Disclaimer

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

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ICD10_MPL1R_WP002_NSDP_V01

Request ID: icd10_mpl1r_wp002_nsdp_v01

Request Description: This report contains estimates of the frequency of diagnoses for a selection of health outcomes using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) versus International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes. Two health outcomes were investigated: hypertension and diabetes.

Sentinel Modular Program Tool Used: Cohort Identification and Descriptive Analysis (CIDA) tool, Version 3.3.2

Data Source: Data from October 1, 2010 to August 31, 2016 from 11 health plans contributing to the Sentinel Distributed Database (SDD) were included in this report. The report includes three separate monitoring periods: 1) October 1, 2010 to August 31, 2016; 2) January 1, 2015 to March 31, 2015; and 3) January 1, 2016 to March 31, 2016. This request was distributed on January 18, 2017 to nine Data Partners and on March 20, 2017 to two Data Partners. See Appendix A for a list of the latest dates of available data for each Data Partner.

Study Design: This request was designed to identify events of interest. The number of qualifying patients with the event of interest were calculated overall and stratified by age group, sex, year, and year-month.

Events of Interest: The events of interest were hypertension diagnosis and diabetes diagnosis that occurred in any care setting. Diagnoses were defined using ICD-9-CM as well as ICD-10-CM diagnosis codes. The Centers for Medicare and Medicaid Services (CMS) General Equivalence Mappings (GEMs) were used to determine appropriate ICD-10-CM codes using Simple Forward Mapping (with and without cluster logic) and Forward Backward Mapping.* Cluster logic involves combinations of codes using "and" logic to create one diagnostic event from multiple codes. See Appendices B-H for specific codes and clusters.

Cohort Eligibility Criteria: Patients were required to be continuously enrolled in plans with medical coverage for at least six months (183 days) before their diagnosis date, during which gaps in coverage of up to 45 days were allowed. The following age groups were included in the cohort: 0-17, 18-49, 50-64, 65+ years.

Please refer to Appendices I and J for detailed specifications of parameters used in the analyses for this request.

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

References:
* Fung KW, Richesson R, Smerek M, et al. Preparing for the ICD-10-CM Transition: Automated Methods for Translating ICD Codes in Clinical Phenotype Definitions. EGEMS (Washington, DC) 2016;4:1211.

Glossary of Terms for Analyses Using
Cohort Identification and Descriptive Analysis (CIDA) Tool*

Amount Supplied - number of units (pills, tablets, vials) dispensed. Net amount per NDC per dispensing. This is equivalent to the "RxAmt" value in the Sentinel Common Data Model.

Blackout Period - number of days at the beginning of a treatment episode that events are to be ignored. If an event occurs during the blackout period, the episode is excluded.

Care Setting - type of medical encounter or facility where the exposure, event, or condition code was recorded. Possible care settings include: Inpatient Hospital Stay (IP), Non-Acute Institutional Stay (IS), Emergency Department (ED), Ambulatory Visit (AV), and Other Ambulatory Visit (OA). For laboratory results, possible care settings include: Emergency department (E), Home (H), Inpatient (I), Outpatient (O), or Unknown or Missing (U). Along with the Principal Diagnosis Indicator, forms the Care Setting/PDX parameter.

    Ambulatory Visit (AV) - includes visits at outpatient clinics, same-day surgeries, urgent care visits, and other same-day ambulatory hospital encounters, but excludes emergency department encounters.

    Emergency Department (ED) - includes ED encounters that become inpatient stays (in which case inpatient stays would be a separate encounter). Excludes urgent care visits.

    Inpatient Hospital Stay (IP) - includes all inpatient stays, same-day hospital discharges, hospital transfers, and acute hospital care where the discharge is after the admission date.

    Non-Acute Institutional Stay (IS) - includes hospice, skilled nursing facility (SNF), rehab center, nursing home, residential, overnight non-hospital dialysis and other non-hospital stays.

    Other Ambulatory Visit (OA) - includes other non overnight AV encounters such as hospice visits, home health visits, skilled nursing facility visits, other non-hospital visits, as well as telemedicine, telephone and email consultations.

Cohort Definition (drug/exposure) - indicates how the cohort will be defined: (1) 01: Cohort includes only the first valid treatment episode during the query period; (2) 02: Cohort includes all valid treatment episodes during the query period; (3) 03: Cohort includes all valid treatment episodes during

Days Supplied - number of days supplied for all dispensings in qualifying treatment episodes.

Episodes - treatment episodes; length of episode is determined by days supplied in one dispensing or consecutive dispensings bridged by the episode

Eligible Members - number of members eligible for an incident treatment episode (defined by the drug/exposure and event washout periods) with drug and medical coverage during the query period.

Enrollment Gap - number of days allowed between two consecutive enrollment periods without breaking a "continuously enrolled" sequence.

Episode Gap - number of days allowed between two (or more) consecutive exposures (dispensings/procedures) to be considered the same treatment

Event Deduplication - specifies how events are counted by the MP algorithm: (0) 0: Counts all occurrences of an HOI during an exposure episode; (1) 1: de-duplicates occurrences of the same HOI code and code type on the same day; (2) 2: de-duplicates occurrences of the same HOI group on the same day (e.g., de-duplicates at the group level).

Exposure Extension Period - number of days post treatment period in which the outcomes/events are counted for a treatment episode. Extensions days are added after any episode gaps have been bridged.

Exposure Episode Length - number of days after exposure initiation that is considered "exposed time."

Lookback Period (pre-existing condition) - number of days wherein a member is required to have evidence of pre-existing condition

Member-Years - sum of all days of enrollment with medical and drug coverage** in the query period preceded by an exposure washout period all

Minimum Days Supplied - specifies a minimum number of days in length of the days supplied for the episode to be considered.

Minimum Episode Duration - specifies a minimum number of days in length of the episode for it to be considered. Applied after any gaps are bridged and extension days added to the length of the exposure episode.

Maximum Episode Duration - truncates exposure episodes after a requester-specified number of exposed days. Applied after any gaps are bridged and extension days added to the length of the exposure episode.

Principal Diagnosis (PDX) - diagnosis or condition established to be chiefly responsible for admission of the patient to the hospital. 'P' = principal diagnosis, 'S' = secondary diagnosis, 'X' = unspecified diagnosis, '.' = blank. Along with the Care Setting values, forms the Caresetting/PDX parameter.

Query Period - period in which the modular program looks for exposures and outcomes of interest.

Treatment Episode Truncation Indicator - indicates whether observation of the incident query code during follow-up requires truncation of valid treatment episodes. A value of Y indicates that the treatment episodes should be truncated at the first occurrence of an incident query code. A value of N indicates that the treatment episodes should not be truncated at the occurrence of the incident query code.

Users - number of members with exposure during the query period. Member must have no evidence of exposure(s) of interest (defined by incidence criteria) in the prior washout period. A user may only be counted once in a query period.

Washout Period (drug/exposure) **-** number of days a user is required to have no evidence of prior exposure (drug dispensing/procedure) and continuous drug and medical coverage prior to an incident treatment episode.

Washout Period (event/outcome) **-** number of days a user is required to have no evidence of a prior event (procedure/diagnosis) and continuous drug and medical coverage prior to an incident treatment episode.

Years at Risk - number of days supplied plus any episode gaps and exposure extension periods all divided by 365.25.

*all terms may not be used in this report

**incident treatment episodes must be incident to both the exposure and the event

Table 1a. Summary of Incident Hypertension Diagnoses using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) versus International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes for a combination of washouts and code sources: Algorithm, Simple Forward Mapping (SFM), and Forward Backward Mapping (FBM), by Monitoring Period

2010-2016

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member-Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from an Algorithm, 183 day washout					
	21,225,160	21,225,160	126,827,167	250,178,638.5	167.35
ICD-9-CM codes from SFM, 183 day washout					
	21,225,048	21,225,048	126,828,668	250,180,822.2	167.35
ICD-9-CM codes from FBM, 183 day washout					
	21,225,048	21,225,048	126,827,326	250,179,404.6	167.35
ICD-10-CM codes from an Algorithm, 183 day washout					
	5,456,996	5,456,996	126,827,167	268,566,115.2	43.03
ICD-10-CM codes from SFM, 183 day washout					
	5,451,135	5,451,135	126,828,668	268,569,967.4	42.98
ICD-10-CM codes from FBM, 183 day washout					
	5,457,043	5,457,043	126,827,326	268,566,536.7	43.03
ICD-9-CM codes from an Algorithm, 0 day washout					
	25,658,526	227,217,362	131,346,603	319,813,419.4	195.35
ICD-9-CM codes from SFM and FBM, 0 day washout					
	25,658,253	227,213,170	131,346,603	319,813,419.4	195.35
ICD-10-CM codes from an Algorithm, 0 day washout					
	10,763,241	30,879,774	131,346,603	319,813,419.4	81.95
ICD-10-CM codes from SFM, 0 day washout					
	10,752,552	30,818,132	131,346,603	319,813,419.4	81.86
ICD-10-CM codes from FBM, 0 day washout					
	10,763,275	30,879,844	131,346,603	319,813,419.4	81.95

2015

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member-Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from an Algorithm, 90 day washout					
	4,133,586	4,133,586	55,581,824	12,137,692.4	74.37
ICD-9-CM codes from SFM and FBM, 90 day washout					
	4,133,577	4,133,577	55,581,844	12,137,699.1	74.37

2016

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member-Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-10-CM codes from an Algorithm, 90 day washout					
	4,341,469	4,341,469	55,304,177	12,276,118.7	78.50
ICD-10-CM codes from SFM, 90 day washout					
	4,337,848	4,337,848	55,308,607	12,277,979.5	78.43
ICD-10-CM codes from FBM, 90 day washout					
	4,341,485	4,341,485	55,304,172	12,276,116.0	78.50

Table 1b. Summary of Incident Hypertension Diagnoses using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) versus International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes for a combination of washouts and code sources: Algorithm, Simple Forward Mapping (SFM), and Forward Backward Mapping (FBM), by Monitoring Period and Age Group

<u>2010-2016</u>

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from an Algorithm, 183 day washout					
0-17 Years	105,943	105,943	29,846,115	64,718,608.4	3.55
18-49 Years	5,868,795	5,868,795	68,083,589	126,699,397.8	86.20
50-64 Years	8,650,464	8,650,464	27,227,908	44,452,780.5	317.71
65+ Years	6,599,958	6,599,958	11,604,330	14,307,851.7	568.75
ICD-9-CM codes from SFM, 183 day washout					
0-17 Years	105,900	105,900	29,846,189	64,718,828.1	3.55
18-49 Years	5,868,703	5,868,703	68,084,002	126,700,259.3	86.20
50-64 Years	8,650,414	8,650,414	27,228,413	44,453,405.6	317.70
65+ Years	6,600,031	6,600,031	11,604,933	14,308,329.2	568.73
ICD-9-CM codes from FBM, 183 day washout					
0-17 Years	105,900	105,900	29,846,115	64,718,702.6	3.55
18-49 Years	5,868,703	5,868,703	68,083,623	126,699,662.8	86.20
50-64 Years	8,650,414	8,650,414	27,227,940	44,452,977.5	317.70
65+ Years	6,600,031	6,600,031	11,604,452	14,308,061.6	568.75
ICD-10-CM codes from an Algorithm, 183 day washout					
0-17 Years	15,320	15,320	29,846,115	64,824,741.0	0.51
18-49 Years	1,200,872	1,200,872	68,121,192	131,643,777.6	17.63
50-64 Years	2,242,290	2,242,290	28,197,328	52,154,843.2	79.52
65+ Years	1,998,514	1,998,514	12,517,244	19,942,753.4	159.66
ICD-10-CM codes from SFM, 183 day washout					
0-17 Years	14,871	14,871	29,846,189	64,824,979.7	0.50
18-49 Years	1,198,470	1,198,470	68,121,632	131,644,936.8	17.59
50-64 Years	2,240,213	2,240,213	28,197,934	52,156,150.3	79.45
65+ Years	1,997,581	1,997,581	12,517,962	19,943,900.6	159.58
ICD-10-CM codes from FBM, 183 day washout					
0-17 Years	15,321	15,321	29,846,115	64,824,769.2	0.51
18-49 Years	1,200,898	1,200,898	68,121,216	131,643,874.3	17.63
50-64 Years	2,242,296	2,242,296	28,197,354	52,154,957.6	79.52
65+ Years	1,998,528	1,998,528	12,517,368	19,942,935.6	159.66
ICD-9-CM codes from an Algorithm, 0 day washout					
0-17 Years	112,180	320,356	29,854,260	64,911,877.6	3.76
18-49 Years	6,730,659	32,271,469	69,118,516	140,553,482.7	97.38
50-64 Years	11,167,126	76,700,993	30,357,747	71,475,208.9	367.85
65+ Years	9,457,689	117,924,544	14,919,540	42,872,850.2	633.91
ICD-9-CM codes from SFM and FBM, 0 day washout					
0-17 Years	112,137	320,289	29,854,260	64,911,877.6	3.76
18-49 Years	6,730,544	32,270,724	69,118,516	140,553,482.7	97.38
50-64 Years	11,167,047	76,699,797	30,357,747	71,475,208.9	367.85
65+ Years	9,457,637	117,922,360	14,919,540	42,872,850.2	633.91
ICD-10-CM codes from an Algorithm, 0 day washout					
0-17 Years	19,311	41,662	29,854,260	64,911,877.6	0.65
18-49 Years	1,884,789	4,021,150	69,118,516	140,553,482.7	27.27
50-64 Years	4,132,392	10,155,636	30,357,747	71,475,208.9	136.12
65+ Years	4,788,410	16,661,326	14,919,540	42,872,850.2	320.95
ICD-10-CM codes from SFM, 0 day washout					
0-17 Years	18,621	39,027	29,854,260	64,911,877.6	0.62
18-49 Years	1,881,278	4,008,544	69,118,516	140,553,482.7	27.22
50-64 Years	4,128,619	10,136,133	30,357,747	71,475,208.9	136.00
65+ Years	4,785,594	16,634,428	14,919,540	42,872,850.2	320.76
ICD-10-CM codes from FBM, 0 day washout					
0-17 Years	19,312	41,667	29,854,260	64,911,877.6	0.65
18-49 Years	1,884,817	4,021,187	69,118,516	140,553,482.7	27.27
50-64 Years	4,132,396	10,155,641	30,357,747	71,475,208.9	136.12
65+ Years	4,788,411	16,661,349	14,919,540	42,872,850.2	320.95

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2015					
ICD-9-CM codes from an Algorithm, 90 day washout					
0-17 Years	6,460	6,460	11,504,218	2,681,902.0	0.56
18-49 Years	728,588	728,588	25,528,131	5,748,936.7	28.54
50-64 Years	1,589,913	1,589,913	12,336,351	2,538,975.4	128.88
65+ Years	1,808,625	1,808,625	6,650,918	1,167,878.3	271.94
ICD-9-CM codes from SFM and FBM, 90 day washout					
0-17 Years	6,457	6,457	11,504,218	2,681,902.6	0.56
18-49 Years	728,587	728,587	25,528,133	5,748,937.9	28.54
50-64 Years	1,589,910	1,589,910	12,336,354	2,538,976.7	128.88
65+ Years	1,808,623	1,808,623	6,650,933	1,167,882.0	271.94
2016					
ICD-10-CM codes from an Algorithm, 90 day washout					
0-17 Years	7,493	7,493	11,311,022	2,686,435.4	0.66
18-49 Years	778,514	778,514	25,451,691	5,826,709.7	30.59
50-64 Years	1,675,777	1,675,777	12,374,598	2,584,056.9	135.42
65+ Years	1,879,685	1,879,685	6,599,921	1,178,916.7	284.80
ICD-10-CM codes from SFM, 90 day washout					
0-17 Years	7,234	7,234	11,311,215	2,686,537.1	0.64
18-49 Years	777,238	777,238	25,452,671	5,827,221.1	30.54
50-64 Years	1,674,484	1,674,484	12,376,129	2,584,703.1	135.30
65+ Years	1,878,892	1,878,892	6,601,722	1,179,518.2	284.61
ICD-10-CM codes from FBM, 90 day washout					
0-17 Years	7,493	7,493	11,311,022	2,686,435.4	0.66
18-49 Years	778,530	778,530	25,451,687	5,826,707.3	30.59
50-64 Years	1,675,778	1,675,778	12,374,598	2,584,057.0	135.42
65+ Years	1,879,684	1,879,684	6,599,920	1,178,916.2	284.80

Table 1c. Summary of Incident Hypertension Diagnoses using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) versus International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes for a combination of washouts and code sources: Algorithm, Simple Forward Mapping (SFM), and Forward Backward Mapping (FBM), by Monitoring Period and Sex

