hospitalization through end of patient record**    |                     |                                 |                             |  |  |
| est performed, at least 1 positive result   | 22 ( 1.72% )        | 100.0% (82.35%, 100.0%)         | 100.0% (82.35%, 100.0%      |  |  |
| est performed, only negative results  | N/A                 | N/A                             | N/A                         |  |  |
| No test or unknown result   | 867 (67.95%)        | 95.47% (93.63%, 96.90%)         | 97.32% (95.79%, 98.40%      |  |  |
| Antigen test within ±14 days from inpatient admission**                             | -                   | -                               | -                           |  |  |
| est performed, at least 1 positive result   | N/A                 | N/A                             | N/A                         |  |  |
| est performed, only negative results  | N/A                 | N/A                             | N/A                         |  |  |
| No test or unknown result   | 162 ( 12.70% )      | 96.73% (92.54%, 98.93%)         | 96.73% ( 92.54% , 98.93%    |  |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                     |                                 |                             |  |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 729 ( 57.13% )      | 91.32% (89.01%, 93.28%)         | 94.91% ( 92.99% , 96.43%    |  |  |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 1: Inpati   | ent (IP) Stay with Code | e U07.1*                        |                             |
|---|-------------------------|---------------------------------|-----------------------------|
|   |                         | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |
|   | Total Patient Count     | (95% Confidence Interval)       | Interval)                   |
|   |                         | Number (Percent)                |                             |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 79 ( 6.19% )            | 92.98% (83 %, 98.05%)           | 96.36% (87.47%, 99.56%)     |
| of breath) OR R50.9 (fever)]  |                         |                                 |                             |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 177 ( 13.87% )          | 92.96% (87.43%, 96.57%)         | 99.25% (95.88%, 99.98%)     |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                         |                                 |                             |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                         |                                 |                             |
| Primary" Lab Test Product Information**** 47377 - SARS COV 2 NS   |                         |                                 |                             |
|   | N/A                     | N/A                             | N/A                         |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A                     | N/A                             | N/A                         |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA<br>7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR | 2 ( 0.16% )             | 100.0% (15.81%, 100.0%)         | 66.67% ( 9.43% , 99.16% )   |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | 447 ( 35.03% )          | 95.28% (92.88%, 97.06%)         | 96.15% (93.90%, 97.74%)     |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | 91 ( 7.13% )            | 95.60% (89.13%, 98.79%)         | 91.58% (84.08%, 96.29%)     |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A<br>N/A              | N/A<br>N/A                      | N/A<br>N/A                  |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | 12 ( 0.94% )            | 91.67% (61.52%, 99.79%)         | 100.0% (71.51%, 100.0%)     |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | 12 ( 0.94%)<br>N/A      | 91.07% (01.32%, 99.79%)<br>N/A  | N/A                         |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With   | N/A                     | N/A                             | N/A                         |
| robe Detection  | NA                      | N/A                             | NA                          |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                     | N/A                             | N/A                         |
| lucleic Acid Amplification Using CDC Primer-Probe Set N1  | 14/71                   | ,,,                             | .,,,,                       |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                     | N/A                             | N/A                         |
| lucleic Acid Amplification Using CDC Primer-Probe Set N2  | ,                       | ,                               | ,                           |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By  | N/A                     | N/A                             | N/A                         |
| AA With Probe Detection   |                         |                                 |                             |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen   | N/A                     | N/A                             | N/A                         |
| y NAA With Probe Detection  |                         |                                 |                             |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A                     | N/A                             | N/A                         |
| AA With Probe Detection   |                         |                                 |                             |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By  | 139 ( 10.89% )          | 97.12% ( 92.80% , 99.21% )      | 98.54% ( 94.83% , 99.82% )  |
| IAA With Probe Detection  |                         |                                 |                             |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | N/A                     | N/A                             | N/A                         |
| nmunoassay  |                         |                                 |                             |

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Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*  |                     |  |  |  |  |  |  |
|--|---------------------|--|--|--|--|--|--|
|  | Total Patient Count | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |  |
|  |                     | Number (Percent)   |  |  |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay             | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                 | N/A  | N/A                                      |  |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A                 | N/A  | N/A                                      |  |  |  |  |
| Unknown  | 23 ( 1.80% )        | 92.86% (66.13%, 99.82%)                                      | 81.25% (54.35%, 95.95%)                  |  |  |  |  |

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Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29* |                 |        |                 |        |                          |
|---|-----------------|--------|-----------------|--------|--------------------------|
|   |                 |        |                 |        |                          |
|   | Lab Positive*** |        | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number | •               |        | Number (Percent)         |
| Care Setting of "Primary" Lab Test***                 |                 |        |                 |        |                          |
| Total Observed  | 990             | 80     | 2               | 212    | 1,070 ( 83.33% )         |
| Inpatient   | 332             | 41     | 1               | N/A    | 373                      |
| Outpatient or Emergency Department                    | 296             | 17     | 0               | N/A    | 313                      |
| Other   | 22              | 1      | 0               | N/A    | 23                       |
| Care Setting Reported as Unknown                      | 232             | 21     | 1               | N/A    | 253                      |
| Demographics  |                 |        |                 |        |                          |
| Sex   |                 |        |                 |        |                          |
| Female  | 493             | 39     | 0               | 91     | 532 ( 85.39% )           |
| Male  | 497             | 41     | 2               | 105    | 538 ( 83.41% )           |
| Other/Missing   | 0               | 0      | 0               | 0      | N/A                      |
| Age at Hospital Admission (Years)                     |                 |        |                 |        |                          |
| 0-5   | 0               | 0      | 0               | 2      | 0 (0.00%)                |
| 6-17  | 1               | 0      | 0               | 0      | 1 ( 100.0% )             |
| 18-29   | 29              | 4      | 0               | 6      | 33 ( 84.62% )            |
| 30-39   | 76              | 3      | 0               | 14     | 79 ( 84.95% )            |
| 40-49   | 106             | 7      | 0               | 16     | 113 (87.60%)             |
| 50-59   | 226             | 14     | 0               | 36     | 240 ( 86.96% )           |
| 60-69   | 236             | 22     | 1               | 44     | 258 ( 85.15% )           |
| 70-79   | 182             | 14     | 1               | 40     | 196 ( 82.70% )           |
| 80-89   | 107             | 12     | 0               | 27     | 119 (81.51%)             |
| 90+   | 27              | 4      | 0               | 11     | 31 (73.81%)              |
| Missing   | 0               | 0      | 0               | 0      | N/A                      |
| Race  |                 | -      | -               | -      | ,                        |
| American Indian or Alaska Native                      | 5               | 0      | 0               | 2      | 5 (71.43%)               |
| Asian   | 68              | 3      | 1               | 8      | 71 (88.75%)              |
| Black or African American                             | 356             | 15     | 1               | 116    | 371 ( 76.02% )           |
| Native Hawaiian or Other Pacific Islander             | 3               | 0      | 0               | 2      | 3 (60 %)                 |
| White   | 294             | 45     | 0               | 30     | 339 ( 91.87% )           |
| Other/Mixed/Unknown                                   | 264             | 17     | 0               | 38     | 281 ( 88.09% )           |
| Ethnicity   |                 |        |                 |        | . ,                      |

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Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab  | Patients with Lab Res |
|--|-----------------|-----------------|-----------------|---------|-----------------------|
|  | Lab r Ositive   | Number          | Lab, No Results | 140 Lab | Number (Percent)      |
| Hispanic   | 243             | 8               | 0               | 27      | 251 ( 90.29% )        |
| Non-Hispanic   | 483             | 41              | 2               | 46      | 524 ( 91.61% )        |
| Unknown  | 264             | 31              | 0               | 123     | 295 ( 70.57% )        |
| Codes Observed During Inpatient Stay   |                 | -               | -               |         |                       |
| symptomatic screening (Z11.59)   | 29              | 9               | 0               | 8       | 38 ( 82.61% )         |
| Contact and suspected exposure (Z20.828)   | 191             | 48              | 0               | 44      | 239 (84.45%)          |
| neumonia (see Appendix B)  | 745             | 54              | 2               | 151     | 799 (83.93%)          |
| other viral pneumonia (J12.89)   | 806             | 32              | 2               | 148     | 838 ( 84.82% )        |
| RDS (J80)  | 195             | 12              | 1               | 30      | 207 ( 86.97% )        |
| epsis (see Appendix C)   | 359             | 40              | 2               | 76      | 399 (83.65%)          |
| ronchitis (J20.8 OR J40)   | 17              | 0               | 0               | 3       | 17 (85 %)             |
| espiratory infection (J22 OR J98.8)  | 50              | 1               | 1               | 17      | 51 (73.91%)           |
| ough (R05)   | 108             | 17              | 0               | 29      | 125 (81.17%)          |
| hortness of breath (R06.2)   | 3               | 0               | 0               | 0       | 3 ( 100.0% )          |
| ever (R50.9)   | 169             | 16              | 0               | 50      | 185 ( 78.72% )        |
| ptional  |                 |                 |                 |         |                       |
| ther COVID Tests   |                 |                 |                 |         |                       |
| ntibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -       | -                     |
| bserved within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |         |                       |
| est performed, at least 1 positive result  | 19              | 0               | 0               | 3       | 19 ( 86.36% )         |
| est performed, only negative results   | 0               | 0               | 0               | 0       | N/A                   |
| o test or unknown result   | 654             | 35              | 2               | 183     | 689 ( 78.83% )        |
| ntigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -       | -                     |
| est performed, at least 1 positive result  | 0               | 0               | 0               | 0       | N/A                   |
| est performed, only negative results   | 0               | 0               | 0               | 0       | N/A                   |
| o test or unknown result   | 148             | 5               | 0               | 9       | 153 ( 94.44% )        |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 |         |                       |
| rocedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 653             | 66              | 1               | 14      | 719 ( 97.96% )        |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*   |                 |                        |                 |          |   |
|---|-----------------|------------------------|-----------------|----------|---|
|   |                 | 1 - 1- 81 1: ***       | Lab Na Bassika  | Nie Lele | Badana wish tah Bassh                     |
|   | Lab Positive*** | Lab Negative*** Number | Lab, No Results | No Lab   | Patients with Lab Result Number (Percent) |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness                           | 53              | 6                      | 0               | 22       | 59 ( 72.84% )                             |
| of breath) OR R50.9 (fever)]  | 33              | O                      | O               | 22       | 33 (72.0470)                              |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                            | 133             | 11                     | 0               | 35       | 144 ( 80.45% )                            |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute                             | -55             |                        | •               |          | ( 000,0 )                                 |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]                             |                 |                        |                 |          |   |
| "Primary" Lab Test Product Information****  |                 |                        |                 |          |   |
| 847377 - SARS_COV_2_NS  | -               | -                      | -               | -        | N/A                                       |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual                                | -               | -                      | -               | -        | N/A                                       |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA                                     | 2               | -                      | -               | -        | 2 ( 100.0% )                              |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 425             | 25                     | 2               | -        | 450 ( 99.56% )                            |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | 87              | 4                      | -               | -        | 91 ( 100.0% )                             |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -               | -                      | -               | -        | N/A                                       |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -               | -                      | -               | -        | N/A                                       |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | 11              | 1                      | -               | -        | 12 ( 100.0% )                             |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | -               | -                      | -               | -        | N/A                                       |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With                            | -               | -                      | -               | -        | N/A                                       |
| Probe Detection   |                 |                        |                 |          |   |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                            | -               | -                      | -               | -        | N/A                                       |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1  |                 |                        |                 |          |   |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                            | -               | -                      | -               | -        | N/A                                       |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2  |                 |                        |                 |          |   |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By                               | -               | -                      | -               | -        | N/A                                       |
| NAA With Probe Detection  |                 |                        |                 |          |   |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen                            | -               | -                      | -               | -        | N/A                                       |
| By NAA With Probe Detection   |                 |                        |                 |          |   |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By                            | -               | -                      | -               | -        | N/A                                       |
| NAA With Probe Detection  |                 |                        |                 |          |   |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By                               | 135             | 4                      | 0               | 0        | 139 ( 100.0% )                            |
| NAA With Probe Detection<br>94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By |                 |                        |                 |          | N1 / 4                                    |
| ,   | -               | -                      | -               | -        | N/A                                       |
| Immunoassay   |                 |                        |                 |          |   |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                                     |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   |                 |                 |                 |        |                          |
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By            | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay   |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With              | -               | -               | -               | -      | N/A                      |
| Probe Detection   |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By              | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen              | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory                   | 0               | 0               | 0               | 0      | N/A                      |
| Specimen By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By                   | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                   | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        | _                        |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                 | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection   |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By              | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection | -               | -               | -               | -      | N/A                      |
|   | 42              | 4               |                 | 0      | 44/50.070()              |
| Unknown   | 13              | 1               | 0               | 9      | 14 ( 60.87% )            |

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Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   | Algorithm 2: IP Stay with Any of Codes U07.1, B97.29* |                               |                             |  |
|---|---|-------------------------------|-----------------------------|--|
|   |   |                               | Sensitivity (95% Confidence |  |
|   | <b>Total Patient Count</b>                            | PPV (95% Confidence Interval) | Interval)                   |  |
|   |   | Number (Percent)              |                             |  |
| Care Setting of "Primary" Lab Test***     |   |                               |                             |  |
| Total Observed                            | 1,284 ( 100.0% )                                      | 92.52% (90.78%, 94.03%)       | 96.49% (95.18%, 97.53%)     |  |
| Inpatient                                 | 374 ( 29.13% )  | 89.01% (85.38%, 92%)          | 84.48% (80.51%, 87.91%)     |  |
| Outpatient or Emergency Department        | 313 ( 24.38% )  | 94.57% (91.45%, 96.80%)       | 84.57% (80.35%, 88.19%)     |  |
| Other                                     | 23 ( 1.79% )  | 95.65% (78.05%, 99.89%)       | 75.86% (56.46%, 89.70%)     |  |
| Care Setting Reported as Unknown          | 263 ( 20.48% )  | 91.70% (87.59%, 94.79%)       | 94.31% (90.64%, 96.85%)     |  |
| Demographics                              |   |                               |                             |  |
| Sex                                       |   |                               |                             |  |
| Female                                    | 623 ( 48.52% )  | 92.67% (90.11%, 94.74%)       | 96.67% (94.72%, 98.05%)     |  |
| Male                                      | 645 ( 50.23% )  | 92.38% (89.80%, 94.48%)       | 96.32% (94.31%, 97.77%)     |  |
| Other/Missing                             | N/A   | N/A                           | N/A                         |  |
| Age at Hospital Admission (Years)         |   |                               |                             |  |
| 0-5                                       | 2 ( 0.16% )   | N/A                           | N/A                         |  |
| 6-17                                      | 1 ( 0.08% )   | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50% , 100.0% )   |  |
| 18-29                                     | 39 ( 3.04% )  | 87.88% (71.80%, 96.60%)       | 93.55% (78.58%, 99.21%)     |  |
| 30-39                                     | 93 ( 7.24% )  | 96.20% (89.30%, 99.21%)       | 95 % (87.69%, 98.62%)       |  |
| 40-49                                     | 129 ( 10.05% )  | 93.81% (87.65%, 97.47%)       | 95.50% (89.80%, 98.52%)     |  |
| 50-59                                     | 276 ( 21.50% )  | 94.17% (90.41%, 96.77%)       | 96.17% (92.85%, 98.23%)     |  |
| 60-69                                     | 303 ( 23.60% )  | 91.47% (87.37%, 94.58%)       | 98.33% (95.79%, 99.54%)     |  |
| 70-79                                     | 237 ( 18.46% )  | 92.86% (88.31%, 96.04%)       | 96.30% (92.52%, 98.50%)     |  |
| 80-89                                     | 146 ( 11.37% )  | 89.92% (83.05%, 94.68%)       | 96.40% (91.03%, 99.01%)     |  |
| 90+                                       | 42 ( 3.27% )  | 87.10% (70.17%, 96.37%)       | 96.43% (81.65%, 99.91%)     |  |
| Missing                                   | N/A   | N/A                           | N/A                         |  |
| Race                                      |   |                               |                             |  |
| American Indian or Alaska Native          | 7 ( 0.55% )   | 100.0% (47.82%, 100.0%)       | 100.0% (47.82%, 100.0%)     |  |
| Asian                                     | 80 ( 6.23% )  | 95.77% (88.14%, 99.12%)       | 95.77% (88.14%, 99.12%)     |  |
| Black or African American                 | 488 ( 38.01% )  | 95.96% (93.42%, 97.72%)       | 98.34% (96.43%, 99.39%)     |  |
| Native Hawaiian or Other Pacific Islander | 5 ( 0.39% )   | 100.0% (29.24%, 100.0%)       | 100.0% (29.24%, 100.0%)     |  |
| White                                     | 369 ( 28.74% )  | 86.73% (82.64%, 90.15%)       | 94.84% (91.75%, 97.02%)     |  |
| Other/Mixed/Unknown                       | 319 ( 24.84% )  | 93.95% (90.49%, 96.44%)       | 96 % (92.96%, 97.99%)       |  |
| Ethnicity                                 |   |                               |                             |  |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   |                            |                               | Sensitivity (95% Confidence |
|---|----------------------------|-------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            | Number (Percent)              |                             |
| Hispanic  | 278 ( 21.65% )             | 96.81% (93.82%, 98.61%)       | 97.20% ( 94.32% , 98.87%    |
| Non-Hispanic  | 572 ( 44.55% )             | 92.18% (89.53%, 94.33%)       | 96.02% ( 93.93% , 97.55%    |
| Unknown   | 418 ( 32.55% )             | 89.49% ( 85.42% , 92.75% )    | 96.70% ( 93.83% , 98.48%    |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| Asymptomatic screening (Z11.59)   | 46 ( 3.58% )               | 76.32% (59.76%, 88.56%)       | 93.55% (78.58%, 99.21%      |
| Contact and suspected exposure (Z20.828)  | 283 ( 22.04% )             | 79.92% ( 74.27% , 84.80% )    | 93.17% (88.81%, 96.22%      |
| Pneumonia (see Appendix B)  | 952 ( 74.14% )             | 93.24% (91.27%, 94.88%)       | 98.54% (97.41%, 99.27%      |
| Other viral pneumonia (J12.89)  | 988 ( 76.95% )             | 96.18% ( 94.65% , 97.37% )    | 99.75% (99.11%, 99.97%      |
| ARDS (J80)  | 238 ( 18.54% )             | 94.20% ( 90.09% , 96.97% )    | 98.98% (96.38%, 99.88%      |
| Sepsis (see Appendix C)   | 477 (37.15%)               | 89.97% (86.60%, 92.74%)       | 97.82% (95.75%, 99.05%      |
| Bronchitis (J20.8 OR J40)   | 20 ( 1.56% )               | 100.0% (80.49%, 100.0%)       | 100.0% (80.49%, 100.0%      |
| Respiratory infection (J22 OR J98.8)  | 69 (5.37%)                 | 98.04% (89.55%, 99.95%)       | 100.0% (92.89%, 100.0%      |
| Cough (R05)   | 154 ( 11.99% )             | 86.40% (79.12%, 91.87%)       | 96.43% (91.11%, 99.02%      |
| Shortness of breath (R06.2)   | 3 ( 0.23% )                | 100.0% (29.24%, 100.0%)       | 100.0% (29.24%, 100.0%      |
| Fever (R50.9)   | 235 ( 18.30% )             | 91.35% (86.34%, 94.98%)       | 97.69% (94.19%, 99.37%      |
| Optional  |                            |                               |                             |
| Other COVID Tests   |                            |                               |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                               |                             |
| Test performed, at least 1 positive result  | 22 ( 1.71% )               | 100.0% (82.35%, 100.0%)       | 100.0% (82.35%, 100.0%      |
| Test performed, only negative results   | N/A                        | N/A                           | N/A                         |
| No test or unknown result   | 874 ( 68.07% )             | 94.92% (93.01%, 96.44%)       | 97.47% ( 95.97% , 98.52%    |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                             | -                           |
| Test performed, at least 1 positive result  | N/A                        | N/A                           | N/A                         |
| est performed, only negative results  | N/A                        | N/A                           | N/A                         |
| No test or unknown result   | 162 ( 12.62% )             | 96.73% (92.54%, 98.93%)       | 96.73% ( 92.54% , 98.93%    |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            |                               |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 734 ( 57.17% )             | 90.82% (88.47%, 92.83%)       | 95.05% (93.15%, 96.55%      |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 2: IP Stay v   | vith Any of Codes U07.     | 1, B97.29*                    |                             |
|--|----------------------------|-------------------------------|-----------------------------|
|  |                            |                               | Sensitivity (95% Confidence |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|  |                            | Number (Percent)              |                             |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness                                      | 81 ( 6.31% )               | 89.83% (79.17%, 96.18%)       | 96.36% (87.47%, 99.56%)     |
| of breath) OR R50.9 (fever)]   |                            |                               |                             |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 179 ( 13.94% )             | 92.36% (86.74%, 96.13%)       | 100.0% (97.26%, 100.0%)     |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  |                            |                               |                             |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                            |                               |                             |
| Primary" Lab Test Product Information****  |                            |                               |                             |
| 47377 - SARS_COV_2_NS  | N/A                        | N/A                           | N/A                         |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | N/A                        | N/A                           | N/A                         |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | 2 ( 0.16% )                | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )   |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 452 ( 35.20% )             | 94.44% (91.91%, 96.37%)       | 96.37% (94.17%, 97.91%)     |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab<br>7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA | 91 ( 7.09% )               | 95.60% (89.13%, 98.79%)       | 91.58% (84.08%, 96.29%)     |
| 7635R - SARS-COV-2, (COVID-19), RIVA, QUAILLATIVE RT-IVAA<br>7635R - SARS-COV-2, NAA (COVID-19), POCT              | N/A                        | N/A                           | N/A                         |
| 7635T - SARS-COV-2, NAA (COVID-19), POCT<br>7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                  | N/A                        | N/A                           | N/A                         |
| 7635Y - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19) 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test     | 12 ( 0.93% )<br>N/A        | 91.67%(61.52%,99.79%)<br>N/A  | 100.0% (71.51%, 100.0%)     |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | N/A<br>N/A                 | N/A<br>N/A                    | N/A<br>N/A                  |
| robe Detection   | IN/A                       | N/A                           | N/A                         |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                        | N/A                           | N/A                         |
| lucleic Acid Amplification Using CDC Primer-Probe Set N1   | IN/ A                      | N/A                           | N/A                         |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                        | N/A                           | N/A                         |
| lucleic Acid Amplification Using CDC Primer-Probe Set N2   | 14/71                      | 14/7                          | 14//                        |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                         |
| AA With Probe Detection  | ,                          |                               | ,                           |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | N/A                        | N/A                           | N/A                         |
| y NAA With Probe Detection   | •                          | •                             | ,                           |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                        | N/A                           | N/A                         |
| AA With Probe Detection  | •                          | •                             | ,                           |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 139 ( 10.83% )             | 97.12% ( 92.80% , 99.21% )    | 98.54% ( 94.83% , 99.82% )  |
| AA With Probe Detection  | ,                          | ,                             | . ,                         |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | N/A                        | N/A                           | N/A                         |
| nmunoassay   |                            |                               |                             |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                          |                            |                               |                             |  |  |
|--|----------------------------|-------------------------------|-----------------------------|--|--|
|  |                            |                               | Sensitivity (95% Confidence |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |  |  |
|  |                            | Number (Percent)              |                             |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                        | N/A                           | N/A                         |  |  |
| Rapid Immunoassay  |                            |                               |                             |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | N/A                        | N/A                           | N/A                         |  |  |
| Probe Detection  |                            |                               |                             |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | N/A                        | N/A                           | N/A                         |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | N/A                        | N/A                           | N/A                         |  |  |
| By NAA With Probe Detection  |                            |                               |                             |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | N/A                        | N/A                           | N/A                         |  |  |
| Specimen By NAA With Probe Detection   |                            |                               |                             |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | N/A                        | N/A                           | N/A                         |  |  |
| Immunoassay  |                            |                               |                             |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | N/A                        | N/A                           | N/A                         |  |  |
| Immunoassay  |                            |                               |                             |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | N/A                        | N/A                           | N/A                         |  |  |
| Non-Probe Detection  |                            |                               |                             |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | N/A                        | N/A                           | N/A                         |  |  |
| NAA With Probe Detection   |                            |                               |                             |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | N/A                        | N/A                           | N/A                         |  |  |
| Probe Detection  | ( ( )                      |                               |                             |  |  |
| Unknown  | 23 ( 1.79% )               | 92.86% (66.13%, 99.82%)       | 81.25% ( 54.35% , 95.95% )  |  |  |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2* |                 |                 |                 |            |                          |  |
|--|-----------------|-----------------|-----------------|------------|--------------------------|--|
|  | Lab Desitive*** | Lab Nagative*** | Lah Na Basulta  | Notob      | Dationto with Lab Docult |  |
|  | Lab Positive*** |                 | Lab, No Results | NO Lab     | Patients with Lab Result |  |
| Care Setting of "Primary" Lab Test***                        |                 | Number          |                 |            | Number (Percent)         |  |
| Total Observed   | 990             | 81              | 2               | 213        | 1,071 ( 83.28% )         |  |
| Inpatient  | 332             | 42              | 1               | 215<br>N/A | 1,071 ( 83.28% )<br>374  |  |
| Outpatient or Emergency Department                           | 296             | 42<br>17        | 0               | N/A<br>N/A | 313                      |  |
| Other  | 290             | 1               | 0               | N/A<br>N/A | 23                       |  |
| Care Setting Reported as Unknown                             | 232             | 21              | 1               | N/A<br>N/A | 25<br>253                |  |
| Demographics   | 232             | 21              | <u> </u>        | IN/A       | 233                      |  |
| Sex  |                 |                 |                 |            |                          |  |
| Female   | 493             | 40              | 0               | 92         | 533 ( 85.28% )           |  |
| Male   | 497             | 41              | 2               | 105        | 538 (83.41%)             |  |
| Other/Missing  | 0               | 0               | 0               | 0          | N/A                      |  |
| Age at Hospital Admission (Years)                            | ŭ               | · ·             | Ü               | Ü          | 14/71                    |  |
| 0-5  | 0               | 0               | 0               | 2          | 0 (0.00%)                |  |
| 6-17   | 1               | 0               | 0               | 0          | 1 ( 100.0% )             |  |
| 18-29  | 29              | 4               | 0               | 6          | 33 ( 84.62% )            |  |
| 30-39  | 76              | 3               | 0               | 14         | 79 ( 84.95% )            |  |
| 40-49  | 106             | 8               | 0               | 16         | 114 (87.69%)             |  |
| 50-59  | 226             | 14              | 0               | 36         | 240 ( 86.96% )           |  |
| 60-69  | 236             | 22              | 1               | 44         | 258 ( 85.15% )           |  |
| 70-79  | 182             | 14              | 1               | 41         | 196 ( 82.35% )           |  |
| 80-89  | 107             | 12              | 0               | 27         | 119 (81.51%)             |  |
| 90+  | 27              | 4               | 0               | 11         | 31 (73.81%)              |  |
| Missing  | 0               | 0               | 0               | 0          | N/A                      |  |
| Race   |                 |                 |                 |            |                          |  |
| American Indian or Alaska Native                             | 5               | 0               | 0               | 2          | 5 ( 71.43% )             |  |
| Asian  | 68              | 3               | 1               | 8          | 71 (88.75%)              |  |
| Black or African American                                    | 356             | 15              | 1               | 116        | 371 ( 76.02% )           |  |
| Native Hawaiian or Other Pacific Islander                    | 3               | 0               | 0               | 2          | 3 ( 60 % )               |  |
| White  | 294             | 45              | 0               | 30         | 339 ( 91.87% )           |  |
| Other/Mixed/Unknown  | 264             | 18              | 0               | 39         | 282 ( 87.85% )           |  |
| Ethnicity  |                 |                 |                 |            |                          |  |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 3: IP Stay with   | Ally of Codes 007 | .1, 097.29, 834.2* |                 |        |                         |
|---|-------------------|--------------------|-----------------|--------|-------------------------|
|   | Lab Positive***   | Lab Negative***    | Lab, No Results | No Lab | Patients with Lab Resul |
|   |                   | Number             |                 |        | Number (Percent)        |
| Hispanic  | 243               | 9                  | 0               | 28     | 252 ( 90 % )            |
| Non-Hispanic  | 483               | 41                 | 2               | 46     | 524 (91.61%)            |
| Unknown   | 264               | 31                 | 0               | 123    | 295 ( 70.57% )          |
| Codes Observed During Inpatient Stay  |                   |                    |                 |        | · · · · · ·             |
| Asymptomatic screening (Z11.59)   | 29                | 9                  | 0               | 8      | 38 ( 82.61% )           |
| Contact and suspected exposure (Z20.828)  | 191               | 49                 | 0               | 44     | 240 (84.51%)            |
| Pneumonia (see Appendix B)  | 745               | 54                 | 2               | 151    | 799 ( 83.93% )          |
| Other viral pneumonia (J12.89)  | 806               | 32                 | 2               | 148    | 838 ( 84.82% )          |
| ARDS (J80)  | 195               | 12                 | 1               | 30     | 207 ( 86.97% )          |
| Sepsis (see Appendix C)   | 359               | 40                 | 2               | 76     | 399 (83.65%)            |
| Bronchitis (J20.8 OR J40)   | 17                | 0                  | 0               | 3      | 17 (85 %)               |
| Respiratory infection (J22 OR J98.8)  | 50                | 1                  | 1               | 17     | 51 ( 73.91% )           |
| Cough (R05)   | 108               | 17                 | 0               | 29     | 125 (81.17%)            |
| Shortness of breath (R06.2)   | 3                 | 0                  | 0               | 0      | 3 (100.0%)              |
| Fever (R50.9)   | 169               | 16                 | 0               | 50     | 185 ( 78.72% )          |
| Optional  |                   |                    |                 |        |                         |
| Other COVID Tests   |                   |                    |                 |        |                         |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                 | -                  | -               | -      | -                       |
| observed within -7 days prior to hospitalization through end of patient record**    |                   |                    |                 |        |                         |
| est performed, at least 1 positive result   | 19                | 0                  | 0               | 3      | 19 ( 86.36% )           |
| est performed, only negative results  | 0                 | 0                  | 0               | 0      | N/A                     |
| No test or unknown result   | 654               | 35                 | 2               | 184    | 689 ( 78.74% )          |
| Antigen test within ±14 days from inpatient admission**                             | -                 | -                  | -               | -      | -                       |
| est performed, at least 1 positive result   | 0                 | 0                  | 0               | 0      | N/A                     |
| est performed, only negative results  | 0                 | 0                  | 0               | 0      | N/A                     |
| No test or unknown result   | 148               | 5                  | 0               | 9      | 153 ( 94.44% )          |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                   |                    |                 |        |                         |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 653               | 67                 | 1               | 15     | 720 ( 97.83% )          |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 3: IP Stay with   | Any of Codes U07 | .1, B97.29, B34.2* |                 |        |                          |
|---|------------------|--------------------|-----------------|--------|--------------------------|
|   | Lab Positive***  | Lab Negative***    | Lab, No Results | No Lab | Patients with Lab Result |
|   |                  | Number             |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 53               | 6                  | 0               | 22     | 59 ( 72.84% )            |
| of breath) OR R50.9 (fever)]  |                  |                    |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 133              | 11                 | 0               | 35     | 144 ( 80.45% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                  |                    |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                  |                    |                 |        |                          |
| "Primary" Lab Test Product Information****  |                  |                    |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -                | -                  | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | -                | -                  | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | 2                | -                  | -               | -      | 2 ( 100.0% )             |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 425              | 25                 | 2               | -      | 450 ( 99.56% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | 87               | 4                  | -               | -      | 91 ( 100.0% )            |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -                | -                  | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -                | -                  | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | 11               | 1                  | -               | -      | 12 ( 100.0% )            |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | -                | -                  | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | -                | -                  | -               | -      | N/A                      |
| Probe Detection   |                  |                    |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -                | -                  | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By |                  |                    |                 |        |                          |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2  | -                | -                  | -               | -      | N/A                      |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   |                  |                    |                 |        | A1 / A                   |
| NAA With Probe Detection  | -                | -                  | -               | -      | N/A                      |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  |                  |                    |                 |        | N1 / A                   |
| By NAA With Probe Detection   | -                | -                  | -               | -      | N/A                      |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  |                  |                    |                 |        | N/A                      |
| NAA With Probe Detection  | -                | -                  | -               | -      | IN/A                     |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 135              | 4                  | 0               | 0      | 139 ( 100.0% )           |
| NAA With Probe Detection  | 155              | 4                  | U               | U      | 139 ( 100.070 )          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | _                | _                  | _               | _      | N/A                      |
| Immunoassay   | _                | _                  | _               | _      | IV/A                     |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                   |                 |                 |                 |        |                          |
|--|-----------------|-----------------|-----------------|--------|--------------------------|
|  |                 |                 |                 |        |                          |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay  |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 0               | 0               | 0               | 0      | N/A                      |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |
| Immunoassay  |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection  |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |
| Probe Detection  |                 |                 |                 |        |                          |
| Unknown  | 13              | 1               | 0               | 9      | 14 ( 60.87% )            |

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Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   |                     |                               | Consitivity (OEV/ Confidence |
|---|---------------------|-------------------------------|------------------------------|
|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence  |
|   | Total Patient Count |                               | Interval)                    |
| Care Setting of "Primary" Lab Test***     |                     | Number (Percent)              |                              |
| otal Observed                             | 1 296 / 100 09/ \   | 02.449/ / 00.609/ 02.059/ )   | 06 400/ / 05 190/ 07 530/ \  |
| Inpatient                                 | 1,286 ( 100.0% )    | 92.44% (90.69%, 93.95%)       | 96.49% (95.18%, 97.53%)      |
| Outpatient or Emergency Department        | 375 ( 29.16% )      | 88.77% (85.12%, 91.79%)       | 84.48% (80.51%, 87.91%)      |
| Other                                     | 313 ( 24.34% )      | 94.57% (91.45%, 96.80%)       | 84.57% (80.35%, 88.19%)      |
| Care Setting Reported as Unknown          | 23 ( 1.79% )        | 95.65% (78.05%, 99.89%)       | 75.86% (56.46%, 89.70%)      |
| Demographics                              | 263 ( 20.45% )      | 91.70% (87.59%, 94.79%)       | 94.31% (90.64%, 96.85%)      |
| Sex Sex                                   |                     |                               |                              |
| Female                                    | 625 ( 48.60% )      | 92.50% (89.92%, 94.58%)       | 96.67% (94.72%, 98.05%)      |
| Male                                      | 645 ( 50.16% )      | 92.38% (89.80%, 94.48%)       | 96.32% (94.31%, 97.77%)      |
| Other/Missing                             | N/A                 | N/A                           | N/A                          |
| Age at Hospital Admission (Years)         | 19/7                | 14/74                         | N/A                          |
| 0-5                                       | 2 ( 0.16% )         | N/A                           | N/A                          |
| 6-17                                      | 1 ( 0.08% )         | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50% , 100.0% )    |
| 18-29                                     | 39 ( 3.03% )        | 87.88% (71.80%, 96.60%)       | 93.55% (78.58%, 99.21%)      |
| 30-39                                     | 93 ( 7.23% )        | 96.20% (89.30%, 99.21%)       | 95 % (87.69%, 98.62%)        |
| 40-49                                     | 130 ( 10.11% )      | 92.98% (86.64%, 96.92%)       | 95.50% (89.80%, 98.52%)      |
| 50-59                                     | 276 ( 21.46% )      | 94.17% (90.41%, 96.77%)       | 96.17% (92.85%, 98.23%)      |
| 60-69                                     | 303 ( 23.56% )      | 91.47% (87.37%, 94.58%)       | 98.33% (95.79%, 99.54%)      |
| 70-79                                     | 238 ( 18.51% )      | 92.86% (88.31%, 96.04%)       | 96.30% (92.52%, 98.50%)      |
| 80-89                                     | 146 ( 11.35% )      | 89.92% (83.05%, 94.68%)       | 96.40% (91.03%, 99.01%)      |
| 90+                                       | 42 ( 3.27% )        | 87.10% (70.17%, 96.37%)       | 96.43% (81.65%, 99.91%)      |
| Missing                                   | N/A                 | N/A                           | N/A                          |
| Race                                      |                     |                               |                              |
| American Indian or Alaska Native          | 7 ( 0.54% )         | 100.0% (47.82%, 100.0%)       | 100.0% (47.82%, 100.0%)      |
| Asian                                     | 80 ( 6.22% )        | 95.77% (88.14%, 99.12%)       | 95.77% (88.14%, 99.12%)      |
| Black or African American                 | 488 ( 37.95% )      | 95.96% (93.42%, 97.72%)       | 98.34% (96.43%, 99.39%)      |
| Native Hawaiian or Other Pacific Islander | 5 ( 0.39% )         | 100.0% (29.24%, 100.0%)       | 100.0% (29.24%, 100.0%)      |
| White                                     | 369 ( 28.69% )      | 86.73% (82.64%, 90.15%)       | 94.84% (91.75%, 97.02%)      |
| Other/Mixed/Unknown                       | 321 ( 24.96% )      | 93.62% (90.10%, 96.17%)       | 96 % ( 92.96% , 97.99% )     |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   | T. ID               |                               | Sensitivity (95% Confidence             |
|---|---------------------|-------------------------------|---|
|   | Total Patient Count | PPV (95% Confidence Interval) | Interval)                               |
| 10.   |                     | Number (Percent)              |   |
| Hispanic  | 280 ( 21.77% )      | 96.43% (93.33%, 98.35%)       | 97.20% (94.32%, 98.87%)                 |
| Non-Hispanic  | 572 ( 44.48% )      | 92.18% (89.53%, 94.33%)       | 96.02% (93.93%, 97.55%)                 |
| Unknown   | 418 ( 32.50% )      | 89.49% (85.42%, 92.75%)       | 96.70% ( 93.83% , 98.48%                |
| Codes Observed During Inpatient Stay  |                     |                               |   |
| Asymptomatic screening (Z11.59)   | 46 ( 3.58% )        | 76.32% ( 59.76% , 88.56% )    | 93.55% (78.58%, 99.21%)                 |
| Contact and suspected exposure (Z20.828)  | 284 ( 22.08% )      | 79.58% ( 73.92% , 84.50% )    | 93.17% (88.81%, 96.22%)                 |
| neumonia (see Appendix B)   | 952 ( 74.03% )      | 93.24% (91.27%, 94.88%)       | 98.54% (97.41%, 99.27%                  |
| Other viral pneumonia (J12.89)  | 988 ( 76.83% )      | 96.18% (94.65%, 97.37%)       | 99.75% (99.11%, 99.97%                  |
| ARDS (J80)  | 238 ( 18.51% )      | 94.20% ( 90.09% , 96.97% )    | 98.98% ( 96.38% , 99.88%                |
| epsis (see Appendix C)  | 477 ( 37.09% )      | 89.97% (86.60%, 92.74%)       | 97.82% (95.75%, 99.05%                  |
| ronchitis (J20.8 OR J40)  | 20 ( 1.56% )        | 100.0% (80.49%, 100.0%)       | 100.0% (80.49%, 100.0%                  |
| tespiratory infection (J22 OR J98.8)  | 69 (5.37%)          | 98.04% (89.55%, 99.95%)       | 100.0% ( 92.89% , 100.0%                |
| Cough (RO5)   | 154 ( 11.98% )      | 86.40% (79.12%, 91.87%)       | 96.43% (91.11%, 99.02%                  |
| Shortness of breath (R06.2)   | 3 ( 0.23% )         | 100.0% (29.24%, 100.0%)       | 100.0% (29.24%, 100.0%                  |
| ever (R50.9)  | 235 ( 18.27% )      | 91.35% (86.34%, 94.98%)       | 97.69% (94.19%, 99.37%                  |
| Optional  |                     |                               |   |
| Other COVID Tests   |                     |                               |   |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                   | -                             | -                                       |
| bserved within -7 days prior to hospitalization through end of patient record**     |                     |                               |   |
| est performed, at least 1 positive result   | 22 ( 1.71% )        | 100.0% (82.35%, 100.0%)       | 100.0% (82.35%, 100.0%                  |
| est performed, only negative results  | N/A                 | N/A                           | N/A                                     |
| lo test or unknown result   | 875 ( 68.04% )      | 94.92% (93.01%, 96.44%)       | 97.47% ( 95.97% , 98.52%                |
| antigen test within ±14 days from inpatient admission**                             | -                   | -                             | -                                       |
| est performed, at least 1 positive result   | N/A                 | N/A                           | N/A                                     |
| est performed, only negative results  | N/A                 | N/A                           | N/A                                     |
| lo test or unknown result   | 162 ( 12.60% )      | 96.73% (92.54%, 98.93%)       | 96.73% ( 92.54% , 98.93%                |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     | ,                   |                               | , |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 736 ( 57.23% )      | 90.69% (88.33%, 92.72%)       | 95.05% ( 93.15% , 96.55%                |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 3: IP Stay with  | Any of Codes U07.1, E | 397.29, B34.2*                |                             |
|--|-----------------------|-------------------------------|-----------------------------|
|  |                       |                               | Sensitivity (95% Confidence |
|  | Total Patient Count   | PPV (95% Confidence Interval) | Interval)                   |
|  |                       | Number (Percent)              |                             |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness                                      | 81 ( 6.30% )          | 89.83% (79.17%, 96.18%)       | 96.36% (87.47%, 99.56%)     |
| of breath) OR R50.9 (fever)]   |                       |                               |                             |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 179 ( 13.92% )        | 92.36% (86.74%, 96.13%)       | 100.0% (97.26%, 100.0%)     |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  |                       |                               |                             |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                       |                               |                             |
| Primary" Lab Test Product Information****  |                       |                               |                             |
| 47377 - SARS_COV_2_NS  | N/A                   | N/A                           | N/A                         |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | N/A                   | N/A                           | N/A                         |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | 2 ( 0.16% )           | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )   |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 452 ( 35.15% )        | 94.44% (91.91%, 96.37%)       | 96.37% (94.17%, 97.91%)     |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab<br>7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA | 91 ( 7.08% )          | 95.60% (89.13%, 98.79%)       | 91.58% (84.08%, 96.29%)     |
| 7635R - SARS-COV-2, (COVID-19), RIVA, QUAIITATIVE RT-INAA<br>7635R - SARS-CoV-2, NAA (COVID-19), POCT              | N/A                   | N/A                           | N/A                         |
| 7635T - SARS-COV-2, NAA (COVID-19), POCT   | N/A                   | N/A                           | N/A                         |
| 7635Y - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)<br>7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | 12 ( 0.93% )<br>N/A   | 91.67%(61.52%,99.79%)<br>N/A  | 100.0% (71.51%, 100.0%)     |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | N/A<br>N/A            | N/A<br>N/A                    | N/A<br>N/A                  |
| robe Detection   | IN/A                  | N/A                           | N/A                         |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                   | N/A                           | N/A                         |
| lucleic Acid Amplification Using CDC Primer-Probe Set N1   | IV/A                  | N/A                           | N/A                         |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                   | N/A                           | N/A                         |
| lucleic Acid Amplification Using CDC Primer-Probe Set N2   | N/A                   | IV/A                          | NA                          |
| 14309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By  | N/A                   | N/A                           | N/A                         |
| AA With Probe Detection  | 14/71                 | . 4,7.                        | 14,71                       |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | N/A                   | N/A                           | N/A                         |
| y NAA With Probe Detection   | ,                     | •                             | ,                           |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                   | N/A                           | N/A                         |
| AA With Probe Detection  | •                     | •                             | ,                           |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 139 ( 10.81% )        | 97.12% ( 92.80% , 99.21% )    | 98.54% ( 94.83% , 99.82% )  |
| AA With Probe Detection  | ,                     | ,                             | · ,                         |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | N/A                   | N/A                           | N/A                         |
| nmunoassay   |                       |                               |                             |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*   |   |                         |  |  |  |  |
|--|---|-------------------------|--|--|--|--|
|  | Total Patient Count PPV (95% Confidence Interval) |                         | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|  |   | Number (Percent)        |  |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay             | N/A   | N/A                     | N/A                                      |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A   | N/A                     | N/A                                      |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A   | N/A                     | N/A                                      |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A   | N/A                     | N/A                                      |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | N/A   | N/A                     | N/A                                      |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A   | N/A                     | N/A                                      |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A   | N/A                     | N/A                                      |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A   | N/A                     | N/A                                      |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A   | N/A                     | N/A                                      |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A   | N/A                     | N/A                                      |  |  |  |
| Unknown  | 23 ( 1.79% )                                      | 92.86% (66.13%, 99.82%) | 81.25% (54.35%, 95.95%)                  |  |  |  |

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Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21* |                    |                 |                 |          |                          |
|--|--------------------|-----------------|-----------------|----------|--------------------------|
|  | 1 - L. D 'A' * * * | 1 - 1- 81 1 *** | Lab Na Bassiba  | Nie Lele | Datients with Leb Devolt |
|  | Lab Positive***    |                 | Lab, No Results | No Lab   | Patients with Lab Result |
| Come Codding of IID in com III als Todding                                   |                    | Number          | •               |          | Number (Percent)         |
| Care Setting of "Primary" Lab Test***  |                    |                 |                 |          |                          |
| Total Observed   | 990                | 82              | 2               | 215      | 1,072 ( 83.17% )         |
| Inpatient  | 332                | 43              | 1               | N/A      | 375                      |
| Outpatient or Emergency Department   | 296                | 17              | 0               | N/A      | 313                      |
| Other  | 22                 | 1               | 0               | N/A      | 23                       |
| Care Setting Reported as Unknown   | 232                | 21              | 1               | N/A      | 253                      |
| Demographics   |                    |                 |                 |          |                          |
| Sex  |                    |                 |                 |          | //                       |
| Female   | 493                | 41              | 0               | 92       | 534 ( 85.30% )           |
| Male   | 497                | 41              | 2               | 107      | 538 (83.15%)             |
| Other/Missing  | 0                  | 0               | 0               | 0        | N/A                      |
| Age at Hospital Admission (Years)  |                    |                 |                 |          |                          |
| 0-5  | 0                  | 0               | 0               | 2        | 0 (0.00%)                |
| 6-17   | 1                  | 0               | 0               | 0        | 1 ( 100.0% )             |
| 18-29  | 29                 | 4               | 0               | 6        | 33 ( 84.62% )            |
| 30-39  | 76                 | 3               | 0               | 14       | 79 ( 84.95% )            |
| 40-49  | 106                | 9               | 0               | 16       | 115 ( 87.79% )           |
| 50-59  | 226                | 14              | 0               | 38       | 240 ( 86.33% )           |
| 60-69  | 236                | 22              | 1               | 44       | 258 ( 85.15% )           |
| 70-79  | 182                | 14              | 1               | 41       | 196 ( 82.35% )           |
| 80-89  | 107                | 12              | 0               | 27       | 119 ( 81.51% )           |
| 90+  | 27                 | 4               | 0               | 11       | 31 ( 73.81% )            |
| Missing  | 0                  | 0               | 0               | 0        | N/A                      |
| Race   |                    |                 |                 |          |                          |
| American Indian or Alaska Native   | 5                  | 0               | 0               | 2        | 5 ( 71.43% )             |
| Asian  | 68                 | 3               | 1               | 8        | 71 ( 88.75% )            |
| Black or African American  | 356                | 15              | 1               | 118      | 371 ( 75.71% )           |
| Native Hawaiian or Other Pacific Islander                                    | 3                  | 0               | 0               | 2        | 3 ( 60 % )               |
| White  | 294                | 45              | 0               | 30       | 339 ( 91.87% )           |
| Other/Mixed/Unknown  | 264                | 19              | 0               | 39       | 283 (87.89%)             |
| Ethnicity  |                    |                 |                 |          |                          |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu |
|---|-----------------|-----------------|-----------------|--------|------------------------|
|   |                 | Number          |                 |        | Number (Percent)       |
| Hispanic  | 243             | 10              | 0               | 28     | 253 ( 90.04% )         |
| Non-Hispanic  | 483             | 41              | 2               | 46     | 524 (91.61%)           |
| Unknown   | 264             | 31              | 0               | 125    | 295 ( 70.24% )         |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        |                        |
| Asymptomatic screening (Z11.59)   | 29              | 9               | 0               | 8      | 38 (82.61%)            |
| Contact and suspected exposure (Z20.828)  | 191             | 50              | 0               | 44     | 241 (84.56%)           |
| Pneumonia (see Appendix B)  | 745             | 54              | 2               | 153    | 799 ( 83.75% )         |
| Other viral pneumonia (J12.89)  | 806             | 32              | 2               | 148    | 838 ( 84.82% )         |
| ARDS (J80)  | 195             | 12              | 1               | 30     | 207 ( 86.97% )         |
| Sepsis (see Appendix C)   | 359             | 40              | 2               | 76     | 399 (83.65%)           |
| Bronchitis (J20.8 OR J40)   | 17              | 0               | 0               | 3      | 17 (85 %)              |
| Respiratory infection (J22 OR J98.8)  | 50              | 1               | 1               | 17     | 51 (73.91%)            |
| Cough (RO5)   | 108             | 17              | 0               | 29     | 125 (81.17%)           |
| shortness of breath (R06.2)   | 3               | 0               | 0               | 0      | 3 (100.0%)             |
| Fever (R50.9)   | 169             | 17              | 0               | 50     | 186 ( 78.81% )         |
| Optional  |                 |                 |                 |        | ,                      |
| Other COVID Tests   |                 |                 |                 |        |                        |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -      | -                      |
| observed within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |        |                        |
| est performed, at least 1 positive result   | 19              | 0               | 0               | 3      | 19 (86.36%)            |
| est performed, only negative results  | 0               | 0               | 0               | 0      | N/A                    |
| lo test or unknown result   | 654             | 35              | 2               | 186    | 689 ( 78.56% )         |
| Antigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -      | -                      |
| est performed, at least 1 positive result   | 0               | 0               | 0               | 0      | N/A                    |
| est performed, only negative results  | 0               | 0               | 0               | 0      | N/A                    |
| No test or unknown result   | 148             | 5               | 0               | 9      | 153 ( 94.44% )         |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 |        | · ·                    |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 653             | 68              | 1               | 15     | 721 ( 97.83% )         |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*  |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 53              | 6               | 0               | 22     | 59 ( 72.84% )            |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        | ,                        |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 133             | 11              | 0               | 35     | 144 ( 80.45% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****                                    |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | 2               | -               | -               | -      | 2 ( 100.0% )             |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 425             | 25              | 2               | -      | 450 ( 99.56% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | 87              | 4               | -               | -      | 91 ( 100.0% )            |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | 11              | 1               | -               | -      | 12 ( 100.0% )            |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | -               | -               | -               | -      | N/A                      |
| Probe Detection   |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                 |                 |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By     | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By     | 135             | 4               | 0               | 0      | 139 ( 100.0% )           |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21\* Lab, No Results No Lab Lab Positive\*\*\* Lab Negative\*\*\* **Patients with Lab Result Number (Percent)** Number 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By N/A Rapid Immunoassay 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With N/A **Probe Detection** 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By N/A NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen N/A By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory 0 0 0 N/A Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By N/A NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A **Probe Detection** Unknown 13 1 0 9 14 (60.87%)

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Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21* |                            |                               |                            |  |  |
|--|----------------------------|-------------------------------|----------------------------|--|--|
|  |                            |                               |                            |  |  |
|  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                  |  |  |
|  |                            | Number (Percent)              |                            |  |  |
| Care Setting of "Primary" Lab Test***  |                            |                               |                            |  |  |
| Total Observed   | 1,289 ( 100.0% )           | 92.35% ( 90.59% , 93.87% )    | 96.49% (95.18%, 97.53%)    |  |  |
| Inpatient  | 376 ( 29.17% )             | 88.53% (84.87%, 91.58%)       | 84.48% (80.51%, 87.91%)    |  |  |
| Outpatient or Emergency Department   | 313 ( 24.28% )             | 94.57% (91.45%, 96.80%)       | 84.57% (80.35%, 88.19%)    |  |  |
| Other  | 23 ( 1.78% )               | 95.65% (78.05%, 99.89%)       | 75.86% (56.46%, 89.70%)    |  |  |
| Care Setting Reported as Unknown   | 263 ( 20.40% )             | 91.70% (87.59%, 94.79%)       | 94.31% (90.64%, 96.85%)    |  |  |
| Demographics   |                            |                               |                            |  |  |
| Sex  |                            |                               |                            |  |  |
| Female   | 626 ( 48.56% )             | 92.32% (89.73%, 94.43%)       | 96.67% (94.72%, 98.05%)    |  |  |
| Male   | 647 ( 50.19% )             | 92.38% (89.80%, 94.48%)       | 96.32% (94.31%, 97.77%)    |  |  |
| Other/Missing  | N/A                        | N/A                           | N/A                        |  |  |
| Age at Hospital Admission (Years)  |                            |                               |                            |  |  |
| 0-5  | 2 ( 0.16% )                | N/A                           | N/A                        |  |  |
| 6-17   | 1 ( 0.08% )                | 100.0% ( 2.50% , 100.0% )     | 100.0% ( 2.50% , 100.0% )  |  |  |
| 18-29  | 39 ( 3.03% )               | 87.88% (71.80%, 96.60%)       | 93.55% (78.58%, 99.21%)    |  |  |
| 30-39  | 93 ( 7.21% )               | 96.20% (89.30%, 99.21%)       | 95 % (87.69%, 98.62%)      |  |  |
| 40-49  | 131 ( 10.16% )             | 92.17% (85.66%, 96.36%)       | 95.50% (89.80%, 98.52%)    |  |  |
| 50-59  | 278 ( 21.57% )             | 94.17% (90.41%, 96.77%)       | 96.17% ( 92.85% , 98.23% ) |  |  |
| 60-69  | 303 ( 23.51% )             | 91.47% (87.37%, 94.58%)       | 98.33% (95.79%, 99.54%)    |  |  |
| 70-79  | 238 ( 18.46% )             | 92.86% (88.31%, 96.04%)       | 96.30% (92.52%, 98.50%)    |  |  |
| 80-89  | 146 ( 11.33% )             | 89.92% (83.05%, 94.68%)       | 96.40% (91.03%, 99.01%)    |  |  |
| 90+  | 42 ( 3.26% )               | 87.10% (70.17%, 96.37%)       | 96.43% (81.65%, 99.91%)    |  |  |
| Missing  | N/A                        | N/A                           | N/A                        |  |  |
| Race   |                            |                               |                            |  |  |
| American Indian or Alaska Native   | 7 ( 0.54% )                | 100.0% (47.82%, 100.0%)       | 100.0% (47.82%, 100.0%)    |  |  |
| Asian  | 80 ( 6.21% )               | 95.77% (88.14%, 99.12%)       | 95.77% (88.14%, 99.12%)    |  |  |
| Black or African American  | 490 ( 38.01% )             | 95.96% (93.42%, 97.72%)       | 98.34% (96.43%, 99.39%)    |  |  |
| Native Hawaiian or Other Pacific Islander                                    | 5 ( 0.39% )                | 100.0% (29.24%, 100.0%)       | 100.0% (29.24%, 100.0%)    |  |  |
| White  | 369 ( 28.63% )             | 86.73% (82.64%, 90.15%)       | 94.84% (91.75%, 97.02%)    |  |  |
| Other/Mixed/Unknown  | 322 ( 24.98% )             | 93.29% (89.71%, 95.91%)       | 96 % (92.96%, 97.99%)      |  |  |
| Ethnicity  |                            |                               |                            |  |  |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   | Tatal Batlant Count | DDV (050/ Confidence Internal) | Sensitivity (95% Confidence |
|---|---------------------|--------------------------------|-----------------------------|
|   | Total Patient Count | PPV (95% Confidence Interval)  | Interval)                   |
| Hispania  |                     | Number (Percent)               |                             |
| Hispanic  | 281 ( 21.80% )      | 96.05% (92.85%, 98.09%)        | 97.20% (94.32%, 98.87%      |
| Non-Hispanic  | 572 ( 44.38% )      | 92.18% (89.53%, 94.33%)        | 96.02% (93.93%, 97.55%      |
| Unknown   | 420 ( 32.58% )      | 89.49% (85.42%, 92.75%)        | 96.70% ( 93.83% , 98.48%    |
| Codes Observed During Inpatient Stay  |                     |                                |                             |
| Asymptomatic screening (Z11.59)   | 46 ( 3.57% )        | 76.32% (59.76%, 88.56%)        | 93.55% (78.58%, 99.21%      |
| Contact and suspected exposure (Z20.828)  | 285 ( 22.11% )      | 79.25% ( 73.58% , 84.19% )     | 93.17% (88.81%, 96.22%      |
| Pneumonia (see Appendix B)  | 954 ( 74.01% )      | 93.24% (91.27%, 94.88%)        | 98.54% (97.41%, 99.27%      |
| Other viral pneumonia (J12.89)  | 988 ( 76.65% )      | 96.18% (94.65%, 97.37%)        | 99.75% (99.11%, 99.97%      |
| ARDS (J80)  | 238 ( 18.46% )      | 94.20% (90.09%, 96.97%)        | 98.98% ( 96.38% , 99.88%    |
| Sepsis (see Appendix C)   | 477 (37.01%)        | 89.97% (86.60%, 92.74%)        | 97.82% ( 95.75% , 99.05%    |
| Bronchitis (J20.8 OR J40)   | 20 ( 1.55% )        | 100.0% (80.49%, 100.0%)        | 100.0% (80.49%, 100.0%      |
| Respiratory infection (J22 OR J98.8)  | 69 (5.35%)          | 98.04% (89.55%, 99.95%)        | 100.0% (92.89%, 100.0%      |
| Cough (R05)   | 154 (11.95%)        | 86.40% (79.12%, 91.87%)        | 96.43% (91.11%, 99.02%      |
| Shortness of breath (R06.2)   | 3 ( 0.23% )         | 100.0% (29.24%, 100.0%)        | 100.0% (29.24%, 100.0%      |
| Fever (R50.9)   | 236 ( 18.31% )      | 90.86% (85.77%, 94.59%)        | 97.69% (94.19%, 99.37%      |
| Optional  |                     |                                |                             |
| Other COVID Tests   |                     |                                |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                   | -                              | -                           |
| bserved within -7 days prior to hospitalization through end of patient record**     |                     |                                |                             |
| est performed, at least 1 positive result   | 22 ( 1.71% )        | 100.0% (82.35%, 100.0%)        | 100.0% (82.35%, 100.0%      |
| est performed, only negative results  | N/A                 | N/A                            | N/A                         |
| No test or unknown result   | 877 (68.04%)        | 94.92% (93.01%, 96.44%)        | 97.47% ( 95.97% , 98.52%    |
| Antigen test within ±14 days from inpatient admission**                             | -                   | <u>-</u>                       | · -                         |
| est performed, at least 1 positive result   | N/A                 | N/A                            | N/A                         |
| est performed, only negative results  | N/A                 | N/A                            | N/A                         |
| No test or unknown result   | 162 ( 12.57% )      | 96.73% ( 92.54% , 98.93% )     | 96.73% ( 92.54% , 98.93%    |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     | · · · · · ·         |                                |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 737 ( 57.18% )      | 90.57% ( 88.20% , 92.60% )     | 95.05% ( 93.15% , 96.55%    |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 4.11 Stay With Any Or   | Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21* |                               |                             |  |  |  |
|---|--|-------------------------------|-----------------------------|--|--|--|
|   |  |                               | Sensitivity (95% Confidence |  |  |  |
|   | Total Patient Count  | PPV (95% Confidence Interval) | Interval)                   |  |  |  |
|   |  | Number (Percent)              |                             |  |  |  |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness  | 81 ( 6.28% )   | 89.83% (79.17%, 96.18%)       | 96.36% (87.47%, 99.56%)     |  |  |  |
| f breath) OR R50.9 (fever)]   |  |                               |                             |  |  |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 179 ( 13.89% )   | 92.36% (86.74%, 96.13%)       | 100.0% (97.26%, 100.0%)     |  |  |  |
| PR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |  |                               |                             |  |  |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |  |                               |                             |  |  |  |
| Primary" Lab Test Product Information****   |  |                               |                             |  |  |  |
| 47377 - SARS_COV_2_NS   | N/A  | N/A                           | N/A                         |  |  |  |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A  | N/A                           | N/A                         |  |  |  |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | 2 ( 0.16% )  | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )   |  |  |  |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 452 ( 35.07% )   | 94.44% (91.91%, 96.37%)       | 96.37% (94.17%, 97.91%      |  |  |  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | 91 ( 7.06% )   | 95.60% (89.13%, 98.79%)       | 91.58% (84.08%, 96.29%      |  |  |  |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A  | N/A                           | N/A                         |  |  |  |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A  | N/A                           | N/A                         |  |  |  |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | 12 ( 0.93% )   | 91.67% (61.52%, 99.79%)       | 100.0% (71.51%, 100.0%)     |  |  |  |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | N/A  | N/A                           | N/A                         |  |  |  |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With robe Detection  | N/A  | N/A                           | N/A                         |  |  |  |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N1 | N/A  | N/A                           | N/A                         |  |  |  |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By   | N/A  | N/A                           | N/A                         |  |  |  |
| ucleic Acid Amplification Using CDC Primer-Probe Set N2<br>4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By | N/A  | N/A                           | N/A                         |  |  |  |
| AA With Probe Detection   | N/A  | N/A                           | N/A                         |  |  |  |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen / NAA With Probe Detection                              | N/A  | N/A                           | N/A                         |  |  |  |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By AA With Probe Detection                                 | N/A  | N/A                           | N/A                         |  |  |  |
| 1500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By  AA With Probe Detection                                   | 139 ( 10.78% )   | 97.12% ( 92.80% , 99.21% )    | 98.54% ( 94.83% , 99.82% )  |  |  |  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | N/A  | N/A                           | N/A                         |  |  |  |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*                                 |   |                         |  |  |  |  |
|--|---|-------------------------|--|--|--|--|
|  | Total Patient Count PPV (95% Confidence Interval) |                         | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|  |   | Number (Percent)        |  |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay             | N/A   | N/A                     | N/A                                      |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A   | N/A                     | N/A                                      |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A   | N/A                     | N/A                                      |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A   | N/A                     | N/A                                      |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | N/A   | N/A                     | N/A                                      |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A   | N/A                     | N/A                                      |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A   | N/A                     | N/A                                      |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A   | N/A                     | N/A                                      |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A   | N/A                     | N/A                                      |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A   | N/A                     | N/A                                      |  |  |  |
| Unknown  | 23 ( 1.78% )                                      | 92.86% (66.13%, 99.82%) | 81.25% (54.35%, 95.95%)                  |  |  |  |