2010-2016

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from an Algorithm, 183 day washout					
Female	10,455,786	10,455,786	64,403,718	128,675,039.1	162.35
Male	10,768,361	10,768,361	62,416,782	121,493,248.3	172.52
Unknown	1,013	1,013	6,667	10,351.1	151.94
ICD-9-CM codes from SFM, 183 day washout					
Female	10,455,726	10,455,726	64,404,433	128,676,188.9	162.34
Male	10,768,309	10,768,309	62,417,568	121,494,282.2	172.52
Unknown	1,013	1,013	6,667	10,351.1	151.94
ICD-9-CM codes from FBM, 183 day washout					
Female	10,455,726	10,455,726	64,403,809	128,675,456.9	162.35
Male	10,768,309	10,768,309	62,416,850	121,493,596.6	172.52
Unknown	1,013	1,013	6,667	10,351.1	151.94
ICD-10-CM codes from an Algorithm, 183 day washout					
Female	2,683,225	2,683,225	64,403,718	137,685,948.9	41.66
Male	2,773,596	2,773,596	62,416,782	130,868,932.6	44.44
Unknown	175	175	6,667	11,233.6	26.25
ICD-10-CM codes from SFM, 183 day washout					
Female	2,680,199	2,680,199	64,404,433	137,687,906.8	41.62
Male	2,770,761	2,770,761	62,417,568	130,870,826.7	44.39
Unknown	175	175	6,667	11,234.0	26.25
ICD-10-CM codes from FBM, 183 day washout					
Female	2,683,254	2,683,254	64,403,809	137,686,184.6	41.66
Male	2,773,614	2,773,614	62,416,850	130,869,118.5	44.44
Unknown	175	175	6,667	11,233.6	26.25
ICD-9-CM codes from an Algorithm, 0 day washout					
Female	12,744,565	119,116,903	66,720,608	163,721,251.5	191.01
Male	12,912,770	108,086,761	64,619,123	156,078,303.4	199.83
Unknown	1,191	13,698	6,872	13,864.6	173.31
ICD-9-CM codes from SFM and FBM, 0 day washout					
Female	12,744,418	119,114,637	66,720,608	163,721,251.5	191.01
Male	12,912,644	108,084,835	64,619,123	156,078,303.4	199.83
Unknown	1,191	13,698	6,872	13,864.6	173.31
ICD-10-CM codes from an Algorithm, 0 day washout					
Female	5,416,725	16,105,316	66,720,608	163,721,251.5	81.19
Male	5,346,110	14,773,271	64,619,123	156,078,303.4	82.73
Unknown	406	1,187	6,872	13,864.6	59.08
ICD-10-CM codes from SFM, 0 day washout					
Female	5,411,364	16,073,776	66,720,608	163,721,251.5	81.10
Male	5,340,783	14,743,172	64,619,123	156,078,303.4	82.65
Unknown	405	1,184	6,872	13,864.6	58.93
ICD-10-CM codes from FBM, 0 day washout					
Female	5,416,746	16,105,357	66,720,608	163,721,251.5	81.19
Male	5,346,123	14,773,300	64,619,123	156,078,303.4	82.73
Unknown	406	1,187	6,872	13,864.6	59.08

	Number of Incident Diagnoses	**Number of Diagnoses**	**Eligible Members**	**Member- Years**	**Number of Incident Diagnoses / 1K Eligible Members**
2015					
ICD-9-CM codes from an Algorithm, 90 day washout					
Female	2,065,451	2,065,451	28,348,983	6,197,197.2	72.86
Male	2,067,944	2,067,944	27,230,619	5,940,020.3	75.94
Unknown	191	191	2,222	475.0	85.96
ICD-9-CM codes from SFM and FBM, 90 day washout					
Female	2,065,442	2,065,442	28,348,991	6,197,200.8	72.86
Male	2,067,944	2,067,944	27,230,631	5,940,023.4	75.94
Unknown	191	191	2,222	475.0	85.96
2016					
ICD-10-CM codes from an Algorithm, 90 day washout					
Female	2,169,899	2,169,899	28,185,729	6,271,185.1	76.99
Male	2,171,421	2,171,421	27,116,156	6,004,471.8	80.08
Unknown	149	149	2,292	461.8	65.01
ICD-10-CM codes from SFM, 90 day washout					
Female	2,168,143	2,168,143	28,187,951	6,272,113.4	76.92
Male	2,169,556	2,169,556	27,118,363	6,005,404.1	80.00
Unknown	149	149	2,293	462.0	64.98
ICD-10-CM codes from FBM, 90 day washout					
Female	2,169,906	2,169,906	28,185,726	6,271,183.5	76.99
Male	2,171,430	2,171,430	27,116,154	6,004,470.6	80.08
Unknown	149	149	2,292	461.8	65.01

Table 1d. Summary of Incident Hypertension Diagnoses using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) versus International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes for a combination of washouts and code sources: Algorithm, Simple Forward Mapping (SFM), and Forward Backward Mapping (FBM), by Monitoring Period and Year

2010-2016

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from an Algorithm, 183 day washout					
2010	2,136,588	2,136,588	52,722,370	12,110,338.4	40.53
2011	7,146,736	7,146,736	63,032,152	46,227,058.4	113.38
2012	4,140,692	4,140,692	58,419,422	44,623,273.8	70.88
2013	3,114,664	3,114,664	57,183,307	44,146,677.7	54.47
2014	2,725,173	2,725,173	57,545,776	43,445,111.2	47.36
2015	1,961,280	1,961,280	57,377,704	43,635,437.5	34.18
2016	27	27	45,736,542	15,990,741.3	0.00
ICD-9-CM codes from SFM, 183 day washout					
2010	2,136,581	2,136,581	52,722,671	12,110,412.6	40.52
2011	7,146,805	7,146,805	63,032,390	46,227,230.2	113.38
2012	4,140,635	4,140,635	58,419,502	44,623,395.9	70.88
2013	3,114,624	3,114,624	57,183,411	44,146,798.9	54.47
2014	2,725,108	2,725,108	57,545,869	43,445,230.2	47.36
2015	1,961,268	1,961,268	57,378,211	43,635,829.5	34.18
2016	27	27	45,739,308	15,991,925.0	0.00
ICD-9-CM codes from FBM, 183 day washout					
2010	2,136,581	2,136,581	52,722,671	12,110,412.6	40.52
2011	7,146,805	7,146,805	63,032,390	46,227,230.2	113.38
2012	4,140,635	4,140,635	58,419,502	44,623,395.9	70.88
2013	3,114,624	3,114,624	57,183,411	44,146,798.9	54.47
2014	2,725,108	2,725,108	57,545,869	43,445,230.0	47.36
2015	1,961,268	1,961,268	57,377,828	43,635,563.4	34.18
2016	27	27	45,736,642	15,990,773.6	0.00
ICD-10-CM codes from an Algorithm, 183 day washout					
2010	1	1	52,722,370	12,110,338.4	0.00
2011	7	7	64,425,224	47,100,096.3	0.00
2012	22	22	64,585,629	47,582,259.9	0.00
2013	40	40	65,191,062	48,076,220.9	0.00
2014	107	107	66,298,162	47,787,097.9	0.00
2015	2,271,245	2,271,245	66,472,132	48,218,086.1	34.17
2016	3,185,574	3,185,574	52,239,570	17,692,015.6	60.98
ICD-10-CM codes from SFM, 183 day washout					
2010	1	1	52,722,671	12,110,412.6	0.00
2011	7	7	64,425,416	47,100,245.3	0.00
2012	22	22	64,585,696	47,582,330.9	0.00
2013	40	40	65,191,111	48,076,281.1	0.00
2014	106	106	66,298,193	47,787,141.8	0.00
2015	2,267,636	2,267,636	66,473,004	48,218,722.2	34.11
2016	3,183,323	3,183,323	52,247,473	17,694,833.5	60.93
ICD-10-CM codes from FBM, 183 day washout					
2010	1	1	52,722,671	12,110,412.6	0.00
2011	7	7	64,425,416	47,100,245.3	0.00
2012	22	22	64,585,696	47,582,330.9	0.00
2013	40	40	65,191,111	48,076,281.1	0.00
2014	107	107	66,298,192	47,787,141.3	0.00
2015	2,271,264	2,271,264	66,472,162	48,218,116.5	34.17
2016	3,185,602	3,185,602	52,239,564	17,692,008.8	60.98

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from an Algorithm, 0 day washout					
2010	6,121,687	10,765,681	59,827,304	14,362,660.8	102.32
2011	12,393,902	43,429,523	68,676,077	55,982,537.1	180.47
2012	12,517,676	44,640,943	68,904,822	56,651,029.5	181.67
2013	12,677,823	46,364,541	69,659,404	57,248,942.9	182.00
2014	12,732,608	46,725,133	70,996,865	56,961,254.2	179.34
2015	11,227,980	35,290,518	71,140,657	57,427,315.9	157.83
2016	819	1,023	59,085,093	21,179,678.9	0.01
ICD-9-CM codes from SFM and FBM, 0 day washout					
2010	6,121,409	10,765,017	59,827,304	14,362,660.8	102.32
2011	12,393,783	43,428,367	68,676,077	55,982,537.1	180.47
2012	12,517,591	44,640,101	68,904,822	56,651,029.5	181.66
2013	12,677,749	46,363,696	69,659,404	57,248,942.9	182.00
2014	12,732,535	46,724,723	70,996,865	56,961,254.2	179.34
2015	11,227,949	35,290,243	71,140,657	57,427,315.9	157.83
2016	819	1,023	59,085,093	21,179,678.9	0.01
ICD-10-CM codes from an Algorithm, 0 day washout					
2010	10	10	59,827,304	14,362,660.8	0.00
2011	84	84	68,676,077	55,982,537.1	0.00
2012	168	169	68,904,822	56,651,029.5	0.00
2013	400	403	69,659,404	57,248,942.9	0.01
2014	1,221	1,267	70,996,865	56,961,254.2	0.02
2015	6,712,711	12,665,505	71,140,657	57,427,315.9	94.36
2016	8,010,646	18,212,336	59,085,093	21,179,678.9	135.58
ICD-10-CM codes from SFM, 0 day washout					
2010	10	10	59,827,304	14,362,660.8	0.00
2011	84	84	68,676,077	55,982,537.1	0.00
2012	164	165	68,904,822	56,651,029.5	0.00
2013	400	403	69,659,404	57,248,942.9	0.01
2014	1,217	1,262	70,996,865	56,961,254.2	0.02
2015	6,704,634	12,639,645	71,140,657	57,427,315.9	94.24
2016	8,001,792	18,176,563	59,085,093	21,179,678.9	135.43
ICD-10-CM codes from FBM, 0 day washout					
2010	10	10	59,827,304	14,362,660.8	0.00
2011	84	84	68,676,077	55,982,537.1	0.00
2012	168	169	68,904,822	56,651,029.5	0.00
2013	400	403	69,659,404	57,248,942.9	0.01
2014	1,221	1,267	70,996,865	56,961,254.2	0.02
2015	6,712,720	12,665,530	71,140,657	57,427,315.9	94.36
2016	8,010,677	18,212,381	59,085,093	21,179,678.9	135.58

2015

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from an Algorithm, 90 day washout					
2015	4,133,586	4,133,586	55,581,824	12,137,692.4	74.37
ICD-9-CM codes from SFM and FBM, 90 day washout					
2015	4,133,577	4,133,577	55,581,844	12,137,699.1	74.37

2016

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-10-CM codes from an Algorithm, 90 day washout					
2016	4,341,469	4,341,469	55,304,177	12,276,118.7	78.50
ICD-10-CM codes from SFM, 90 day washout					
2016	4,337,848	4,337,848	55,308,607	12,277,979.5	78.43
ICD-10-CM codes from FBM, 90 day washout					
2016	4,341,485	4,341,485	55,304,172	12,276,116.0	78.50

Table 1e. Summary of Incident Hypertension Diagnoses using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) versus International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes for a combination of washouts and code sources: Algorithm, Simple Forward Mapping (SFM), and Forward Backward Mapping (FBM), by Monitoring Period and Year-Month

2010-2016

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from an Algorithm, 183 day washout					
2010					
October	724,941	724,941	49,441,391	4,076,849.0	14.66
November	725,254	725,254	48,831,844	3,943,000.5	14.85
December	686,393	686,393	49,982,147	4,090,489.0	13.73
2011					
January	707,340	707,340	46,838,557	3,843,699.8	15.10
February	661,378	661,378	46,111,260	3,477,710.2	14.34
March	755,501	755,501	46,396,444	3,862,046.7	16.28
April	648,061	648,061	46,136,362	3,735,960.6	14.05
May	622,403	622,403	45,780,369	3,833,722.1	13.60
June	600,317	600,317	45,318,520	3,677,402.8	13.25
July	542,092	542,092	48,715,773	4,061,828.4	11.13
August	588,893	588,893	48,866,539	4,048,742.1	12.05
September	559,535	559,535	47,822,865	3,883,280.6	11.70
October	531,099	531,099	48,089,741	3,988,237.5	11.04
November	487,339	487,339	47,275,161	3,842,615.6	10.31
December	442,778	442,778	48,238,755	3,971,812.2	9.18
2012					
January	439,643	439,643	44,872,263	3,708,488.6	9.80
February	407,004	407,004	44,049,954	3,464,138.7	9.24
March	394,023	394,023	43,970,467	3,691,007.4	8.96
April	353,352	353,352	43,885,143	3,573,703.5	8.05
May	346,534	346,534	43,663,363	3,673,547.3	7.94
June	310,412	310,412	43,431,283	3,540,588.7	7.15
July	324,872	324,872	46,490,513	3,902,534.5	6.99
August	337,961	337,961	46,867,558	3,886,253.7	7.21
September	305,715	305,715	45,985,763	3,746,633.1	6.65
October	342,035	342,035	46,357,152	3,856,791.8	7.38
November	306,873	306,873	45,680,326	3,724,591.4	6.72
December	272,268	272,268	46,600,524	3,854,995.3	5.84
2013					
January	301,557	301,557	44,053,706	3,630,928.8	6.85
February	259,564	259,564	43,330,405	3,298,801.9	5.99
March	263,802	263,802	43,746,808	3,678,516.0	6.03
April	270,604	270,604	43,616,879	3,556,361.6	6.20
May	248,602	248,602	43,455,590	3,662,012.7	5.72
June	219,262	219,262	43,109,645	3,519,632.8	5.09
July	260,476	260,476	46,221,669	3,874,172.9	5.64
August	262,447	262,447	46,426,611	3,864,758.7	5.65
September	257,035	257,035	45,566,663	3,716,287.8	5.64
October	285,285	285,285	45,943,226	3,827,274.9	6.21
November	249,360	249,360	45,297,556	3,695,259.1	5.50
December	236,670	236,670	46,279,544	3,822,670.5	5.11
2014					
January	241,871	241,871	42,933,068	3,555,227.9	5.63
February	214,318	214,318	42,240,173	3,218,122.6	5.07
March	223,147	223,147	42,419,441	3,572,016.5	5.26
April	220,116	220,116	42,386,150	3,457,183.9	5.19
May	200,699	200,699	42,212,133	3,558,810.9	4.75
June	192,946	192,946	42,168,480	3,442,187.3	4.58
July	238,590	238,590	46,120,783	3,861,357.3	5.17
August	227,393	227,393	46,284,587	3,811,650.6	4.91
September	245,780	245,780	45,034,864	3,673,469.8	5.46
October	261,509	261,509	45,846,381	3,802,006.5	5.70
November	222,335	222,335	45,167,977	3,685,601.0	4.92
December	236,469	236,469	46,060,999	3,807,476.9	5.13

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2015					
January	222,444	222,444	43,014,064	3,560,943.9	5.17
February	204,644	204,644	42,342,867	3,195,270.7	4.83
March	229,378	229,378	42,487,675	3,573,460.6	5.40
April	219,494	219,494	42,499,864	3,464,958.6	5.16
May	192,282	192,282	42,393,770	3,574,026.9	4.54
June	200,581	200,581	42,374,732	3,459,176.5	4.73
July	230,503	230,503	46,056,802	3,858,035.8	5.00
August	224,522	224,522	46,491,420	3,852,293.1	4.83
September	237,378	237,378	45,638,510	3,723,181.8	5.20
October	25	25	46,145,461	3,836,466.5	0.00
November	17	17	45,451,195	3,707,912.0	0.00
December	12	12	46,274,204	3,829,711.0	0.00
2016					
January	9	9	42,677,792	3,538,615.5	0.00
February	8	8	42,007,422	3,312,877.8	0.00
March	5	5	42,277,728	3,544,876.1	0.00
April	1	1	30,097,174	2,454,597.1	0.00
May	2	2	14,723,229	1,243,711.5	0.00
June	1	1	14,756,120	1,206,889.1	0.00
July	1	1	4,795,437	404,428.2	0.00
August	0	0	3,812,398	284,746.2	0.00
ICD-9-CM codes from SFM, 183 day washout					
2010					
October	724,937	724,937	49,441,691	4,076,873.9	14.66
November	725,261	725,261	48,832,137	3,943,024.8	14.85
December	686,383	686,383	49,982,441	4,090,513.9	13.73
2011					
January	707,378	707,378	46,838,847	3,843,722.6	15.10
February	661,403	661,403	46,111,515	3,477,728.6	14.34
March	755,522	755,522	46,396,655	3,862,064.5	16.28
April	648,076	648,076	46,136,544	3,735,975.1	14.05
May	622,406	622,406	45,780,530	3,833,735.8	13.60
June	600,327	600,327	45,318,672	3,677,414.8	13.25
July	542,089	542,089	48,715,920	4,061,841.1	11.13
August	588,891	588,891	48,866,681	4,048,754.4	12.05
September	559,526	559,526	47,823,001	3,883,292.2	11.70
October	531,084	531,084	48,089,873	3,988,249.4	11.04
November	487,336	487,336	47,275,297	3,842,627.2	10.31
December	442,767	442,767	48,238,891	3,971,824.3	9.18
2012					
January	439,649	439,649	44,872,385	3,708,498.9	9.80
February	406,996	406,996	44,050,060	3,464,147.9	9.24
March	394,015	394,015	43,970,581	3,691,017.4	8.96
April	353,342	353,342	43,885,259	3,573,713.7	8.05
May	346,529	346,529	43,663,486	3,673,558.1	7.94
June	310,409	310,409	43,431,408	3,540,599.0	7.15
July	324,874	324,874	46,490,641	3,902,545.2	6.99
August	337,958	337,958	46,867,672	3,886,263.8	7.21
September	305,702	305,702	45,985,872	3,746,642.9	6.65
October	342,025	342,025	46,357,269	3,856,802.4	7.38
November	306,871	306,871	45,680,444	3,724,601.4	6.72
December	272,265	272,265	46,600,639	3,855,005.1	5.84
2013					
January	301,550	301,550	44,053,811	3,630,938.0	6.85
February	259,552	259,552	43,330,516	3,298,810.6	5.99
March	263,803	263,803	43,746,931	3,678,526.6	6.03
April	270,601	270,601	43,617,002	3,556,371.8	6.20
May	248,600	248,600	43,455,710	3,662,023.2	5.72
June	219,260	219,260	43,109,768	3,519,642.8	5.09
July	260,475	260,475	46,221,798	3,874,183.8	5.64
August	262,446	262,446	46,426,735	3,864,769.4	5.65
September	257,031	257,031	45,566,781	3,716,297.8	5.64
October	285,284	285,284	45,943,347	3,827,285.1	6.21
November	249,351	249,351	45,297,671	3,695,269.0	5.50
December	236,671	236,671	46,279,667	3,822,680.8	5.11

		Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2014						
	January	241,867	241,867	42,933,176	3,555,237.2	5.63
	February	214,318	214,318	42,240,279	3,218,130.9	5.07
	March	223,137	223,137	42,419,544	3,572,025.7	5.26
	April	220,114	220,114	42,386,261	3,457,193.3	5.19
	May	200,695	200,695	42,212,242	3,558,820.4	4.75
	June	192,937	192,937	42,168,588	3,442,196.5	4.58
	July	238,577	238,577	46,120,899	3,861,367.6	5.17
	August	227,392	227,392	46,284,713	3,811,661.2	4.91
	September	245,774	245,774	45,034,988	3,673,480.1	5.46
	October	261,503	261,503	45,846,506	3,802,017.6	5.70
	November	222,329	222,329	45,168,104	3,685,611.6	4.92
	December	236,465	236,465	46,061,131	3,807,488.3	5.13
2015						
	January	222,445	222,445	43,014,193	3,560,954.7	5.17
	February	204,641	204,641	42,342,994	3,195,280.5	4.83
	March	229,376	229,376	42,487,802	3,573,471.5	5.40
	April	219,491	219,491	42,499,991	3,464,969.1	5.16
	May	192,282	192,282	42,393,901	3,574,038.1	4.54
	June	200,576	200,576	42,374,860	3,459,187.2	4.73
	July	230,505	230,505	46,056,936	3,858,047.2	5.00
	August	224,519	224,519	46,491,546	3,852,304.0	4.83
	September	237,379	237,379	45,638,638	3,723,192.4	5.20
	October	25	25	46,145,646	3,836,508.9	0.00
	November	17	17	45,452,157	3,708,010.0	0.00
	December	12	12	46,275,877	3,829,865.9	0.00
2016						
	January	9	9	42,680,043	3,538,811.3	0.00
	February	8	8	42,010,279	3,313,110.7	0.00
	March	5	5	42,281,307	3,545,178.1	0.00
	April	1	1	30,099,988	2,454,838.3	0.00
	May	2	2	14,724,290	1,243,806.1	0.00
	June	1	1	14,757,196	1,206,982.7	0.00
	July	1	1	4,795,585	404,441.9	0.00
	August	0	0	3,812,521	284,756.0	0.00
ICD-9-CM codes from FBM, 183 day washout						
2010						
	October	724,937	724,937	49,441,691	4,076,873.9	14.66
	November	725,261	725,261	48,832,137	3,943,024.8	14.85
	December	686,383	686,383	49,982,441	4,090,513.9	13.73
2011						
	January	707,378	707,378	46,838,847	3,843,722.6	15.10
	February	661,403	661,403	46,111,515	3,477,728.6	14.34
	March	755,522	755,522	46,396,655	3,862,064.5	16.28
	April	648,076	648,076	46,136,544	3,735,975.1	14.05
	May	622,406	622,406	45,780,530	3,833,735.8	13.60
	June	600,327	600,327	45,318,672	3,677,414.8	13.25
	July	542,089	542,089	48,715,920	4,061,841.1	11.13
	August	588,891	588,891	48,866,681	4,048,754.4	12.05
	September	559,526	559,526	47,823,001	3,883,292.2	11.70
	October	531,084	531,084	48,089,873	3,988,249.4	11.04
	November	487,336	487,336	47,275,297	3,842,627.2	10.31
	December	442,767	442,767	48,238,891	3,971,824.3	9.18
2012						
	January	439,649	439,649	44,872,385	3,708,498.9	9.80
	February	406,996	406,996	44,050,060	3,464,147.9	9.24
	March	394,015	394,015	43,970,581	3,691,017.4	8.96
	April	353,342	353,342	43,885,259	3,573,713.7	8.05
	May	346,529	346,529	43,663,486	3,673,558.1	7.94
	June	310,409	310,409	43,431,408	3,540,599.0	7.15
	July	324,874	324,874	46,490,641	3,902,545.2	6.99
	August	337,958	337,958	46,867,672	3,886,263.8	7.21
	September	305,702	305,702	45,985,872	3,746,642.9	6.65
	October	342,025	342,025	46,357,269	3,856,802.4	7.38
	November	306,871	306,871	45,680,444	3,724,601.4	6.72
	December	272,265	272,265	46,600,639	3,855,005.1	5.84

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2013					
January	301,550	301,550	44,053,811	3,630,938.0	6.85
February	259,552	259,552	43,330,516	3,298,810.6	5.99
March	263,803	263,803	43,746,931	3,678,526.6	6.03
April	270,601	270,601	43,617,002	3,556,371.8	6.20
May	248,600	248,600	43,455,710	3,662,023.2	5.72
June	219,260	219,260	43,109,768	3,519,642.8	5.09
July	260,475	260,475	46,221,798	3,874,183.8	5.64
August	262,446	262,446	46,426,735	3,864,769.4	5.65
September	257,031	257,031	45,566,781	3,716,297.8	5.64
October	285,284	285,284	45,943,347	3,827,285.1	6.21
November	249,351	249,351	45,297,671	3,695,269.0	5.50
December	236,671	236,671	46,279,667	3,822,680.8	5.11
2014					
January	241,867	241,867	42,933,176	3,555,237.2	5.63
February	214,318	214,318	42,240,279	3,218,130.9	5.07
March	223,137	223,137	42,419,544	3,572,025.6	5.26
April	220,114	220,114	42,386,260	3,457,193.2	5.19
May	200,695	200,695	42,212,241	3,558,820.3	4.75
June	192,937	192,937	42,168,588	3,442,196.5	4.58
July	238,577	238,577	46,120,899	3,861,367.6	5.17
August	227,392	227,392	46,284,713	3,811,661.2	4.91
September	245,774	245,774	45,034,988	3,673,480.1	5.46
October	261,503	261,503	45,846,506	3,802,017.6	5.70
November	222,329	222,329	45,168,104	3,685,611.6	4.92
December	236,465	236,465	46,061,131	3,807,488.3	5.13
2015					
January	222,445	222,445	43,014,193	3,560,954.7	5.17
February	204,641	204,641	42,342,994	3,195,280.5	4.83
March	229,376	229,376	42,487,802	3,573,471.5	5.40
April	219,491	219,491	42,499,991	3,464,969.1	5.16
May	192,282	192,282	42,393,901	3,574,038.1	4.54
June	200,576	200,576	42,374,860	3,459,187.2	4.73
July	230,505	230,505	46,056,936	3,858,047.2	5.00
August	224,519	224,519	46,491,546	3,852,304.0	4.83
September	237,379	237,379	45,638,637	3,723,192.2	5.20
October	25	25	46,145,586	3,836,477.0	0.00
November	17	17	45,451,315	3,707,921.6	0.00
December	12	12	46,274,314	3,829,720.4	0.00
2016					
January	9	9	42,677,890	3,538,623.9	0.00
February	8	8	42,007,514	3,312,884.9	0.00
March	5	5	42,277,818	3,544,883.4	0.00
April	1	1	30,097,222	2,454,600.9	0.00
May	2	2	14,723,266	1,243,714.4	0.00
June	1	1	14,756,151	1,206,891.5	0.00
July	1	1	4,795,440	404,428.4	0.00
August	0	0	3,812,397	284,746.2	0.00
ICD-10-CM codes from an Algorithm, 183 day washout					
2010					
October	0	0	49,441,391	4,076,849.0	0.00
November	1	1	48,831,844	3,943,000.5	0.00
December	0	0	49,982,147	4,090,489.0	0.00
2011					
January	0	0	46,838,557	3,843,699.8	0.00
February	1	1	46,111,260	3,477,710.2	0.00
March	1	1	46,396,444	3,862,046.7	0.00
April	1	1	46,407,886	3,745,499.6	0.00
May	1	1	46,336,384	3,867,132.6	0.00
June	1	1	46,152,083	3,730,796.3	0.00
July	0	0	49,830,089	4,136,162.9	0.00
August	1	1	50,281,726	4,146,321.6	0.00
September	0	0	49,563,520	4,001,825.2	0.00
October	0	0	50,133,029	4,133,251.4	0.00
November	1	1	49,550,022	4,001,932.4	0.00
December	0	0	50,768,074	4,153,717.7	0.00

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2012					
January	0	0	47,429,479	3,895,043.7	0.00
February	1	1	46,751,516	3,650,174.7	0.00
March	5	5	46,841,130	3,899,973.4	0.00
April	1	1	46,918,499	3,789,281.7	0.00
May	0	0	46,847,217	3,908,688.5	0.00
June	3	3	46,733,003	3,779,120.4	0.00
July	1	1	49,889,347	4,156,226.4	0.00
August	4	4	50,478,949	4,153,664.3	0.00
September	3	3	49,770,648	4,019,042.4	0.00
October	0	0	50,294,347	4,148,248.7	0.00
November	3	3	49,705,094	4,017,061.6	0.00
December	1	1	50,750,065	4,165,734.2	0.00
2013					
January	3	3	48,089,237	3,932,615.2	0.00
February	2	2	47,369,336	3,575,632.7	0.00
March	5	5	47,909,342	3,989,838.7	0.00
April	3	3	47,852,464	3,864,615.4	0.00
May	3	3	47,748,221	3,985,880.5	0.00
June	2	2	47,446,051	3,839,234.7	0.00
July	3	3	50,617,210	4,206,668.5	0.00
August	1	1	50,954,240	4,206,001.2	0.00
September	1	1	50,196,553	4,055,579.9	0.00
October	4	4	50,703,510	4,183,913.3	0.00
November	7	7	50,077,616	4,045,604.7	0.00
December	6	6	51,132,130	4,190,636.0	0.00
2014					
January	9	9	47,524,244	3,902,544.2	0.00
February	7	7	46,819,409	3,534,865.1	0.00
March	7	7	47,075,823	3,924,981.6	0.00
April	6	6	47,097,627	3,802,739.5	0.00
May	9	9	46,995,024	3,921,371.5	0.00
June	10	10	46,945,165	3,796,936.9	0.00
July	9	9	50,943,630	4,228,950.3	0.00
August	11	11	51,192,860	4,182,202.7	0.00
September	11	11	50,010,150	4,040,217.9	0.00
October	8	8	50,941,184	4,186,894.4	0.00
November	10	10	50,277,471	4,062,760.6	0.00
December	10	10	51,264,460	4,202,633.2	0.00
2015					
January	44	44	47,983,206	3,938,905.9	0.00
February	22	22	47,294,047	3,532,426.6	0.00
March	35	35	47,402,866	3,948,488.5	0.00
April	32	32	47,461,231	3,830,873.3	0.00
May	55	55	47,379,334	3,955,583.8	0.00
June	61	61	47,350,230	3,830,307.2	0.00
July	129	129	51,084,240	4,242,869.5	0.00
August	341	341	51,599,504	4,243,771.6	0.01
September	3,950	3,950	50,857,942	4,109,005.9	0.08
October	790,486	790,486	51,488,391	4,240,842.5	15.35
November	737,208	737,208	50,796,230	4,103,195.7	14.51
December	738,882	738,882	51,694,236	4,241,815.6	14.29
2016					
January	711,714	711,714	47,814,200	3,929,442.8	14.88
February	721,371	721,371	47,127,320	3,679,086.2	15.31
March	743,236	743,236	47,422,964	3,934,375.9	15.67
April	519,934	519,934	33,771,946	2,736,275.9	15.40
May	204,110	204,110	16,191,261	1,360,711.4	12.61
June	196,363	196,363	16,102,504	1,311,211.7	12.19
July	53,918	53,918	5,201,743	436,344.0	10.37
August	34,928	34,928	4,095,756	304,567.6	8.53
ICD-10-CM codes from SFM, 183 day washout					
2010					
October	0	0	49,441,691	4,076,873.9	0.00
November	1	1	48,832,137	3,943,024.8	0.00
December	0	0	49,982,441	4,090,513.9	0.00

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	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2011					
January	0	0	46,838,847	3,843,722.6	0.00
February	1	1	46,111,515	3,477,728.6	0.00
March	1	1	46,396,655	3,862,064.5	0.00
April	1	1	46,408,057	3,745,513.7	0.00
May	1	1	46,336,523	3,867,144.8	0.00
June	1	1	46,152,199	3,730,805.8	0.00
July	0	0	49,830,207	4,136,172.9	0.00
August	1	1	50,281,833	4,146,331.1	0.00
September	0	0	49,563,627	4,001,834.3	0.00
October	0	0	50,133,132	4,133,260.5	0.00
November	1	1	49,550,120	4,001,940.7	0.00
December	0	0	50,768,167	4,153,725.6	0.00
2012					
January	0	0	47,429,558	3,895,050.2	0.00
February	1	1	46,751,588	3,650,180.6	0.00
March	5	5	46,841,203	3,899,979.9	0.00
April	1	1	46,918,570	3,789,288.1	0.00
May	0	0	46,847,297	3,908,695.1	0.00
June	3	3	46,733,075	3,779,126.6	0.00
July	1	1	49,889,427	4,156,232.5	0.00
August	4	4	50,479,009	4,153,670.1	0.00
September	3	3	49,770,701	4,019,047.2	0.00
October	0	0	50,294,406	4,148,254.2	0.00
November	3	3	49,705,163	4,017,067.0	0.00
December	1	1	50,750,125	4,165,739.4	0.00
2013					
January	3	3	48,089,291	3,932,620.2	0.00
February	2	2	47,369,405	3,575,638.1	0.00
March	5	5	47,909,417	3,989,845.2	0.00
April	3	3	47,852,536	3,864,621.3	0.00
May	3	3	47,748,287	3,985,886.2	0.00
June	2	2	47,446,115	3,839,239.8	0.00
July	3	3	50,617,278	4,206,674.2	0.00
August	1	1	50,954,295	4,206,006.4	0.00
September	1	1	50,196,600	4,055,584.2	0.00
October	4	4	50,703,555	4,183,917.3	0.00
November	7	7	50,077,656	4,045,608.4	0.00
December	6	6	51,132,176	4,190,639.8	0.00
2014					
January	9	9	47,524,283	3,902,547.4	0.00
February	7	7	46,819,442	3,534,867.8	0.00
March	6	6	47,075,856	3,924,984.5	0.00
April	6	6	47,097,668	3,802,743.0	0.00
May	9	9	46,995,062	3,921,375.0	0.00
June	10	10	46,945,202	3,796,940.2	0.00
July	9	9	50,943,665	4,228,954.0	0.00
August	11	11	51,192,909	4,182,206.7	0.00
September	11	11	50,010,194	4,040,221.7	0.00
October	8	8	50,941,233	4,186,898.7	0.00
November	10	10	50,277,521	4,062,764.9	0.00
December	10	10	51,264,510	4,202,637.9	0.00
2015					
January	44	44	47,983,256	3,938,910.2	0.00
February	22	22	47,294,092	3,532,430.3	0.00
March	35	35	47,402,906	3,948,492.0	0.00
April	32	32	47,461,267	3,830,876.1	0.00
May	55	55	47,379,361	3,955,586.6	0.00
June	61	61	47,350,260	3,830,309.7	0.00
July	129	129	51,084,272	4,242,872.2	0.00
August	340	340	51,599,534	4,243,774.3	0.01
September	3,939	3,939	50,857,971	4,109,008.1	0.08
October	789,000	789,000	51,488,616	4,240,914.6	15.32
November	736,138	736,138	50,798,280	4,103,396.0	14.49
December	737,841	737,841	51,698,028	4,242,152.3	14.27