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Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]* |                 |                |                   |        |   |
|--|-----------------|----------------|-------------------|--------|---|
|  | Lab Positive*** | Lab Negative** | * Lab, No Results | No Lab | Patients with Lab Result                |
|  |                 | Numbe          |                   |        | Number (Percent)                        |
| Care Setting of "Primary" Lab Test***  |                 |                |                   |        | , |
| Total Observed   | 852             | 58             | 2                 | 173    | 910 ( 83.87% )                          |
| Inpatient  | 261             | 27             | 1                 | N/A    | 288                                     |
| Outpatient or Emergency Department   | 263             | 14             | 0                 | N/A    | 277                                     |
| Other  | 18              | 0              | 0                 | N/A    | 18                                      |
| Care Setting Reported as Unknown   | 213             | 17             | 1                 | N/A    | 230                                     |
| Demographics   |                 |                |                   |        |   |
| Sex  |                 |                |                   |        |   |
| Female   | 402             | 27             | 0                 | 70     | 429 ( 85.97% )                          |
| Male   | 450             | 31             | 2                 | 90     | 481 (83.94%)                            |
| Other/Missing  | 0               | 0              | 0                 | 0      | N/A                                     |
| Age at Hospital Admission (Years)  |                 |                |                   |        |   |
| 0-5  | 0               | 0              | 0                 | 0      | N/A                                     |
| 6-17   | 0               | 0              | 0                 | 0      | N/A                                     |
| 18-29  | 15              | 0              | 0                 | 4      | 15 ( 78.95% )                           |
| 30-39  | 57              | 3              | 0                 | 10     | 60 (85.71%)                             |
| 40-49  | 91              | 6              | 0                 | 14     | 97 (87.39%)                             |
| 50-59  | 204             | 13             | 0                 | 30     | 217 (87.85%)                            |
| 60-69  | 219             | 16             | 1                 | 39     | 235 ( 85.45% )                          |
| 70-79  | 157             | 10             | 1                 | 30     | 167 (84.34%)                            |
| 80-89  | 88              | 7              | 0                 | 23     | 95 (80.51%)                             |
| 90+  | 21              | 3              | 0                 | 10     | 24 ( 70.59% )                           |
| Missing  | 0               | 0              | 0                 | 0      | N/A                                     |
| Race   |                 |                |                   |        | •                                       |
| American Indian or Alaska Native   | 4               | 0              | 0                 | 1      | 4 ( 80 % )                              |
| Asian  | 63              | 3              | 1                 | 7      | 66 (89.19%)                             |
| Black or African American  | 317             | 13             | 1                 | 95     | 330 (77.46%)                            |
| Native Hawaiian or Other Pacific Islander  | 2               | 0              | 0                 | 2      | 2 (50 %)                                |
| White  | 235             | 29             | 0                 | 26     | 264 ( 91.03% )                          |
| Other/Mixed/Unknown  | 231             | 13             | 0                 | 29     | 244 ( 89.38% )                          |
| Ethnicity  |                 |                |                   |        |   |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   | Lab Positive*** | Lab Negative*** | Lah No Posults  | No Lab  | Patients with Lab Resul |
|---|-----------------|-----------------|-----------------|---------|-------------------------|
|   | Lab Positive*** | Number          | Lab, No Results | INO Lab | Number (Percent)        |
| Hispanic  | 210             | 6               | 0               | 23      | 216 ( 90.38% )          |
| Non-Hispanic  | 412             | 26              | 2               | 35      | 438 ( 92.21% )          |
| Unknown   | 230             | 26              | 0               | 102     | 256 ( 71.51% )          |
| Codes Observed During Inpatient Stay  |                 |                 | -               |         |                         |
| Asymptomatic screening (Z11.59)   | 28              | 5               | 0               | 7       | 33 ( 82.50% )           |
| Contact and suspected exposure (Z20.828)  | 185             | 34              | 0               | 40      | 219 ( 84.56% )          |
| Pneumonia (see Appendix B)  | 748             | 54              | 2               | 151     | 802 ( 83.98% )          |
| Other viral pneumonia (J12.89)  | 809             | 32              | 2               | 148     | 841 ( 84.86% )          |
| ARDS (J80)  | 196             | 12              | 1               | 30      | 208 ( 87.03% )          |
| Sepsis (see Appendix C)   | 348             | 27              | 2               | 66      | 375 ( 84.65% )          |
| Fronchitis (J20.8 OR J40)   | 9               | 0               | 0               | 3       | 9 (75 %)                |
| Respiratory infection (J22 OR J98.8)  | 42              | 1               | 1               | 14      | 43 ( 74.14% )           |
| Cough (RO5)   | 94              | 12              | 0               | 26      | 106 ( 80.30% )          |
| shortness of breath (R06.2)   | 3               | 0               | 0               | 0       | 3 ( 100.0% )            |
| ever (R50.9)  | 160             | 12              | 0               | 45      | 172 ( 79.26% )          |
| <b>Optional</b>   |                 |                 |                 |         | · · · · · ·             |
| Other COVID Tests   |                 |                 |                 |         |                         |
| Intibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -       | -                       |
| bserved within -7 days prior to hospitalization through end of patient record**     |                 |                 |                 |         |                         |
| est performed, at least 1 positive result   | 16              | 0               | 0               | 3       | 16 (84.21%)             |
| est performed, only negative results  | 0               | 0               | 0               | 0       | N/A                     |
| No test or unknown result   | 571             | 28              | 2               | 149     | 599 ( 79.87% )          |
| Intigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -       | · -                     |
| est performed, at least 1 positive result   | 0               | 0               | 0               | 0       | N/A                     |
| est performed, only negative results  | 0               | 0               | 0               | 0       | N/A                     |
| No test or unknown result   | 116             | 3               | 0               | 7       | 119 ( 94.44% )          |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 |         |                         |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 555             | 56              | 1               | 14      | 611 ( 97.60% )          |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]*              |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 51              | 5               | 0               | 22     | 56 ( 71.79% )            |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 132             | 11              | 0               | 35     | 143 ( 80.34% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****  |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | 2               | -               | -               | -      | 2 ( 100.0% )             |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 380             | 20              | 2               | -      | 400 ( 99.50% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | 79              | 4               | -               | -      | 83 ( 100.0% )            |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | 10              | 1               | -               | -      | 11 ( 100.0% )            |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | -               | -               | -               | -      | N/A                      |
| Probe Detection   |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1  |                 |                 |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -               | -               | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2<br>94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By |                 |                 |                 |        |                          |
| NAA With Probe Detection  | -               | -               | -               | -      | N/A                      |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  |                 |                 |                 |        | N1 / A                   |
| By NAA With Probe Detection   | -               | -               | -               | -      | N/A                      |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  |                 |                 |                 |        | NI /A                    |
| NAA With Probe Detection  | -               | -               | -               | -      | N/A                      |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 105             | 2               | 0               | 0      | 100 / 100 00/ \          |
| NAA With Probe Detection  | 105             | 3               | 0               | 0      | 108 ( 100.0% )           |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   |                 |                 |                 |        | N/A                      |
| Immunoassay   | -               | -               | -               | -      | IN/A                     |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia\*\* OR Acute Respiratory Distress Syndrome (ARDS) (J80)]\* Lab Positive\*\*\* Lab Negative\*\*\* Lab, No Results No Lab **Patients with Lab Result Number (Percent)** Number 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By N/A Rapid Immunoassay 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With N/A **Probe Detection** 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By N/A NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen N/A By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory 0 0 0 N/A Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By N/A NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A **Probe Detection** Unknown 11 0 0 7 11 (61.11%)

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Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]* |  |                            |                               |                             |
|--|--|----------------------------|-------------------------------|-----------------------------|
|  |  |                            |                               | Sensitivity (95% Confidence |
|  |  | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|  |  | Number (Percent)           | Pero                          | cent                        |
| Care Setting of "Primary" Lab Test*****  |  |                            |                               |                             |
| Total Observed   |  | 1,085 ( 100.0% )           | 93.63% (91.84%, 95.13%)       | 83.04% (80.60%, 85.29%)     |
| Inpatient  |  | 289 ( 26.64% )             | 90.63% (86.65%, 93.73%)       | 66.41% (61.51%, 71.07%)     |
| Outpatient or Emergency Department   |  | 277 ( 25.53% )             | 94.95% (91.67%, 97.21%)       | 75.14% (70.27%, 79.58%)     |
| Other  |  | 18 ( 1.66% )               | 100.0% (81.47%, 100.0%)       | 62.07% (42.26%, 79.31%)     |
| Care Setting Reported as Unknown   |  | 238 ( 21.94% )             | 92.61% (88.43%, 95.64%)       | 86.59% (81.68%, 90.58%)     |
| Demographics   |  |                            |                               |                             |
| Sex  |  |                            |                               |                             |
| Female   |  | 499 ( 45.99% )             | 93.71% ( 90.97% , 95.81% )    | 78.82% ( 75.02% , 82.29% )  |
| Male   |  | 573 ( 52.81% )             | 93.56% ( 90.98% , 95.58% )    | 87.21% (84.02%, 89.97%)     |
| Other/Missing  |  | N/A                        | N/A                           | N/A                         |
| Age at Hospital Admission (Years)  |  |                            |                               |                             |
| 0-5  |  | N/A                        | N/A                           | N/A                         |
| 6-17   |  | N/A                        | N/A                           | N/A                         |
| 18-29  |  | 19 ( 1.75% )               | 100.0% (78.20%, 100.0%)       | 48.39% (30.15%, 66.94%)     |
| 30-39  |  | 70 ( 6.45% )               | 95 % (86.08%, 98.96%)         | 71.25% (60.05%, 80.82%)     |
| 40-49  |  | 111 ( 10.23% )             | 93.81% (87.02%, 97.70%)       | 81.98% (73.55%, 88.63%)     |
| 50-59  |  | 247 ( 22.76% )             | 94.01% (89.97%, 96.77%)       | 86.81% (81.80%, 90.86%)     |
| 60-69  |  | 275 ( 25.35% )             | 93.19% (89.18%, 96.06%)       | 91.25% (86.94%, 94.50%)     |
| 70-79  |  | 198 ( 18.25% )             | 94.01% (89.26%, 97.09%)       | 83.07% (76.95%, 88.12%)     |
| 80-89  |  | 118 ( 10.88% )             | 92.63% (85.41%, 96.99%)       | 79.28% ( 70.55% , 86.39% )  |
| 90+  |  | 34 ( 3.13% )               | 87.50% (67.64%, 97.34%)       | 75 % (55.13%, 89.31%)       |
| Missing  |  | N/A                        | N/A                           | N/A                         |
| Race   |  |                            |                               |                             |
| American Indian or Alaska Native   |  | 5 ( 0.46% )                | 100.0% (39.76%, 100.0%)       | 80 % (28.36%, 99.49%)       |
| Asian  |  | 74 ( 6.82% )               | 95.45% (87.29%, 99.05%)       | 88.73% (79%, 95.01%)        |
| Black or African American  |  | 426 ( 39.26% )             | 96.06% (93.36%, 97.89%)       | 87.57% (83.72%, 90.79%)     |
| Native Hawaiian or Other Pacific Islander  |  | 4 ( 0.37% )                | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )   |
| White  |  | 290 ( 26.73% )             | 89.02% (84.61%, 92.52%)       | 75.81% (70.64%, 80.47%)     |
| Other/Mixed/Unknown  |  | 273 ( 25.16% )             | 94.67% (91.06%, 97.13%)       | 84 % (79.12%, 88.13%)       |
| Ethnicity  |  |                            |                               |                             |

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Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

|   | Total Patient Count                     | PPV (95% Confidence Interval) | Sensitivity (95% Confidence Interval) |  |
|---|---|-------------------------------|---------------------------------------|--|
|   |   |                               |                                       |  |
| Hispanic  | 239 ( 22.03% )                          | 97.22% ( 94.05% , 98.97% )    | cent<br>84 %(78.86%, 88.32%)          |  |
| Non-Hispanic  | • | , , ,                         |                                       |  |
| Unknown   | 475 ( 43.78% )                          | 94.06% (91.42%, 96.09%)       | 81.91% (78.26%, 85.18%                |  |
| Codes Observed During Inpatient Stay  | 358 ( 33 % )                            | 89.84% ( 85.47% , 93.26% )    | 84.25% (79.38%, 88.36%                |  |
| Asymptomatic screening (Z11.59)   | 40 ( 3.69% )                            | 84.85% (68.10%, 94.89%)       | 90.32% ( 74.25% , 97.96%              |  |
| Contact and suspected exposure (Z20.828)  | 259 ( 23.87% )                          | 84.47% (78.99%, 89%)          | 90.24% ( 85.33% , 93.94%              |  |
| Pneumonia (see Appendix B)  | 955 ( 88.02% )                          | 93.27% (91.31%, 94.90%)       | 98.94% (97.93%, 99.54%                |  |
| Other viral pneumonia (J12.89)  | 991 ( 91.34% )                          | 96.20% (94.67%, 97.38%)       | ****                                  |  |
| ARDS (J80)  | 239 ( 22.03% )                          | 94.23% (90.14%, 96.98%)       | 99.49% ( 97.20% , 99.99%              |  |
| Sepsis (see Appendix C)   | 443 ( 40.83% )                          | 92.80% (89.70%, 95.20%)       | 94.82% (92.03%, 96.85%                |  |
| Bronchitis (J20.8 OR J40)   | 12 ( 1.11% )                            | 100.0% (66.37%, 100.0%)       | 52.94% ( 27.81% , 77.02%              |  |
| Respiratory infection (J22 OR J98.8)  | 58 ( 5.35% )                            | 97.67% (87.71%, 99.94%)       | 84 % (70.89%, 92.83%)                 |  |
| Cough (RO5)   | 132 ( 12.17% )                          | 88.68% (81.06%, 94.01%)       | 83.93% ( 75.79% , 90.19%              |  |
| Shortness of breath (R06.2)   | 3 ( 0.28% )                             | 100.0% ( 29.24% , 100.0% )    | 100.0% ( 29.24% , 100.0%              |  |
| Fever (R50.9)   | 217 ( 20 % )                            | 93.02% (88.13%, 96.34%)       | 92.49% (87.49%, 95.94%                |  |
| Optional  | ,                                       |                               |                                       |  |
| Other COVID Tests   |   |                               |                                       |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                                       | -                             | -                                     |  |
| observed within -7 days prior to hospitalization through end of patient record**    |   |                               |                                       |  |
| Test performed, at least 1 positive result  | 19 ( 1.75% )                            | 100.0% (79.41%, 100.0%)       | 84.21% (60.42%, 96.62%                |  |
| Test performed, only negative results   | N/A                                     | N/A                           | N/A                                   |  |
| No test or unknown result   | 750 ( 69.12% )                          | 95.33% (93.31%, 96.87%)       | 85.10% (82.17%, 87.71%                |  |
| Antigen test within ±14 days from inpatient admission**                             | -                                       | -                             | -                                     |  |
| Test performed, at least 1 positive result  | N/A                                     | N/A                           | N/A                                   |  |
| Fest performed, only negative results   | N/A                                     | N/A                           | N/A                                   |  |
| No test or unknown result   | 126 ( 11.61% )                          | 97.48% (92.81%, 99.48%)       | 75.82% ( 68.24% , 82.37%              |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |   |                               |                                       |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 626 ( 57.70% )                          | 90.83% (88.26%, 93%)          | 80.79% (77.64%, 83.67%                |  |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]*  |                     |                               |  |  |  |  |
|---|---------------------|-------------------------------|--|--|--|--|
|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|   | Number (Percent)    | Per                           | cent                                     |  |  |  |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness  | 78 ( 7.19% )        | 91.07% ( 80.38% , 97.04% )    | 92.73% (82.41%, 97.98%)                  |  |  |  |
| f breath) OR R50.9 (fever)]   |                     |                               |  |  |  |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 178 ( 16.41% )      | 92.31% (86.65%, 96.10%)       | 99.25% (95.88%, 99.98%)                  |  |  |  |
| R J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  |                     |                               |  |  |  |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                     |                               |  |  |  |  |
| Primary" Lab Test Product Information****   |                     |                               |  |  |  |  |
| 47377 - SARS_COV_2_NS   | N/A                 | N/A                           | N/A                                      |  |  |  |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A                 | N/A                           | N/A                                      |  |  |  |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | 2 ( 0.18% )         | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )                |  |  |  |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 402 ( 37.05% )      | 95 % ( 92.38% , 96.92% )      | 86.17% (82.59%, 89.25%                   |  |  |  |
| '635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | 83 ( 7.65% )        | 95.18% (88.12%, 98.67%)       | 83.16% (74.10%, 90.06%                   |  |  |  |
| '635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A                 | N/A                           | N/A                                      |  |  |  |
| '635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A                 | N/A                           | N/A                                      |  |  |  |
| '635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | 11 ( 1.01% )        | 90.91% (58.72%, 99.77%)       | 90.91% (58.72%, 99.77%)                  |  |  |  |
| 635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | N/A                 | N/A                           | N/A                                      |  |  |  |
| 1306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With robe Detection  | N/A                 | N/A                           | N/A                                      |  |  |  |
| I307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N1 | N/A                 | N/A                           | N/A                                      |  |  |  |
| 1308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                 | N/A                           | N/A                                      |  |  |  |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By AA With Probe Detection                                    | N/A                 | N/A                           | N/A                                      |  |  |  |
| 1314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen NAA With Probe Detection                                | N/A                 | N/A                           | N/A                                      |  |  |  |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By AA With Probe Detection                                 | N/A                 | N/A                           | N/A                                      |  |  |  |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By  AA With Probe Detection                                   | 108 ( 9.95% )       | 97.22% ( 92.10% , 99.42% )    | 76.64% ( 68.66% , 83.44%                 |  |  |  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | N/A                 | N/A                           | N/A                                      |  |  |  |



Table 1h. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between April 1, 2020 and April 30, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]*                           |                     |                               |  |  |  |  |
|--|---------------------|-------------------------------|--|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|  | Number (Percent)    | Per                           | cent                                     |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                               | N/A                 | N/A                           | N/A                                      |  |  |  |
| Rapid Immunoassay  |                     |                               |  |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A                 | N/A                           | N/A                                      |  |  |  |
| Unknown *Includes only the first algorithm qualifying innations story and algorithm and nations.             | 18 ( 1.66% )        | 100.0% (71.51%, 100.0%)       | 68.75% (41.34%, 88.98%)                  |  |  |  |

<sup>\*</sup>Includes only the first algorithm-qualifying inpatient stay per algorithm per patient.

Includes one test result per encounter - positive if patient had at least one positive NAA result; negative if all NAA results are negative (during test window, from any type of specimen/site).

<sup>\*\*</sup> COVID NAA, antibody, and antigen tests are identified using LOINCs or any other identifier available in the data.

<sup>\*\*\*</sup>Any NAA result in 14 days prior through 14 days after inpatient encounter during which the COVID diagnosis codes were recorded.

<sup>&</sup>quot;Primary" test result will be the first positive molecular test within the ±14-day window, or the last negative molecular test within the ±14-day window among patients with no positive test.

<sup>\*\*\*\*</sup>Only the "primary" lab test, as defined above, is described

<sup>\*\*\*\*\*</sup>Sensitivity not calculated because algorithm cohort NAA-positive patient count is larger than laboratory result cohort NAA-positive patient count. This is a result of a different visit being used to describe characteristics among the lab-based cohort and the algorithm-based cohort.

<sup>\*\*\*\*\*\*</sup>Sum across care settings does not equal total observed because care setting was not reported for some patients.



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Care Setting of "Primary" Lab Test\*\*\*\*\* **Total Observed** 42,707 2.570 3.035 31.852 Inpatient 896 1,034 17,052 22,351 **Outpatient or Emergency Department** 904 943 6,128 6,747 Other 278 382 4,849 7,967 Care Setting Reported as Unknown 443 495 4,918 5,609 **Demographics** Sex Female 1,289 18,643 24,177 1,494 Male 1,281 1,541 13,209 18,530 Other/Missing 0 0 0 0 Age at Hospital Admission (Years) 0-5 304 366 14 14 6-17 9 10 377 457 18-29 179 199 3,530 4,233 30-39 240 274 5.177 6,168 40-49 331 375 2,605 3,514 50-59 524 608 3,869 5,421 60-69 565 653 5,703 7,981 70-79 388 473 5,598 7,878 80-89 240 319 3.585 5,101 90+ 80 110 1.104 1,588 Missing 0 0 0 0 Race American Indian or Alaska Native 19 24 218 315 Asian 260 311 1,720 2,158 Black or African American 763 872 5.487 6,974 Native Hawaiian or Other Pacific Islander 3 3 45 63 White 798 985 20,922 28,813 727 Other/Mixed/Unknown 840 3,460 4,384

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Ethnicity



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Hispanic 634 733 2,227 2,796 Non-Hispanic 1.326 1.610 24,118 33.220 Unknown 610 692 6,691 5,507 **Codes Observed During Inpatient Stay** Asymptomatic screening (Z11.59) 54 62 7,260 9,801 Contact and suspected exposure (Z20.828) 192 228 12,695 18,782 Pneumonia (see Appendix B) 1.794 2.284 2.197 3,593 Other viral pneumonia (J12.89) 1,856 2.230 243 349 ARDS (J80) 79 270 363 132 Sepsis (see Appendix C) 720 958 3,209 5,104 Bronchitis (J20.8 OR J40) 32 38 50 72 Respiratory infection (J22 OR J98.8) 54 64 81 36 Cough (R05) 512 165 197 654 Shortness of breath (R06.2) 6 7 54 73 Fever (R50.9) 253 306 1.062 1,542 Optional **Other COVID Tests** Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) observed within -7 days prior to hospitalization through end of patient record\*\* Test performed, at least 1 positive result 31 25 40 16 Test performed, only negative results 3 3 148 286 No test or unknown result 2.155 2.511 26.897 36.379 Antigen test within ±14 days from inpatient admission\*\* Test performed, at least 1 positive result 0 0 0 0 Test performed, only negative results 0 0 0 0 No test or unknown result 981 27,281 1,185 19,259 Codes Observed Within ±5 Days of Diagnostic Specimen Collection Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426) 1,608 1,958 20,794 27,662 **Codes Observed During Inpatient Stay** 

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Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) **Patients Positive Lab Tests Positive Patients Negative Lab Tests Negative** Number Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness 74 83 877 1,136 of breath) OR R50.9 (fever)] Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia) 123 93 140 150 OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)] "Primary" Lab Test Product Information\*\*\*\* 847377 - SARS COV 2 NS 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR 526 571 2,840 3,219 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab 640 649 2.272 2.407 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA 87635R - SARS-CoV-2, NAA (COVID-19), POCT 7 6 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19) 3.775 146 149 3,474 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test 1 1 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With Probe Detection 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N1 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N2 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA With Probe Detection 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen By NAA With Probe Detection 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By NAA With Probe Detection 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By NAA 923 1.121 19.112 26.947 With Probe Detection 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By

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**Immunoassay** 



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test within ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason)

| All Nucleic Acid Amplification (NAA) Lab Tests: COVID NAA Test Within ±14 i    | ±14 Days from Hospital Admission Date for Inpatient (IP) Stay (Admitted for Any Reason) |                    |                   |                    |
|--|---|--------------------|-------------------|--------------------|
|  | Patients Positive   | Lab Tests Positive | Patients Negative | Lab Tests Negative |
|  |   | Nun                | nber              |                    |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -   | -                  | -                 | -                  |
| Rapid Immunoassay  |   |                    |                   |                    |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -   | -                  | -                 | -                  |
| Probe Detection  |   |                    |                   |                    |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | -   | -                  | -                 | -                  |
| NAA With Probe Detection   |   |                    |                   |                    |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | -   | -                  | -                 | -                  |
| By NAA With Probe Detection  |   |                    |                   |                    |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 6   | 8                  | 29                | 67                 |
| Specimen By NAA With Probe Detection   |   |                    |                   |                    |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | 4   | 8                  | 23                | 68                 |
| Immunoassay  |   |                    |                   |                    |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -   | -                  | 7                 | 7                  |
| Immunoassay  |   |                    |                   |                    |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -   | -                  | -                 | -                  |
| Non-Probe Detection  |   |                    |                   |                    |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | -   | -                  | -                 | -                  |
| NAA With Probe Detection   |   |                    |                   |                    |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -   | -                  | -                 | -                  |
| Probe Detection  |   |                    |                   |                    |
| Unknown  | 48  | 48                 | 95                | 199                |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   | Algorithm 1: Inpatient (IP) Stay with Code U07.1* |                 |                 |                 |         |                          |
|---|---|-----------------|-----------------|-----------------|---------|--------------------------|
|   |   | Lab Positive*** | Lab Negative*** | Lah No Posults  | No Lab  | Patients with Lab Result |
|   |   | Lab Fositive    | Number          | Lab, No Results | INO Lab | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****   |   |                 | Number          |                 |         | rumber (rercent)         |
| Total Observed                            |   | 2,478           | 182             | 1               | 573     | 2,660 ( 82.25% )         |
| Inpatient                                 |   | 840             | 38              | 0               | N/A     | 878                      |
| Outpatient or Emergency Department        |   | 795             | 85              | 1               | N/A     | 880                      |
| Other                                     |   | 255             | 0               | 0               | N/A     | 255                      |
| Care Setting Reported as Unknown          |   | 408             | 53              | 0               | N/A     | 461                      |
| Demographics                              |   |                 |                 |                 |         |                          |
| Sex                                       |   |                 |                 |                 |         |                          |
| Female                                    |   | 1,231           | 102             | 1               | 246     | 1,333 ( 84.37% )         |
| Male                                      |   | 1,247           | 80              | 0               | 264     | 1,327 (83.41%)           |
| Other/Missing                             |   | 0               | 0               | 0               | 0       | N/A                      |
| Age at Hospital Admission (Years)         |   |                 |                 |                 |         | •                        |
| 0-5                                       |   | 9               | 0               | 0               | 6       | 9 ( 60 % )               |
| 6-17                                      |   | 8               | 1               | 0               | 3       | 9 ( 75 % )               |
| 18-29                                     |   | 171             | 11              | 0               | 45      | 182 ( 80.18% )           |
| 30-39                                     |   | 233             | 17              | 0               | 42      | 250 ( 85.62% )           |
| 40-49                                     |   | 323             | 25              | 0               | 45      | 348 (88.55%)             |
| 50-59                                     |   | 502             | 31              | 0               | 79      | 533 (87.09%)             |
| 60-69                                     |   | 547             | 35              | 0               | 114     | 582 (83.62%)             |
| 70-79                                     |   | 375             | 36              | 1               | 103     | 411 (79.81%)             |
| 80-89                                     |   | 234             | 20              | 0               | 57      | 254 (81.67%)             |
| 90+                                       |   | 76              | 6               | 0               | 16      | 82 ( 83.67% )            |
| Missing                                   |   | 0               | 0               | 0               | 0       | N/A                      |
| Race                                      |   |                 |                 |                 |         | •                        |
| American Indian or Alaska Native          |   | 19              | 1               | 0               | 1       | 20 ( 95.24% )            |
| Asian                                     |   | 257             | 10              | 0               | 20      | 267 ( 93.03% )           |
| Black or African American                 |   | 732             | 54              | 0               | 207     | 786 ( 79.15% )           |
| Native Hawaiian or Other Pacific Islander |   | 3               | 0               | 0               | 1       | 3 ( 75 % )               |
| White                                     |   | 768             | 71              | 1               | 146     | 839 ( 85.09% )           |
| Other/Mixed/Unknown                       |   | 699             | 46              | 0               | 135     | 745 ( 84.66% )           |
| Ethnicity                                 |   |                 |                 |                 |         |                          |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 1: Inpati   | ent (IP) Stay with ( | Code U07.1*     |                 |        |                        |  |
|---|----------------------|-----------------|-----------------|--------|------------------------|--|
|   | Lab Positive***      | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu |  |
|   | Number               |                 |                 |        | Number (Percent)       |  |
| Hispanic  | 614                  | 40              | 0               | 86     | 654 ( 88.38% )         |  |
| Non-Hispanic  | 1,275                | 69              | 1               | 180    | 1,344 (88.13%)         |  |
| Unknown   | 591                  | 71              | 0               | 244    | 662 ( 73.07% )         |  |
| Codes Observed During Inpatient Stay  |                      |                 |                 |        |                        |  |
| Asymptomatic screening (Z11.59)   | 36                   | 17              | 0               | 13     | 53 ( 80.30% )          |  |
| Contact and suspected exposure (Z20.828)  | 155                  | 76              | 0               | 72     | 231 ( 76.24% )         |  |
| Pneumonia (see Appendix B)  | 1,785                | 99              | 0               | 317    | 1,884 (85.60%)         |  |
| Other viral pneumonia (J12.89)  | 1,860                | 73              | 0               | 298    | 1,933 (86.64%)         |  |
| ARDS (J80)  | 271                  | 10              | 0               | 34     | 281 (89.21%)           |  |
| Sepsis (see Appendix C)   | 717                  | 56              | 0               | 140    | 773 ( 84.67% )         |  |
| Bronchitis (J20.8 OR J40)   | 33                   | 2               | 0               | 6      | 35 (85.37%)            |  |
| Respiratory infection (J22 OR J98.8)  | 65                   | 1               | 0               | 5      | 66 ( 92.96% )          |  |
| Cough (R05)   | 165                  | 21              | 1               | 24     | 186 (88.15%)           |  |
| Shortness of breath (R06.2)   | 5                    | 2               | 0               | 0      | 7 ( 100.0% )           |  |
| Fever (R50.9)   | 251                  | 30              | 1               | 47     | 281 (85.41%)           |  |
| Optional  |                      |                 |                 |        |                        |  |
| Other COVID Tests   |                      |                 |                 |        |                        |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                    | -               | -               | -      | -                      |  |
| observed within -7 days prior to hospitalization through end of patient record**    |                      |                 |                 |        |                        |  |
| Test performed, at least 1 positive result  | 26                   | 3               | 0               | 4      | 29 ( 87.88% )          |  |
| est performed, only negative results  | 2                    | 3               | 0               | 0      | 5 ( 100.0% )           |  |
| No test or unknown result   | 2,099                | 117             | 0               | 461    | 2,216 (82.78%)         |  |
| Antigen test within ±14 days from inpatient admission**                             | -                    | -               | -               | -      | -                      |  |
| est performed, at least 1 positive result   | 0                    | 0               | 0               | 0      | N/A                    |  |
| est performed, only negative results  | 0                    | 0               | 0               | 0      | N/A                    |  |
| No test or unknown result   | 949                  | 10              | 0               | 129    | 959 ( 88.14% )         |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                      |                 |                 |        |                        |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,536                | 163             | 0               | 47     | 1,699 ( 97.31% )       |  |
| Codes Observed During Inpatient Stay  |                      |                 |                 |        |                        |  |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*   |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   | Number          |                 |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 69              | 22              | 1               | 17     | 91 (83.49%)              |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 123             | 26              | 0               | 44     | 149 ( 77.20% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****  |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | -               | -               | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 485             | 45              | -               | -      | 530 ( 100.0% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | 562             | 44              | -               | -      | 606 ( 100.0% )           |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | 131             | 24              | -               | -      | 155 ( 100.0% )           |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test<br>94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With | -               | -               | -               | -      | N/A                      |
| Probe Detection   | -               | -               | -               | -      | N/A                      |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  |                 |                 |                 |        |                          |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1  | -               | -               | -               | -      | N/A                      |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  |                 |                 |                 |        | A1 / A                   |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2  | -               | -               | -               | -      | N/A                      |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   |                 |                 |                 |        | N1 / A                   |
| NAA With Probe Detection  | -               | -               | -               | -      | N/A                      |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  |                 |                 |                 |        | NI/A                     |
| By NAA With Probe Detection   | -               | -               | -               | -      | N/A                      |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  |                 |                 |                 |        | N/A                      |
| NAA With Probe Detection  | -               | -               | -               | -      | N/A                      |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 897             | 10              | 0               | 0      | 907 ( 100.0% )           |
| NAA With Probe Detection  | 097             | 10              | U               | U      | 907 ( 100.0% )           |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | _               | _               | _               | _      | N/A                      |
| Immunoassay   | -               | -               | _               | -      | IN/ M                    |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*   |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   |                 |                 |                 |        |                          |
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By            | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay   |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With              | -               | -               | -               | -      | N/A                      |
| Probe Detection   |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By              | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen              | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory                   | 5               | 0               | 0               | 0      | 5 ( 100.0% )             |
| Specimen By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By                   | 0               | 0               | 0               | 0      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                   | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                 | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection   |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By              | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection | -               | -               | -               | -      | N/A                      |
|   | 47              | •               |                 | 420    | 47 / 26 700/ \           |
| Unknown   | 47              | 0               | 0               | 129    | 47 ( 26.70% )            |