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2016					
January	710,949	710,949	47,819,379	3,929,875.6	14.87
February	720,759	720,759	47,134,101	3,679,611.7	15.29
March	742,685	742,685	47,431,781	3,935,081.3	15.66
April	519,833	519,833	33,779,171	2,736,869.0	15.39
May	203,973	203,973	16,193,998	1,360,948.2	12.60
June	196,292	196,292	16,105,367	1,311,449.7	12.19
July	53,909	53,909	5,202,304	436,392.6	10.36
August	34,923	34,923	4,096,207	304,605.4	8.53
ICD-10-CM codes from FBM, 183 day washout					
2010					
October	0	0	49,441,691	4,076,873.9	0.00
November	1	1	48,832,137	3,943,024.8	0.00
December	0	0	49,982,441	4,090,513.9	0.00
2011					
January	0	0	46,838,847	3,843,722.6	0.00
February	1	1	46,111,515	3,477,728.6	0.00
March	1	1	46,396,655	3,862,064.5	0.00
April	1	1	46,408,057	3,745,513.7	0.00
May	1	1	46,336,523	3,867,144.8	0.00
June	1	1	46,152,199	3,730,805.8	0.00
July	0	0	49,830,207	4,136,172.9	0.00
August	1	1	50,281,833	4,146,331.1	0.00
September	0	0	49,563,627	4,001,834.3	0.00
October	0	0	50,133,132	4,133,260.5	0.00
November	1	1	49,550,120	4,001,940.7	0.00
December	0	0	50,768,167	4,153,725.6	0.00
2012					
January	0	0	47,429,558	3,895,050.2	0.00
February	1	1	46,751,588	3,650,180.6	0.00
March	5	5	46,841,203	3,899,979.9	0.00
April	1	1	46,918,570	3,789,288.1	0.00
May	0	0	46,847,297	3,908,695.1	0.00
June	3	3	46,733,075	3,779,126.6	0.00
July	1	1	49,889,427	4,156,232.5	0.00
August	4	4	50,479,009	4,153,670.1	0.00
September	3	3	49,770,701	4,019,047.2	0.00
October	0	0	50,294,406	4,148,254.2	0.00
November	3	3	49,705,163	4,017,067.0	0.00
December	1	1	50,750,125	4,165,739.4	0.00
2013					
January	3	3	48,089,291	3,932,620.2	0.00
February	2	2	47,369,405	3,575,638.1	0.00
March	5	5	47,909,417	3,989,845.2	0.00
April	3	3	47,852,536	3,864,621.3	0.00
May	3	3	47,748,287	3,985,886.2	0.00
June	2	2	47,446,115	3,839,239.8	0.00
July	3	3	50,617,278	4,206,674.2	0.00
August	1	1	50,954,295	4,206,006.4	0.00
September	1	1	50,196,600	4,055,584.2	0.00
October	4	4	50,703,555	4,183,917.3	0.00
November	7	7	50,077,656	4,045,608.4	0.00
December	6	6	51,132,176	4,190,639.8	0.00
2014					
January	9	9	47,524,283	3,902,547.4	0.00
February	7	7	46,819,442	3,534,867.8	0.00
March	7	7	47,075,856	3,924,984.4	0.00
April	6	6	47,097,667	3,802,742.9	0.00
May	9	9	46,995,061	3,921,374.9	0.00
June	10	10	46,945,201	3,796,940.1	0.00
July	9	9	50,943,664	4,228,953.9	0.00
August	11	11	51,192,908	4,182,206.6	0.00
September	11	11	50,010,193	4,040,221.6	0.00
October	8	8	50,941,233	4,186,898.7	0.00
November	10	10	50,277,521	4,062,764.9	0.00
December	10	10	51,264,510	4,202,637.9	0.00

		Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2015						
	January	44	44	47,983,256	3,938,910.2	0.00
	February	22	22	47,294,092	3,532,430.3	0.00
	March	35	35	47,402,905	3,948,492.0	0.00
	April	32	32	47,461,266	3,830,876.0	0.00
	May	55	55	47,379,361	3,955,586.6	0.00
	June	61	61	47,350,260	3,830,309.7	0.00
	July	129	129	51,084,272	4,242,872.2	0.00
	August	341	341	51,599,534	4,243,774.2	0.01
	September	3,950	3,950	50,857,970	4,109,008.0	0.08
	October	790,492	790,492	51,488,418	4,240,844.6	15.35
	November	737,217	737,217	50,796,250	4,103,196.9	14.51
	December	738,886	738,886	51,694,243	4,241,816.0	14.29
2016						
	January	711,717	711,717	47,814,199	3,929,443.1	14.89
	February	721,377	721,377	47,127,314	3,679,085.5	15.31
	March	743,244	743,244	47,422,949	3,934,374.5	15.67
	April	519,939	519,939	33,771,928	2,736,274.1	15.40
	May	204,114	204,114	16,191,246	1,360,710.0	12.61
	June	196,365	196,365	16,102,485	1,311,210.1	12.19
	July	53,918	53,918	5,201,743	436,344.0	10.37
	August	34,928	34,928	4,095,755	304,567.6	8.53

ICD-9-CM codes from an Algorithm, 0 day washout

		Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2010						
	October	2,705,216	3,651,649	57,716,153	4,834,624.7	46.87
	November	2,665,854	3,598,049	57,083,139	4,676,871.8	46.70
	December	2,600,861	3,515,983	58,361,401	4,851,164.3	44.56
2011						
	January	2,550,341	3,468,465	54,708,355	4,559,066.6	46.62
	February	2,459,502	3,310,155	54,004,537	4,128,109.5	45.54
	March	2,816,993	3,895,277	54,304,661	4,589,505.2	51.87
	April	2,571,730	3,486,140	54,376,438	4,451,813.2	47.29
	May	2,593,406	3,522,638	54,345,382	4,596,809.0	47.72
	June	2,625,092	3,567,409	54,180,080	4,437,454.8	48.45
	July	2,559,060	3,454,452	58,516,097	4,922,622.7	43.73
	August	2,801,464	3,840,071	58,949,591	4,934,256.4	47.52
	September	2,741,140	3,716,935	58,085,767	4,756,913.3	47.19
	October	2,802,577	3,798,153	58,676,595	4,912,248.5	47.76
	November	2,747,942	3,714,917	58,078,196	4,756,987.5	47.31
	December	2,696,274	3,654,911	59,388,173	4,936,750.4	45.40
2012						
	January	2,701,487	3,710,619	55,530,223	4,630,251.0	48.65
	February	2,647,095	3,604,239	54,876,327	4,343,731.8	48.24
	March	2,771,095	3,808,897	54,975,889	4,646,212.7	50.41
	April	2,659,723	3,607,851	55,096,138	4,512,914.6	48.27
	May	2,737,579	3,757,782	55,049,184	4,658,029.6	49.73
	June	2,604,132	3,533,714	54,978,230	4,504,350.2	47.37
	July	2,705,091	3,689,618	58,694,936	4,954,101.6	46.09
	August	2,839,243	3,912,485	59,224,748	4,948,556.2	47.94
	September	2,647,613	3,577,398	58,386,075	4,782,162.8	45.35
	October	2,972,388	4,088,718	58,911,806	4,936,312.3	50.45
	November	2,788,536	3,792,285	58,315,915	4,778,740.5	47.82
	December	2,618,784	3,557,337	59,471,414	4,955,666.4	44.03
2013						
	January	2,789,409	3,882,447	56,197,731	4,670,823.4	49.64
	February	2,554,999	3,494,385	55,542,762	4,246,777.7	46.00
	March	2,696,210	3,734,684	56,138,854	4,744,073.1	48.03
	April	2,851,691	3,996,748	56,104,107	4,595,653.8	50.83
	May	2,769,588	3,880,435	56,057,246	4,744,239.6	49.41
	June	2,568,714	3,538,293	55,778,760	4,571,072.3	46.05
	July	2,844,604	3,975,943	59,556,573	5,016,305.0	47.76
	August	2,850,079	3,982,777	59,876,675	5,015,940.4	47.60
	September	2,801,061	3,866,847	59,000,407	4,833,576.6	47.48
	October	3,095,827	4,346,018	59,493,519	4,988,077.6	52.04
	November	2,771,144	3,822,868	58,886,507	4,825,393.1	47.06
	December	2,764,471	3,843,096	60,055,310	4,997,010.4	46.03

		Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2014						
	January	2,720,780	3,820,382	55,701,673	4,645,703.0	48.85
	February	2,545,372	3,525,918	55,017,049	4,207,098.7	46.27
	March	2,736,263	3,845,031	55,271,800	4,673,920.9	49.51
	April	2,787,016	3,921,177	55,288,350	4,527,701.2	50.41
	May	2,676,484	3,771,627	55,167,407	4,668,733.3	48.52
	June	2,637,212	3,690,944	55,203,751	4,521,918.7	47.77
	July	2,885,532	4,085,315	60,017,841	5,048,903.4	48.08
	August	2,751,464	3,877,568	60,258,780	4,995,827.3	45.66
	September	2,892,130	4,077,746	58,851,445	4,821,953.3	49.14
	October	3,068,861	4,358,908	59,811,527	4,994,616.9	51.31
	November	2,661,780	3,691,352	59,123,837	4,845,527.4	45.02
	December	2,869,516	4,059,165	60,149,691	5,009,350.1	47.71
2015						
	January	2,679,308	3,788,814	56,110,525	4,678,415.9	47.75
	February	2,506,756	3,513,798	55,431,573	4,198,556.6	45.22
	March	2,856,737	4,074,785	55,562,529	4,693,730.3	51.41
	April	2,840,361	4,036,269	55,654,716	4,555,384.6	51.04
	May	2,639,473	3,734,454	55,625,323	4,706,910.3	47.45
	June	2,774,628	3,946,867	55,657,221	4,559,569.0	49.85
	July	2,897,588	4,137,767	60,121,043	5,059,633.5	48.20
	August	2,823,020	3,992,538	60,711,514	5,062,973.3	46.50
	September	2,914,101	4,061,750	59,802,370	4,899,634.6	48.73
	October	1,218	2,326	60,415,951	5,056,566.0	0.02
	November	468	715	59,733,371	4,894,566.1	0.01
	December	268	435	60,716,875	5,061,375.7	0.00
2016						
	January	207	282	56,184,879	4,690,539.7	0.00
	February	176	222	55,510,698	4,396,218.4	0.00
	March	123	126	55,892,627	4,707,486.7	0.00
	April	89	89	40,838,247	3,348,128.0	0.00
	May	89	90	18,931,915	1,605,398.3	0.00
	June	92	94	18,953,391	1,556,068.3	0.00
	July	69	69	6,080,161	514,545.9	0.01
	August	51	51	4,828,490	361,293.6	0.01
ICD-9-CM codes from SFM and FBM, 0 day washout						
2010						
	October	2,705,076	3,651,413	57,716,153	4,834,624.7	46.87
	November	2,665,686	3,597,826	57,083,139	4,676,871.8	46.70
	December	2,600,711	3,515,778	58,361,401	4,851,164.3	44.56
2011						
	January	2,550,294	3,468,382	54,708,355	4,559,066.6	46.62
	February	2,459,443	3,310,067	54,004,537	4,128,109.5	45.54
	March	2,816,938	3,895,193	54,304,661	4,589,505.2	51.87
	April	2,571,681	3,486,019	54,376,438	4,451,813.2	47.29
	May	2,593,344	3,522,497	54,345,382	4,596,809.0	47.72
	June	2,625,045	3,567,313	54,180,080	4,437,454.8	48.45
	July	2,559,024	3,454,376	58,516,097	4,922,622.7	43.73
	August	2,801,418	3,839,961	58,949,591	4,934,256.4	47.52
	September	2,741,095	3,716,858	58,085,767	4,756,913.3	47.19
	October	2,802,529	3,798,047	58,676,595	4,912,248.5	47.76
	November	2,747,915	3,714,852	58,078,196	4,756,987.5	47.31
	December	2,696,232	3,654,802	59,388,173	4,936,750.4	45.40
2012						
	January	2,701,455	3,710,512	55,530,223	4,630,251.0	48.65
	February	2,647,054	3,604,135	54,876,327	4,343,731.8	48.24
	March	2,771,056	3,808,829	54,975,889	4,646,212.7	50.40
	April	2,659,687	3,607,790	55,096,138	4,512,914.6	48.27
	May	2,737,560	3,757,740	55,049,184	4,658,029.6	49.73
	June	2,604,097	3,533,659	54,978,230	4,504,350.2	47.37
	July	2,705,059	3,689,563	58,694,936	4,954,101.6	46.09
	August	2,839,214	3,912,416	59,224,748	4,948,556.2	47.94
	September	2,647,573	3,577,318	58,386,075	4,782,162.8	45.35
	October	2,972,350	4,088,640	58,911,806	4,936,312.3	50.45
	November	2,788,503	3,792,215	58,315,915	4,778,740.5	47.82
	December	2,618,760	3,557,284	59,471,414	4,955,666.4	44.03

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2013					
January	2,789,376	3,882,357	56,197,731	4,670,823.4	49.64
February	2,554,961	3,494,289	55,542,762	4,246,777.7	46.00
March	2,696,180	3,734,603	56,138,854	4,744,073.1	48.03
April	2,851,663	3,996,676	56,104,107	4,595,653.8	50.83
May	2,769,568	3,880,379	56,057,246	4,744,239.6	49.41
June	2,568,687	3,538,182	55,778,760	4,571,072.3	46.05
July	2,844,591	3,975,869	59,556,573	5,016,305.0	47.76
August	2,850,052	3,982,716	59,876,675	5,015,940.4	47.60
September	2,801,044	3,866,790	59,000,407	4,833,576.6	47.47
October	3,095,812	4,345,954	59,493,519	4,988,077.6	52.04
November	2,771,121	3,822,823	58,886,507	4,825,393.1	47.06
December	2,764,459	3,843,058	60,055,310	4,997,010.4	46.03
2014					
January	2,720,758	3,820,344	55,701,673	4,645,703.0	48.85
February	2,545,354	3,525,896	55,017,049	4,207,098.7	46.26
March	2,736,245	3,845,002	55,271,800	4,673,920.9	49.51
April	2,786,992	3,921,140	55,288,350	4,527,701.2	50.41
May	2,676,472	3,771,609	55,167,407	4,668,733.3	48.52
June	2,637,191	3,690,911	55,203,751	4,521,918.7	47.77
July	2,885,507	4,085,277	60,017,841	5,048,903.4	48.08
August	2,751,451	3,877,540	60,258,780	4,995,827.3	45.66
September	2,892,108	4,077,693	58,851,445	4,821,953.3	49.14
October	3,068,844	4,358,876	59,811,527	4,994,616.9	51.31
November	2,661,759	3,691,303	59,123,837	4,845,527.4	45.02
December	2,869,499	4,059,132	60,149,691	5,009,350.1	47.71
2015					
January	2,679,293	3,788,780	56,110,525	4,678,415.9	47.75
February	2,506,739	3,513,763	55,431,573	4,198,556.6	45.22
March	2,856,718	4,074,752	55,562,529	4,693,730.3	51.41
April	2,840,350	4,036,239	55,654,716	4,555,384.6	51.04
May	2,639,459	3,734,429	55,625,323	4,706,910.3	47.45
June	2,774,614	3,946,836	55,657,221	4,559,569.0	49.85
July	2,897,577	4,137,732	60,121,043	5,059,633.5	48.20
August	2,823,001	3,992,506	60,711,514	5,062,973.3	46.50
September	2,914,091	4,061,730	59,802,370	4,899,634.6	48.73
October	1,218	2,326	60,415,951	5,056,566.0	0.02
November	468	715	59,733,371	4,894,566.1	0.01
December	268	435	60,716,875	5,061,375.7	0.00
2016					
January	207	282	56,184,879	4,690,539.7	0.00
February	176	222	55,510,698	4,396,218.4	0.00
March	123	126	55,892,627	4,707,486.7	0.00
April	89	89	40,838,247	3,348,128.0	0.00
May	89	90	18,931,915	1,605,398.3	0.00
June	92	94	18,953,391	1,556,068.3	0.00
July	69	69	6,080,161	514,545.9	0.01
August	51	51	4,828,490	361,293.6	0.01
ICD-10-CM codes from an Algorithm, 0 day washout					
2010					
October	3	3	57,716,153	4,834,624.7	0.00
November	5	5	57,083,139	4,676,871.8	0.00
December	2	2	58,361,401	4,851,164.3	0.00
2011					
January	3	3	54,708,355	4,559,066.6	0.00
February	7	7	54,004,537	4,128,109.5	0.00
March	2	2	54,304,661	4,589,505.2	0.00
April	4	4	54,376,438	4,451,813.2	0.00
May	4	4	54,345,382	4,596,809.0	0.00
June	9	9	54,180,080	4,437,454.8	0.00
July	8	8	58,516,097	4,922,622.7	0.00
August	5	5	58,949,591	4,934,256.4	0.00
September	13	13	58,085,767	4,756,913.3	0.00
October	7	7	58,676,595	4,912,248.5	0.00
November	13	13	58,078,196	4,756,987.5	0.00
December	9	9	59,388,173	4,936,750.4	0.00

		Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2012						
	January	5	5	55,530,223	4,630,251.0	0.00
	February	9	9	54,876,327	4,343,731.8	0.00
	March	15	15	54,975,889	4,646,212.7	0.00
	April	13	13	55,096,138	4,512,914.6	0.00
	May	18	18	55,049,184	4,658,029.6	0.00
	June	10	10	54,978,230	4,504,350.2	0.00
	July	21	21	58,694,936	4,954,101.6	0.00
	August	17	17	59,224,748	4,948,556.2	0.00
	September	10	10	58,386,075	4,782,162.8	0.00
	October	17	17	58,911,806	4,936,312.3	0.00
	November	20	20	58,315,915	4,778,740.5	0.00
	December	14	14	59,471,414	4,955,666.4	0.00
2013						
	January	31	31	56,197,731	4,670,823.4	0.00
	February	22	22	55,542,762	4,246,777.7	0.00
	March	34	34	56,138,854	4,744,073.1	0.00
	April	35	35	56,104,107	4,595,653.8	0.00
	May	25	26	56,057,246	4,744,239.6	0.00
	June	22	22	55,778,760	4,571,072.3	0.00
	July	30	30	59,556,573	5,016,305.0	0.00
	August	23	23	59,876,675	5,015,940.4	0.00
	September	35	35	59,000,407	4,833,576.6	0.00
	October	37	37	59,493,519	4,988,077.6	0.00
	November	50	50	58,886,507	4,825,393.1	0.00
	December	57	58	60,055,310	4,997,010.4	0.00
2014						
	January	63	63	55,701,673	4,645,703.0	0.00
	February	66	68	55,017,049	4,207,098.7	0.00
	March	62	65	55,271,800	4,673,920.9	0.00
	April	62	66	55,288,350	4,527,701.2	0.00
	May	83	89	55,167,407	4,668,733.3	0.00
	June	84	87	55,203,751	4,521,918.7	0.00
	July	100	100	60,017,841	5,048,903.4	0.00
	August	122	124	60,258,780	4,995,827.3	0.00
	September	131	139	58,851,445	4,821,953.3	0.00
	October	140	140	59,811,527	4,994,616.9	0.00
	November	132	133	59,123,837	4,845,527.4	0.00
	December	190	193	60,149,691	5,009,350.1	0.00
2015						
	January	347	347	56,110,525	4,678,415.9	0.01
	February	286	289	55,431,573	4,198,556.6	0.01
	March	345	346	55,562,529	4,693,730.3	0.01
	April	453	458	55,654,716	4,555,384.6	0.01
	May	590	591	55,625,323	4,706,910.3	0.01
	June	812	814	55,657,221	4,559,569.0	0.01
	July	1,560	1,566	60,121,043	5,059,633.5	0.03
	August	7,748	11,172	60,711,514	5,062,973.3	0.13
	September	39,904	55,098	59,802,370	4,899,634.6	0.67
	October	3,056,803	4,352,851	60,415,951	5,056,566.0	50.60
	November	2,867,698	4,034,407	59,733,371	4,894,566.1	48.01
	December	2,957,544	4,207,566	60,716,875	5,061,375.7	48.71
2016						
	January	2,744,677	3,888,914	56,184,879	4,690,539.7	48.85
	February	2,817,468	4,013,504	55,510,698	4,396,218.4	50.76
	March	2,995,614	4,320,030	55,892,627	4,707,486.7	53.60
	April	2,318,131	3,320,849	40,838,247	3,348,128.0	56.76
	May	802,218	1,135,288	18,931,915	1,605,398.3	42.37
	June	808,060	1,140,420	18,953,391	1,556,068.3	42.63
	July	183,533	233,865	6,080,161	514,545.9	30.19
	August	126,742	159,466	4,828,490	361,293.6	26.25
ICD-10-CM codes from SFM, 0 day washout						
2010						
	October	3	3	57,716,153	4,834,624.7	0.00
	November	5	5	57,083,139	4,676,871.8	0.00
	December	2	2	58,361,401	4,851,164.3	0.00

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2011					
January	3	3	54,708,355	4,559,066.6	0.00
February	7	7	54,004,537	4,128,109.5	0.00
March	2	2	54,304,661	4,589,505.2	0.00
April	4	4	54,376,438	4,451,813.2	0.00
May	4	4	54,345,382	4,596,809.0	0.00
June	9	9	54,180,080	4,437,454.8	0.00
July	8	8	58,516,097	4,922,622.7	0.00
August	5	5	58,949,591	4,934,256.4	0.00
September	13	13	58,085,767	4,756,913.3	0.00
October	7	7	58,676,595	4,912,248.5	0.00
November	13	13	58,078,196	4,756,987.5	0.00
December	9	9	59,388,173	4,936,750.4	0.00
2012					
January	5	5	55,530,223	4,630,251.0	0.00
February	8	8	54,876,327	4,343,731.8	0.00
March	14	14	54,975,889	4,646,212.7	0.00
April	13	13	55,096,138	4,512,914.6	0.00
May	18	18	55,049,184	4,658,029.6	0.00
June	10	10	54,978,230	4,504,350.2	0.00
July	21	21	58,694,936	4,954,101.6	0.00
August	17	17	59,224,748	4,948,556.2	0.00
September	8	8	58,386,075	4,782,162.8	0.00
October	17	17	58,911,806	4,936,312.3	0.00
November	20	20	58,315,915	4,778,740.5	0.00
December	14	14	59,471,414	4,955,666.4	0.00
2013					
January	31	31	56,197,731	4,670,823.4	0.00
February	22	22	55,542,762	4,246,777.7	0.00
March	34	34	56,138,854	4,744,073.1	0.00
April	35	35	56,104,107	4,595,653.8	0.00
May	25	26	56,057,246	4,744,239.6	0.00
June	22	22	55,778,760	4,571,072.3	0.00
July	30	30	59,556,573	5,016,305.0	0.00
August	23	23	59,876,675	5,015,940.4	0.00
September	35	35	59,000,407	4,833,576.6	0.00
October	37	37	59,493,519	4,988,077.6	0.00
November	50	50	58,886,507	4,825,393.1	0.00
December	57	58	60,055,310	4,997,010.4	0.00
2014					
January	63	63	55,701,673	4,645,703.0	0.00
February	66	68	55,017,049	4,207,098.7	0.00
March	60	63	55,271,800	4,673,920.9	0.00
April	61	65	55,288,350	4,527,701.2	0.00
May	83	89	55,167,407	4,668,733.3	0.00
June	84	87	55,203,751	4,521,918.7	0.00
July	100	100	60,017,841	5,048,903.4	0.00
August	121	123	60,258,780	4,995,827.3	0.00
September	130	138	58,851,445	4,821,953.3	0.00
October	140	140	59,811,527	4,994,616.9	0.00
November	132	133	59,123,837	4,845,527.4	0.00
December	190	193	60,149,691	5,009,350.1	0.00
2015					
January	346	346	56,110,525	4,678,415.9	0.01
February	286	289	55,431,573	4,198,556.6	0.01
March	344	345	55,562,529	4,693,730.3	0.01
April	453	458	55,654,716	4,555,384.6	0.01
May	590	591	55,625,323	4,706,910.3	0.01
June	812	814	55,657,221	4,559,569.0	0.01
July	1,558	1,564	60,121,043	5,059,633.5	0.03
August	7,739	11,163	60,711,514	5,062,973.3	0.13
September	39,818	55,001	59,802,370	4,899,634.6	0.67
October	3,052,061	4,343,810	60,415,951	5,056,566.0	50.52
November	2,863,461	4,026,322	59,733,371	4,894,566.1	47.94
December	2,953,003	4,198,942	60,716,875	5,061,375.7	48.64

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	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2016					
January	2,740,424	3,881,191	56,184,879	4,690,539.7	48.78
February	2,813,143	4,005,662	55,510,698	4,396,218.4	50.68
March	2,990,935	4,311,144	55,892,627	4,707,486.7	53.51
April	2,314,651	3,314,282	40,838,247	3,348,128.0	56.68
May	800,991	1,133,041	18,931,915	1,605,398.3	42.31
June	806,856	1,138,239	18,953,391	1,556,068.3	42.57
July	183,373	233,619	6,080,161	514,545.9	30.16
August	126,682	159,385	4,828,490	361,293.6	26.24
ICD-10-CM codes from FBM, 0 day washout					
2010					
October	3	3	57,716,153	4,834,624.7	0.00
November	5	5	57,083,139	4,676,871.8	0.00
December	2	2	58,361,401	4,851,164.3	0.00
2011					
January	3	3	54,708,355	4,559,066.6	0.00
February	7	7	54,004,537	4,128,109.5	0.00
March	2	2	54,304,661	4,589,505.2	0.00
April	4	4	54,376,438	4,451,813.2	0.00
May	4	4	54,345,382	4,596,809.0	0.00
June	9	9	54,180,080	4,437,454.8	0.00
July	8	8	58,516,097	4,922,622.7	0.00
August	5	5	58,949,591	4,934,256.4	0.00
September	13	13	58,085,767	4,756,913.3	0.00
October	7	7	58,676,595	4,912,248.5	0.00
November	13	13	58,078,196	4,756,987.5	0.00
December	9	9	59,388,173	4,936,750.4	0.00
2012					
January	5	5	55,530,223	4,630,251.0	0.00
February	9	9	54,876,327	4,343,731.8	0.00
March	15	15	54,975,889	4,646,212.7	0.00
April	13	13	55,096,138	4,512,914.6	0.00
May	18	18	55,049,184	4,658,029.6	0.00
June	10	10	54,978,230	4,504,350.2	0.00
July	21	21	58,694,936	4,954,101.6	0.00
August	17	17	59,224,748	4,948,556.2	0.00
September	10	10	58,386,075	4,782,162.8	0.00
October	17	17	58,911,806	4,936,312.3	0.00
November	20	20	58,315,915	4,778,740.5	0.00
December	14	14	59,471,414	4,955,666.4	0.00
2013					
January	31	31	56,197,731	4,670,823.4	0.00
February	22	22	55,542,762	4,246,777.7	0.00
March	34	34	56,138,854	4,744,073.1	0.00
April	35	35	56,104,107	4,595,653.8	0.00
May	25	26	56,057,246	4,744,239.6	0.00
June	22	22	55,778,760	4,571,072.3	0.00
July	30	30	59,556,573	5,016,305.0	0.00
August	23	23	59,876,675	5,015,940.4	0.00
September	35	35	59,000,407	4,833,576.6	0.00
October	37	37	59,493,519	4,988,077.6	0.00
November	50	50	58,886,507	4,825,393.1	0.00
December	57	58	60,055,310	4,997,010.4	0.00
2014					
January	63	63	55,701,673	4,645,703.0	0.00
February	66	68	55,017,049	4,207,098.7	0.00
March	62	65	55,271,800	4,673,920.9	0.00
April	62	66	55,288,350	4,527,701.2	0.00
May	83	89	55,167,407	4,668,733.3	0.00
June	84	87	55,203,751	4,521,918.7	0.00
July	100	100	60,017,841	5,048,903.4	0.00
August	122	124	60,258,780	4,995,827.3	0.00
September	131	139	58,851,445	4,821,953.3	0.00
October	140	140	59,811,527	4,994,616.9	0.00
November	132	133	59,123,837	4,845,527.4	0.00
December	190	193	60,149,691	5,009,350.1	0.00

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2015					
January	347	347	56,110,525	4,678,415.9	0.01
February	286	289	55,431,573	4,198,556.6	0.01
March	345	346	55,562,529	4,693,730.3	0.01
April	453	458	55,654,716	4,555,384.6	0.01
May	590	591	55,625,323	4,706,910.3	0.01
June	812	814	55,657,221	4,559,569.0	0.01
July	1,560	1,566	60,121,043	5,059,633.5	0.03
August	7,748	11,172	60,711,514	5,062,973.3	0.13
September	39,903	55,097	59,802,370	4,899,634.6	0.67
October	3,056,810	4,352,871	60,415,951	5,056,566.0	50.60
November	2,867,701	4,034,413	59,733,371	4,894,566.1	48.01
December	2,957,545	4,207,566	60,716,875	5,061,375.7	48.71
2016					
January	2,744,686	3,888,925	56,184,879	4,690,539.7	48.85
February	2,817,473	4,013,513	55,510,698	4,396,218.4	50.76
March	2,995,623	4,320,038	55,892,627	4,707,486.7	53.60
April	2,318,136	3,320,859	40,838,247	3,348,128.0	56.76
May	802,222	1,135,292	18,931,915	1,605,398.3	42.37
June	808,062	1,140,423	18,953,391	1,556,068.3	42.63
July	183,533	233,865	6,080,161	514,545.9	30.19
August	126,742	159,466	4,828,490	361,293.6	26.25

2015

ICD-9-CM codes from an Algorithm, 90 day washout

2016					
2015					
January	1,399,223	1,399,223	51,592,545	4,185,631.2	27.12
February	1,270,632	1,270,632	50,787,987	3,756,527.5	25.02
March	1,463,731	1,463,731	50,948,805	4,195,533.7	28.73

ICD-9-CM codes from SFM and FBM, 90 day washout

2015					
January	1,399,220	1,399,220	51,592,571	4,185,633.8	27.12
February	1,270,632	1,270,632	50,788,009	3,756,529.5	25.02
March	1,463,725	1,463,725	50,948,828	4,195,535.9	28.73

2016

ICD-10-CM codes from an Algorithm, 90 day washout

2016					
January	1,401,469	1,401,469	51,408,361	4,176,157.8	27.26
February	1,426,595	1,426,595	50,721,151	3,915,195.3	28.13
March	1,513,405	1,513,405	51,042,803	4,184,765.6	29.65

ICD-10-CM codes from SFM, 90 day washout

2016					
January	1,400,227	1,400,227	51,414,702	4,176,780.5	27.23
February	1,425,454	1,425,454	50,727,678	3,915,789.3	28.10
March	1,512,167	1,512,167	51,049,435	4,185,409.6	29.62

ICD-10-CM codes from FBM, 90 day washout

2016					
January	1,401,471	1,401,471	51,408,356	4,176,157.2	27.26
February	1,426,601	1,426,601	50,721,145	3,915,194.5	28.13
March	1,513,413	1,513,413	51,042,790	4,184,764.3	29.65

Figures 1a-1e. Number of Hypertension Diagnoses by Monitoring Period, Code Type, Code Source, and Washout Period

Figure 1a. 2010-2016 Monitoring Period: Number of Incident Hypertension Diagnoses by Code Type and Code Source, 183-Day Washout

Figure 1b. 2010-2016 Monitoring Period: Number of Prevalent Hypertension Diagnoses by Code Type and Code Source, 0-Day Washout
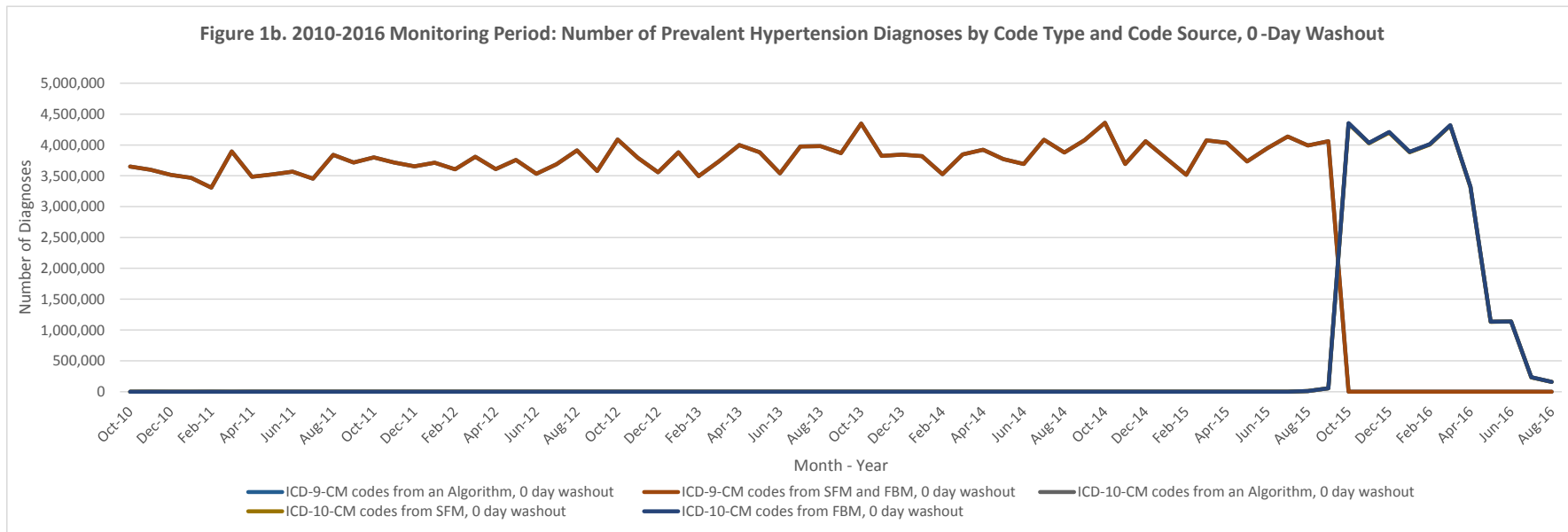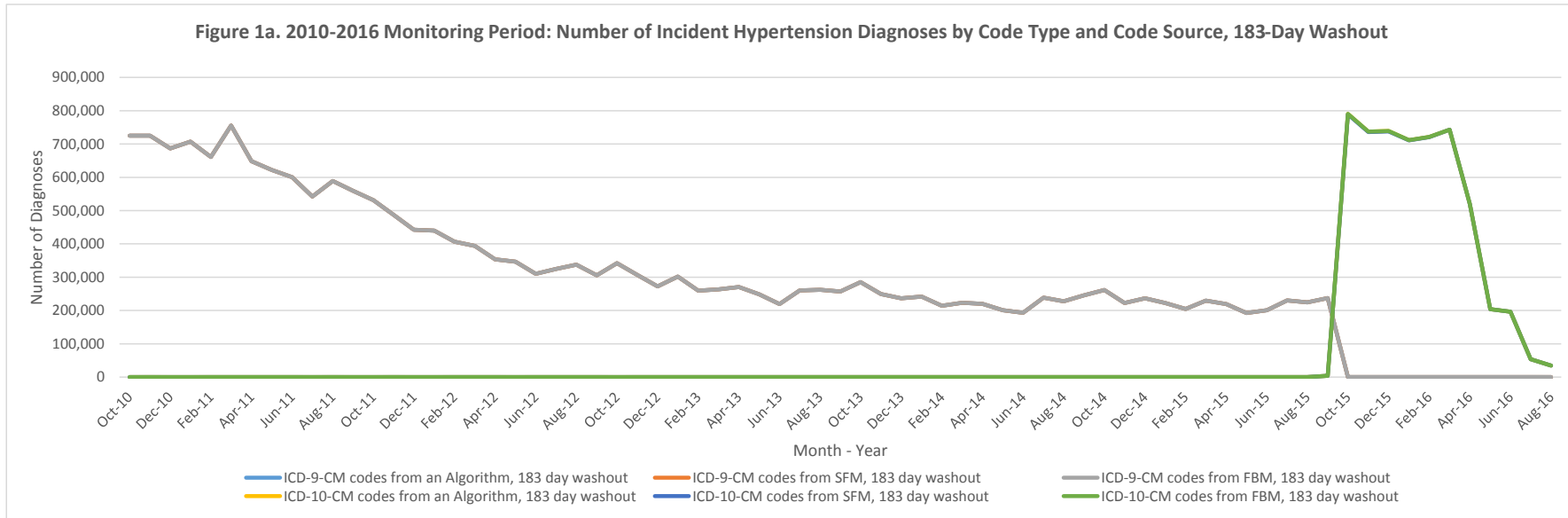
Figure 1c. 2010-2016 Monitoring Period: Persons with Prevalent Hypertension Diagnoses by Code Type and Code Source, 0-Day Washout

Legend:
- ICD-9-CM codes from an Algorithm, 0 day washout
- ICD-9-CM codes from SFM and FBM, 0 day washout
- ICD-10-CM codes from an Algorithm, 0 day washout
- ICD-10-CM codes from SFM, 0 day washout
- ICD-10-CM codes from FBM, 0 day washout
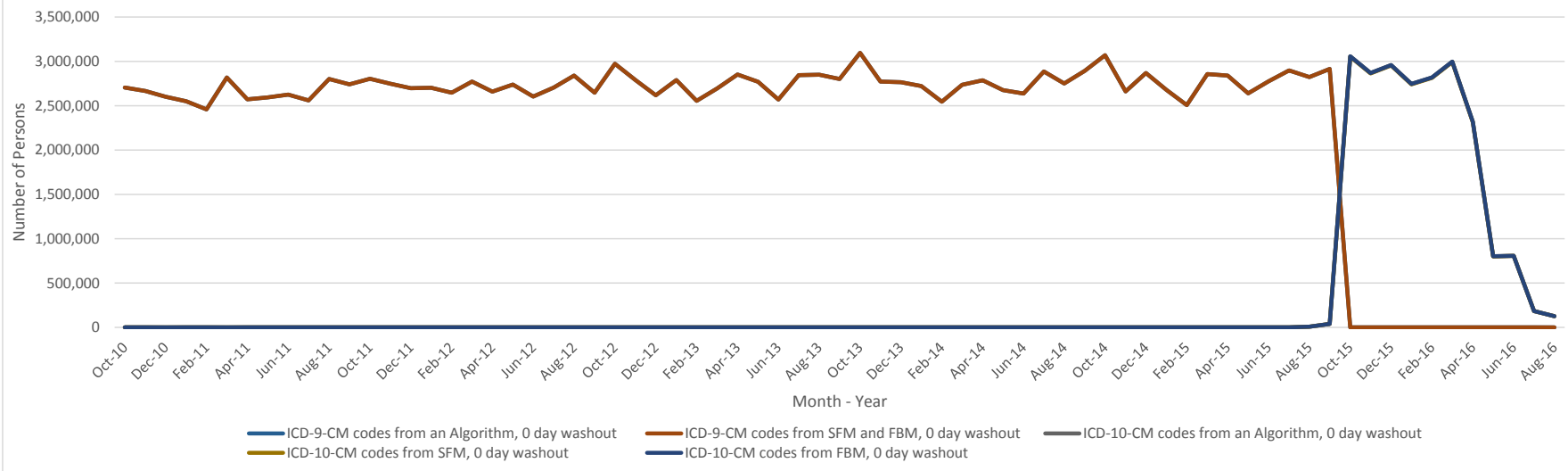
Figure 1d. 2015 Monitoring Period: Number of Incident Hypertension Diagnoses by Code Type and Code Source, 90-Day Washout

Legend:
- ICD-9-CM codes from SFM and FBM, 90 day washout
- ICD-9-CM codes from an Algorithm, 90 day washout
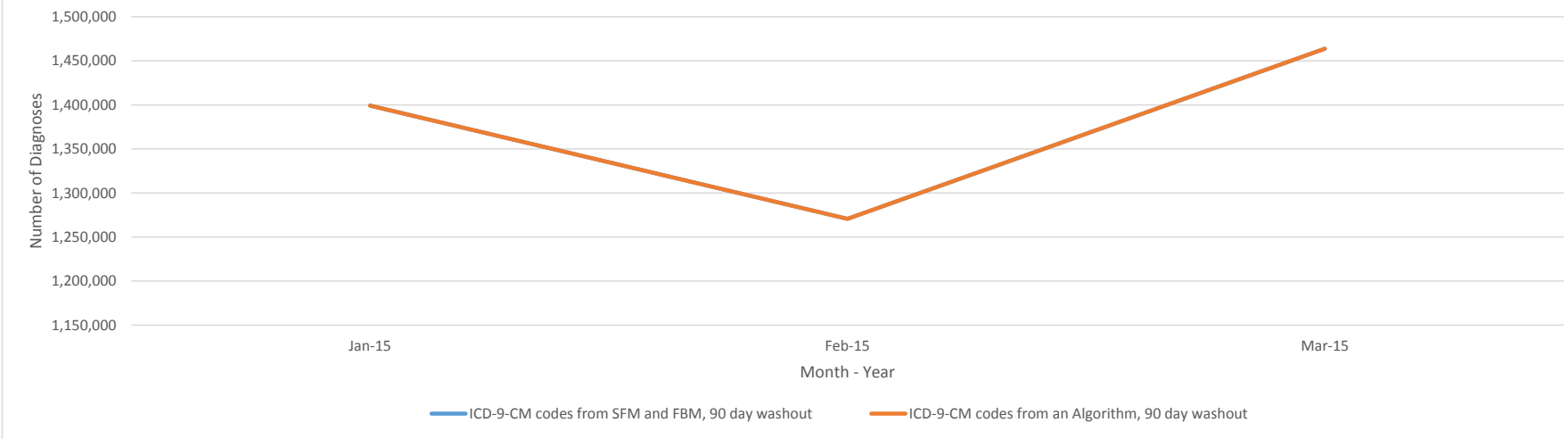
Figure 1e. 2016 Monitoring Period: Number of Incident Hypertension Diagnoses by Code Type and Code Source, 90-Day Washout

Figure 1f. 2010-2016 Monitoring Period: Number of Incident Diagnoses per 1,000 Eligible Members of Hypertension by Code Type and Code Source, 183-Day Washout
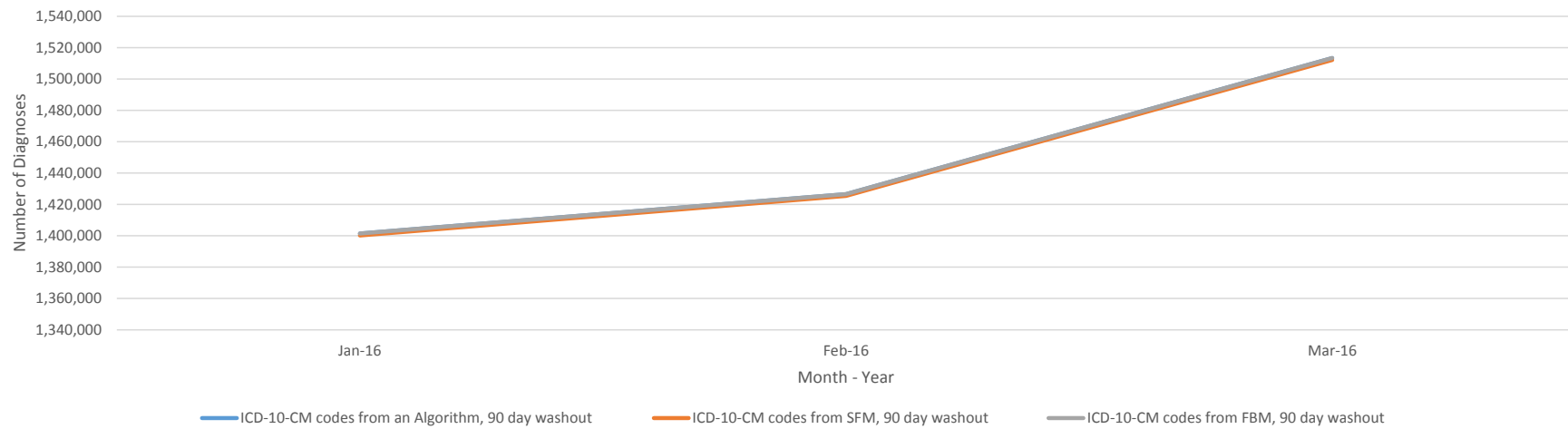
Figure 1g. 2010-2016 Monitoring Period: Number of Incident Diagnoses per 1,000 Eligible Members of Hypertension by Code Type and Code Source, 0-Day Washout
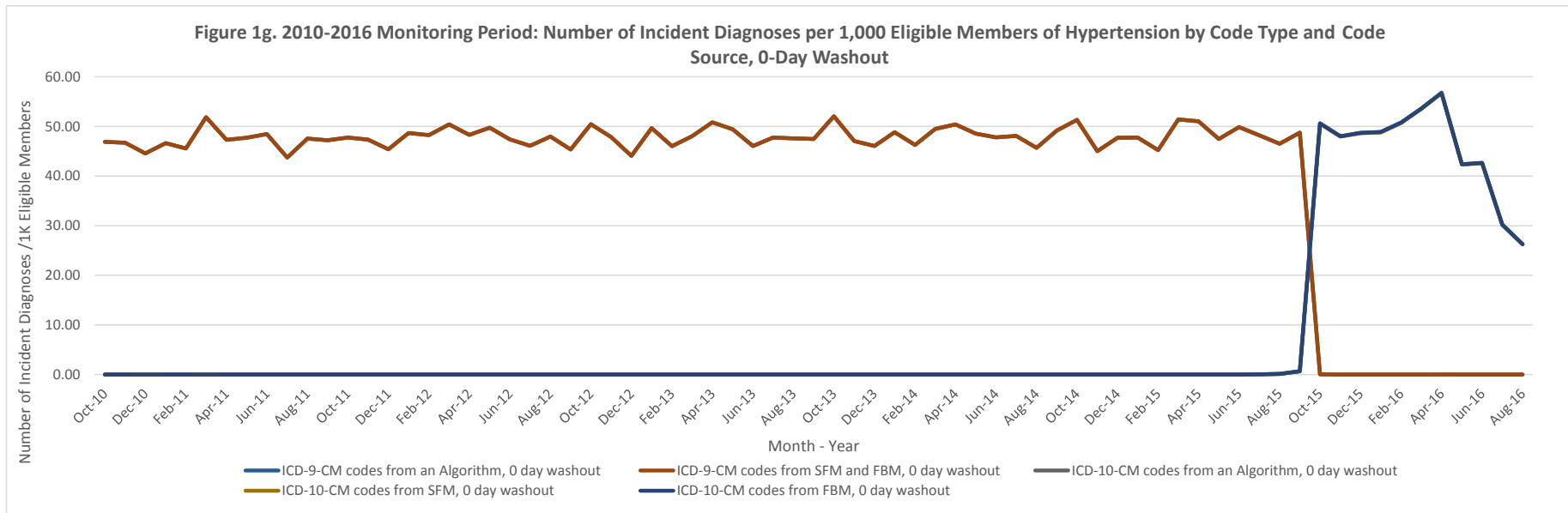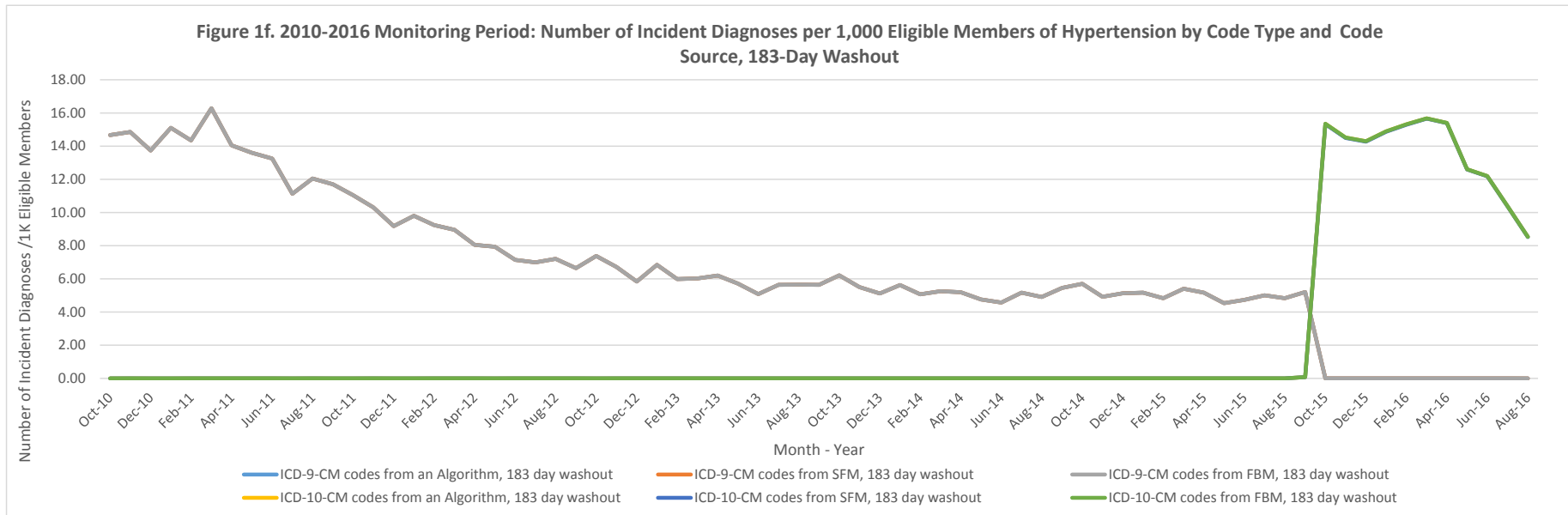
Figure 1h. 2015 Monitoring Period: Number of Incident Diagnoses per 1,000 Eligible Members of Hypertension by Code Type and Code Source, 90-Day Washout
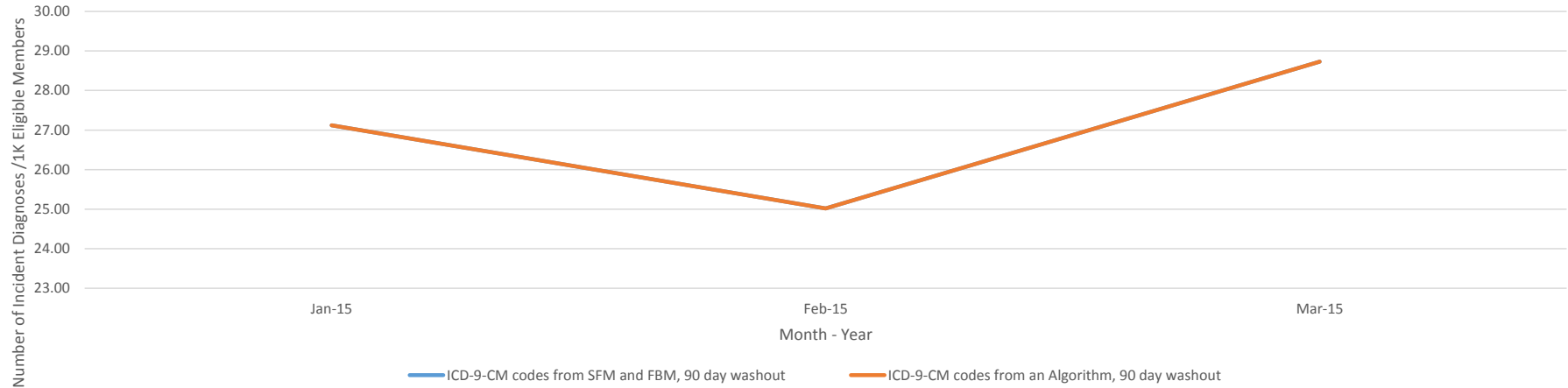
Figure 1i. 2016 Monitoring Period: Number of Incident Diagnoses per 1,000 Eligible Members of Hypertension by Code Type and Code Source, 90-Day Washout