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Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   | Algorithm 1: Inpatient (IP) Stay with Code |                                 |   |  |
|---|--|---------------------------------|---|--|
|   |  | Positive Predictive Value (PPV) | Sensitivity (95% Confidence             |  |
|   | <b>Total Patient Count</b>                 | (95% Confidence Interval)       | Interval)                               |  |
|   |  | Number (Percent)                | nt)                                     |  |
| Care Setting of "Primary" Lab Test*****   |  |                                 |   |  |
| Total Observed                            | 3,234 ( 100.0% )                           | 93.16% (92.13%, 94.09%)         | 96.42% (95.63%, 97.10%)                 |  |
| Inpatient                                 | 878 ( 27.15% )                             | 95.67% (94.11%, 96.92%)         | 93.75% (91.96%, 95.24%)                 |  |
| Outpatient or Emergency Department        | 881 ( 27.24% )                             | 90.34% (88.20%, 92.21%)         | 87.94% (85.64%, 89.99%)                 |  |
| Other                                     | 255 ( 7.88% )                              | 100.0% (98.56%, 100.0%)         | 91.73% (87.84%, 94.68%)                 |  |
| Care Setting Reported as Unknown          | 590 ( 18.24% )                             | 88.50% (85.23%, 91.27%)         | 92.10% (89.18%, 94.44%)                 |  |
| Demographics                              |  |                                 |   |  |
| Sex                                       |  |                                 |   |  |
| Female                                    | 1,580 ( 48.86% )                           | 92.35% (90.79%, 93.72%)         | 95.50% (94.22%, 96.57%)                 |  |
| Male                                      | 1,591 ( 49.20% )                           | 93.97% (92.55%, 95.19%)         | 97.35% (96.31%, 98.16%)                 |  |
| Other/Missing                             | N/A  | N/A                             | N/A                                     |  |
| Age at Hospital Admission (Years)         |  |                                 |   |  |
| 0-5                                       | 15 ( 0.46% )                               | 100.0% (66.37%, 100.0%)         | 64.29% (35.14%, 87.24%)                 |  |
| 6-17                                      | 12 ( 0.37% )                               | 88.89% (51.75%, 99.72%)         | 88.89% (51.75%, 99.72%)                 |  |
| 18-29                                     | 227 ( 7.02% )                              | 93.96% (89.44%, 96.94%)         | 95.53% (91.38%, 98.05%)                 |  |
| 30-39                                     | 292 ( 9.03% )                              | 93.20% (89.34%, 95.99%)         | 97.08% (94.08%, 98.82%)                 |  |
| 40-49                                     | 393 ( 12.15% )                             | 92.82% (89.58%, 95.30%)         | 97.58% (95.29%, 98.95%)                 |  |
| 50-59                                     | 612 ( 18.92% )                             | 94.18% (91.85%, 96.01%)         | 95.80% (93.71%, 97.35%)                 |  |
| 60-69                                     | 696 ( 21.52% )                             | 93.99% (91.74%, 95.78%)         | 96.81% (95.01%, 98.10%)                 |  |
| 70-79                                     | 515 ( 15.92% )                             | 91.24% (88.08%, 93.79%)         | 96.65% ( 94.34% , 98.20% )              |  |
| 80-89                                     | 311 ( 9.62% )                              | 92.13% (88.10%, 95.12%)         | 97.50% ( 94.64% , 99.08%                |  |
| 90+                                       | 98 ( 3.03% )                               | 92.68% (84.75%, 97.27%)         | 95 % (87.69%, 98.62%)                   |  |
| Missing                                   | N/A  | N/A                             | N/A                                     |  |
| Race                                      |  |                                 |   |  |
| American Indian or Alaska Native          | 21 ( 0.65% )                               | 95 % (75.13%, 99.87%)           | 100.0% (82.35%, 100.0%)                 |  |
| Asian                                     | 287 ( 8.87% )                              | 96.25% (93.22%, 98.19%)         | 98.85% ( 96.67% , 99.76%                |  |
| Black or African American                 | 993 (30.71%)                               | 93.13% (91.13%, 94.80%)         | 95.94% ( 94.28% , 97.22% )              |  |
| Native Hawaiian or Other Pacific Islander | 4 ( 0.12% )                                | 100.0% (29.24%, 100.0%)         | 100.0% (29.24%, 100.0%)                 |  |
| White                                     | 986 ( 30.49% )                             | 91.54% (89.45%, 93.33%)         | 96.24% ( 94.68% , 97.45%                |  |
| Other/Mixed/Unknown                       | 880 ( 27.21% )                             | 93.83% (91.85%, 95.44%)         | 96.15% (94.48%, 97.43%)                 |  |
| Ethnicity                                 | , ,  | ,                               | • |  |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   |                            | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |
|---|----------------------------|---------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | (95% Confidence Interval)       | Interval)                   |
|   |                            | Number (Percent)                |                             |
| Hispanic  | 740 ( 22.88% )             | 93.88% (91.76%, 95.59%)         | 96.85% (95.17%, 98.06%      |
| Non-Hispanic  | 1,525 ( 47.16% )           | 94.87% (93.55%, 95.98%)         | 96.15% (94.97%, 97.12%      |
| Unknown   | 906 ( 28.01% )             | 89.27% (86.66%, 91.53%)         | 96.89% (95.18%, 98.11%      |
| Codes Observed During Inpatient Stay  |                            |                                 |                             |
| Asymptomatic screening (Z11.59)   | 66 ( 2.04% )               | 67.92% ( 53.68% , 80.08% )      | 66.67% (52.53%, 78.91%      |
| Contact and suspected exposure (Z20.828)  | 303 ( 9.37% )              | 67.10% (60.63%, 73.12%)         | 80.73% (74.43%, 86.05%      |
| Pneumonia (see Appendix B)  | 2,201 (68.06%)             | 94.75% (93.64%, 95.71%)         | 99.50% (99.05%, 99.77%      |
| Other viral pneumonia (J12.89)  | 2,231 (68.99%)             | 96.22% ( 95.27% , 97.03% )      | ****                        |
| ARDS (J80)  | 315 ( 9.74% )              | 96.44% ( 93.55% , 98.28% )      | ****                        |
| Sepsis (see Appendix C)   | 913 ( 28.23% )             | 92.76% ( 90.70% , 94.48% )      | 99.58% (98.79%, 99.91%      |
| Bronchitis (J20.8 OR J40)   | 41 ( 1.27% )               | 94.29% (80.84%, 99.30%)         | ****                        |
| Respiratory infection (J22 OR J98.8)  | 71 ( 2.20% )               | 98.48% (91.84%, 99.96%)         | ****                        |
| Cough (R05)   | 211 ( 6.52% )              | 88.71% (83.26%, 92.87%)         | 100.0% (97.79%, 100.0%      |
| Shortness of breath (R06.2)   | 7 ( 0.22% )                | 71.43% ( 29.04% , 96.33% )      | 83.33% (35.88%, 99.58%      |
| Fever (R50.9)   | 329 ( 10.17% )             | 89.32% (85.11%, 92.68%)         | 99.21% (97.17%, 99.90%      |
| Optional  |                            |                                 |                             |
| Other COVID Tests   |                            |                                 |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                               | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                                 |                             |
| Test performed, at least 1 positive result  | 33 ( 1.02% )               | 89.66% (72.65%, 97.81%)         | 83.87% (66.27%, 94.55%      |
| Test performed, only negative results   | 5 ( 0.15% )                | 40 % ( 5.27% , 85.34% )         | 66.67% ( 9.43% , 99.16% )   |
| No test or unknown result   | 2,677 ( 82.78% )           | 94.72% (93.71%, 95.61%)         | 97.40% (96.64%, 98.03%      |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                               | -                           |
| est performed, at least 1 positive result   | N/A                        | N/A                             | N/A                         |
| est performed, only negative results  | N/A                        | N/A                             | N/A                         |
| No test or unknown result   | 1,088 ( 33.64% )           | 98.96% (98.09%, 99.50%)         | 96.74% ( 95.43% , 97.76%    |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            |                                 |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,746 ( 53.99% )           | 90.41% (88.91%, 91.77%)         | 95.52% (94.39%, 96.48%      |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*  |                     |                                 |                             |  |  |  |
|--|---------------------|---------------------------------|-----------------------------|--|--|--|
|  |                     | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |  |  |  |
|  | Total Patient Count | (95% Confidence Interval)       | Interval)                   |  |  |  |
| 20.020 /   |                     | Number (Percent)                |                             |  |  |  |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 109 ( 3.37% )       | 75.82% (65.72%, 84.19%)         | 93.24% (84.93%, 97.77%)     |  |  |  |
| of breath) OR R50.9 (fever)] 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)                             |                     |                                 |                             |  |  |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  | 193 ( 5.97% )       | 82.55% (75.49%, 88.27%)         | 100.0% (97.05%, 100.0%)     |  |  |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                     |                                 |                             |  |  |  |
| Primary" Lab Test Product Information****  |                     |                                 |                             |  |  |  |
| 47377 - SARS COV 2 NS  | N/A                 | N/A                             | N/A                         |  |  |  |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | N/A<br>N/A          | N/A<br>N/A                      | N/A<br>N/A                  |  |  |  |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | N/A<br>N/A          | N/A                             | N/A                         |  |  |  |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 530 ( 16.39% )      | 91.51% (88.80%, 93.74%)         | 92.21% (89.57%, 94.35%)     |  |  |  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | 606 ( 18.74% )      | 92.74% (90.38%, 94.68%)         | 87.81% (85.02%, 90.25%)     |  |  |  |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | N/A                 | N/A                             | N/A                         |  |  |  |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT   | N/A                 | N/A                             | N/A                         |  |  |  |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | 155 ( 4.79% )       | 84.52%(77.84%, 89.82%)          | 89.73% (83.62%, 94.13%)     |  |  |  |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | N/A                 | N/A                             | N/A                         |  |  |  |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With robe Detection   | N/A                 | N/A                             | N/A                         |  |  |  |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                 | N/A                             | N/A                         |  |  |  |
| ucleic Acid Amplification Using CDC Primer-Probe Set N1  | ,                   | ,                               | ,                           |  |  |  |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By lucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                 | N/A                             | N/A                         |  |  |  |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   | N/A                 | N/A                             | N/A                         |  |  |  |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | N/A                 | N/A                             | N/A                         |  |  |  |
| y NAA With Probe Detection   |                     |                                 |                             |  |  |  |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By AA With Probe Detection                                  | N/A                 | N/A                             | N/A                         |  |  |  |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By AA With Probe Detection                                     | 907 ( 28.05% )      | 98.90% ( 97.98% , 99.47% )      | 97.18% (95.90%, 98.15%)     |  |  |  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | N/A                 | N/A                             | N/A                         |  |  |  |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 1: Inpatient (IP) Stay with Code U07.1*  |                     |  |  |  |  |  |
|--|---------------------|--|--|--|--|--|
|  | Total Patient Count | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|  |                     | Number (Percent)   |  |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay             | N/A                 | N/A  | N/A                                      |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                 | N/A  | N/A                                      |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A                 | N/A  | N/A                                      |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                 | N/A  | N/A                                      |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | 5 ( 0.15% )         | 100.0% (47.82%, 100.0%)                                      | 83.33% (35.88%, 99.58%)                  |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A  | N/A                                      |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A  | N/A                                      |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A                 | N/A  | N/A                                      |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                 | N/A  | N/A                                      |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A                 | N/A  | N/A                                      |  |  |  |
| Unknown  | 176 ( 5.44% )       | 100.0% (92.45%, 100.0%)                                      | 97.92% (88.93%, 99.95%)                  |  |  |  |

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Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   | Algorithm 2: IP Stay with Any of Codes U07.1, B97.29* |                 |                 |                 |         |                          |
|---|---|-----------------|-----------------|-----------------|---------|--------------------------|
|   |   | Lab Positive*** | Lab Negative*** | Lah No Posults  | No Lab  | Patients with Lab Result |
|   |   | Lab Fositive    | Number          | Lab, No Results | INO Lab | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****   |   |                 | Number          |                 |         | radinaer (rercent)       |
| Total Observed                            |   | 2,479           | 184             | 1               | 575     | 2,663 ( 82.22% )         |
| Inpatient                                 |   | 840             | 39              | 0               | N/A     | 879                      |
| Outpatient or Emergency Department        |   | 795             | 86              | 1               | N/A     | 881                      |
| Other                                     |   | 255             | 0               | 0               | N/A     | 255                      |
| Care Setting Reported as Unknown          |   | 409             | 53              | 0               | N/A     | 462                      |
| Demographics                              |   |                 |                 |                 |         |                          |
| Sex                                       |   |                 |                 |                 |         |                          |
| Female                                    |   | 1,232           | 102             | 1               | 246     | 1,334 ( 84.38% )         |
| Male                                      |   | 1,247           | 82              | 0               | 265     | 1,329 (83.38%)           |
| Other/Missing                             |   | 0               | 0               | 0               | 0       | N/A                      |
| Age at Hospital Admission (Years)         |   |                 |                 |                 |         |                          |
| 0-5                                       |   | 9               | 0               | 0               | 6       | 9 ( 60 % )               |
| 6-17                                      |   | 8               | 1               | 0               | 3       | 9 (75 %)                 |
| 18-29                                     |   | 171             | 11              | 0               | 45      | 182 ( 80.18% )           |
| 30-39                                     |   | 233             | 17              | 0               | 42      | 250 ( 85.62% )           |
| 40-49                                     |   | 323             | 25              | 0               | 45      | 348 (88.55%)             |
| 50-59                                     |   | 502             | 32              | 0               | 79      | 534 (87.11%)             |
| 60-69                                     |   | 547             | 36              | 0               | 115     | 583 (83.52%)             |
| 70-79                                     |   | 376             | 36              | 1               | 103     | 412 (79.84%)             |
| 80-89                                     |   | 234             | 20              | 0               | 57      | 254 (81.67%)             |
| 90+                                       |   | 76              | 6               | 0               | 16      | 82 ( 83.67% )            |
| Missing                                   |   | 0               | 0               | 0               | 0       | N/A                      |
| Race                                      |   |                 |                 |                 |         |                          |
| American Indian or Alaska Native          |   | 19              | 1               | 0               | 1       | 20 ( 95.24% )            |
| Asian                                     |   | 257             | 10              | 0               | 20      | 267 ( 93.03% )           |
| Black or African American                 |   | 732             | 54              | 0               | 208     | 786 (79.07%)             |
| Native Hawaiian or Other Pacific Islander |   | 3               | 0               | 0               | 1       | 3 (75 %)                 |
| White                                     |   | 768             | 72              | 1               | 146     | 840 (85.11%)             |
| Other/Mixed/Unknown                       |   | 700             | 47              | 0               | 135     | 747 ( 84.69% )           |
| Ethnicity                                 |   |                 |                 |                 |         |                          |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 2: IP Stay v  | with Any of Codes l | J07.1, B97.29*  |                 |        |                        |
|---|---------------------|-----------------|-----------------|--------|------------------------|
|   | Lab Positive***     | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu |
|   |                     | Number          |                 |        | Number (Percent)       |
| Hispanic  | 615                 | 41              | 0               | 86     | 656 (88.41%)           |
| Non-Hispanic  | 1,275               | 70              | 1               | 180    | 1,345 (88.14%)         |
| Unknown   | 591                 | 71              | 0               | 245    | 662 ( 72.99% )         |
| Codes Observed During Inpatient Stay  |                     |                 |                 |        |                        |
| Asymptomatic screening (Z11.59)   | 36                  | 17              | 0               | 13     | 53 ( 80.30% )          |
| Contact and suspected exposure (Z20.828)  | 155                 | 78              | 0               | 72     | 233 ( 76.39% )         |
| Pneumonia (see Appendix B)  | 1,786               | 100             | 0               | 317    | 1,886 (85.61%)         |
| Other viral pneumonia (J12.89)  | 1,861               | 74              | 0               | 298    | 1,935 ( 86.65% )       |
| ARDS (J80)  | 271                 | 10              | 0               | 34     | 281 (89.21%)           |
| Sepsis (see Appendix C)   | 717                 | 56              | 0               | 141    | 773 (84.57%)           |
| Bronchitis (J20.8 OR J40)   | 33                  | 3               | 0               | 6      | 36 (85.71%)            |
| Respiratory infection (J22 OR J98.8)  | 65                  | 1               | 0               | 5      | 66 ( 92.96% )          |
| Cough (RO5)   | 165                 | 21              | 1               | 24     | 186 (88.15%)           |
| Shortness of breath (R06.2)   | 5                   | 2               | 0               | 0      | 7 ( 100.0% )           |
| Fever (R50.9)   | 251                 | 30              | 1               | 47     | 281 ( 85.41% )         |
| Optional  |                     |                 |                 |        |                        |
| Other COVID Tests   |                     |                 |                 |        |                        |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                   | -               | -               | -      | -                      |
| observed within -7 days prior to hospitalization through end of patient record**    |                     |                 |                 |        |                        |
| est performed, at least 1 positive result   | 26                  | 3               | 0               | 4      | 29 ( 87.88% )          |
| est performed, only negative results  | 2                   | 3               | 0               | 0      | 5 ( 100.0% )           |
| No test or unknown result   | 2,100               | 118             | 0               | 462    | 2,218 ( 82.76% )       |
| Antigen test within ±14 days from inpatient admission**                             | -                   | -               | -               | -      | -                      |
| est performed, at least 1 positive result   | 0                   | 0               | 0               | 0      | N/A                    |
| est performed, only negative results  | 0                   | 0               | 0               | 0      | N/A                    |
| No test or unknown result   | 949                 | 10              | 0               | 129    | 959 (88.14%)           |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                     |                 |                 |        |                        |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,537               | 165             | 0               | 47     | 1,702 ( 97.31% )       |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                         |                  |                        |                 |        |  |
|---|------------------|------------------------|-----------------|--------|--|
|   | Lab Dasitiva *** |                        | Lab Na Daggita  | No Lob | Detients with Leb Desult                   |
|   | Lab Positive***  | Lab Negative*** Number | Lab, No Results | No Lab | Patients with Lab Result  Number (Percent) |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 69               | 22                     | 1               | 17     | 91 ( 83.49% )                              |
| of breath) OR R50.9 (fever)]  | 03               | 22                     | 1               | 17     | J1 ( 65.4570 )                             |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 123              | 27                     | 0               | 44     | 150 ( 77.32% )                             |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                  |                        |                 |        | ,  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                  |                        |                 |        |  |
| "Primary" Lab Test Product Information****                                    |                  |                        |                 |        |  |
| 847377 - SARS_COV_2_NS  | -                | -                      | -               | -      | N/A  |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -                | -                      | -               | -      | N/A  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | -                | -                      | -               | -      | N/A  |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 486              | 45                     | -               | -      | 531 ( 100.0% )                             |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | 562              | 45                     | -               | -      | 607 ( 100.0% )                             |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -                | -                      | -               | -      | N/A  |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -                | -                      | -               | -      | N/A  |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | 131              | 24                     | -               | -      | 155 ( 100.0% )                             |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -                | -                      | -               | -      | N/A  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | -                | -                      | -               | -      | N/A  |
| Probe Detection   |                  |                        |                 |        |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -                | -                      | -               | -      | N/A  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                  |                        |                 |        |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -                | -                      | -               | -      | N/A  |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                  |                        |                 |        |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By     | -                | -                      | -               | -      | N/A  |
| NAA With Probe Detection  |                  |                        |                 |        |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | -                | -                      | -               | -      | N/A  |
| By NAA With Probe Detection   |                  |                        |                 |        |  |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -                | -                      | -               | -      | N/A  |
| NAA With Probe Detection  |                  |                        |                 |        |  |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By     | 897              | 10                     | 0               | 0      | 907 ( 100.0% )                             |
| NAA With Probe Detection  |                  |                        |                 |        |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -                | -                      | -               | -      | N/A  |
| Immunoassay   |                  |                        |                 |        |  |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*   |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   |                 |                 |                 |        |                          |
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                        | -               | -               | -               | -      | N/A                      |
| Rapid Immunoassay   |                 |                 |                 |        |                          |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With                          | -               | -               | -               | -      | N/A                      |
| Probe Detection   |                 |                 |                 |        |                          |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By                          | -               | -               | -               | -      | N/A                      |
| NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen                          | -               | -               | -               | -      | N/A                      |
| By NAA With Probe Detection   |                 |                 |                 |        |                          |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory                               | 5               | 0               | 0               | 0      | 5 ( 100.0% )             |
| Specimen By NAA With Probe Detection  |                 |                 |                 |        |                          |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By                               | 0               | 0               | 0               | 0      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                               | -               | -               | -               | -      | N/A                      |
| Immunoassay   |                 |                 |                 |        |                          |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                             | -               | -               | -               | -      | N/A                      |
| Non-Probe Detection  O4641 8 SARS Colv 2 (COLVID 10) S Cone Investored In Unspecified Specimen By     |                 |                 |                 |        |                          |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection | -               | -               | -               | -      | N/A                      |
|   |                 |                 |                 |        |                          |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection             | -               | -               | -               | -      | N/A                      |
| Unknown   | 47              | •               |                 | 420    | 47 / 26 700/ )           |
| OHKHOWH   | 47              | 0               | 0               | 129    | 47 ( 26.70% )            |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algo                                      | orithm 2: IP Stay with Any of Codes U07. | .1, B97.29*                   |                             |
|---|--|-------------------------------|-----------------------------|
|   |  |                               | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b>               | PPV (95% Confidence Interval) | Interval)                   |
|   |  | Number (Percent)              |                             |
| Care Setting of "Primary" Lab Test*****   |  |                               |                             |
| Total Observed                            | 3,239 ( 100.0% )                         | 93.09% ( 92.06% , 94.02% )    | 96.46% ( 95.67% , 97.14% )  |
| Inpatient                                 | 879 ( 27.14% )                           | 95.56% (93.98%, 96.83%)       | 93.75% (91.96%, 95.24%)     |
| Outpatient or Emergency Department        | 882 ( 27.23% )                           | 90.24% (88.09%, 92.12%)       | 87.94% (85.64%, 89.99%)     |
| Other                                     | 255 ( 7.87% )                            | 100.0% (98.56%, 100.0%)       | 91.73% (87.84%, 94.68%)     |
| Care Setting Reported as Unknown          | 591 ( 18.25% )                           | 88.53% (85.26%, 91.29%)       | 92.33% (89.44%, 94.63%)     |
| Demographics                              |  |                               |                             |
| Sex                                       |  |                               |                             |
| Female                                    | 1,581 ( 48.81% )                         | 92.35% (90.80%, 93.72%)       | 95.58% (94.31%, 96.63%)     |
| Male                                      | 1,594 ( 49.21% )                         | 93.83% (92.40%, 95.06%)       | 97.35% (96.31%, 98.16%)     |
| Other/Missing                             | N/A                                      | N/A                           | N/A                         |
| Age at Hospital Admission (Years)         |  |                               |                             |
| 0-5                                       | 15 ( 0.46% )                             | 100.0% (66.37%, 100.0%)       | 64.29% (35.14%, 87.24%)     |
| 6-17                                      | 12 ( 0.37% )                             | 88.89% (51.75%, 99.72%)       | 88.89% (51.75%, 99.72%)     |
| 18-29                                     | 227 ( 7.01% )                            | 93.96% (89.44%, 96.94%)       | 95.53% (91.38%, 98.05%)     |
| 30-39                                     | 292 ( 9.02% )                            | 93.20% (89.34%, 95.99%)       | 97.08% (94.08%, 98.82%)     |
| 40-49                                     | 393 ( 12.13% )                           | 92.82% (89.58%, 95.30%)       | 97.58% (95.29%, 98.95%)     |
| 50-59                                     | 613 ( 18.93% )                           | 94.01% (91.65%, 95.87%)       | 95.80% (93.71%, 97.35%)     |
| 60-69                                     | 698 ( 21.55% )                           | 93.83% (91.55%, 95.64%)       | 96.81% (95.01%, 98.10%)     |
| 70-79                                     | 516 ( 15.93% )                           | 91.26% (88.11%, 93.81%)       | 96.91% (94.66%, 98.39%)     |
| 80-89                                     | 311 ( 9.60% )                            | 92.13% (88.10%, 95.12%)       | 97.50% (94.64%, 99.08%)     |
| 90+                                       | 98 ( 3.03% )                             | 92.68% (84.75%, 97.27%)       | 95 % (87.69%, 98.62%)       |
| Missing                                   | N/A                                      | N/A                           | N/A                         |
| Race                                      |  |                               |                             |
| American Indian or Alaska Native          | 21 ( 0.65% )                             | 95 % (75.13%, 99.87%)         | 100.0% (82.35%, 100.0%)     |
| Asian                                     | 287 ( 8.86% )                            | 96.25% (93.22%, 98.19%)       | 98.85% (96.67%, 99.76%)     |
| Black or African American                 | 994 ( 30.69% )                           | 93.13% (91.13%, 94.80%)       | 95.94% (94.28%, 97.22%      |
| Native Hawaiian or Other Pacific Islander | 4 ( 0.12% )                              | 100.0% (29.24%, 100.0%)       | 100.0% (29.24%, 100.0%)     |
| White                                     | 987 ( 30.47% )                           | 91.43% (89.33%, 93.23%)       | 96.24% ( 94.68% , 97.45%    |
| Other/Mixed/Unknown                       | 882 ( 27.23% )                           | 93.71% (91.72%, 95.34%)       | 96.29% ( 94.64% , 97.54%    |
| Ethnicity                                 |  |                               |                             |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   |                            |                               | Sensitivity (95% Confidence |
|---|----------------------------|-------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            | Number (Percent)              |                             |
| Hispanic  | 742 ( 22.91% )             | 93.75% ( 91.62% , 95.48% )    | 97 % (95.36%, 98.19%)       |
| Non-Hispanic  | 1,526 ( 47.11% )           | 94.80% (93.47%, 95.92%)       | 96.15% (94.97%, 97.12%)     |
| Unknown   | 907 ( 28 % )               | 89.27% (86.66%, 91.53%)       | 96.89% (95.18%, 98.11%)     |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| Asymptomatic screening (Z11.59)   | 66 ( 2.04% )               | 67.92% (53.68%, 80.08%)       | 66.67% (52.53%, 78.91%)     |
| Contact and suspected exposure (Z20.828)  | 305 ( 9.42% )              | 66.52% ( 60.07% , 72.55% )    | 80.73% (74.43%, 86.05%)     |
| Pneumonia (see Appendix B)  | 2,203 ( 68.01% )           | 94.70% ( 93.59% , 95.67% )    | 99.55% (99.12%, 99.81%)     |
| Other viral pneumonia (J12.89)  | 2,233 ( 68.94% )           | 96.18% ( 95.22% , 96.99% )    | ****                        |
| ARDS (J80)  | 315 ( 9.73% )              | 96.44% (93.55%, 98.28%)       | ****                        |
| Sepsis (see Appendix C)   | 914 ( 28.22% )             | 92.76% ( 90.70% , 94.48% )    | 99.58% (98.79%, 99.91%)     |
| Bronchitis (J20.8 OR J40)   | 42 ( 1.30% )               | 91.67% (77.53%, 98.25%)       | ****                        |
| Respiratory infection (J22 OR J98.8)  | 71 ( 2.19% )               | 98.48% (91.84%, 99.96%)       | ****                        |
| Cough (RO5)   | 211 ( 6.51% )              | 88.71% (83.26%, 92.87%)       | 100.0% (97.79%, 100.0%)     |
| Shortness of breath (R06.2)   | 7 ( 0.22% )                | 71.43% (29.04%, 96.33%)       | 83.33% (35.88%, 99.58%)     |
| Fever (R50.9)   | 329 ( 10.16% )             | 89.32% (85.11%, 92.68%)       | 99.21% (97.17%, 99.90%)     |
| Optional  |                            |                               |                             |
| Other COVID Tests   |                            |                               |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                               |                             |
| est performed, at least 1 positive result   | 33 ( 1.02% )               | 89.66% (72.65%, 97.81%)       | 83.87% (66.27%, 94.55%)     |
| est performed, only negative results  | 5 ( 0.15% )                | 40 % ( 5.27% , 85.34% )       | 66.67% ( 9.43% , 99.16% )   |
| No test or unknown result   | 2,680 ( 82.74% )           | 94.68% ( 93.66% , 95.58% )    | 97.45% (96.69%, 98.07%)     |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                             | -                           |
| est performed, at least 1 positive result   | N/A                        | N/A                           | N/A                         |
| est performed, only negative results  | N/A                        | N/A                           | N/A                         |
| No test or unknown result   | 1,088 ( 33.59% )           | 98.96% (98.09%, 99.50%)       | 96.74% (95.43%, 97.76%)     |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                            |                               |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1749 ( 54 % )              | 90.31% (88.80%, 91.67%)       | 95.58% ( 94.46% , 96.54% )  |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 2: IP Stay w  | ith Any of Codes U07. | 1, B97.29*                    |  |
|---|-----------------------|-------------------------------|--|
|   | Total Patient Count   | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|   |                       | Number (Percent)              |  |
| 220.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 109 ( 3.37% )         | 75.82% (65.72%, 84.19%)       | 93.24% (84.93%, 97.77%)                  |
| of breath) OR R50.9 (fever)]  |                       |                               |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 194 ( 5.99% )         | 82 % ( 74.90% , 87.79% )      | 100.0% (97.05%, 100.0%)                  |
| PR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                       |                               |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                       |                               |  |
| Primary" Lab Test Product Information****   |                       |                               |  |
| 47377 - SARS_COV_2_NS   | N/A                   | N/A                           | N/A                                      |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A                   | N/A                           | N/A                                      |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | N/A                   | N/A                           | N/A                                      |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 531 ( 16.39% )        | 91.53% (88.82%, 93.75%)       | 92.40% (89.79%, 94.51%)                  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | 607 ( 18.74% )        | 92.59% (90.21%, 94.54%)       | 87.81% (85.02%, 90.25%)                  |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A                   | N/A                           | N/A                                      |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A                   | N/A                           | N/A                                      |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | 155 ( 4.79% )         | 84.52% (77.84%, 89.82%)       | 89.73% (83.62%, 94.13%)                  |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | N/A                   | N/A                           | N/A                                      |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With robe Detection  | N/A                   | N/A                           | N/A                                      |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N1 | N/A                   | N/A                           | N/A                                      |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                   | N/A                           | N/A                                      |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By AA With Probe Detection                                    | N/A                   | N/A                           | N/A                                      |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen y NAA With Probe Detection                              | N/A                   | N/A                           | N/A                                      |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  AA With Probe Detection                                | N/A                   | N/A                           | N/A                                      |
| 45 With Probe Detection<br>4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By<br>AA With Probe Detection      | 907 ( 28 % )          | 98.90% (97.98%, 99.47%)       | 97.18% (95.90%, 98.15%)                  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | N/A                   | N/A                           | N/A                                      |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 2: IP Stay with Any of Codes U07.1, B97.29*                          |                     |                               |  |  |  |  |
|--|---------------------|-------------------------------|--|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|  | Total Fatient Count | Number (Percent)              | intervalj                                |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                 | N/A                           | N/A                                      |  |  |  |
| Rapid Immunoassay  |                     |                               |  |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | N/A                 | N/A                           | N/A                                      |  |  |  |
| Probe Detection  |                     |                               |  |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | N/A                 | N/A                           | N/A                                      |  |  |  |
| NAA With Probe Detection   |                     |                               |  |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | N/A                 | N/A                           | N/A                                      |  |  |  |
| By NAA With Probe Detection  |                     |                               |  |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 5 ( 0.15% )         | 100.0% (47.82%, 100.0%)       | 83.33% (35.88%, 99.58%)                  |  |  |  |
| Specimen By NAA With Probe Detection   |                     |                               |  |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | N/A                 | N/A                           | N/A                                      |  |  |  |
| Immunoassay  |                     |                               |  |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | N/A                 | N/A                           | N/A                                      |  |  |  |
| Immunoassay  |                     |                               |  |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | N/A                 | N/A                           | N/A                                      |  |  |  |
| Non-Probe Detection  |                     |                               |  |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | N/A                 | N/A                           | N/A                                      |  |  |  |
| NAA With Probe Detection   |                     |                               |  |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | N/A                 | N/A                           | N/A                                      |  |  |  |
| Probe Detection  |                     |                               |  |  |  |  |
| Unknown  | 176 ( 5.43% )       | 100.0% (92.45%, 100.0%)       | 97.92% (88.93%, 99.95%)                  |  |  |  |