Table 2a. Summary of Incident Diabetes Diagnoses using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) versus International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes for a combination of washouts and code sources: Algorithm, Simple Forward Mapping (SFM), and Forward Backward Mapping (FBM), by Monitoring Period

2010-2016

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from Algorithm, 183 day washout					
	7,202,900	7,202,900	128,443,890	292,822,708.2	56.08
ICD-9-CM codes from SFM, 183 day washout					
	7,202,851	7,202,851	128,241,380	292,759,346.9	56.17
ICD-9-CM codes from FBM, 183 day washout					
	7,202,842	7,202,842	128,206,860	292,747,436.1	56.18
ICD-10-CM codes from an Algorithm, 183 day washout					
	1,489,529	1,489,529	128,443,890	298,754,392.0	11.60
ICD-10-CM codes from SFM, 183 day washout					
	1,584,077	1,584,077	128,241,380	298,593,408.5	12.35
ICD-10-CM codes from SFM with cluster logic, 183 day washout					
	1,583,090	1,583,090	128,248,617	298,598,188.4	12.34
ICD-10-CM codes from FBM, 183 day washout					
	1,598,679	1,598,679	128,206,860	298,561,135.7	12.47
ICD-9-CM codes from Algorithm, SFM, and FBM, 0 day washout					
	10,305,551	135,664,816	131,346,603	319,813,419.4	78.46
ICD-10-CM codes from an Algorithm, 0 day washout					
	3,881,208	11,798,574	131,346,603	319,813,419.4	29.55
ICD-10-CM codes from SFM, 0 day washout					
	4,412,589	16,669,324	131,346,603	319,813,419.4	33.59
ICD-10-CM codes from SFM with cluster logic, 0 day washout					
	4,396,434	16,481,214	131,346,603	319,813,419.4	33.47
ICD-10-CM codes from FBM, 0 day washout					
	4,505,244	18,172,333	131,346,603	319,813,419.4	34.30

2015

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from Algorithm, SFM, and FBM, 90 day washout					
	1,546,292	1,546,292	56,265,712	12,885,112.2	27.48

2016

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-10-CM codes from an Algorithm, 90 day washout					
	1,496,853	1,496,853	56,565,054	13,226,494.9	26.46
ICD-10-CM codes from SFM, 90 day washout					
	1,630,389	1,630,389	56,158,454	13,102,104.2	29.03
ICD-10-CM codes from SFM with cluster logic, 90 day washout					
	1,627,135	1,627,135	56,173,536	13,106,440.1	28.97
ICD-10-CM codes from FBM, 90 day washout					
	1,632,430	1,632,430	56,049,983	13,076,449.9	29.12

Table 2b. Summary of Incident Diabetes Diagnoses using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) versus International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes for a combination of washouts and code sources: Algorithm, Simple Forward Mapping (SFM), and Forward Backward Mapping (FBM), by Monitoring Period and Age Group

<u>**2010-2016**</u>

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from Algorithm, 183 day washout					
0-17 Years	69,157	69,157	29,810,770	64,684,631.9	2.32
18-49 Years	1,968,985	1,968,985	68,493,460	135,379,602.8	28.75
50-64 Years	2,919,629	2,919,629	28,725,026	61,179,630.7	101.64
65+ Years	2,245,129	2,245,129	13,147,920	31,578,842.8	170.76
ICD-9-CM codes from SFM, 183 day washout					
0-17 Years	69,157	69,157	29,808,225	64,684,001.3	2.32
18-49 Years	1,968,974	1,968,974	68,462,330	135,366,235.7	28.76
50-64 Years	2,919,612	2,919,612	28,653,559	61,156,470.7	101.89
65+ Years	2,245,108	2,245,108	13,047,471	31,552,639.2	172.07
ICD-9-CM codes from FBM, 183 day washout					
0-17 Years	69,157	69,157	29,808,203	64,683,944.1	2.32
18-49 Years	1,968,974	1,968,974	68,459,914	135,364,505.1	28.76
50-64 Years	2,919,608	2,919,608	28,643,629	61,152,814.3	101.93
65+ Years	2,245,103	2,245,103	13,024,836	31,546,172.6	172.37
ICD-10-CM codes from an Algorithm, 183 day washout					
0-17 Years	7,922	7,922	29,810,770	64,736,481.1	0.27
18-49 Years	322,731	322,731	68,509,792	136,921,293.4	4.71
50-64 Years	616,256	616,256	29,009,889	63,439,201.6	21.24
65+ Years	542,620	542,620	13,437,552	33,657,415.9	40.38
ICD-10-CM codes from SFM, 183 day washout					
0-17 Years	7,919	7,919	29,808,225	64,735,453.4	0.27
18-49 Years	357,665	357,665	68,478,071	136,891,482.2	5.22
50-64 Years	658,491	658,491	28,929,159	63,378,904.4	22.76
65+ Years	560,002	560,002	13,325,790	33,587,568.5	42.02
ICD-10-CM codes from SFM with cluster logic, 183 day washout					
0-17 Years	7,906	7,906	29,808,227	64,735,458.5	0.27
18-49 Years	357,102	357,102	68,478,565	136,892,022.6	5.21
50-64 Years	657,938	657,938	28,931,259	63,380,360.6	22.74
65+ Years	560,144	560,144	13,331,101	33,590,346.6	42.02
ICD-10-CM codes from FBM, 183 day washout					
0-17 Years	8,126	8,126	29,808,203	64,735,366.7	0.27
18-49 Years	362,765	362,765	68,475,637	136,888,083.8	5.30
50-64 Years	664,556	664,556	28,918,108	63,369,442.7	22.98
65+ Years	563,232	563,232	13,300,492	33,568,242.5	42.35
ICD-9-CM codes from Algorithm, SFM, and FBM, 0 day washout					
0-17 Years	112,242	1,244,612	29,854,260	64,911,877.6	3.76
18-49 Years	2,552,660	19,167,655	69,118,516	140,553,482.7	36.93
50-64 Years	4,403,073	46,880,885	30,357,747	71,475,208.9	145.04
65+ Years	3,961,542	68,371,664	14,919,540	42,872,850.2	265.53
ICD-10-CM codes from an Algorithm, 0 day washout					
0-17 Years	29,378	97,879	29,854,260	64,911,877.6	0.98
18-49 Years	661,805	1,647,015	69,118,516	140,553,482.7	9.57
50-64 Years	1,518,193	4,158,884	30,357,747	71,475,208.9	50.01
65+ Years	1,699,589	5,894,796	14,919,540	42,872,850.2	113.92
ICD-10-CM codes from SFM, 0 day washout					
0-17 Years	34,428	155,778	29,854,260	64,911,877.6	1.15
18-49 Years	773,297	2,361,257	69,118,516	140,553,482.7	11.19
50-64 Years	1,729,151	5,841,003	30,357,747	71,475,208.9	56.96
65+ Years	1,913,671	8,311,286	14,919,540	42,872,850.2	128.27

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-10-CM codes from SFM with cluster logic, 0 day washout					
0-17 Years	34,410	155,691	29,854,260	64,911,877.6	1.15
18-49 Years	771,315	2,346,694	69,118,516	140,553,482.7	11.16
50-64 Years	1,723,935	5,788,966	30,357,747	71,475,208.9	56.79
65+ Years	1,904,408	8,189,863	14,919,540	42,872,850.2	127.65
ICD-10-CM codes from FBM, 0 day washout					
0-17 Years	34,699	156,851	29,854,260	64,911,877.6	1.16
18-49 Years	784,809	2,462,677	69,118,516	140,553,482.7	11.35
50-64 Years	1,759,703	6,247,357	30,357,747	71,475,208.9	57.97
65+ Years	1,966,100	9,305,448	14,919,540	42,872,850.2	131.78

2015

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from Algorithm, SFM, and FBM, 90 day washout					
0-17 Years	10,379	10,379	11,490,097	2,677,765.0	0.90
18-49 Years	283,733	283,733	25,612,102	5,864,102.4	11.08
50-64 Years	622,338	622,338	12,558,576	2,809,225.7	49.55
65+ Years	629,842	629,842	7,067,949	1,534,019.1	89.11

2016

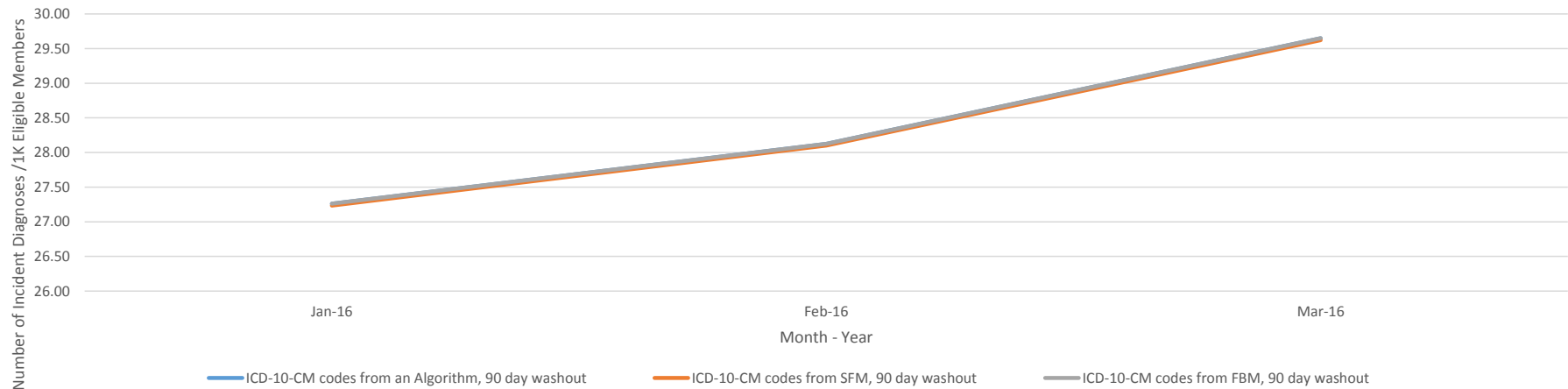|	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-10-CM codes from an Algorithm, 90 day washout					
0-17 Years	10,037	10,037	11,303,211	2,683,940.9	0.89
18-49 Years	259,056	259,056	25,608,672	5,976,451.9	10.12
50-64 Years	596,901	596,901	12,787,487	2,926,725.6	46.68
65+ Years	630,859	630,859	7,330,507	1,639,376.5	86.06
ICD-10-CM codes from SFM, 90 day washout					
0-17 Years	9,642	9,642	11,296,971	2,682,619.0	0.85
18-49 Years	292,716	292,716	25,545,568	5,954,995.6	11.46
50-64 Years	657,794	657,794	12,644,169	2,880,639.1	52.02
65+ Years	670,237	670,237	7,131,849	1,583,850.5	93.98
ICD-10-CM codes from SFM with cluster logic, 90 day washout					
0-17 Years	9,634	9,634	11,296,973	2,682,622.2	0.85
18-49 Years	292,135	292,135	25,546,703	5,955,386.9	11.44
50-64 Years	656,573	656,573	12,648,428	2,881,894.6	51.91
65+ Years	668,793	668,793	7,141,666	1,586,536.3	93.65
ICD-10-CM codes from FBM, 90 day washout					
0-17 Years	9,720	9,720	11,296,894	2,682,581.5	0.86
18-49 Years	295,432	295,432	25,538,665	5,952,862.1	11.57
50-64 Years	660,946	660,946	12,614,846	2,873,184.8	52.39
65+ Years	666,332	666,332	7,058,917	1,567,821.5	94.40

Table 2c. Summary of Incident Diabetes Diagnoses using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) versus International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes for a combination of washouts and code sources: Algorithm, Simple Forward Mapping (SFM), and Forward Backward Mapping (FBM), by Monitoring Period and Sex

2010-2016

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from Algorithm, 183 day washout					
Female	3,474,233	3,474,233	65,308,771	150,643,229.6	53.20
Male	3,728,269	3,728,269	63,128,373	142,167,132.8	59.06
Unknown	398	398	6,746	12,345.8	59.00
ICD-9-CM codes from SFM, 183 day washout					
Female	3,474,211	3,474,211	65,211,792	150,613,622.9	53.28
Male	3,728,242	3,728,242	63,022,845	142,133,378.9	59.16
Unknown	398	398	6,743	12,345.0	59.02
ICD-9-CM codes from FBM, 183 day washout					
Female	3,474,206	3,474,206	65,195,020	150,607,745.6	53.29
Male	3,728,238	3,728,238	63,005,098	142,127,345.6	59.17
Unknown	398	398	6,742	12,344.9	59.03
ICD-10-CM codes from an Algorithm, 183 day washout					
Female	706,697	706,697	65,308,771	153,655,864.4	10.82
Male	782,772	782,772	63,128,373	145,085,896.9	12.40
Unknown	60	60	6,746	12,630.7	8.89
ICD-10-CM codes from SFM, 183 day washout					
Female	744,315	744,315	65,211,792	153,582,778.9	11.41
Male	839,699	839,699	63,022,845	144,998,002.6	13.32
Unknown	63	63	6,743	12,627.1	9.34
ICD-10-CM codes from SFM with cluster logic, 183 day washout					
Female	743,944	743,944	65,215,123	153,584,888.4	11.41
Male	839,083	839,083	63,026,751	145,000,672.9	13.31
Unknown	63	63	6,743	12,627.1	9.34
ICD-10-CM codes from FBM, 183 day washout					
Female	751,543	751,543	65,195,020	153,567,358.1	11.53
Male	847,074	847,074	63,005,098	144,981,151.1	13.44
Unknown	62	62	6,742	12,626.6	9.20
ICD-9-CM codes from Algorithm, SFM, and FBM, 0 day washout					
Female	4,984,740	65,899,479	66,720,608	163,721,251.5	74.71
Male	5,320,298	69,755,956	64,619,123	156,078,303.4	82.33
Unknown	513	9,381	6,872	13,864.6	74.65
ICD-10-CM codes from an Algorithm, 0 day washout					
Female	1,869,333	5,843,351	66,720,608	163,721,251.5	28.02
Male	2,011,698	5,954,694	64,619,123	156,078,303.4	31.13
Unknown	177	529	6,872	13,864.6	25.76
ICD-10-CM codes from SFM, 0 day washout					
Female	2,108,097	8,099,662	66,720,608	163,721,251.5	31.60
Male	2,304,301	8,568,959	64,619,123	156,078,303.4	35.66
Unknown	191	703	6,872	13,864.6	27.79
ICD-10-CM codes from SFM with cluster logic, 0 day washout					
Female	2,101,091	8,017,068	66,720,608	163,721,251.5	31.49
Male	2,295,152	8,463,446	64,619,123	156,078,303.4	35.52
Unknown	191	700	6,872	13,864.6	27.79
ICD-10-CM codes from FBM, 0 day washout					
Female	2,152,041	8,807,682	66,720,608	163,721,251.5	32.25
Male	2,353,008	9,363,895	64,619,123	156,078,303.4	36.41
Unknown	195	756	6,872	13,864.6	28.38

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2015					
ICD-9-CM codes from Algorithm, SFM, and FBM, 90 day washout					
Female	727,051	727,051	28,752,364	6,594,317.2	25.29
Male	819,164	819,164	27,511,095	6,290,286.8	29.78
Unknown	77	77	2,253	508.2	34.18
2016					
ICD-10-CM codes from an Algorithm, 90 day washout					
Female	713,528	713,528	28,860,299	6,764,575.0	24.72
Male	783,266	783,266	27,702,419	6,461,429.3	28.27
Unknown	59	59	2,336	490.7	25.26
ICD-10-CM codes from SFM, 90 day washout					
Female	769,967	769,967	28,667,870	6,707,209.9	26.86
Male	860,359	860,359	27,488,259	6,394,406.8	31.30
Unknown	63	63	2,325	487.5	27.10
ICD-10-CM codes from SFM with cluster logic, 90 day washout					
Female	768,605	768,605	28,674,578	6,709,117.6	26.80
Male	858,467	858,467	27,496,633	6,396,834.9	31.22
Unknown	63	63	2,325	487.5	27.10
ICD-10-CM codes from FBM, 90 day washout					
Female	770,781	770,781	28,616,512	6,695,088.1	26.93
Male	861,587	861,587	27,431,149	6,380,875.1	31.41
Unknown	62	62	2,322	486.7	26.70