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Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2* |                 |                 |                 |         |                          |  |
|--|-----------------|-----------------|-----------------|---------|--------------------------|--|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab  | Patients with Lab Result |  |
|  | 1300 1 3300 5   | Number          | -               | 110 200 | Number (Percent)         |  |
| Care Setting of "Primary" Lab Test*****                      |                 |                 |                 |         | (                        |  |
| Total Observed   | 2,479           | 186             | 1               | 575     | 2,665 ( 82.23% )         |  |
| Inpatient  | 840             | 40              | 0               | N/A     | 880                      |  |
| Outpatient or Emergency Department                           | 795             | 86              | 1               | N/A     | 881                      |  |
| Other  | 255             | 0               | 0               | N/A     | 255                      |  |
| Care Setting Reported as Unknown                             | 409             | 54              | 0               | N/A     | 463                      |  |
| Demographics   |                 |                 |                 |         |                          |  |
| Sex  |                 |                 |                 |         |                          |  |
| Female   | 1,232           | 102             | 1               | 246     | 1,334 ( 84.38% )         |  |
| Male   | 1,247           | 84              | 0               | 265     | 1,331 (83.40%)           |  |
| Other/Missing  | 0               | 0               | 0               | 0       | N/A                      |  |
| Age at Hospital Admission (Years)                            |                 |                 |                 |         |                          |  |
| 0-5  | 9               | 0               | 0               | 6       | 9 ( 60 % )               |  |
| 6-17   | 8               | 1               | 0               | 3       | 9 (75 %)                 |  |
| 18-29  | 171             | 11              | 0               | 45      | 182 ( 80.18% )           |  |
| 30-39  | 233             | 17              | 0               | 42      | 250 ( 85.62% )           |  |
| 40-49  | 323             | 25              | 0               | 45      | 348 (88.55%)             |  |
| 50-59  | 502             | 33              | 0               | 79      | 535 (87.13%)             |  |
| 60-69  | 547             | 37              | 0               | 115     | 584 ( 83.55% )           |  |
| 70-79  | 376             | 36              | 1               | 103     | 412 ( 79.84% )           |  |
| 80-89  | 234             | 20              | 0               | 57      | 254 (81.67%)             |  |
| 90+  | 76              | 6               | 0               | 16      | 82 ( 83.67% )            |  |
| Missing  | 0               | 0               | 0               | 0       | N/A                      |  |
| Race   |                 |                 |                 |         |                          |  |
| American Indian or Alaska Native                             | 19              | 1               | 0               | 1       | 20 ( 95.24% )            |  |
| Asian  | 257             | 10              | 0               | 20      | 267 ( 93.03% )           |  |
| Black or African American                                    | 732             | 55              | 0               | 208     | 787 ( 79.10% )           |  |
| Native Hawaiian or Other Pacific Islander                    | 3               | 0               | 0               | 1       | 3 (75 %)                 |  |
| White  | 768             | 72              | 1               | 146     | 840 (85.11%)             |  |
| Other/Mixed/Unknown  | 700             | 48              | 0               | 135     | 748 ( 84.71% )           |  |
| Ethnicity  |                 |                 |                 |         |                          |  |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                        |                 |                 |                 |        |                                       |
|---|-----------------|-----------------|-----------------|--------|---------------------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Resu                |
|   |                 | Number          |                 |        | Number (Percent)                      |
| Hispanic  | 615             | 42              | 0               | 86     | 657 ( 88.43% )                        |
| Non-Hispanic  | 1,275           | 70              | 1               | 180    | 1,345 (88.14%)                        |
| Unknown   | 591             | 72              | 0               | 245    | 663 (73.02%)                          |
| Codes Observed During Inpatient Stay  |                 |                 |                 |        | · · · · · · · · · · · · · · · · · · · |
| Asymptomatic screening (Z11.59)   | 36              | 18              | 0               | 13     | 54 ( 80.60% )                         |
| Contact and suspected exposure (Z20.828)  | 155             | 79              | 0               | 72     | 234 ( 76.47% )                        |
| Pneumonia (see Appendix B)  | 1,786           | 101             | 0               | 317    | 1,887 (85.62%)                        |
| Other viral pneumonia (J12.89)  | 1,861           | 74              | 0               | 298    | 1,935 (86.65%)                        |
| ARDS (J80)  | 271             | 10              | 0               | 34     | 281 ( 89.21% )                        |
| Sepsis (see Appendix C)   | 717             | 57              | 0               | 141    | 774 (84.59%)                          |
| Bronchitis (J20.8 OR J40)   | 33              | 3               | 0               | 6      | 36 (85.71%)                           |
| Respiratory infection (J22 OR J98.8)  | 65              | 1               | 0               | 5      | 66 ( 92.96% )                         |
| Cough (RO5)   | 165             | 21              | 1               | 24     | 186 (88.15%)                          |
| Shortness of breath (R06.2)   | 5               | 2               | 0               | 0      | 7 ( 100.0% )                          |
| Fever (R50.9)   | 251             | 30              | 1               | 47     | 281 ( 85.41% )                        |
| Optional  |                 |                 |                 |        |                                       |
| Other COVID Tests   |                 |                 |                 |        |                                       |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -      | -                                     |
| observed within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |        |                                       |
| est performed, at least 1 positive result   | 26              | 3               | 0               | 4      | 29 ( 87.88% )                         |
| est performed, only negative results  | 2               | 4               | 0               | 0      | 6 ( 100.0% )                          |
| No test or unknown result   | 2,100           | 118             | 0               | 462    | 2,218 ( 82.76% )                      |
| Antigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -      | -                                     |
| est performed, at least 1 positive result   | 0               | 0               | 0               | 0      | N/A                                   |
| est performed, only negative results  | 0               | 0               | 0               | 0      | N/A                                   |
| No test or unknown result   | 949             | 10              | 0               | 129    | 959 ( 88.14% )                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 |        |                                       |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,537           | 167             | 0               | 47     | 1,704 ( 97.32% )                      |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*  |                 |                 |                 |        |                          |
|---|-----------------|-----------------|-----------------|--------|--------------------------|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |
|   |                 | Number          |                 |        | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 69              | 22              | 1               | 17     | 91 ( 83.49% )            |
| of breath) OR R50.9 (fever)]  |                 |                 |                 |        |                          |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 123             | 27              | 0               | 44     | 150 ( 77.32% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                 |        |                          |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                 |        |                          |
| "Primary" Lab Test Product Information****  |                 |                 |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -               | -               | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | -               | -               | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | -               | -               | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 486             | 46              | -               | -      | 532 ( 100.0% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | 562             | 45              | -               | -      | 607 ( 100.0% )           |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -               | -               | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -               | -               | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | 131             | 24              | -               | -      | 155 ( 100.0% )           |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | -               | -               | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | -               | -               | -               | -      | N/A                      |
| Probe Detection   |                 |                 |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N1 | -               | -               | -               | -      | N/A                      |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  |                 |                 |                 |        | A1 / A                   |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2  | -               | -               | -               | -      | N/A                      |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By   |                 |                 |                 |        | N1 / A                   |
| NAA With Probe Detection  | -               | -               | -               | -      | N/A                      |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  |                 |                 |                 |        | N/A                      |
| By NAA With Probe Detection   | -               | -               | -               | -      | N/A                      |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  |                 |                 |                 |        | N/A                      |
| NAA With Probe Detection  | -               | -               | -               | -      | IN/A                     |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By   | 897             | 10              | 0               | 0      | 907 ( 100.0% )           |
| NAA With Probe Detection  | 037             | 10              | U               | U      | 307 ( 100.0% )           |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | _               | _               | _               | _      | N/A                      |
| Immunoassay   |                 |                 |                 |        | MU                       |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                   |                 |                 |                 |        |                          |  |
|--|-----------------|-----------------|-----------------|--------|--------------------------|--|
|  |                 |                 |                 |        |                          |  |
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |  |
|  |                 | Number          |                 |        | Number (Percent)         |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |  |
| Rapid Immunoassay  |                 |                 |                 |        |                          |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |  |
| Probe Detection  |                 |                 |                 |        |                          |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | -               | -               | -               | -      | N/A                      |  |
| NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | -               | -               | -               | -      | N/A                      |  |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 5               | 0               | 0               | 0      | 5 ( 100.0% )             |  |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | 0               | 0               | 0               | 0      | N/A                      |  |
| Immunoassay  |                 |                 |                 |        |                          |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |  |
| Immunoassay  |                 |                 |                 |        |                          |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |  |
| Non-Probe Detection  |                 |                 |                 |        |                          |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |  |
| NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |  |
| Probe Detection  |                 |                 |                 |        |                          |  |
| Unknown  | 47              | 0               | 0               | 129    | 47 ( 26.70% )            |  |

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Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorit                                   | hm 3: IP Stay with Any of Codes U07.1, E | 397.29, B34.2*                |                             |
|---|--|-------------------------------|-----------------------------|
|   |  |                               | Sensitivity (95% Confidence |
|   | <b>Total Patient Count</b>               | PPV (95% Confidence Interval) | Interval)                   |
|   |  | Number (Percent)              |                             |
| Care Setting of "Primary" Lab Test*****   |  |                               |                             |
| Total Observed                            | 3,241 ( 100.0% )                         | 93.02% (91.99%, 93.96%)       | 96.46% (95.67%, 97.14%      |
| Inpatient                                 | 880 ( 27.15% )                           | 95.45% ( 93.86% , 96.73% )    | 93.75% (91.96%, 95.24%      |
| Outpatient or Emergency Department        | 882 ( 27.21% )                           | 90.24% (88.09%, 92.12%)       | 87.94% (85.64%, 89.99%      |
| Other                                     | 255 ( 7.87% )                            | 100.0% (98.56%, 100.0%)       | 91.73% (87.84%, 94.68%      |
| Care Setting Reported as Unknown          | 592 ( 18.27% )                           | 88.34% (85.06%, 91.12%)       | 92.33% (89.44%, 94.63%      |
| Demographics                              |  |                               |                             |
| Sex                                       |  |                               |                             |
| Female                                    | 1,581 ( 48.78% )                         | 92.35% ( 90.80% , 93.72% )    | 95.58% (94.31%, 96.63%      |
| Male                                      | 1,596 ( 49.24% )                         | 93.69% ( 92.25% , 94.94% )    | 97.35% (96.31%, 98.16%      |
| Other/Missing                             | N/A                                      | N/A                           | N/A                         |
| Age at Hospital Admission (Years)         |  |                               |                             |
| 0-5                                       | 15 ( 0.46% )                             | 100.0% (66.37%, 100.0%)       | 64.29% (35.14%, 87.24%      |
| 6-17                                      | 12 ( 0.37% )                             | 88.89% (51.75%, 99.72%)       | 88.89% (51.75%, 99.72%      |
| 18-29                                     | 227 ( 7 % )                              | 93.96% (89.44%, 96.94%)       | 95.53% (91.38%, 98.05%      |
| 30-39                                     | 292 ( 9.01% )                            | 93.20% (89.34%, 95.99%)       | 97.08% (94.08%, 98.82%      |
| 40-49                                     | 393 ( 12.13% )                           | 92.82% (89.58%, 95.30%)       | 97.58% (95.29%, 98.95%      |
| 50-59                                     | 614 ( 18.94% )                           | 93.83% (91.45%, 95.72%)       | 95.80% (93.71%, 97.35%      |
| 60-69                                     | 699 ( 21.57% )                           | 93.66% (91.37%, 95.50%)       | 96.81% (95.01%, 98.10%      |
| 70-79                                     | 516 ( 15.92% )                           | 91.26% (88.11%, 93.81%)       | 96.91% (94.66%, 98.39%      |
| 80-89                                     | 311 ( 9.60% )                            | 92.13% (88.10%, 95.12%)       | 97.50% (94.64%, 99.08%      |
| 90+                                       | 98 ( 3.02% )                             | 92.68% (84.75%, 97.27%)       | 95 % (87.69%, 98.62%)       |
| Missing                                   | N/A                                      | N/A                           | N/A                         |
| Race                                      |  |                               |                             |
| American Indian or Alaska Native          | 21 ( 0.65% )                             | 95 % (75.13%, 99.87%)         | 100.0% (82.35%, 100.0%      |
| Asian                                     | 287 ( 8.86% )                            | 96.25% (93.22%, 98.19%)       | 98.85% (96.67%, 99.76%      |
| Black or African American                 | 995 (30.70%)                             | 93.01% (91%, 94.69%)          | 95.94% (94.28%, 97.22%      |
| Native Hawaiian or Other Pacific Islander | 4 ( 0.12% )                              | 100.0% (29.24%, 100.0%)       | 100.0% (29.24%, 100.0%      |
| White                                     | 987 ( 30.45% )                           | 91.43% (89.33%, 93.23%)       | 96.24% (94.68%, 97.45%      |
| Other/Mixed/Unknown                       | 883 ( 27.24% )                           | 93.58% (91.58%, 95.23%)       | 96.29% (94.64%, 97.54%      |
| Ethnicity                                 | ,  | ,                             | •                           |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   |                     |                               | Sensitivity (95% Confidence |
|---|---------------------|-------------------------------|-----------------------------|
|   | Total Patient Count | PPV (95% Confidence Interval) | Interval)                   |
|   |                     | Number (Percent)              |                             |
| Hispanic  | 743 ( 22.93% )      | 93.61% (91.46%, 95.35%)       | 97 % (95.36%, 98.19%)       |
| Non-Hispanic  | 1,526 ( 47.08% )    | 94.80% (93.47%, 95.92%)       | 96.15% (94.97%, 97.12%)     |
| Unknown   | 908 ( 28.02% )      | 89.14% (86.52%, 91.41%)       | 96.89% (95.18%, 98.11%)     |
| Codes Observed During Inpatient Stay  |                     |                               |                             |
| Asymptomatic screening (Z11.59)   | 67 ( 2.07% )        | 66.67% ( 52.53% , 78.91% )    | 66.67% (52.53%, 78.91%)     |
| Contact and suspected exposure (Z20.828)  | 306 ( 9.44% )       | 66.24% (59.79%, 72.27%)       | 80.73% (74.43%, 86.05%)     |
| Pneumonia (see Appendix B)  | 2,204 ( 68 % )      | 94.65% (93.53%, 95.62%)       | 99.55% (99.12%, 99.81%)     |
| Other viral pneumonia (J12.89)  | 2,233 ( 68.90% )    | 96.18% ( 95.22% , 96.99% )    | ****                        |
| ARDS (J80)  | 315 ( 9.72% )       | 96.44% ( 93.55% , 98.28% )    | ****                        |
| Sepsis (see Appendix C)   | 915 ( 28.23% )      | 92.64% ( 90.56% , 94.37% )    | 99.58% (98.79%, 99.91%)     |
| Bronchitis (J20.8 OR J40)   | 42 ( 1.30% )        | 91.67% (77.53%, 98.25%)       | ****                        |
| Respiratory infection (J22 OR J98.8)  | 71 ( 2.19% )        | 98.48% (91.84%, 99.96%)       | ****                        |
| Cough (RO5)   | 211 ( 6.51% )       | 88.71% (83.26%, 92.87%)       | 100.0% (97.79%, 100.0%)     |
| Shortness of breath (R06.2)   | 7 ( 0.22% )         | 71.43% ( 29.04% , 96.33% )    | 83.33% (35.88%, 99.58%)     |
| Fever (R50.9)   | 329 ( 10.15% )      | 89.32% (85.11%, 92.68%)       | 99.21% (97.17%, 99.90%)     |
| Optional  |                     |                               |                             |
| Other COVID Tests   |                     |                               |                             |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                   | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                     |                               |                             |
| est performed, at least 1 positive result   | 33 ( 1.02% )        | 89.66% (72.65%, 97.81%)       | 83.87% (66.27%, 94.55%)     |
| est performed, only negative results  | 6 ( 0.19% )         | 33.33% ( 4.33% , 77.72% )     | 66.67% ( 9.43% , 99.16% )   |
| lo test or unknown result   | 2,680 ( 82.69% )    | 94.68% (93.66%, 95.58%)       | 97.45% ( 96.69% , 98.07%    |
| Antigen test within ±14 days from inpatient admission**                             | -                   | -                             | -                           |
| est performed, at least 1 positive result   | N/A                 | N/A                           | N/A                         |
| est performed, only negative results  | N/A                 | N/A                           | N/A                         |
| No test or unknown result   | 1,088 ( 33.57% )    | 98.96% ( 98.09% , 99.50% )    | 96.74% ( 95.43% , 97.76%    |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection                      |                     |                               |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,751 ( 54.03% )    | 90.20% (88.69%, 91.57%)       | 95.58% (94.46%, 96.54%)     |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*  |                     |                               |  |  |  |
|---|---------------------|-------------------------------|--|--|--|
|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |
|   |                     | Number (Percent)              |  |  |  |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness  | 109 ( 3.36% )       | 75.82% (65.72%, 84.19%)       | 93.24% (84.93%, 97.77%)                  |  |  |
| f breath) OR R50.9 (fever)]   |                     |                               |  |  |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 194 ( 5.99% )       | 82 % ( 74.90% , 87.79% )      | 100.0% (97.05%, 100.0%)                  |  |  |
| PR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                     |                               |  |  |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                     |                               |  |  |  |
| Primary" Lab Test Product Information****   |                     |                               |  |  |  |
| 47377 - SARS_COV_2_NS   | N/A                 | N/A                           | N/A                                      |  |  |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A                 | N/A                           | N/A                                      |  |  |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | N/A                 | N/A                           | N/A                                      |  |  |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 532 ( 16.41% )      | 91.35% (88.64%, 93.60%)       | 92.40% (89.79%, 94.51%)                  |  |  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | 607 ( 18.73% )      | 92.59% (90.21%, 94.54%)       | 87.81% (85.02%, 90.25%)                  |  |  |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A                 | N/A                           | N/A                                      |  |  |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A                 | N/A                           | N/A                                      |  |  |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | 155 ( 4.78% )       | 84.52% (77.84%, 89.82%)       | 89.73% (83.62%, 94.13%)                  |  |  |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | N/A                 | N/A                           | N/A                                      |  |  |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With robe Detection  | N/A                 | N/A                           | N/A                                      |  |  |
| 4307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N1 | N/A                 | N/A                           | N/A                                      |  |  |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                 | N/A                           | N/A                                      |  |  |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By  AA With Probe Detection                                   | N/A                 | N/A                           | N/A                                      |  |  |
| 4314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen ANAA With Probe Detection                               | N/A                 | N/A                           | N/A                                      |  |  |
| 316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | N/A                 | N/A                           | N/A                                      |  |  |
| AA With Probe Detection ISOO-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By AA With Probe Detection            | 907 ( 27.99% )      | 98.90% (97.98%, 99.47%)       | 97.18% ( 95.90% , 98.15% )               |  |  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | N/A                 | N/A                           | N/A                                      |  |  |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 3: IP Stay with Any of Codes U07.1, B97.29, B34.2*                   |                     |                               |                             |  |  |  |
|--|---------------------|-------------------------------|-----------------------------|--|--|--|
|  |                     |                               | Sensitivity (95% Confidence |  |  |  |
|  | Total Patient Count | PPV (95% Confidence Interval) | Interval)                   |  |  |  |
|  |                     | Number (Percent)              |                             |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | N/A                 | N/A                           | N/A                         |  |  |  |
| Rapid Immunoassay  |                     |                               |                             |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | N/A                 | N/A                           | N/A                         |  |  |  |
| Probe Detection  |                     |                               |                             |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | N/A                 | N/A                           | N/A                         |  |  |  |
| NAA With Probe Detection   |                     |                               |                             |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | N/A                 | N/A                           | N/A                         |  |  |  |
| By NAA With Probe Detection  |                     |                               |                             |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 5 ( 0.15% )         | 100.0% (47.82%, 100.0%)       | 83.33% (35.88%, 99.58%)     |  |  |  |
| Specimen By NAA With Probe Detection   |                     |                               |                             |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | N/A                 | N/A                           | N/A                         |  |  |  |
| Immunoassay  |                     |                               |                             |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | N/A                 | N/A                           | N/A                         |  |  |  |
| Immunoassay  |                     |                               |                             |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | N/A                 | N/A                           | N/A                         |  |  |  |
| Non-Probe Detection  | ·                   | ·                             | ·                           |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | N/A                 | N/A                           | N/A                         |  |  |  |
| NAA With Probe Detection   | ·                   | ·                             | ·                           |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | N/A                 | N/A                           | N/A                         |  |  |  |
| Probe Detection  | •                   | •                             | •                           |  |  |  |
| Unknown  | 176 ( 5.43% )       | 100.0% (92.45%, 100.0%)       | 97.92% (88.93%, 99.95%)     |  |  |  |

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Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21* |                 |                 |                   |        |                          |
|--|-----------------|-----------------|-------------------|--------|--------------------------|
|  | Lab Positive*** | Lab Negative*** | * Lab, No Results | No Lab | Patients with Lab Result |
|  |                 | Numbe           | r                 |        | Number (Percent)         |
| Care Setting of "Primary" Lab Test*****                                      |                 |                 |                   |        |                          |
| Total Observed   | 2,479           | 186             | 1                 | 575    | 2,665 ( 82.23% )         |
| Inpatient  | 840             | 40              | 0                 | N/A    | 880                      |
| Outpatient or Emergency Department   | 795             | 86              | 1                 | N/A    | 881                      |
| Other  | 255             | 0               | 0                 | N/A    | 255                      |
| Care Setting Reported as Unknown   | 409             | 54              | 0                 | N/A    | 463                      |
| Demographics   |                 |                 |                   |        |                          |
| Sex  |                 |                 |                   |        |                          |
| Female   | 1,232           | 102             | 1                 | 246    | 1,334 ( 84.38% )         |
| Male   | 1,247           | 84              | 0                 | 265    | 1,331 (83.40%)           |
| Other/Missing  | 0               | 0               | 0                 | 0      | N/A                      |
| Age at Hospital Admission (Years)  |                 |                 |                   |        |                          |
| 0-5  | 9               | 0               | 0                 | 6      | 9 ( 60 % )               |
| 6-17   | 8               | 1               | 0                 | 3      | 9 ( 75 % )               |
| 18-29  | 171             | 11              | 0                 | 45     | 182 ( 80.18% )           |
| 30-39  | 233             | 17              | 0                 | 42     | 250 ( 85.62% )           |
| 40-49  | 323             | 25              | 0                 | 45     | 348 (88.55%)             |
| 50-59  | 502             | 33              | 0                 | 79     | 535 (87.13%)             |
| 60-69  | 547             | 37              | 0                 | 115    | 584 (83.55%)             |
| 70-79  | 376             | 36              | 1                 | 103    | 412 (79.84%)             |
| 80-89  | 234             | 20              | 0                 | 57     | 254 (81.67%)             |
| 90+  | 76              | 6               | 0                 | 16     | 82 ( 83.67% )            |
| Missing  | 0               | 0               | 0                 | 0      | N/A                      |
| Race   |                 |                 |                   |        |                          |
| American Indian or Alaska Native   | 19              | 1               | 0                 | 1      | 20 ( 95.24% )            |
| Asian  | 257             | 10              | 0                 | 20     | 267 ( 93.03% )           |
| Black or African American  | 732             | 55              | 0                 | 208    | 787 ( 79.10% )           |
| Native Hawaiian or Other Pacific Islander                                    | 3               | 0               | 0                 | 1      | 3 (75 %)                 |
| White  | 768             | 72              | 1                 | 146    | 840 (85.11%)             |
| Other/Mixed/Unknown  | 700             | 48              | 0                 | 135    | 748 ( 84.71% )           |
| Ethnicity  |                 |                 |                   |        |                          |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 4: IP Stay with Any of  | Coues 007.1, B37 | 29, D34.2, J12.01, D | 37.21           |        |                                       |
|---|------------------|----------------------|-----------------|--------|---------------------------------------|
|   | Lab Positive***  | Lab Negative***      | Lab, No Results | No Lab | Patients with Lab Resul               |
|   |                  | Number               |                 |        | Number (Percent)                      |
| Hispanic  | 615              | 42                   | 0               | 86     | 657 ( 88.43% )                        |
| Non-Hispanic  | 1,275            | 70                   | 1               | 180    | 1,345 (88.14%)                        |
| Unknown   | 591              | 72                   | 0               | 245    | 663 ( 73.02% )                        |
| Codes Observed During Inpatient Stay  |                  |                      |                 |        | · · · · · · · · · · · · · · · · · · · |
| Asymptomatic screening (Z11.59)   | 36               | 18                   | 0               | 13     | 54 ( 80.60% )                         |
| Contact and suspected exposure (Z20.828)  | 155              | 79                   | 0               | 72     | 234 ( 76.47% )                        |
| Pneumonia (see Appendix B)  | 1,786            | 101                  | 0               | 317    | 1,887 (85.62%)                        |
| Other viral pneumonia (J12.89)  | 1,861            | 74                   | 0               | 298    | 1,935 ( 86.65% )                      |
| ARDS (J80)  | 271              | 10                   | 0               | 34     | 281 ( 89.21% )                        |
| Sepsis (see Appendix C)   | 717              | 57                   | 0               | 141    | 774 (84.59%)                          |
| Bronchitis (J20.8 OR J40)   | 33               | 3                    | 0               | 6      | 36 (85.71%)                           |
| Respiratory infection (J22 OR J98.8)  | 65               | 1                    | 0               | 5      | 66 ( 92.96% )                         |
| Cough (R05)   | 165              | 21                   | 1               | 24     | 186 ( 88.15% )                        |
| Shortness of breath (R06.2)   | 5                | 2                    | 0               | 0      | 7 ( 100.0% )                          |
| Fever (R50.9)   | 251              | 30                   | 1               | 47     | 281 (85.41%)                          |
| Optional  |                  |                      |                 |        |                                       |
| Other COVID Tests   |                  |                      |                 |        |                                       |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                | -                    | -               | -      | -                                     |
| observed within -7 days prior to hospitalization through end of patient record**    |                  |                      |                 |        |                                       |
| Test performed, at least 1 positive result  | 26               | 3                    | 0               | 4      | 29 ( 87.88% )                         |
| est performed, only negative results  | 2                | 4                    | 0               | 0      | 6 ( 100.0% )                          |
| No test or unknown result   | 2,100            | 118                  | 0               | 462    | 2,218 (82.76%)                        |
| Antigen test within ±14 days from inpatient admission**                             | -                | -                    | -               | -      | -                                     |
| est performed, at least 1 positive result   | 0                | 0                    | 0               | 0      | N/A                                   |
| est performed, only negative results  | 0                | 0                    | 0               | 0      | N/A                                   |
| No test or unknown result   | 949              | 10                   | 0               | 129    | 959 ( 88.14% )                        |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                  |                      |                 |        |                                       |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,537            | 167                  | 0               | 47     | 1,704 ( 97.32% )                      |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 4: IP Stay with Any of  | Codes U07.1, B97.2 | 29, B34.2, J12.81, B | 97.21*          |        |                          |
|---|--------------------|----------------------|-----------------|--------|--------------------------|
|   | Lab Positive***    | Lab Negative***      | Lab, No Results | No Lab | Patients with Lab Result |
|   | Lab i Ositive      | Number               | Lab, No Results | NO Lab | Number (Percent)         |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness | 69                 | 22                   | 1               | 17     | 91 ( 83.49% )            |
| of breath) OR R50.9 (fever)]  |                    |                      | _               |        | ( ,                      |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 123                | 27                   | 0               | 44     | 150 ( 77.32% )           |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                    |                      |                 |        | ,                        |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                    |                      |                 |        |                          |
| "Primary" Lab Test Product Information****                                    |                    |                      |                 |        |                          |
| 847377 - SARS_COV_2_NS  | -                  | -                    | -               | -      | N/A                      |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual      | -                  | -                    | -               | -      | N/A                      |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA           | -                  | -                    | -               | -      | N/A                      |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR                      | 486                | 46                   | -               | -      | 532 ( 100.0% )           |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab                      | 562                | 45                   | -               | -      | 607 ( 100.0% )           |
| 87635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA                      | -                  | -                    | -               | -      | N/A                      |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT                                     | -                  | -                    | -               | -      | N/A                      |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)                        | 131                | 24                   | -               | -      | 155 ( 100.0% )           |
| 87635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test                     | -                  | -                    | -               | -      | N/A                      |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With  | -                  | -                    | -               | -      | N/A                      |
| Probe Detection   |                    |                      |                 |        |                          |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -                  | -                    | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N1                      |                    |                      |                 |        |                          |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -                  | -                    | -               | -      | N/A                      |
| Nucleic Acid Amplification Using CDC Primer-Probe Set N2                      |                    |                      |                 |        |                          |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By     | -                  | -                    | -               | -      | N/A                      |
| NAA With Probe Detection  |                    |                      |                 |        |                          |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | -                  | -                    | -               | -      | N/A                      |
| By NAA With Probe Detection   |                    |                      |                 |        |                          |
| 94316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By  | -                  | -                    | -               | -      | N/A                      |
| NAA With Probe Detection  |                    |                      |                 |        |                          |
| 94500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By     | 897                | 10                   | 0               | 0      | 907 ( 100.0% )           |
| NAA With Probe Detection  |                    |                      |                 |        |                          |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -                  | -                    | -               | -      | N/A                      |
| Immunoassay   |                    |                      |                 |        |                          |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*   |                 |                 |                 |        |                          |  |
|--|-----------------|-----------------|-----------------|--------|--------------------------|--|
|  | Lab Positive*** | Lab Negative*** | Lab, No Results | No Lab | Patients with Lab Result |  |
|  |                 | Number          |                 |        | Number (Percent)         |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By | -               | -               | -               | -      | N/A                      |  |
| Rapid Immunoassay  |                 |                 |                 |        |                          |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With   | -               | -               | -               | -      | N/A                      |  |
| Probe Detection  |                 |                 |                 |        |                          |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By   | -               | -               | -               | -      | N/A                      |  |
| NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen   | -               | -               | -               | -      | N/A                      |  |
| By NAA With Probe Detection  |                 |                 |                 |        |                          |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory        | 5               | 0               | 0               | 0      | 5 ( 100.0% )             |  |
| Specimen By NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By        | 0               | 0               | 0               | 0      | N/A                      |  |
| Immunoassay  |                 |                 |                 |        |                          |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By        | -               | -               | -               | -      | N/A                      |  |
| Immunoassay  |                 |                 |                 |        |                          |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |  |
| Non-Probe Detection  |                 |                 |                 |        |                          |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By   | -               | -               | -               | -      | N/A                      |  |
| NAA With Probe Detection   |                 |                 |                 |        |                          |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With      | -               | -               | -               | -      | N/A                      |  |
| Probe Detection  |                 |                 |                 |        |                          |  |
| Unknown  | 47              | 0               | 0               | 129    | 47 ( 26.70% )            |  |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| 0   | Stay with Any of Codes U07.1, B97.29, I | , | Sensitivity (95% Confidence |
|---|---|---|-----------------------------|
|   | Total Patient Count                     | PPV (95% Confidence Interval)           | Interval)                   |
|   | Total Patient Count                     | ,                                       | intervalj                   |
| Care Setting of "Primary" Lab Test*****   |   | Number (Percent)                        |                             |
| Total Observed                            | 3,241 ( 100.0% )                        | 93.02% ( 91.99% , 93.96% )              | 96.46% ( 95.67% , 97.14%    |
| Inpatient                                 | 880 ( 27.15% )                          | 95.45% (93.86%, 96.73%)                 | 93.75% (91.96%, 95.24%)     |
| Outpatient or Emergency Department        | 882 ( 27.21% )                          | 90.24% (88.09%, 92.12%)                 | 87.94% (85.64%, 89.99%)     |
| Other                                     | 255 ( 7.87% )                           | 100.0% (98.56%, 100.0%)                 | 91.73% (87.84%, 94.68%)     |
| Care Setting Reported as Unknown          | 592 ( 18.27% )                          | 88.34% (85.06%, 91.12%)                 | 92.33% (89.44%, 94.63%)     |
| Demographics                              | 332 (10/27/07)                          | 36.3 170 (35.6670) 31.11270)            | 32.3370 (33.1170) 3 110370  |
| Sex                                       |   |   |                             |
| Female                                    | 1,581 ( 48.78% )                        | 92.35% (90.80%, 93.72%)                 | 95.58% (94.31%, 96.63%)     |
| Male                                      | 1,596 (49.24%)                          | 93.69% ( 92.25% , 94.94% )              | 97.35% (96.31%, 98.16%)     |
| Other/Missing                             | N/A                                     | N/A                                     | N/A                         |
| Age at Hospital Admission (Years)         | ,                                       | •                                       | ·                           |
| 0-5                                       | 15 ( 0.46% )                            | 100.0% (66.37%, 100.0%)                 | 64.29% (35.14%, 87.24%)     |
| 6-17                                      | 12 ( 0.37% )                            | 88.89% (51.75%, 99.72%)                 | 88.89% (51.75%, 99.72%      |
| 18-29                                     | 227 ( 7 % )                             | 93.96% (89.44%, 96.94%)                 | 95.53% (91.38%, 98.05%      |
| 30-39                                     | 292 ( 9.01% )                           | 93.20% (89.34%, 95.99%)                 | 97.08% ( 94.08% , 98.82%    |
| 40-49                                     | 393 (12.13%)                            | 92.82% (89.58%, 95.30%)                 | 97.58% (95.29%, 98.95%      |
| 50-59                                     | 614 (18.94%)                            | 93.83% (91.45%, 95.72%)                 | 95.80% (93.71%, 97.35%      |
| 60-69                                     | 699 (21.57%)                            | 93.66% (91.37%, 95.50%)                 | 96.81% (95.01%, 98.10%      |
| 70-79                                     | 516 (15.92%)                            | 91.26% (88.11%, 93.81%)                 | 96.91% ( 94.66% , 98.39%    |
| 80-89                                     | 311 ( 9.60% )                           | 92.13% (88.10%, 95.12%)                 | 97.50% ( 94.64% , 99.08%    |
| 90+                                       | 98 ( 3.02% )                            | 92.68% (84.75%, 97.27%)                 | 95 % (87.69%, 98.62%)       |
| Missing                                   | N/A                                     | N/A                                     | N/A                         |
| Race                                      |   |   |                             |
| American Indian or Alaska Native          | 21 ( 0.65% )                            | 95 % (75.13% , 99.87%)                  | 100.0% (82.35%, 100.0%      |
| Asian                                     | 287 ( 8.86% )                           | 96.25% (93.22%, 98.19%)                 | 98.85% (96.67%, 99.76%      |
| Black or African American                 | 995 ( 30.70% )                          | 93.01% (91%, 94.69%)                    | 95.94% ( 94.28% , 97.22%    |
| Native Hawaiian or Other Pacific Islander | 4 ( 0.12% )                             | 100.0% (29.24%, 100.0%)                 | 100.0% (29.24%, 100.0%      |
| White                                     | 987 ( 30.45% )                          | 91.43% (89.33%, 93.23%)                 | 96.24% ( 94.68% , 97.45%    |
| Other/Mixed/Unknown                       | 883 ( 27.24% )                          | 93.58% (91.58%, 95.23%)                 | 96.29% ( 94.64% , 97.54%    |
| Ethnicity                                 |   |   |                             |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   |                            |                               | Sensitivity (95% Confidence |
|---|----------------------------|-------------------------------|-----------------------------|
|   | <b>Total Patient Count</b> | PPV (95% Confidence Interval) | Interval)                   |
|   |                            | Number (Percent)              |                             |
| Hispanic  | 743 ( 22.93% )             | 93.61% ( 91.46% , 95.35% )    | 97 % (95.36%, 98.19%)       |
| Non-Hispanic  | 1,526 ( 47.08% )           | 94.80% ( 93.47% , 95.92% )    | 96.15% (94.97%, 97.12%      |
| Unknown   | 908 ( 28.02% )             | 89.14% (86.52%, 91.41%)       | 96.89% (95.18%, 98.11%      |
| Codes Observed During Inpatient Stay  |                            |                               |                             |
| Asymptomatic screening (Z11.59)   | 67 ( 2.07% )               | 66.67% (52.53%, 78.91%)       | 66.67% (52.53%, 78.91%      |
| Contact and suspected exposure (Z20.828)  | 306 ( 9.44% )              | 66.24% (59.79%, 72.27%)       | 80.73% ( 74.43% , 86.05%    |
| Pneumonia (see Appendix B)  | 2,204 ( 68 % )             | 94.65% ( 93.53% , 95.62% )    | 99.55% (99.12%, 99.81%      |
| Other viral pneumonia (J12.89)  | 2,233 ( 68.90% )           | 96.18% ( 95.22% , 96.99% )    | ****                        |
| ARDS (J80)  | 315 ( 9.72% )              | 96.44% ( 93.55% , 98.28% )    | ****                        |
| Sepsis (see Appendix C)   | 915 ( 28.23% )             | 92.64% ( 90.56% , 94.37% )    | 99.58% (98.79%, 99.91%      |
| Bronchitis (J20.8 OR J40)   | 42 ( 1.30% )               | 91.67% (77.53%, 98.25%)       | ****                        |
| Respiratory infection (J22 OR J98.8)  | 71 ( 2.19% )               | 98.48% (91.84%, 99.96%)       | ****                        |
| Cough (RO5)   | 211 ( 6.51% )              | 88.71% (83.26%, 92.87%)       | 100.0% (97.79%, 100.0%      |
| Shortness of breath (R06.2)   | 7 ( 0.22% )                | 71.43% (29.04%, 96.33%)       | 83.33% (35.88%, 99.58%      |
| Fever (R50.9)   | 329 ( 10.15% )             | 89.32% (85.11%, 92.68%)       | 99.21% (97.17%, 99.90%      |
| Optional  |                            |                               |                             |
| Other COVID Tests   |                            |                               |                             |
| antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                          | -                             | -                           |
| observed within -7 days prior to hospitalization through end of patient record**    |                            |                               |                             |
| est performed, at least 1 positive result   | 33 ( 1.02% )               | 89.66% (72.65%, 97.81%)       | 83.87% (66.27%, 94.55%      |
| est performed, only negative results  | 6 ( 0.19% )                | 33.33% ( 4.33% , 77.72% )     | 66.67% ( 9.43% , 99.16%)    |
| lo test or unknown result   | 2,680 ( 82.69% )           | 94.68% (93.66%, 95.58%)       | 97.45% ( 96.69% , 98.07%    |
| Antigen test within ±14 days from inpatient admission**                             | -                          | -                             | -                           |
| est performed, at least 1 positive result   | N/A                        | N/A                           | N/A                         |
| est performed, only negative results  | N/A                        | N/A                           | N/A                         |
| No test or unknown result   | 1,088 ( 33.57% )           | 98.96% ( 98.09% , 99.50% )    | 96.74% ( 95.43% , 97.76%    |
| odes Observed Within ±5 Days of Diagnostic Specimen Collection                      |                            |                               |                             |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,751 ( 54.03% )           | 90.20% (88.69%, 91.57%)       | 95.58% (94.46%, 96.54%      |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21*  |                     |                               |  |  |  |  |
|---|---------------------|-------------------------------|--|--|--|--|
|   | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|   |                     | Number (Percent)              |  |  |  |  |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness  | 109 ( 3.36% )       | 75.82% (65.72%, 84.19%)       | 93.24% ( 84.93% , 97.77% )               |  |  |  |
| f breath) OR R50.9 (fever)]   |                     |                               |  |  |  |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 194 ( 5.99% )       | 82 % ( 74.90% , 87.79% )      | 100.0% (97.05%, 100.0%)                  |  |  |  |
| R J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  |                     |                               |  |  |  |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                     |                               |  |  |  |  |
| Primary" Lab Test Product Information****   |                     |                               |  |  |  |  |
| 47377 - SARS_COV_2_NS   | N/A                 | N/A                           | N/A                                      |  |  |  |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A                 | N/A                           | N/A                                      |  |  |  |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | N/A                 | N/A                           | N/A                                      |  |  |  |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 532 ( 16.41% )      | 91.35% (88.64%, 93.60%)       | 92.40% (89.79%, 94.51%)                  |  |  |  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | 607 (18.73%)        | 92.59% (90.21%, 94.54%)       | 87.81% (85.02%, 90.25%)                  |  |  |  |
| 7635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA   | N/A                 | N/A                           | N/A                                      |  |  |  |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A                 | N/A                           | N/A                                      |  |  |  |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | 155 ( 4.78% )       | 84.52% (77.84%, 89.82%)       | 89.73% (83.62%, 94.13%)                  |  |  |  |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | N/A                 | N/A                           | N/A                                      |  |  |  |
| 1306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With robe Detection  | N/A                 | N/A                           | N/A                                      |  |  |  |
| 1307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N1 | N/A                 | N/A                           | N/A                                      |  |  |  |
| 1308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                 | N/A                           | N/A                                      |  |  |  |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By  AA With Probe Detection                                   | N/A                 | N/A                           | N/A                                      |  |  |  |
| #314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen ANAA With Probe Detection                               | N/A                 | N/A                           | N/A                                      |  |  |  |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By AA With Probe Detection                                 | N/A                 | N/A                           | N/A                                      |  |  |  |
| 45 With Probe Detection<br>4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By<br>4A With Probe Detection      | 907 ( 27.99% )      | 98.90% ( 97.98% , 99.47% )    | 97.18% (95.90%, 98.15%)                  |  |  |  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | N/A                 | N/A                           | N/A                                      |  |  |  |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 4: IP Stay with Any of   | Codes U07.1, B97.29, I | B34.2, J12.81, B97.21*        |  |
|--|------------------------|-------------------------------|--|
|  | Total Patient Count    | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|  | Total Patient Count    | intervarj                     |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By Rapid Immunoassay             | N/A                    | Number (Percent) N/A          | N/A                                      |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                    | N/A                           | N/A                                      |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A                    | N/A                           | N/A                                      |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                    | N/A                           | N/A                                      |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | 5 ( 0.15% )            | 100.0% (47.82%, 100.0%)       | 83.33% (35.88%, 99.58%)                  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By                                      | N/A                    | N/A                           | N/A                                      |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By                                      | N/A                    | N/A                           | N/A                                      |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A                    | N/A                           | N/A                                      |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                    | N/A                           | N/A                                      |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Probe Detection                    | N/A                    | N/A                           | N/A                                      |
| Unknown  | 176 ( 5.43% )          | 100.0% (92.45%, 100.0%)       | 97.92% (88.93%, 99.95%)                  |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   | Lab Positive*** | Lah Negative** | * Lab, No Results | No Lah Patients with | Patients with Lab Resul |
|---|-----------------|----------------|-------------------|----------------------|-------------------------|
|   | Lab rositive    | Numbe          |                   | IVO Lab              | Number (Percent)        |
| Care Setting of "Primary" Lab Test*****   |                 | Nullibe        | = 1               |                      | Number (Fercent)        |
| Fotal Observed                            | 1,931           | 107            | 0                 | 406                  | 2,038 ( 83.39% )        |
| Inpatient                                 | 541             | 20             | 0                 | N/A                  | 561                     |
| Outpatient or Emergency Department        | 728             | 55             | 0                 | N/A                  | 783                     |
| Other                                     | 214             | 0              | 0                 | N/A                  | 214                     |
| Care Setting Reported as Unknown          | 321             | 27             | 0                 | N/A                  | 348                     |
| Demographics                              |                 | :              | -                 |                      | 3.0                     |
| Sex                                       |                 |                |                   |                      |                         |
| Female                                    | 901             | 54             | 0                 | 153                  | 955 ( 86.19% )          |
| Male                                      | 1,030           | 53             | 0                 | 201                  | 1,083 ( 84.35% )        |
| Other/Missing                             | 0               | 0              | 0                 | 0                    | N/A                     |
| Age at Hospital Admission (Years)         |                 |                |                   |                      | •                       |
| 0-5                                       | 1               | 0              | 0                 | 0                    | 1 (100.0%)              |
| 6-17                                      | 2               | 0              | 0                 | 1                    | 2 (66.67%)              |
| 18-29                                     | 65              | 2              | 0                 | 13                   | 67 (83.75%)             |
| 30-39                                     | 141             | 9              | 0                 | 19                   | 150 (88.76%)            |
| 40-49                                     | 277             | 12             | 0                 | 38                   | 289 ( 88.38% )          |
| 50-59                                     | 428             | 27             | 0                 | 57                   | 455 (88.87%)            |
| 60-69                                     | 477             | 19             | 0                 | 93                   | 496 (84.21%)            |
| 70-79                                     | 318             | 24             | 0                 | 76                   | 342 (81.82%)            |
| 80-89                                     | 172             | 10             | 0                 | 45                   | 182 (80.18%)            |
| 90+                                       | 50              | 4              | 0                 | 12                   | 54 (81.82%)             |
| Missing                                   | 0               | 0              | 0                 | 0                    | N/A                     |
| Race                                      |                 |                |                   |                      |                         |
| American Indian or Alaska Native          | 12              | 0              | 0                 | 1                    | 12 ( 92.31% )           |
| Asian                                     | 213             | 6              | 0                 | 18                   | 219 (92.41%)            |
| Black or African American                 | 579             | 27             | 0                 | 138                  | 606 (81.45%)            |
| Native Hawaiian or Other Pacific Islander | 2               | 0              | 0                 | 1                    | 2 ( 66.67% )            |
| White                                     | 557             | 41             | 0                 | 102                  | 598 ( 85.43% )          |
| Other/Mixed/Unknown                       | 568             | 33             | 0                 | 94                   | 601 (86.47%)            |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   | Lab Positive*** | Lab Negative*** | Lah No Posults  | No Lab  | o Lab Patients with Lab Resu |
|---|-----------------|-----------------|-----------------|---------|------------------------------|
|   | Lab Positive    | Number          | Lab, No Results | INO Lab | Number (Percent)             |
| Hispanic  | 517             | 28              | 0               | 54      | 545 ( 90.98% )               |
| Non-Hispanic  | 926             | 41              | 0               | 136     | 967 (87.67%)                 |
| Unknown   | 488             | 38              | 0               | 164     | 526 ( 76.23% )               |
| Codes Observed During Inpatient Stay  |                 |                 | -               |         | 0=0 ( 1 0 1=0 1 0 )          |
| Asymptomatic screening (Z11.59)   | 29              | 9               | 0               | 8       | 38 ( 82.61% )                |
| Contact and suspected exposure (Z20.828)  | 140             | 56              | 0               | 55      | 196 ( 78.09% )               |
| Pneumonia (see Appendix B)  | 1,803           | 100             | 0               | 324     | 1,903 ( 85.45% )             |
| Other viral pneumonia (J12.89)  | 1,879           | 74              | 0               | 304     | 1,953 (86.53%)               |
| ARDS (J80)  | 273             | 10              | 0               | 34      | 283 ( 89.27% )               |
| Sepsis (see Appendix C)   | 661             | 37              | 0               | 118     | 698 ( 85.54% )               |
| Bronchitis (J20.8 OR J40)   | 12              | 3               | 0               | 3       | 15 (83.33%)                  |
| Respiratory infection (J22 OR J98.8)  | 58              | 0               | 0               | 3       | 58 ( 95.08% )                |
| Cough (RO5)   | 140             | 13              | 0               | 17      | 153 ( 90 % )                 |
| Shortness of breath (R06.2)   | 4               | 2               | 0               | 0       | 6 ( 100.0% )                 |
| Fever (R50.9)   | 218             | 19              | 0               | 33      | 237 ( 87.78% )               |
| Optional  |                 |                 |                 |         |                              |
| Other COVID Tests   |                 |                 |                 |         |                              |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -               | -               | -               | -       | -                            |
| observed within -7 days prior to hospitalization through end of patient record**    |                 |                 |                 |         |                              |
| Test performed, at least 1 positive result  | 22              | 3               | 0               | 2       | 25 ( 92.59% )                |
| Test performed, only negative results   | 1               | 2               | 0               | 0       | 3 ( 100.0% )                 |
| No test or unknown result   | 1,639           | 65              | 0               | 322     | 1,704 (84.11%)               |
| Antigen test within ±14 days from inpatient admission**                             | -               | -               | -               | -       | -                            |
| Fest performed, at least 1 positive result  | 0               | 0               | 0               | 0       | N/A                          |
| est performed, only negative results  | 0               | 0               | 0               | 0       | N/A                          |
| No test or unknown result   | 646             | 6               | 0               | 109     | 652 ( 85.68% )               |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                 |                 |                 |         |                              |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,275           | 93              | 0               | 32      | 1,368 ( 97.71% )             |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Syndrome (ARDS) (J80)]*              |                 |                 |                  |        |                         |  |
|---|-----------------|-----------------|------------------|--------|-------------------------|--|
|   | Lab Positive*** | Lab Negative*** | Lab, No Results  | No Lab | Patients with Lab Resul |  |
|   |                 |                 | Number (Percent) |        |                         |  |
| Z20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness   | 58              | 14              | 0                | 15     | 72 ( 82.76% )           |  |
| of breath) OR R50.9 (fever)]  |                 |                 |                  |        |                         |  |
| Z20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)  | 123             | 27              | 0                | 44     | 150 ( 77.32% )          |  |
| OR J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute   |                 |                 |                  |        |                         |  |
| respiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]   |                 |                 |                  |        |                         |  |
| "Primary" Lab Test Product Information****  |                 |                 |                  |        |                         |  |
| 847377 - SARS_COV_2_NS  | -               | -               | -                | -      | N/A                     |  |
| 85008 - Blood Count; Blood Smear, Microscopic Examination Without Manual  | -               | -               | -                | -      | N/A                     |  |
| 87635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA   | -               | -               | -                | -      | N/A                     |  |
| 87635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR  | 387             | 24              | -                | -      | 411 ( 100.0% )          |  |
| 87635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab  | 532             | 28              | -                | -      | 560 ( 100.0% )          |  |
| 37635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | -               | -               | -                | -      | N/A                     |  |
| 87635R - SARS-CoV-2, NAA (COVID-19), POCT   | -               | -               | -                | -      | N/A                     |  |
| 87635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)  | 97              | 12              | -                | -      | 109 ( 100.0% )          |  |
| 37635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test   | -               | -               | -                | -      | N/A                     |  |
| 94306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With Probe Detection  | -               | -               | -                | -      | N/A                     |  |
| 94307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N1 | -               | -               | -                | -      | N/A                     |  |
| 94308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By Nucleic Acid Amplification Using CDC Primer-Probe Set N2 | -               | -               | -                | -      | N/A                     |  |
| 94309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By NAA With Probe Detection                                    | -               | -               | -                | -      | N/A                     |  |
| 94314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen  | -               | -               | -                | -      | N/A                     |  |
| y NAA With Probe Detection<br>4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By<br>IAA With Probe Detection | -               | -               | -                | -      | N/A                     |  |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By IAA With Probe Detection                                     | 600             | 6               | 0                | 0      | 606 ( 100.0% )          |  |
| 94505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By   | -               | -               | -                | -      | N/A                     |  |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia\*\* OR Acute Respiratory Distress Syndrome (ARDS) (J80)]\* Lab, No Results No Lab Lab Positive\*\*\* Lab Negative\*\*\* **Patients with Lab Result Number (Percent)** Number 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By N/A Rapid Immunoassay 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With N/A **Probe Detection** 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By N/A NAA With Probe Detection 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen N/A By NAA With Probe Detection 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory 3 0 3 (100.0%) 0 0 Specimen By NAA With Probe Detection 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By 0 0 0 N/A **Immunoassay** 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By N/A **Immunoassay** 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A Non-Probe Detection 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By N/A NAA With Probe Detection 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With N/A **Probe Detection** Unknown 43 0 0 109 43 (28.29%)

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Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Alborithm 3. II 3tu                       | y with Codes [U07.1 OR B97.29] and [Pne | uniona On Ando (300)]         |                             |
|---|---|-------------------------------|-----------------------------|
|   |   |                               | Sensitivity (95% Confidence |
|   | Total Patient Count                     | PPV (95% Confidence Interval) | Interval)                   |
|   | Number (Percent)                        | Per                           | cent                        |
| Care Setting of "Primary" Lab Test*****   |   |                               |                             |
| Total Observed                            | 2,444 ( 100.0% )                        | 94.75% ( 93.69% , 95.68% )    | 75.14% (73.42%, 76.80%)     |
| Inpatient                                 | 561 ( 22.95% )                          | 96.43% (94.55%, 97.81%)       | 60.38% (57.09%, 63.60%)     |
| Outpatient or Emergency Department        | 783 ( 32.04% )                          | 92.98% (90.95%, 94.66%)       | 80.53% (77.80%, 83.06%)     |
| Other                                     | 214 ( 8.76% )                           | 100.0% (98.29%, 100.0%)       | 76.98% (71.58%, 81.80%)     |
| Care Setting Reported as Unknown          | 457 ( 18.70% )                          | 92.24% (88.91%, 94.82%)       | 72.46% (68.05%, 76.57%)     |
| Demographics                              |   |                               |                             |
| Sex                                       |   |                               |                             |
| Female                                    | 1,108 ( 45.34% )                        | 94.35% (92.69%, 95.72%)       | 69.90% (67.31%, 72.39%)     |
| Male                                      | 1,284 ( 52.54% )                        | 95.11% (93.65%, 96.31%)       | 80.41% (78.12%, 82.55%)     |
| Other/Missing                             | N/A                                     | N/A                           | N/A                         |
| Age at Hospital Admission (Years)         |   |                               |                             |
| 0-5                                       | 1 ( 0.04% )                             | 100.0% ( 2.50% , 100.0% )     | 7.14% ( 0.18% , 33.87% )    |
| 6-17                                      | 3 ( 0.12% )                             | 100.0% (15.81%, 100.0%)       | 22.22% ( 2.81% , 60.01% )   |
| 18-29                                     | 80 ( 3.27% )                            | 97.01% (89.63%, 99.64%)       | 36.31% (29.27%, 43.82%)     |
| 30-39                                     | 169 ( 6.91% )                           | 94 % (88.92%, 97.22%)         | 58.75% (52.24%, 65.04%)     |
| 40-49                                     | 327 ( 13.38% )                          | 95.85% ( 92.86% , 97.84% )    | 83.69% (79.26%, 87.50%)     |
| 50-59                                     | 512 ( 20.95% )                          | 94.07% (91.48%, 96.05%)       | 81.68% (78.10%, 84.90%)     |
| 60-69                                     | 589 ( 24.10% )                          | 96.17% (94.08%, 97.68%)       | 84.42% (81.17%, 87.32%)     |
| 70-79                                     | 418 ( 17.10% )                          | 92.98% (89.74%, 95.45%)       | 81.96% (77.76%, 85.66%)     |
| 80-89                                     | 227 ( 9.29% )                           | 94.51% (90.13%, 97.33%)       | 71.67% (65.51%, 77.28%)     |
| 90+                                       | 66 ( 2.70% )                            | 92.59% (82.11%, 97.94%)       | 62.50% (50.96%, 73.08%)     |
| Missing                                   | N/A                                     | N/A                           | N/A                         |
| Race                                      | ,                                       | ,                             | •                           |
| American Indian or Alaska Native          | 13 ( 0.53% )                            | 100.0% (73.54%, 100.0%)       | 63.16% (38.36%, 83.71%)     |
| Asian                                     | 237 ( 9.70% )                           | 97.26% (94.13%, 98.99%)       | 81.92% (76.70%, 86.40%)     |
| Black or African American                 | 744 ( 30.44% )                          | 95.54% ( 93.58% , 97.04% )    | 75.88% (72.69%, 78.88%      |
| Native Hawaiian or Other Pacific Islander | 3 ( 0.12% )                             | 100.0% (15.81%, 100.0%)       | 66.67% ( 9.43% , 99.16% )   |
| White                                     | 700 ( 28.64% )                          | 93.14% (90.81%, 95.04%)       | 69.80% (66.48%, 72.97%)     |
| Other/Mixed/Unknown                       | 695 ( 28.44% )                          | 94.51% (92.37%, 96.19%)       | 78.13% ( 74.94% , 81.08%    |
| Ethnicity                                 | (                                       | ( , ,                         |                             |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

|   | Total Patient Count    | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |
|---|------------------------|-------------------------------|--|--|
|   | Number (Percent) Perce |                               | cent                                     |  |
| Hispanic  | 599 ( 24.51% )         | 94.86% ( 92.66% , 96.56% )    | 81.55% (78.30%, 84.49%                   |  |
| Non-Hispanic  | 1,103 ( 45.13% )       | 95.76% (94.29%, 96.94%)       | 69.83% (67.28%, 72.30%                   |  |
| Unknown   | 690 ( 28.23% )         | 92.78% (90.22%, 94.84%)       | 80 % (76.60%, 83.10%)                    |  |
| Codes Observed During Inpatient Stay  |                        |                               |  |  |
| Asymptomatic screening (Z11.59)   | 46 ( 1.88% )           | 76.32% (59.76%, 88.56%)       | 53.70% (39.61%, 67.38%                   |  |
| Contact and suspected exposure (Z20.828)  | 251 ( 10.27% )         | 71.43% (64.56%, 77.64%)       | 72.92% (66.05%, 79.06%                   |  |
| Pneumonia (see Appendix B)  | 2,227 ( 91.12% )       | 94.75% ( 93.65% , 95.70% )    | ****                                     |  |
| Other viral pneumonia (J12.89)  | 2,257 ( 92.35% )       | 96.21% ( 95.27% , 97.01% )    | ****                                     |  |
| ARDS (J80)  | 317 ( 12.97% )         | 96.47% (93.60%, 98.29%)       | ****                                     |  |
| Sepsis (see Appendix C)   | 816 (33.39%)           | 94.70% (92.77%, 96.24%)       | 91.81% (89.56%, 93.70%                   |  |
| Bronchitis (J20.8 OR J40)   | 18 ( 0.74% )           | 80 % (51.91%, 95.67%)         | 37.50% (21.10%, 56.31%                   |  |
| Respiratory infection (J22 OR J98.8)  | 61 ( 2.50% )           | 100.0% (93.84%, 100.0%)       | 90.63% (80.70%, 96.48%                   |  |
| Cough (RO5)   | 170 ( 6.96% )          | 91.50% (85.91%, 95.40%)       | 84.85% (78.45%, 89.95%                   |  |
| Shortness of breath (R06.2)   | 6 ( 0.25% )            | 66.67% (22.28%, 95.67%)       | 66.67% (22.28%, 95.67%                   |  |
| Fever (R50.9)   | 270 ( 11.05% )         | 91.98% (87.76%, 95.10%)       | 86.17% (81.29%, 90.17%                   |  |
| Optional  |                        |                               |  |  |
| Other COVID Tests   |                        |                               |  |  |
| Antibody laboratory test (IgM, IgG, IgA, any combination or total, or neutralizing) | -                      | -                             | -  |  |
| observed within -7 days prior to hospitalization through end of patient record**    |                        |                               |  |  |
| Test performed, at least 1 positive result  | 27 ( 1.10% )           | 88 % (68.78%, 97.45%)         | 70.97% (51.96%, 85.78%                   |  |
| est performed, only negative results  | 3 ( 0.12% )            | 33.33% ( 0.84% , 90.57% )     | 33.33% ( 0.84% , 90.57% )                |  |
| No test or unknown result   | 2,026 ( 82.90% )       | 96.19% (95.16%, 97.04%)       | 76.06% (74.20%, 77.84%                   |  |
| Antigen test within ±14 days from inpatient admission**                             | -                      | -                             | -  |  |
| est performed, at least 1 positive result   | N/A                    | N/A                           | N/A                                      |  |
| est performed, only negative results  | N/A                    | N/A                           | N/A                                      |  |
| No test or unknown result   | 761 (31.14%)           | 99.08% (98.01%, 99.66%)       | 65.85% (62.79%, 68.82%                   |  |
| Codes Observed Within ±5 Days of Diagnostic Specimen Collection                     |                        |                               |  |  |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)              | 1,400 ( 57.28% )       | 93.20% (91.74%, 94.48%)       | 79.29% (77.23%, 81.25%                   |  |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 5: IP Stay with Codes [U07.   | 1 OR B97.29] and [Pne | umonia** OR ARDS (J80)]*      |  |
|---|-----------------------|-------------------------------|--|
|   | Total Patient Count   | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |
|   | Number (Percent)      | Per                           | cent                                     |
| 20.828 (contact and suspected exposure) AND [R05 (cough) OR R06.2 (shortness  | 87 ( 3.56% )          | 80.56% ( 69.53% , 88.94% )    | 78.38% ( 67.28% , 87.11% )               |
| f breath) OR R50.9 (fever)]   |                       |                               |  |
| 20.828 (contact and suspected exposure) AND [J12.89 (other viral pneumonia)   | 194 ( 7.94% )         | 82 % ( 74.90% , 87.79% )      | 100.0% (97.05%, 100.0%)                  |
| R J20.8 (acute bronchitis) OR J40 (bronchitis, NOS) OR J22 (lower or acute  |                       |                               |  |
| espiratory infection) OR J98.8 (respiratory infection, NOS) OR J80 (ARDS)]  |                       |                               |  |
| Primary" Lab Test Product Information****   |                       |                               |  |
| 47377 - SARS_COV_2_NS   | N/A                   | N/A                           | N/A                                      |
| 5008 - Blood Count; Blood Smear, Microscopic Examination Without Manual   | N/A                   | N/A                           | N/A                                      |
| 7635A - Coronavirus 2019-Ncov Panel (N1, N2, N3), Qualitative, NAA  | N/A                   | N/A                           | N/A                                      |
| 7635K - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-PCR   | 411 ( 16.82% )        | 94.16% (91.44%, 96.22%)       | 73.57% (69.59%, 77.30%)                  |
| 7635M - SARS-CoV-2, Qualitative, NAA (COVID-19), KP Lab   | 560 ( 22.91% )        | 95 % ( 92.85% , 96.65% )      | 83.13% (79.99%, 85.95%)                  |
| 635P - SARS-CoV-2, (COVID-19), RNA, Qualitative RT-NAA  | N/A                   | N/A                           | N/A                                      |
| 7635R - SARS-CoV-2, NAA (COVID-19), POCT  | N/A                   | N/A                           | N/A                                      |
| 7635T - SARS-CoV-2, Qualitative, Rapid NAA (COVID-19)   | 109 ( 4.46% )         | 88.99% (81.56%, 94.18%)       | 66.44% (58.16%, 74.03%)                  |
| 7635Y - SARS-CoV-2, NAA (COVID-19), Home Collection Test  | N/A                   | N/A                           | N/A                                      |
| 4306-8 - SARS-CoV-2 (COVID-19) RNA Panel - Unspecified Specimen By NAA With robe Detection  | N/A                   | N/A                           | N/A                                      |
| 1307-6 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N1 | N/A                   | N/A                           | N/A                                      |
| 4308-4 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By ucleic Acid Amplification Using CDC Primer-Probe Set N2 | N/A                   | N/A                           | N/A                                      |
| 4309-2 - SARS-CoV-2 (COVID-19) RNA [presence] In Unspecified Specimen By AA With Probe Detection                                    | N/A                   | N/A                           | N/A                                      |
| H314-2 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Unspecified Specimen NAA With Probe Detection                                | N/A                   | N/A                           | N/A                                      |
| 4316-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Unspecified Specimen By AA With Probe Detection                                 | N/A                   | N/A                           | N/A                                      |
| 4500-6 - SARS-CoV-2 (COVID-19) RNA [presence] In Respiratory Specimen By  AA With Probe Detection                                   | 606 ( 24.80% )        | 99.01% (97.86%, 99.64%)       | 65.01% (61.83%, 68.08%)                  |
| 4505-5 - SARS-CoV-2 (COVID-19) IgG Ab [units/Volume] In Serum Or Plasma By  | N/A                   | N/A                           | N/A                                      |



Table 1i. Aggregated Baseline Table for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020

| Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR ARDS (J80)]*                           |                     |                               |  |  |  |  |
|--|---------------------|-------------------------------|--|--|--|--|
|  | Total Patient Count | PPV (95% Confidence Interval) | Sensitivity (95% Confidence<br>Interval) |  |  |  |
|  | Number (Percent)    | Per                           | cent                                     |  |  |  |
| 94507-1 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum, Plasma Or Blood By                               | N/A                 | N/A                           | N/A                                      |  |  |  |
| Rapid Immunoassay  |                     |                               |  |  |  |  |
| 94531-1 - SARS-CoV-2 (COVID-19) RNA Panel - Respiratory Specimen By NAA With Probe Detection                 | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94533-7 - SARS-CoV-2 (COVID-19) N Gene [presence] In Respiratory Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94534-5 - SARS-CoV-2 (COVID-19) RdRp Gene [presence] In Respiratory Specimen By NAA With Probe Detection     | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94559-2 - SARS-CoV-2 (COVID-19) ORF1ab Region [presence] In Respiratory Specimen By NAA With Probe Detection | 3 ( 0.12% )         | 100.0% ( 29.24% , 100.0% )    | 50 % (11.81%, 88.19%)                    |  |  |  |
| 94563-4 - SARS-CoV-2 (COVID-19) IgG Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94564-2 - SARS-CoV-2 (COVID-19) IgM Ab [presence] In Serum Or Plasma By Immunoassay                          | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94565-9 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With Non-Probe Detection                | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94641-8 - SARS-CoV-2 (COVID-19) S Gene [presence] In Unspecified Specimen By NAA With Probe Detection        | N/A                 | N/A                           | N/A                                      |  |  |  |
| 94759-8 - SARS-CoV-2 (COVID-19) RNA [presence] In Nasopharynx By NAA With                                    | N/A                 | N/A                           | N/A                                      |  |  |  |
| Probe Detection  |                     |                               |  |  |  |  |
| Unknown **Includes only the first algorithm qualifying innations story and algorithm and nations.            | 152 ( 6.22% )       | 100.0% (91.78%, 100.0%)       | 89.58% (77.34%, 96.53%)                  |  |  |  |

<sup>\*</sup>Includes only the first algorithm-qualifying inpatient stay per algorithm per patient.

Includes one test result per encounter - positive if patient had at least one positive NAA result; negative if all NAA results are negative (during test window, from any type of specimen/site).

<sup>\*\*</sup> COVID NAA, antibody, and antigen tests are identified using LOINCs or any other identifier available in the data.

<sup>\*\*\*</sup>Any NAA result in 14 days prior through 14 days after inpatient encounter during which the COVID diagnosis codes were recorded.

<sup>&</sup>quot;Primary" test result will be the first positive molecular test within the ±14-day window, or the last negative molecular test within the ±14-day window among patients with no positive test.

<sup>\*\*\*\*</sup>Only the "primary" lab test, as defined above, is described

<sup>\*\*\*\*\*</sup>Sensitivity not calculated because algorithm cohort NAA-positive patient count is larger than laboratory result cohort NAA-positive patient count. This is a result of a different visit being used to describe characteristics among the lab-based cohort and the algorithm-based cohort.

<sup>\*\*\*\*\*\*</sup>Sum across care settings does not equal total observed because care setting was not reported for some patients.



Table 2a. Summary of Outcomes for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and October 17, 2020, by Time Period

|   | Algorithm 1: Inpatient (IP) Stay with Code U07.1* |                 |                                |                                  |                             |
|---|---|-----------------|--------------------------------|----------------------------------|-----------------------------|
| <b>Total Nucleic Acid Amplification</b> |   | Lab Test        |                                | Positive Predictive Value (PPV)  | Sensitivity (95% Confidence |
| (NAA) Positive Patients                 | Total Patients Observed                           | Positive***     | Total Lab Results Known        | (95% Confidence Interval)        | Interval)                   |
|   | Number  |                 |                                | Number (Percent)                 |                             |
| All Times                               |   |                 |                                |                                  |                             |
| 9,103                                   | 41,895  | 8,070           | 9,527 (22.74%)                 | 84.71% (83.97%, 85.42%)          | 88.65% ( 87.98% , 89.30% )  |
| Time A: February 20, 2020 - March       | 31, 2020  |                 |                                |                                  |                             |
| 1,524                                   | 3,597   | 869             | 924 (25.69%)                   | 94.05% ( 92.32% , 95.48% )       | 57.02% ( 54.49% , 59.52% )  |
| Time B: April 1, 2020 - April 30, 20    | 20  |                 |                                |                                  |                             |
| 2,768                                   | 12,397  | 2,637           | 2,979 (24.03%)                 | 88.52% (87.32%, 89.64%)          | 95.27% ( 94.41% , 96.03% )  |
| Time C: May 1, 2020 - October 17,       | 2020  |                 |                                |                                  |                             |
| 4,811                                   | 25,901  | 4,564           | 5,624 (21.71%)                 | 81.15% (80.11%, 82.17%)          | 94.87% ( 94.20% , 95.47% )  |
|   |   | Algo            | rithm 2: IP Stay with Any of C | odes U07.1, B97.29*              |                             |
| All Times                               |   |                 |                                |                                  |                             |
| 9,103                                   | 44,527  | 8,536           | 10,071 (22.62%)                | 84.76% ( 84.04% , 85.46% )       | 93.77% ( 93.26% , 94.26% )  |
| Time A: February 20, 2020 - March       | 31, 2020  |                 |                                |                                  |                             |
| 1,524                                   | 5,920   | 1,328           | 1,439 (24.31%)                 | 92.29% ( 90.78% , 93.61% )       | 87.14% (85.35%, 88.78%)     |
| Time B: April 1, 2020 - April 30, 20    | 20  |                 |                                |                                  |                             |
| 2,768                                   | 12,528  | 2,640           | 2,993 (23.89%)                 | 88.21% (87.00%, 89.34%)          | 95.38% (94.53%, 96.13%)     |
| Time C: May 1, 2020 - October 17,       | 2020  |                 |                                |                                  |                             |
| 4,811                                   | 26,079  | 4,568           | 5,639 (21.62%)                 | 81.01% ( 79.96% , 82.02% )       | 94.95% (94.29%, 95.55%)     |
|   |   | Algorith        | m 3: IP Stay with Any of Code  | es U07.1, B97.29, B34.2*         |                             |
| All Times                               |   |                 |                                |                                  |                             |
| 9,103                                   | 45,165  | 8,570           | 10,163 (22.5%)                 | 84.33% (83.60%, 85.03%)          | 94.14% (93.64%, 94.62%)     |
| Time A: February 20, 2020 - March       | 31, 2020  |                 |                                |                                  |                             |
| 1,524                                   | 6,270   | 1,352           | 1,491 (23.78%)                 | 90.68% (89.09%, 92.11%)          | 88.71% (87.02%, 90.26%)     |
| Time B: April 1, 2020 - April 30, 20    | 20  |                 |                                |                                  |                             |
| 2,768                                   | 12,663  | 2,647           | 3,011 (23.78%)                 | 87.91% (86.69%, 89.05%)          | 95.63% ( 94.80% , 96.36% )  |
| Time C: May 1, 2020 - October 17,       | 2020  |                 |                                |                                  |                             |
| 4,811                                   | 26,232  | 4,571           | 5,661 (21.58%)                 | 80.75% ( 79.69% , 81.77% )       | 95.01% ( 94.36% , 95.61% )  |
|   |   | Algorithm 4: IP | Stay with Any of Codes U07.1   | , B97.29, B34.2, J12.81, B97.21* |                             |



Table 2a. Summary of Outcomes for Algorithm Cohorts from All Participating Sentinel Data Partners in the Sentinel Distributed Database (SDD) between February 20, 2020 and October 17, 2020, by Time Period

|                                      |                                | Lab Test         |                            |   | Sensitivity (95% Confidence |
|--------------------------------------|--------------------------------|------------------|----------------------------|---|-----------------------------|
|                                      | <b>Total Patients Observed</b> | Positive***      | Total Lab Results Known    | PPV (95% Confidence Interval)           | Interval)                   |
|                                      | Number                         |                  |                            | Number (Percent)                        |                             |
| All Times                            |                                |                  |                            |   |                             |
| 9,103                                | 45,417                         | 8,598            | 10,205 (22.47%)            | 84.25% (83.53%, 84.95%)                 | 94.45% (93.96%, 94.91%)     |
| Time A: February 20, 2020 - Marc     | h 31, 2020                     |                  |                            |   |                             |
| 1,524                                | 6,386                          | 1,371            | 1,514 (23.71%)             | 90.55% (88.97%, 91.98%)                 | 89.96% (88.34%, 91.42%)     |
| Time B: April 1, 2020 - April 30, 20 | 020                            |                  |                            |   |                             |
| 2,768                                | 12,731                         | 2,651            | 3,020 (23.72%)             | 87.78% (86.56%, 88.93%)                 | 95.77% ( 94.96% , 96.49% )  |
| Time C: May 1, 2020 - October 17     | , 2020                         |                  |                            |   |                             |
| 4,811                                | 26,300                         | 4,576            | 5,671 (21.56%)             | 80.69% (79.64%, 81.71%)                 | 95.12% (94.47%, 95.71%)     |
|                                      | Algorithm 5: IP Stay wit       | h Codes [U07.1 O | R B97.29] and [Pneumonia** | <b>OR Acute Respiratory Distress Sy</b> | ndrome (ARDS) (J80)]*       |
| All Times                            |                                |                  |                            |   |                             |
| 9,103                                | 33,635                         | 7,095            | 8,108 (24.11%)             | 87.51% (86.77%, 88.22%)                 | 77.94% (77.08% , 78.79% )   |
| Time A: February 20, 2020 - Marc     | h 31, 2020                     |                  |                            |   |                             |
| 1,524                                | 5,218                          | 1,220            | 1,313 (25.16%)             | 92.92% (91.39%, 94.25%)                 | 80.05% (77.96%, 82.03%)     |
| Time B: April 1, 2020 - April 30, 20 | 020                            |                  |                            |   |                             |
| 2,768                                | 10,097                         | 2,291            | 2,558 (25.33%)             | 89.56% (88.31%, 90.72%)                 | 82.77% (81.31%, 84.16%)     |
| Time C: May 1, 2020 - October 17     | , 2020                         |                  |                            |   |                             |
| 4,811                                | 18,320                         | 3,584            | 4,237 (23.13%)             | 84.59% (83.47%, 85.66%)                 | 74.50% ( 73.24% , 75.72% )  |
| *Last described Cost described       | 1.6                            |                  |                            |   |                             |

<sup>\*</sup>Includes only the first algorithm-qualifying inpatient (IP) stay per algorithm per patient.

Includes one test result per IP stay - positive if patient had at least one positive RT-NAA result; negative if all RT-NAA results are negative.

<sup>\*\*</sup> Diagnosis codes provided.

<sup>\*\*\*</sup>Any NAA result in 14 days prior through 14 days after admission for the inpatient encounter during which the COVID diagnosis codes were recorded.



Table 2b. Summary of Outcomes for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020, by Time Period

|   | Algorithm 1: Inpatient (IP) Stay with Code U07.1* |                    |                               |                                 |                             |
|---|---|--------------------|-------------------------------|---------------------------------|-----------------------------|
| <b>Total Nucleic Acid Amplification</b> |   | Lab Test           |                               | Positive Predictive Value (PPV) | Sensitivity (95% Confidence |
| (NAA) Positive Patients                 | <b>Total Patients Observed</b>                    | Positive***        | Total Lab Results Known       | (95% Confidence Interval)       | Interval)                   |
|   | Number  |                    |                               | Number (Percent)                |                             |
| All Times                               |   |                    |                               |                                 |                             |
| 5,112                                   | 37,105  | 4,376              | 5,572 (15.02%)                | 78.54% (77.43%, 79.61%)         | 85.60% (84.61%, 86.55%)     |
| Time A: February 20, 2020 - March       | h 31, 2020  |                    |                               |                                 |                             |
| 1,129                                   | 3,317   | 643                | 693 (20.89%)                  | 92.78% ( 90.60% , 94.60% )      | 56.95% (54.01%, 59.86%)     |
| Time B: April 1, 2020 - April 30, 20    | 20  |                    |                               |                                 |                             |
| 1,742                                   | 11,121  | 1,647              | 1,915 (17.22%)                | 86.01% (84.37%, 87.53%)         | 94.55% (93.37%, 95.57%)     |
| Time C: May 1, 2020 - September         | 25, 2020  |                    |                               |                                 |                             |
| 2,241                                   | 22,667  | 2,086              | 2,964 (13.08%)                | 70.38% (68.70%, 72.02%)         | 93.08% (91.95%, 94.10%)     |
|   |   | Algori             | thm 2: IP Stay with Any of Co | des U07.1, B97.29*              |                             |
| All Times                               |   |                    |                               |                                 |                             |
| 5,112                                   | 39,532  | 4,716              | 5,966 (15.09%)                | 79.05% (77.99%, 80.07%)         | 92.25% (91.49%, 92.97%)     |
| Time A: February 20, 2020 - March       | n 31, 2020  |                    |                               |                                 |                             |
| 1,129                                   | 5,448   | 977                | 1,067 (19.59%)                | 91.57% (89.73%, 93.16%)         | 86.54% (84.41%, 88.47%)     |
| Time B: April 1, 2020 - April 30, 20    | 20  |                    |                               |                                 |                             |
| 1,742                                   | 11,244  | 1,650              | 1,923 (17.1%)                 | 85.80% (84.16%, 87.33%)         | 94.72% (93.56%, 95.72%)     |
| Time C: May 1, 2020 - September         | 25, 2020  |                    |                               |                                 |                             |
| 2,241                                   | 22,840  | 2,089              | 2,976 (13.03%)                | 70.19% (68.52%, 71.83%)         | 93.22% (92.10%, 94.22%)     |
|   |   | Algorithm          | 3: IP Stay with Any of Codes  | U07.1, B97.29, B34.2*           |                             |
| All Times                               |   |                    |                               |                                 |                             |
| 5,112                                   | 40,157  | 4,748              | 6,050 (15.07%)                | 78.48% (77.42%, 79.51%)         | 92.88% (92.14%, 93.57%)     |
| Time A: February 20, 2020 - March       | h 31, 2020  |                    |                               |                                 |                             |
| 1,129                                   | 5,789   | 999                | 1,114 (19.24%)                | 89.68% (87.74%, 91.40%)         | 88.49% (86.48%, 90.29%)     |
| Time B: April 1, 2020 - April 30, 20    | 20  |                    |                               |                                 |                             |
| 1,742                                   | 11,377  | 1,657              | 1,940 (17.05%)                | 85.41% (83.76%, 86.95%)         | 95.12% ( 94 % , 96.08% )    |
| Time C: May 1, 2020 - September         | 25, 2020  |                    |                               |                                 |                             |
| 2,241                                   | 22,991  | 2,092              | 2,996 (13.03%)                | 69.83% (68.15%, 71.47%)         | 93.35% ( 92.24% , 94.35% )  |
|   |   | Algorithm 4: IP St | ay with Any of Codes U07.1,   | B97.29, B34.2, J12.81, B97.21*  |                             |



Table 2b. Summary of Outcomes for Algorithm Cohorts from All Participating National Insurers in the Sentinel Distributed Database (SDD) between February 20, 2020 and September 25, 2020, by Time Period

|  |                           | Lab Test        |                            |                                   | Sensitivity (95% Confidence |
|--|---------------------------|-----------------|----------------------------|-----------------------------------|-----------------------------|
|  | Total Patients Observed   | Positive***     | Total Lab Results Known    | PPV (95% Confidence Interval)     | Interval)                   |
|  | Number                    |                 |                            | Number (Percent)                  |                             |
| All Times                              |                           |                 |                            |                                   |                             |
| 5,112                                  | 40,400                    | 4,771           | 6,086 (15.06%)             | 78.39% (77.34%, 79.42%)           | 93.33% (92.61%, 94.00%)     |
| Time A: February 20, 2020 - Marc       | h 31, 2020                |                 |                            |                                   |                             |
| 1,129                                  | 5,899                     | 1,013           | 1,132 (19.19%)             | 89.49% (87.55%, 91.21%)           | 89.73% (87.81%, 91.44%)     |
| Time B: April 1, 2020 - April 30, 20   | 020                       |                 |                            |                                   |                             |
| 1,742                                  | 11,442                    | 1,661           | 1,948 (17.02%)             | 85.27% (83.61%, 86.81%)           | 95.35% (94.25%, 96.29%)     |
| Time C: May 1, 2020 - September        | 25, 2020                  |                 |                            |                                   |                             |
| 2,241                                  | 23,059                    | 2,097           | 3,006 (13.04%)             | 69.76% ( 68.08% , 71.40% )        | 93.57% ( 92.48% , 94.55% )  |
|  | Algorithm 5: IP Stay with | Codes [U07.1 OR | B97.29] and [Pneumonia** ( | OR Acute Respiratory Distress Syr | ndrome (ARDS) (J80)]*       |
| All Times                              |                           |                 |                            |                                   |                             |
| 5,112                                  | 29,693                    | 3,991           | 4,824 (16.25%)             | 82.73% (81.64%, 83.79%)           | 78.07% (76.91%, 79.20%)     |
| Time A: February 20, 2020 - Marc       | h 31, 2020                |                 |                            |                                   |                             |
| 1,129                                  | 4,805                     | 899             | 977 (20.33%)               | 92.02% (90.14%, 93.64%)           | 79.63% (77.16%, 81.94%)     |
| Time B: April 1, 2020 - April 30, 20   | 020                       |                 |                            |                                   |                             |
| 1,742                                  | 9,012                     | 1,439           | 1,648 (18.29%)             | 87.32% (85.61%, 88.89%)           | 82.61% (80.74%, 84.36%)     |
| Time C: May 1, 2020 - September        | 25, 2020                  |                 |                            |                                   |                             |
| 2,241                                  | 15,876                    | 1,653           | 2,199 (13.85%)             | 75.17% (73.31%, 76.96%)           | 73.76% (71.89%, 75.57%)     |
| ## I I I I I I I I I I I I I I I I I I | 116 1 1 11 1 (15)         |                 |                            |                                   |                             |

<sup>\*</sup>Includes only the first algorithm-qualifying inpatient (IP) stay per algorithm per patient.

Includes one test result per IP stay - positive if patient had at least one positive RT-NAA result; negative if all RT-NAA results are negative.

<sup>\*\*</sup> Diagnosis codes provided.

<sup>\*\*\*</sup>Any NAA result in 14 days prior through 14 days after admission for the inpatient encounter during which the COVID diagnosis codes were recorded.



Table 2c. Summary of Outcomes for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and October 17, 2020, by Time Period

|  | Algorithm 1: Inpatient (IP) Stay with Code U07.1* |                         |                                |  |                                       |
|--|---|-------------------------|--------------------------------|--|---------------------------------------|
| Total Nucleic Acid Amplification (NAA) Positive Patients | Total Patients Observed                           | Lab Test<br>Positive*** | Total Lab Results Known        | Positive Predictive Value (PPV)<br>(95% Confidence Interval) | Sensitivity (95% Confidence Interval) |
|  | Number  |                         |                                | Number (Percent)   |                                       |
| All Times  |   |                         |                                |  |                                       |
| 3,991  | 4,790   | 3,694                   | 3,955 (82.57%)                 | 93.40% ( 92.58% , 94.15% )                                   | 92.56% (91.70%, 93.35%)               |
| Time A: February 20, 2020 - March                        | 31, 2020  |                         |                                |  |                                       |
| 395  | 280   | 226                     | 231 (82.5%)                    | 97.84% ( 95.02% , 99.29% )                                   | 57.22% ( 52.17% , 62.15% )            |
| Time B: April 1, 2020 - April 30, 202                    | 20  |                         |                                |  |                                       |
| 1,026  | 1,276   | 990                     | 1,064 (83.39%)                 | 93.05% (91.35%, 94.50%)                                      | 96.49% (95.18%, 97.53%)               |
| Time C: May 1, 2020 - October 17,                        | 2020  |                         |                                |  |                                       |
| 2,570  | 3,234   | 2,478                   | 2,660 (82.25%)                 | 93.16% ( 92.13% , 94.09% )                                   | 96.42% (95.63%, 97.10%)               |
|  |   | Algor                   | ithm 2: IP Stay with Any of Co | odes U07.1, B97.29*  |                                       |
| All Times  |   |                         |                                |  |                                       |
| 3,991  | 4,995   | 3,820                   | 4,105 (82.18%)                 | 93.06% ( 92.24% , 93.82% )                                   | 95.72% (95.04%, 96.32%)               |
| Time A: February 20, 2020 - March                        | 31, 2020  |                         |                                |  |                                       |
| 395  | 472   | 351                     | 372 (78.81%)                   | 94.35% (91.50%, 96.47%)                                      | 88.86% (85.34%, 91.79%)               |
| Time B: April 1, 2020 - April 30, 202                    | 20  |                         |                                |  |                                       |
| 1,026  | 1,284   | 990                     | 1,070 (83.33%)                 | 92.52% ( 90.78% , 94.03% )                                   | 96.49% (95.18%, 97.53%)               |
| Time C: May 1, 2020 - October 17,                        | 2020  |                         |                                |  |                                       |
| 2,570  | 3,239   | 2,479                   | 2,663 (82.22%)                 | 93.09% ( 92.06% , 94.02% )                                   | 96.46% (95.67%, 97.14%)               |
|  |   | Algorithr               | n 3: IP Stay with Any of Code  | s U07.1, B97.29, B34.2*                                      |                                       |
| All Times  |   |                         |                                |  |                                       |
| 3,991  | 5,008   | 3,822                   | 4,113 (82.13%)                 | 92.92% ( 92.10% , 93.69% )                                   | 95.77% (95.09%, 96.37%)               |
| Time A: February 20, 2020 - March                        | 31, 2020  |                         |                                |  |                                       |
| 395  | 481   | 353                     | 377 (78.38%)                   | 93.63% ( 90.68% , 95.88% )                                   | 89.37% (85.90%, 92.23%)               |
| Time B: April 1, 2020 - April 30, 202                    | 20  |                         |                                |  |                                       |
| 1,026  | 1,286   | 990                     | 1,071 (83.28%)                 | 92.44% ( 90.69% , 93.95% )                                   | 96.49% (95.18%, 97.53%)               |
| Time C: May 1, 2020 - October 17,                        |   |                         |                                |  |                                       |
| 2,570  | 3,241   | 2,479                   | 2,665 (82.23%)                 | 93.02% ( 91.99% , 93.96% )                                   | 96.46% ( 95.67% , 97.14% )            |
|  |   | Algorithm 4: IP S       | tay with Any of Codes U07.1    | , B97.29, B34.2, J12.81, B97.21*                             |                                       |



Table 2c. Summary of Outcomes for Algorithm Cohorts from All Participating Integrated Delivery Systems in the Sentinel Distributed Database (SDD) between February 20, 2020 and October 17, 2020, by Time Period

|                                | Lab Test  |   |  | Sensitivity (95% Confidence  |
|--------------------------------|---|---|--|--|
| <b>Total Patients Observed</b> | Positive***   | Total Lab Results Known   | PPV (95% Confidence Interval)  | Interval)  |
| Number                         |   |   | Number (Percent)   |  |
|                                |   |   |  |  |
| 5,017                          | 3,827   | 4,119 (82.1%)   | 92.91% (92.08%, 93.68%)  | 95.89% (95.23%, 96.49%)  |
| 31, 2020                       |   |   |  |  |
| 487                            | 358   | 382 (78.44%)  | 93.72% ( 90.80% , 95.93% )   | 90.63% (87.32%, 93.32%)  |
| 20                             |   |   |  |  |
| 1,289                          | 990   | 1,072 (83.17%   | 92.35% (90.59%, 93.87%)  | 96.49% (95.18%, 97.53%)  |
| 2020                           |   |   |  |  |
| 3,241                          | 2,479   | 2,665 (82.23%)  | 93.02% (91.99%, 93.96%)  | 96.46% ( 95.67% , 97.14% )   |
| Algorithm 5: IP Stay with      | Codes [U07.1 OF   | R B97.29] and [Pneumonia**  | <b>OR Acute Respiratory Distress Sy</b>  | ndrome (ARDS) (J80)]*  |
|                                |   |   |  |  |
| 3,942                          | 3,104   | 3,284 (83.31%)  | 94.52% (93.68%, 95.27%)  | 77.77% (76.45% , 79.06% )  |
| 31, 2020                       |   |   |  |  |
| 413                            | 321   | 336 (81.36%)  | 95.54% (92.74%, 97.48%)  | 81.27% (77.06%, 84.99%)  |
| 20                             |   |   |  |  |
| 1,085                          | 852   | 910 (83.87%)  | 93.63% (91.84%, 95.13%)  | 83.04% (80.60%, 85.29%)  |
| 2020                           |   |   |  |  |
| 2,444                          | 1,931   | 2,038 (83.39%)  | 94.75% ( 93.69% , 95.68% )   | 75.14% (73.42%, 76.80%)  |
|                                | 5,017 31, 2020  487 20  1,289 2020  3,241  Algorithm 5: IP Stay with  3,942 31, 2020  413 20  1,085 2020  2,444 | Total Patients Observed Number  5,017 3,827  31, 2020  487 358  20  1,289 990  2020  3,241 2,479  Algorithm 5: IP Stay with Codes [U07.1 OF Stay With Codes]  3,942 3,104  31, 2020  413 321  20  1,085 852 | Total Patients Observed Number    5,017   3,827   4,119 (82.1%)     31, 2020     487   358   382 (78.44%)     20 | Number         Positive***         Total Lab Results Known         PPV (95% Confidence Interval)           Number (Percent)           5,017         3,827         4,119 (82.1%)         92.91% (92.08%, 93.68%)           31, 2020         487         358         382 (78.44%)         93.72% (90.80%, 95.93%)           10         1,289         990         1,072 (83.17%         92.35% (90.59%, 93.87%)           2020         3,241         2,479         2,665 (82.23%)         93.02% (91.99%, 93.96%)           Algorithm 5: IP Stay with Codes [U07.1 OR B97.29] and [Pneumonia** OR Acute Respiratory Distress Systems of the company |

<sup>\*</sup>Includes only the first algorithm-qualifying inpatient (IP) stay per algorithm per patient.

<sup>\*\*</sup> Diagnosis codes provided.

<sup>\*\*\*</sup>Any NAA result in 14 days prior through 14 days after admission for the inpatient encounter during which the COVID diagnosis codes were recorded. Includes one test result per IP stay - positive if patient had at least one positive RT-NAA result; negative if all RT-NAA results are negative.



Table 3. Descriptive Summary of Outpatient Encounters Meeting the COVID-19 Claims Algorithms in the Sentinel Distributed Database (SDD) between May 1, 2020 and October 17, 2020\*

| October 17, 2020   |  |  |   |   |  |
|--|--|--|---|---|--|
|  | Algorithm 1:<br>Inpatient (IP) Stay<br>with Code U07.1** | Algorithm 2: IP Stay<br>with Any of Codes<br>U07.1, B97.29** | Algorithm 3: IP Stay<br>with Any of Codes<br>U07.1, B97.29, B34.2** | Algorithm 4: IP Stay with Any of Codes U07.1, B97.29, B34.2, J12.81, B97.21** | Algorithm 5: IP Stay with Codes [U07.1 OR<br>B97.29] and [Pneumonia*** OR Acute<br>Respiratory Distress Syndrome (ARDS) (J80)]** |
|  |  |  |   | Number  |  |
| <b>Total Patients Observed</b>   |  |  |   |   |  |
|  | 173,733  | 186,619  | 198,563   | 202,917   | 8,649  |
| Patient History  |  |  |   |   |  |
| No history of hospitalization in prior 30 days (look back for discharge date in prior 30 days) | 164,649  | 177,424  | 189,177   | 193,436   | 5,681  |
| Positive COVID NAA diagnostic test in ±7 days from outpatient encounter                        | 46,395   | 48,097   | 49,225  | 49,387  | 1,863  |
| <b>Codes Observed During Outpatient Encount</b>  | ter  |  |   |   |  |
| Asymptomatic screening (Z11.59)  | 8,082  | 8,559  | 9,197   | 9,407   | 74   |
| Contact and suspected exposure (Z20.828)   | 30,524   | 38,053   | 41,918  | 42,543  | 383  |
| Pneumonia (see Appendix B)   | 6,213  | 6,379  | 6,473   | 6,955   | 8,262  |
| Other viral pneumonia (J12.89)   | 3,672  | 3,765  | 3,760   | 3,754   | 5,020  |
| ARDS (J80)   | 210  | 217  | 218   | 220   | 271  |
| Sepsis (see Appendix C)  | 441  | 445  | 453   | 454   | 276  |
| Bronchitis (J20.8 OR J40)  | 974  | 1,115  | 1,133   | 1,148   | 48   |
| Respiratory infection (J22 OR J98.8)   | 6,787  | 10,351   | 10,450  | 10,454  | 174  |
| Cough (R05)  | 16,483   | 22,503   | 23,327  | 23,574  | 836  |
| Shortness of breath (R06.2)  | 319  | 352  | 377   | 383   | 33   |
| Fever (R50.9)  | 218  | 218  | 223   | 224   | 30   |
| Procedure code for PCR test (U0001, U0002, U0003, U0004, 87635, 87426)                         | 57,822   | 64,564   | 69,375  | 71,349  | 549  |

<sup>\*</sup>Optional table including results from two of the six participating DPs.

<sup>\*\*</sup>Includes only the first algorithm-qualifying outpatient encounter per algorithm per patient.

<sup>\*\*\*</sup> Based on provided diagnosis codes.



# Appendix A. Most Recent Lab Data Dates for Each Data Partner (DP) up to the Request End Date (October 17, 2020)

| DP ID    | Most Recent Lab Data |
|----------|----------------------|
| IDS01    | 09/30/2020           |
| IDS02    | 10/05/2020           |
| IDS03    | 10/13/2020           |
| IDS04    | 10/17/2020           |
| Claims01 | 09/15/2020           |
| Claims02 | 09/25/2020           |

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Appendix B. List of International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Diagnosis Codes Used to Define Pneumonia in this Request

| Code    | Description   | <b>Code Category</b> | Code Type |  |  |  |  |
|---------|---|----------------------|-----------|--|--|--|--|
|         | Pneumonia   |                      |           |  |  |  |  |
| J12     | Viral pneumonia, not elsewhere classified                             | Diagnosis            | ICD-10-CM |  |  |  |  |
| J12.81  | Pneumonia due to SARS-associated coronavirus                          | Diagnosis            | ICD-10-CM |  |  |  |  |
| J12.89  | Other viral pneumonia   | Diagnosis            | ICD-10-CM |  |  |  |  |
| J12.9   | Viral pneumonia, unspecified  | Diagnosis            | ICD-10-CM |  |  |  |  |
| J13     | Pneumonia due to Streptococcus pneumoniae                             | Diagnosis            | ICD-10-CM |  |  |  |  |
| J14     | Pneumonia due to Hemophilus influenzae                                | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15     | Bacterial pneumonia, not elsewhere classified                         | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15.0   | Pneumonia due to Klebsiella pneumoniae                                | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15.1   | Pneumonia due to Pseudomonas  | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15.20  | Pneumonia due to staphylococcus, unspecified                          | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15.211 | Pneumonia due to Methicillin susceptible Staphylococcus aureus        | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15.212 | Pneumonia due to Methicillin resistant Staphylococcus aureus          | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15.29  | Pneumonia due to other staphylococcus                                 | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15.3   | Pneumonia due to streptococcus, group B                               | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15.4   | Pneumonia due to other streptococci                                   | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15.5   | Pneumonia due to Escherichia coli                                     | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15.6   | Pneumonia due to other Gram-negative bacteria                         | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15.7   | Pneumonia due to Mycoplasma pneumoniae                                | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15.8   | Pneumonia due to other specified bacteria                             | Diagnosis            | ICD-10-CM |  |  |  |  |
| J15.9   | Unspecified bacterial pneumonia                                       | Diagnosis            | ICD-10-CM |  |  |  |  |
| J16     | Pneumonia due to other infectious organisms, not elsewhere classified | Diagnosis            | ICD-10-CM |  |  |  |  |
| J16.8   | Pneumonia due to other specified infectious organisms                 | Diagnosis            | ICD-10-CM |  |  |  |  |
| J17     | Pneumonia in diseases classified elsewhere                            | Diagnosis            | ICD-10-CM |  |  |  |  |
| J18.0   | Bronchopneumonia, unspecified organism                                | Diagnosis            | ICD-10-CM |  |  |  |  |
| J18.1   | Lobar pneumonia, unspecified organism                                 | Diagnosis            | ICD-10-CM |  |  |  |  |
| J18.8   | Other pneumonia, unspecified organism                                 | Diagnosis            | ICD-10-CM |  |  |  |  |
| J18.9   | Pneumonia, unspecified organism                                       | Diagnosis            | ICD-10-CM |  |  |  |  |
| J95.851 | Ventilator associated pneumonia                                       | Diagnosis            | ICD-10-CM |  |  |  |  |

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Appendix C. List of International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Diagnosis Codes Used to Define Sepsis in this Request

| Code     | Description   | Code Category | Code Type |
|----------|---|---------------|-----------|
|          | Sepsis  |               |           |
| A02.1    | Salmonella sepsis   | Diagnosis     | ICD-10-CM |
| A20.7    | Septicemic plague   | Diagnosis     | ICD-10-CM |
| A22.7    | Anthrax sepsis  | Diagnosis     | ICD-10-CM |
| A26.7    | Erysipelothrix sepsis   | Diagnosis     | ICD-10-CM |
| A32.7    | Listerial sepsis  | Diagnosis     | ICD-10-CM |
| A40      | Streptococcal sepsis  | Diagnosis     | ICD-10-CM |
| A40.0    | Sepsis due to streptococcus, group A  | Diagnosis     | ICD-10-CM |
| A40.1    | Sepsis due to streptococcus, group B  | Diagnosis     | ICD-10-CM |
| A40.3    | Sepsis due to Streptococcus pneumoniae  | Diagnosis     | ICD-10-CM |
| A40.8    | Other streptococcal sepsis  | Diagnosis     | ICD-10-CM |
| A40.9    | Streptococcal sepsis, unspecified   | Diagnosis     | ICD-10-CM |
| A41      | Other sepsis  | Diagnosis     | ICD-10-CM |
| A41.0    | Sepsis due to Staphylococcus aureus   | Diagnosis     | ICD-10-CM |
| A41.01   | Sepsis due to Methicillin susceptible Staphylococcus aureus                     | Diagnosis     | ICD-10-CM |
| A41.02   | Sepsis due to Methicillin resistant Staphylococcus aureus                       | Diagnosis     | ICD-10-CM |
| A41.0Z16 | Sepsis due to Staphylococcus aureusInfection with drug resistant microorganisms | Diagnosis     | ICD-10-CM |
| A41.1    | Sepsis due to other specified staphylococcus                                    | Diagnosis     | ICD-10-CM |
| A41.2    | Sepsis due to unspecified staphylococcus  | Diagnosis     | ICD-10-CM |
| A41.3    | Sepsis due to Hemophilus influenzae   | Diagnosis     | ICD-10-CM |
| A41.4    | Sepsis due to anaerobes   | Diagnosis     | ICD-10-CM |
| A41.5    | Sepsis due to other Gram-negative organisms                                     | Diagnosis     | ICD-10-CM |
| A41.50   | Gram-negative sepsis, unspecified   | Diagnosis     | ICD-10-CM |
| A41.51   | Sepsis due to Escherichia coli [E. coli]  | Diagnosis     | ICD-10-CM |
| A41.52   | Sepsis due to Pseudomonas   | Diagnosis     | ICD-10-CM |
| A41.53   | Sepsis due to Serratia  | Diagnosis     | ICD-10-CM |
| A41.59   | Other Gram-negative sepsis  | Diagnosis     | ICD-10-CM |
| A41.8    | Other specified sepsis  | Diagnosis     | ICD-10-CM |
| A41.81   | Sepsis due to Enterococcus  | Diagnosis     | ICD-10-CM |
| A41.89   | Other specified sepsis  | Diagnosis     | ICD-10-CM |
| A41.9    | Sepsis, unspecified organism  | Diagnosis     | ICD-10-CM |
| A42.7    | Actinomycotic sepsis  | Diagnosis     | ICD-10-CM |
| A54.86   | Gonococcal sepsis   | Diagnosis     | ICD-10-CM |
| B37.7    | Candidal sepsis   | Diagnosis     | ICD-10-CM |
| 126.01   | Septic pulmonary embolism with acute cor pulmonale                              | Diagnosis     | ICD-10-CM |
| 126.90   | Septic pulmonary embolism without acute cor pulmonale                           | Diagnosis     | ICD-10-CM |
| 176      | Septic arterial embolism  | Diagnosis     | ICD-10-CM |
| P36      | Bacterial sepsis of newborn   | Diagnosis     | ICD-10-CM |
| P36.0    | Sepsis of newborn due to streptococcus, group B                                 | Diagnosis     | ICD-10-CM |
| P36.1    | Sepsis of newborn due to other and unspecified streptococci                     | Diagnosis     | ICD-10-CM |
| P36.10   | Sepsis of newborn due to unspecified streptococci                               | Diagnosis     | ICD-10-CM |
| P36.19   | Sepsis of newborn due to other streptococci                                     | Diagnosis     | ICD-10-CM |

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# Appendix C. List of International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Diagnosis Codes Used to Define Sepsis in this Request

| Code     | Description  | <b>Code Category</b> | Code Type |
|----------|--|----------------------|-----------|
| P36.2    | Sepsis of newborn due to Staphylococcus aureus               | Diagnosis            | ICD-10-CM |
| P36.3    | Sepsis of newborn due to other and unspecified staphylococci | Diagnosis            | ICD-10-CM |
| P36.30   | Sepsis of newborn due to unspecified staphylococci           | Diagnosis            | ICD-10-CM |
| P36.39   | Sepsis of newborn due to other staphylococci                 | Diagnosis            | ICD-10-CM |
| P36.4    | Sepsis of newborn due to Escherichia coli                    | Diagnosis            | ICD-10-CM |
| P36.5    | Sepsis of newborn due to anaerobes                           | Diagnosis            | ICD-10-CM |
| P36.8    | Other bacterial sepsis of newborn                            | Diagnosis            | ICD-10-CM |
| P36.9    | Bacterial sepsis of newborn, unspecified                     | Diagnosis            | ICD-10-CM |
| R65.2    | Severe sepsis  | Diagnosis            | ICD-10-CM |
| R65.20   | Severe sepsis without septic shock                           | Diagnosis            | ICD-10-CM |
| R65.21   | Severe sepsis with septic shock                              | Diagnosis            | ICD-10-CM |
| T81.12   | Postprocedural septic shock                                  | Diagnosis            | ICD-10-CM |
| T81.12XA | Postprocedural septic shock, initial encounter               | Diagnosis            | ICD-10-CM |
| T81.12XD | Postprocedural septic shock, subsequent encounter            | Diagnosis            | ICD-10-CM |
| T81.12XS | Postprocedural septic shock, sequela                         | Diagnosis            | ICD-10-CM |
| T81.44   | Sepsis following a procedure                                 | Diagnosis            | ICD-10-CM |
| T81.44XA | Sepsis following a procedure, initial encounter              | Diagnosis            | ICD-10-CM |
| T81.44XD | Sepsis following a procedure, subsequent encounter           | Diagnosis            | ICD-10-CM |
| T81.44XS | Sepsis following a procedure, sequela                        | Diagnosis            | ICD-10-CM |

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Appendix D. List of Logical Observation Identifiers Names and Codes (LOINC) Terminology Used to Define COVID Nucleic Acid Amplification (NAA) Diagnostic Tests in this Request

| Code    | Short Name                             | Long Common Name   |
|---------|--|--|
|         |  | COVID Nucleic Acid Amplification (NAA) Diagnostic Tests  |
| 95521-1 | SARS-CoV-2 N gene # Resp NAA+probe     | SARS-CoV-2 (COVID-19) N gene [#/volume] (viral load) in Respiratory specimen by NAA with probe detection                             |
| 94510-5 | SARS-CoV-2 N gene Ct XXX Qn NAA+probe  | SARS-CoV-2 (COVID-19) N gene [Cycle Threshold #] in Unspecified specimen by NAA with probe detection                                 |
| 94311-8 | SARS-CoV-2 N gene Ct XXX Qn NAA N1     | SARS-CoV-2 (COVID-19) N gene [Cycle Threshold #] in Unspecified specimen by Nucleic acid amplification using CDC                     |
| 94312-6 | SARS-CoV-2 N gene Ct XXX Qn NAA N2     | primer-probe set N1 SARS-CoV-2 (COVID-19) N gene [Cycle Threshold #] in Unspecified specimen by Nucleic acid amplification using CDC |
| 95522-9 | SARS-CoV-2 N gene Resp NAA+probe-Log#  | primer-probe set N2 SARS-CoV-2 (COVID-19) N gene [Log #/volume] (viral load) in Respiratory specimen by NAA with probe detection     |
| 94760-6 | SARS-CoV-2 N gene Nph Ql NAA+probe     | SARS-CoV-2 (COVID-19) N gene [Presence] in Nasopharynx by NAA with probe detection   |
| 95409-9 | SARS-CoV-2 N gene Nose Ql NAA+probe    | SARS-CoV-2 (COVID-19) N gene [Presence] in Nose by NAA with probe detection  |
| 94533-7 | SARS-CoV-2 N gene Resp Ql NAA+probe    | SARS-CoV-2 (COVID-19) N gene [Presence] in Respiratory specimen by NAA with probe detection  |
| 94756-4 | SARS-CoV-2 N gene Resp Ql NAA N1       | SARS-CoV-2 (COVID-19) N gene [Presence] in Respiratory specimen by Nucleic acid amplification using CDC primer-<br>probe set N1      |
| 94757-2 | SARS-CoV-2 N gene Resp Ql NAA N2       | SARS-CoV-2 (COVID-19) N gene [Presence] in Respiratory specimen by Nucleic acid amplification using CDC primer-probe set N2          |
| 95425-5 | SARS-CoV-2 N gene Sal Ql NAA+probe     | SARS-CoV-2 (COVID-19) N gene [Presence] in Saliva (oral fluid) by NAA with probe detection   |
| 94766-3 | SARS-CoV-2 N gene SerPl Ql NAA+probe   | SARS-CoV-2 (COVID-19) N gene [Presence] in Serum or Plasma by NAA with probe detection   |
| 94316-7 | SARS-CoV-2 N gene XXX QI NAA+probe     | SARS-CoV-2 (COVID-19) N gene [Presence] in Unspecified specimen by NAA with probe detection  |
| 94307-6 | SARS-CoV-2 N gene XXX QI NAA N1        | SARS-CoV-2 (COVID-19) N gene [Presence] in Unspecified specimen by Nucleic acid amplification using CDC primer-<br>probe set N1      |
| 94308-4 | SARS-CoV-2 N gene XXX QI NAA N2        | SARS-CoV-2 (COVID-19) N gene [Presence] in Unspecified specimen by Nucleic acid amplification using CDC primer-<br>probe set N2      |
| 94644-2 | SARS-CoV-2 ORF1ab Ct Resp Qn NAA+probe | SARS-CoV-2 (COVID-19) ORF1ab region [Cycle Threshold #] in Respiratory specimen by NAA with probe detection                          |
| 94511-3 | SARS-CoV-2 ORF1ab Ct XXX Qn NAA+probe  | SARS-CoV-2 (COVID-19) ORF1ab region [Cycle Threshold #] in Unspecified specimen by NAA with probe detection                          |
| 94559-2 | SARS-CoV-2 ORF1ab Resp QI NAA+probe    | SARS-CoV-2 (COVID-19) ORF1ab region [Presence] in Respiratory specimen by NAA with probe detection                                   |
| 95824-9 | SARS-CoV-2 ORF1ab Sal Ql NAA+probe     | SARS-CoV-2 (COVID-19) ORF1ab region [Presence] in Saliva (oral fluid) by NAA with probe detection                                    |
| 94639-2 | SARS-CoV-2 ORF1ab XXX QI NAA+probe     | SARS-CoV-2 (COVID-19) ORF1ab region [Presence] in Unspecified specimen by NAA with probe detection                                   |
| 94646-7 | SARS-CoV-2 RdRp Ct Resp Qn NAA+probe   | SARS-CoV-2 (COVID-19) RdRp gene [Cycle Threshold #] in Respiratory specimen by NAA with probe detection                              |
| 94645-9 | SARS-CoV-2 RdRp Ct XXX Qn NAA+probe    | SARS-CoV-2 (COVID-19) RdRp gene [Cycle Threshold #] in Unspecified specimen by NAA with probe detection                              |
| 94534-5 | SARS-CoV-2 RdRp Resp QI NAA+probe      | SARS-CoV-2 (COVID-19) RdRp gene [Presence] in Respiratory specimen by NAA with probe detection                                       |
| 94314-2 | SARS-CoV-2 RdRp XXX QI NAA+probe       | SARS-CoV-2 (COVID-19) RdRp gene [Presence] in Unspecified specimen by NAA with probe detection                                       |
| 94745-7 | SARS-CoV-2 RNA Ct Resp Qn NAA+probe    | SARS-CoV-2 (COVID-19) RNA [Cycle Threshold #] in Respiratory specimen by NAA with probe detection                                    |



Appendix D. List of Logical Observation Identifiers Names and Codes (LOINC) Terminology Used to Define COVID Nucleic Acid Amplification (NAA) Diagnostic Tests in this Request

| Code    | Short Name                             | Long Common Name  |
|---------|--|---|
| 94746-5 | SARS-CoV-2 RNA Ct XXX Qn NAA+probe     | SARS-CoV-2 (COVID-19) RNA [Cycle Threshold #] in Unspecified specimen by NAA with probe detection         |
| 94819-0 | SARS-CoV-2 RNA XXX NAA+probe-Log#      | SARS-CoV-2 (COVID-19) RNA [Log #/volume] (viral load) in Unspecified specimen by NAA with probe detection |
| 94565-9 | SARS-CoV-2 RNA Nph Ql NAA+non-probe    | SARS-CoV-2 (COVID-19) RNA [Presence] in Nasopharynx by NAA with non-probe detection                       |
| 94759-8 | SARS-CoV-2 RNA Nph Ql NAA+probe        | SARS-CoV-2 (COVID-19) RNA [Presence] in Nasopharynx by NAA with probe detection                           |
| 95406-5 | SARS-CoV-2 RNA Nose Ql NAA+probe       | SARS-CoV-2 (COVID-19) RNA [Presence] in Nose by NAA with probe detection                                  |
| 95608-6 | SARS-CoV-2 RNA Resp Ql NAA+non-probe   | SARS-CoV-2 (COVID-19) RNA [Presence] in Respiratory specimen by NAA with non-probe detection              |
| 94500-6 | SARS-CoV-2 RNA Resp Ql NAA+probe       | SARS-CoV-2 (COVID-19) RNA [Presence] in Respiratory specimen by NAA with probe detection                  |
| 94845-5 | SARS-CoV-2 RNA Sal Ql NAA+probe        | SARS-CoV-2 (COVID-19) RNA [Presence] in Saliva (oral fluid) by NAA with probe detection                   |
| 94660-8 | SARS-CoV-2 RNA SerPl Ql NAA+probe      | SARS-CoV-2 (COVID-19) RNA [Presence] in Serum or Plasma by NAA with probe detection                       |
| 94309-2 | SARS-CoV-2 RNA XXX QI NAA+probe        | SARS-CoV-2 (COVID-19) RNA [Presence] in Unspecified specimen by NAA with probe detection                  |
| 94531-1 | SARS-CoV-2 RNA Pnl Resp NAA+probe      | SARS-CoV-2 (COVID-19) RNA panel - Respiratory specimen by NAA with probe detection                        |
| 95826-4 | SARS-CoV-2 RNA Pnl Sal NAA+probe       | SARS-CoV-2 (COVID-19) RNA panel - Saliva (oral fluid) by NAA with probe detection                         |
| 94306-8 | SARS-CoV-2 RNA Pnl XXX NAA+probe       | SARS-CoV-2 (COVID-19) RNA panel - Unspecified specimen by NAA with probe detection                        |
| 94642-6 | SARS-CoV-2 S gene Ct Resp Qn NAA+probe | SARS-CoV-2 (COVID-19) S gene [Cycle Threshold #] in Respiratory specimen by NAA with probe detection      |
| 94643-4 | SARS-CoV-2 S gene Ct XXX Qn NAA+probe  | SARS-CoV-2 (COVID-19) S gene [Cycle Threshold #] in Unspecified specimen by NAA with probe detection      |
| 94640-0 | SARS-CoV-2 S gene Resp QI NAA+probe    | SARS-CoV-2 (COVID-19) S gene [Presence] in Respiratory specimen by NAA with probe detection               |
| 94767-1 | SARS-CoV-2 S gene SerPl Ql NAA+probe   | SARS-CoV-2 (COVID-19) S gene [Presence] in Serum or Plasma by NAA with probe detection                    |
| 94641-8 | SARS-CoV-2 S gene XXX QI NAA+probe     | SARS-CoV-2 (COVID-19) S gene [Presence] in Unspecified specimen by NAA with probe detection               |



Appendix E. List of Logical Observation Identifiers Names and Codes (LOINC) Terminology Used to Define COVID Antibody Tests in this Request

| Code    | Short Name                              | Long Common Name   |
|---------|---|--|
|         |   | COVID Antibody Tests   |
| 94661-6 | SARS-CoV-2 Ab SerPl-Imp                 | SARS-CoV-2 (COVID-19) Ab [Interpretation] in Serum or Plasma                               |
| 95825-6 | SARS-CoV-2 Ab DBS QI IA                 | SARS-CoV-2 (COVID-19) Ab [Presence] in DBS by Immunoassay                                  |
| 94762-2 | SARS-CoV-2 Ab SerPl Ql IA               | SARS-CoV-2 (COVID-19) Ab [Presence] in Serum or Plasma by Immunoassay                      |
| 94769-7 | SARS-CoV-2 Ab SerPl IA-aCnc             | SARS-CoV-2 (COVID-19) Ab [Units/volume] in Serum or Plasma by Immunoassay                  |
| 94504-8 | SARS-CoV-2 Ab Pnl SerPl IA              | SARS-CoV-2 (COVID-19) Ab panel - Serum or Plasma by Immunoassay                            |
| 94503-0 | SARS-CoV-2 Ab Pnl SerPlBld IA.rapid     | SARS-CoV-2 (COVID-19) Ab panel - Serum, Plasma or Blood by Rapid immunoassay               |
| 94562-6 | SARS-CoV-2 IgA SerPl Ql IA              | SARS-CoV-2 (COVID-19) IgA Ab [Presence] in Serum or Plasma by Immunoassay                  |
| 94768-9 | SARS-CoV-2 IgA SerPIBId QI IA.rapid     | SARS-CoV-2 (COVID-19) IgA Ab [Presence] in Serum, Plasma or Blood by Rapid immunoassay     |
| 95427-1 | SARS-CoV-2 IgA Titr SerPl IF            | SARS-CoV-2 (COVID-19) IgA Ab [Titer] in Serum or Plasma by Immunofluorescence              |
| 94720-0 | SARS-CoV-2 IgA SerPl IA-aCnc            | SARS-CoV-2 (COVID-19) IgA Ab [Units/volume] in Serum or Plasma by Immunoassay              |
| 95125-1 | SARS-CoV-2 IgA+IgM SerPl Ql IA          | SARS-CoV-2 (COVID-19) IgA+IgM [Presence] in Serum or Plasma by Immunoassay                 |
| 94761-4 | SARS-CoV-2 IgG DBS QI IA                | SARS-CoV-2 (COVID-19) IgG Ab [Presence] in DBS by Immunoassay                              |
| 94563-4 | SARS-CoV-2 IgG SerPl Ql IA              | SARS-CoV-2 (COVID-19) IgG Ab [Presence] in Serum or Plasma by Immunoassay                  |
| 94507-1 | SARS-CoV-2 IgG SerPIBId QI IA.rapid     | SARS-CoV-2 (COVID-19) IgG Ab [Presence] in Serum, Plasma or Blood by Rapid immunoassay     |
| 95429-7 | SARS-CoV-2 IgG Titr SerPl IF            | SARS-CoV-2 (COVID-19) IgG Ab [Titer] in Serum or Plasma by Immunofluorescence              |
| 94505-5 | SARS-CoV-2 IgG SerPl IA-aCnc            | SARS-CoV-2 (COVID-19) IgG Ab [Units/volume] in Serum or Plasma by Immunoassay              |
| 94547-7 | SARS-CoV-2 IgG+IgM SerPl Ql IA          | SARS-CoV-2 (COVID-19) IgG+IgM Ab [Presence] in Serum or Plasma by Immunoassay              |
| 95542-7 | SARS-CoV-2 IgG+IgM SerPIBId QI IA.rapid | SARS-CoV-2 (COVID-19) IgG+IgM Ab [Presence] in Serum, Plasma or Blood by Rapid immunoassay |
| 95416-4 | SARS-CoV-2 IgM DBS QI IA                | SARS-CoV-2 (COVID-19) IgM Ab [Presence] in DBS by Immunoassay                              |
| 94564-2 | SARS-CoV-2 IgM SerPl QI IA              | SARS-CoV-2 (COVID-19) IgM Ab [Presence] in Serum or Plasma by Immunoassay                  |
| 94508-9 | SARS-CoV-2 IgM SerPIBId QI IA.rapid     | SARS-CoV-2 (COVID-19) IgM Ab [Presence] in Serum, Plasma or Blood by Rapid immunoassay     |
| 95428-9 | SARS-CoV-2 IgM Titr SerPl IF            | SARS-CoV-2 (COVID-19) IgM Ab [Titer] in Serum or Plasma by Immunofluorescence              |
| 94506-3 | SARS-CoV-2 IgM SerPl IA-aCnc            | SARS-CoV-2 (COVID-19) IgM Ab [Units/volume] in Serum or Plasma by Immunoassay              |
| 95411-5 | SARS-CoV-2 NAb Ser Ql pVNT              | SARS-CoV-2 (COVID-19) neutralizing antibody [Presence] in Serum by pVNT                    |
| 95410-7 | SARS-CoV-2 NAb Titr Ser pVNT            | SARS-CoV-2 (COVID-19) neutralizing antibody [Titer] in Serum by pVNT                       |

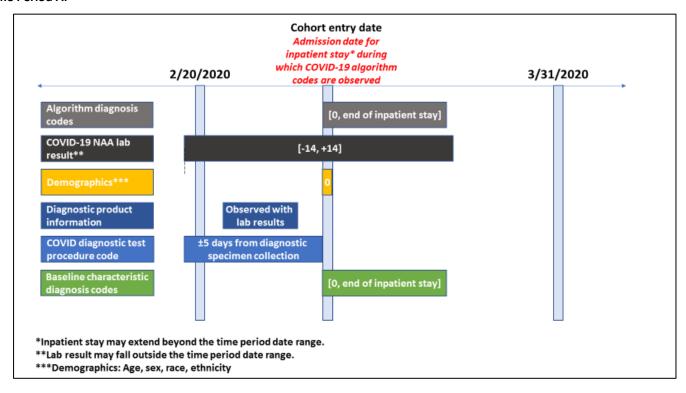


# Appendix F. List of Logical Observation Identifiers Names and Codes (LOINC) Terminology Used to Define COVID Antigen Tests in this Request

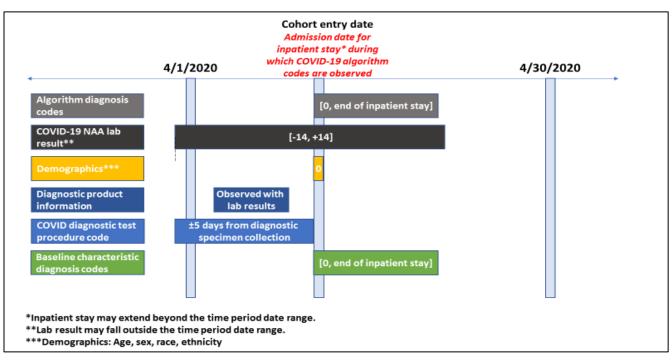
| Code                | Short Name                              | Long Common Name  |
|---------------------|---|---|
| COVID Antigen Tests |   |   |
| 95209-3             | SARS-CoV+SARS-CoV-2 Ag Resp Ql IA.rapid | SARS-CoV+SARS-CoV-2 (COVID-19) Ag [Presence] in Respiratory specimen by Rapid immunoassay |
| 94558-4             | SARS-CoV-2 Ag Resp Ql IA.rapid          | SARS-CoV-2 (COVID-19) Ag [Presence] in Respiratory specimen by Rapid immunoassay          |

## Appendix G. Design Diagrams Detailing the Study Parameters for this Request for each of the Three Time Periods Assessed

#### **Time Period A:**



## **Time Period B:**

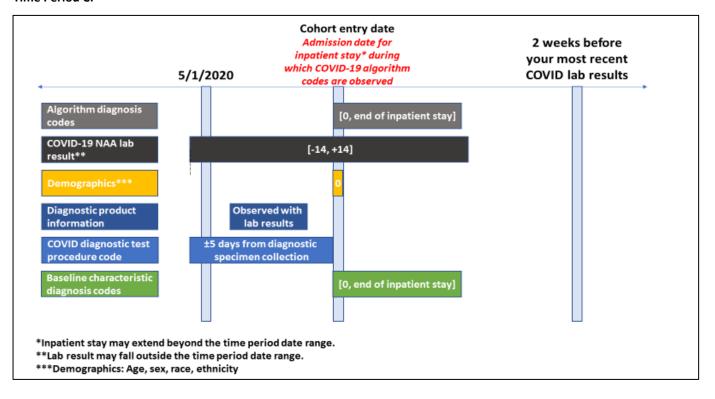


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## Appendix G. Design Diagrams Detailing the Study Parameters for this Request for each of the Three Time Periods Assessed

#### **Time Period C:**



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