Table 2d. Summary of Incident Diabetes Diagnoses using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) versus International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes for a combination of washouts and code sources: Algorithm, Simple Forward Mapping (SFM), and Forward Backward Mapping (FBM), by Monitoring Period and Year

<u>**2010-2016**</u>

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from Algorithm, 183 day washout					
2010	589,095	589,095	56,674,715	13,453,961.1	10.39
2011	2,098,523	2,098,523	65,861,059	52,159,182.5	31.86
2012	1,414,201	1,414,201	64,766,350	52,115,939.8	21.84
2013	1,173,173	1,173,173	64,849,870	52,282,431.8	18.09
2014	1,103,075	1,103,075	65,718,837	51,720,430.3	16.78
2015	824,779	824,779	65,636,631	51,939,453.6	12.57
2016	54	54	53,975,793	19,151,309.2	0.00
ICD-9-CM codes from SFM, 183 day washout					
2010	589,095	589,095	56,674,715	13,453,961.1	10.39
2011	2,098,523	2,098,523	65,861,059	52,159,182.0	31.86
2012	1,414,201	1,414,201	64,766,350	52,115,939.7	21.84
2013	1,173,173	1,173,173	64,849,870	52,282,431.6	18.09
2014	1,103,074	1,103,074	65,718,837	51,720,428.2	16.78
2015	824,759	824,759	65,613,064	51,932,628.8	12.57
2016	26	26	53,741,325	19,094,775.4	0.00
ICD-9-CM codes from FBM, 183 day washout					
2010	589,095	589,095	56,674,715	13,453,961.1	10.39
2011	2,098,523	2,098,523	65,861,059	52,159,182.0	31.86
2012	1,414,201	1,414,201	64,766,350	52,115,939.7	21.84
2013	1,173,172	1,173,172	64,849,870	52,282,431.4	18.09
2014	1,103,073	1,103,073	65,718,837	51,720,428.1	16.78
2015	824,754	824,754	65,608,563	51,931,007.5	12.57
2016	24	24	53,699,841	19,084,486.3	0.00
ICD-10-CM codes from an Algorithm, 183 day washout					
2010	1	1	56,674,715	13,453,961.1	0.00
2011	5	5	66,202,703	52,384,824.7	0.00
2012	11	11	66,357,553	52,947,725.7	0.00
2013	19	19	67,037,345	53,475,105.7	0.00
2014	52	52	68,244,953	53,125,195.9	0.00
2015	543,408	543,408	68,414,606	53,509,941.7	7.94
2016	946,033	946,033	56,470,744	19,857,637.1	16.75
ICD-10-CM codes from SFM, 183 day washout					
2010	1	1	56,674,715	13,453,961.1	0.00
2011	7	7	66,202,703	52,384,824.3	0.00
2012	11	11	66,357,551	52,947,724.0	0.00
2013	21	21	67,037,343	53,475,103.5	0.00
2014	59	59	68,244,949	53,125,189.4	0.00
2015	629,142	629,142	68,369,513	53,493,587.3	9.20
2016	954,836	954,836	55,957,863	19,713,018.9	17.06
ICD-10-CM codes from SFM with cluster logic, 183 day washout					
2010	1	1	56,674,715	13,453,961.1	0.00
2011	7	7	66,202,703	52,384,824.3	0.00
2012	11	11	66,357,551	52,947,724.0	0.00
2013	21	21	67,037,343	53,475,103.5	0.00
2014	59	59	68,244,949	53,125,189.4	0.00
2015	626,561	626,561	68,371,438	53,494,163.6	9.16
2016	956,430	956,430	55,975,719	19,717,222.5	17.09
ICD-10-CM codes from FBM, 183 day washout					
2010	1	1	56,674,715	13,453,961.1	0.00
2011	7	7	66,202,703	52,384,824.3	0.00
2012	11	11	66,357,551	52,947,724.0	0.00
2013	22	22	67,037,343	53,475,103.3	0.00
2014	62	62	68,244,949	53,125,189.2	0.00
2015	648,729	648,729	68,360,169	53,489,757.2	9.49
2016	949,847	949,847	55,855,842	19,684,576.6	17.01

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from Algorithm, SFM, and FBM, 0 day washout					
2010	2,790,139	6,261,232	59,827,304	14,362,660.8	46.64
2011	4,751,079	25,535,544	68,676,077	55,982,537.1	69.18
2012	4,820,774	26,559,508	68,904,822	56,651,029.5	69.96
2013	4,920,922	27,628,561	69,659,404	57,248,942.9	70.64
2014	5,062,706	28,130,672	70,996,865	56,961,254.2	71.31
2015	4,678,219	21,548,510	71,140,657	57,427,315.9	65.76
2016	609	789	59,085,093	21,179,678.9	0.01
ICD-10-CM codes from an Algorithm, 0 day washout					
2010	4	4	59,827,304	14,362,660.8	0.00
2011	30	30	68,676,077	55,982,537.1	0.00
2012	70	71	68,904,822	56,651,029.5	0.00
2013	150	150	69,659,404	57,248,942.9	0.00
2014	480	495	70,996,865	56,961,254.2	0.01
2015	2,553,226	4,926,275	71,140,657	57,427,315.9	35.89
2016	2,910,479	6,871,549	59,085,093	21,179,678.9	49.26
ICD-10-CM codes from SFM, 0 day washout					
2010	4	4	59,827,304	14,362,660.8	0.00
2011	46	46	68,676,077	55,982,537.1	0.00
2012	95	96	68,904,822	56,651,029.5	0.00
2013	208	208	69,659,404	57,248,942.9	0.00
2014	640	671	70,996,865	56,961,254.2	0.01
2015	3,071,716	6,853,649	71,140,657	57,427,315.9	43.18
2016	3,456,506	9,814,650	59,085,093	21,179,678.9	58.50
ICD-10-CM codes from SFM with cluster logic, 0 day washout					
2010	4	4	59,827,304	14,362,660.8	0.00
2011	46	46	68,676,077	55,982,537.1	0.00
2012	94	95	68,904,822	56,651,029.5	0.00
2013	208	208	69,659,404	57,248,942.9	0.00
2014	636	667	70,996,865	56,961,254.2	0.01
2015	3,053,015	6,774,786	71,140,657	57,427,315.9	42.92
2016	3,438,308	9,705,408	59,085,093	21,179,678.9	58.19
ICD-10-CM codes from FBM, 0 day washout					
2010	4	4	59,827,304	14,362,660.8	0.00
2011	48	48	68,676,077	55,982,537.1	0.00
2012	99	100	68,904,822	56,651,029.5	0.00
2013	223	223	69,659,404	57,248,942.9	0.00
2014	694	727	70,996,865	56,961,254.2	0.01
2015	3,177,017	7,407,482	71,140,657	57,427,315.9	44.66
2016	3,562,490	10,763,749	59,085,093	21,179,678.9	60.29

2015

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from Algorithm, SFM, and FBM, 90 day washout					
2015	1,546,292	1,546,292	56,265,712	12,885,112.2	27.48

2016

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-10-CM codes from an Algorithm, 90 day washout					
2016	1,496,853	1,496,853	56,565,054	13,226,494.9	26.46
ICD-10-CM codes from SFM, 90 day washout					
2016	1,630,389	1,630,389	56,158,454	13,102,104.2	29.03
ICD-10-CM codes from SFM with cluster logic, 90 day washout					
2016	1,627,135	1,627,135	56,173,536	13,106,440.1	28.97
ICD-10-CM codes from FBM, 90 day washout					
2016	1,632,430	1,632,430	56,049,983	13,076,449.9	29.12

Table 2e. Summary of Incident Diabetes Diagnoses using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) versus International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes for a combination of washouts and code sources: Algorithm, Simple Forward Mapping (SFM), and Forward Backward Mapping (FBM), by Monitoring Period and Year-Month

2010-2016

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-9-CM codes from Algorithm, 183 day washout					
2010					
October	200,887	200,887	54,284,189	4,529,189.7	3.70
November	198,634	198,634	53,659,168	4,380,734.9	3.70
December	189,574	189,574	54,883,968	4,544,036.5	3.45
2011					
January	192,758	192,758	51,450,286	4,270,563.7	3.75
February	183,552	183,552	50,753,891	3,866,589.3	3.62
March	215,068	215,068	51,049,641	4,297,763.6	4.21
April	188,105	188,105	51,030,493	4,165,902.9	3.69
May	180,875	180,875	50,910,649	4,294,949.2	3.55
June	178,241	178,241	50,666,460	4,139,401.9	3.52
July	165,864	165,864	54,641,326	4,585,733.3	3.04
August	177,758	177,758	54,980,661	4,589,256.7	3.23
September	166,365	166,365	54,070,033	4,418,135.3	3.08
October	161,852	161,852	54,563,369	4,556,058.0	2.97
November	149,413	149,413	53,909,590	4,406,398.6	2.77
December	138,672	138,672	55,105,344	4,568,429.8	2.52
2012					
January	137,516	137,516	51,458,841	4,279,938.0	2.67
February	130,638	130,638	50,763,827	4,010,856.0	2.57
March	131,540	131,540	50,819,618	4,286,583.3	2.59
April	120,366	120,366	50,872,824	4,159,874.8	2.37
May	119,574	119,574	50,767,560	4,288,483.3	2.36
June	110,222	110,222	50,641,617	4,142,834.5	2.18
July	115,163	115,163	54,083,149	4,557,493.0	2.13
August	120,667	120,667	54,551,346	4,547,644.9	2.21
September	107,045	107,045	53,696,754	4,391,274.9	1.99
October	118,696	118,696	54,163,242	4,528,982.7	2.19
November	105,974	105,974	53,542,651	4,381,197.6	1.98
December	96,800	96,800	54,610,416	4,540,776.9	1.77
2013					
January	106,938	106,938	51,622,607	4,279,622.6	2.07
February	93,299	93,299	50,948,376	3,890,400.6	1.83
March	97,985	97,985	51,473,451	4,343,146.2	1.90
April	104,798	104,798	51,401,697	4,204,244.8	2.04
May	96,774	96,774	51,306,149	4,336,203.8	1.89
June	86,366	86,366	50,997,536	4,174,214.3	1.69
July	100,707	100,707	54,484,326	4,582,271.4	1.85
August	100,461	100,461	54,749,423	4,577,617.4	1.83
September	96,189	96,189	53,874,941	4,407,582.0	1.79
October	107,479	107,479	54,316,650	4,545,074.5	1.98
November	92,891	92,891	53,693,582	4,393,838.9	1.73
December	89,286	89,286	54,785,573	4,548,215.3	1.63
2014					
January	92,383	92,383	50,808,271	4,228,127.2	1.82
February	83,859	83,859	50,121,955	3,828,221.1	1.67
March	90,637	90,637	50,344,764	4,251,380.9	1.80
April	90,441	90,441	50,335,703	4,116,596.2	1.80
May	85,651	85,651	50,186,418	4,241,731.1	1.71
June	82,576	82,576	50,175,208	4,105,155.7	1.65
July	98,844	98,844	54,613,934	4,587,370.4	1.81
August	93,406	93,406	54,803,566	4,534,255.2	1.70
September	98,758	98,758	53,449,359	4,373,101.1	1.85
October	104,534	104,534	54,333,332	4,527,422.8	1.92
November	87,870	87,870	53,643,121	4,390,278.2	1.64
December	94,116	94,116	54,604,119	4,536,790.5	1.72

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2015					
January	90,126	90,126	50,955,392	4,238,674.2	1.77
February	83,436	83,436	50,277,131	3,802,998.5	1.66
March	96,393	96,393	50,401,298	4,251,427.1	1.91
April	93,877	93,877	50,454,849	4,124,143.6	1.86
May	83,901	83,901	50,384,949	4,258,016.5	1.67
June	87,637	87,637	50,386,671	4,122,688.5	1.74
July	97,762	97,762	54,499,578	4,579,627.8	1.79
August	94,508	94,508	55,008,746	4,577,936.0	1.72
September	97,071	97,071	54,111,064	4,427,151.5	1.79
October	37	37	54,670,338	4,566,682.7	0.00
November	23	23	54,008,232	4,419,696.3	0.00
December	8	8	54,955,905	4,570,410.8	0.00
2016					
January	8	8	50,850,884	4,234,740.3	0.00
February	8	8	50,238,716	3,971,575.2	0.00
March	8	8	50,668,574	4,257,207.5	0.00
April	7	7	36,672,073	3,000,243.9	0.00
May	8	8	17,305,250	1,465,275.4	0.00
June	7	7	17,331,193	1,420,812.4	0.00
July	6	6	5,568,211	470,594.5	0.00
August	2	2	4,425,422	330,860.0	0.00
ICD-9-CM codes from SFM, 183 day washout					
2010					
October	200,887	200,887	54,284,189	4,529,189.7	3.70
November	198,634	198,634	53,659,168	4,380,734.9	3.70
December	189,574	189,574	54,883,968	4,544,036.5	3.45
2011					
January	192,758	192,758	51,450,286	4,270,563.7	3.75
February	183,552	183,552	50,753,891	3,866,589.3	3.62
March	215,068	215,068	51,049,641	4,297,763.6	4.21
April	188,105	188,105	51,030,493	4,165,902.9	3.69
May	180,875	180,875	50,910,649	4,294,949.2	3.55
June	178,241	178,241	50,666,460	4,139,401.9	3.52
July	165,864	165,864	54,641,326	4,585,733.3	3.04
August	177,758	177,758	54,980,660	4,589,256.6	3.23
September	166,365	166,365	54,070,032	4,418,135.2	3.08
October	161,852	161,852	54,563,368	4,556,058.0	2.97
November	149,413	149,413	53,909,589	4,406,398.6	2.77
December	138,672	138,672	55,105,343	4,568,429.7	2.52
2012					
January	137,516	137,516	51,458,841	4,279,937.9	2.67
February	130,638	130,638	50,763,827	4,010,856.0	2.57
March	131,540	131,540	50,819,618	4,286,583.3	2.59
April	120,366	120,366	50,872,824	4,159,874.8	2.37
May	119,574	119,574	50,767,560	4,288,483.3	2.36
June	110,222	110,222	50,641,617	4,142,834.5	2.18
July	115,163	115,163	54,083,149	4,557,493.0	2.13
August	120,667	120,667	54,551,346	4,547,644.9	2.21
September	107,045	107,045	53,696,754	4,391,274.9	1.99
October	118,696	118,696	54,163,242	4,528,982.7	2.19
November	105,974	105,974	53,542,651	4,381,197.6	1.98
December	96,800	96,800	54,610,416	4,540,776.9	1.77
2013					
January	106,938	106,938	51,622,607	4,279,622.6	2.07
February	93,299	93,299	50,948,376	3,890,400.6	1.83
March	97,985	97,985	51,473,451	4,343,146.2	1.90
April	104,798	104,798	51,401,697	4,204,244.8	2.04
May	96,774	96,774	51,306,149	4,336,203.8	1.89
June	86,366	86,366	50,997,536	4,174,214.3	1.69
July	100,707	100,707	54,484,326	4,582,271.4	1.85
August	100,461	100,461	54,749,423	4,577,617.4	1.83
September	96,189	96,189	53,874,941	4,407,582.0	1.79
October	107,479	107,479	54,316,650	4,545,074.5	1.98
November	92,891	92,891	53,693,581	4,393,838.8	1.73
December	89,286	89,286	54,785,572	4,548,215.2	1.63

		Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2014						
	January	92,383	92,383	50,808,268	4,228,127.0	1.82
	February	83,859	83,859	50,121,951	3,828,220.7	1.67
	March	90,637	90,637	50,344,759	4,251,380.5	1.80
	April	90,441	90,441	50,335,699	4,116,595.8	1.80
	May	85,651	85,651	50,186,415	4,241,730.9	1.71
	June	82,576	82,576	50,175,206	4,105,155.4	1.65
	July	98,844	98,844	54,613,931	4,587,370.2	1.81
	August	93,405	93,405	54,803,566	4,534,255.2	1.70
	September	98,758	98,758	53,449,359	4,373,101.1	1.85
	October	104,534	104,534	54,333,332	4,527,422.8	1.92
	November	87,870	87,870	53,643,121	4,390,278.2	1.64
	December	94,116	94,116	54,604,119	4,536,790.5	1.72
2015						
	January	90,126	90,126	50,955,391	4,238,674.0	1.77
	February	83,436	83,436	50,277,129	3,802,998.3	1.66
	March	96,393	96,393	50,401,296	4,251,426.9	1.91
	April	93,877	93,877	50,454,845	4,124,143.2	1.86
	May	83,899	83,899	50,384,943	4,258,016.1	1.67
	June	87,637	87,637	50,386,667	4,122,688.0	1.74
	July	97,762	97,762	54,499,572	4,579,627.1	1.79
	August	94,507	94,507	55,008,734	4,577,934.8	1.72
	September	97,060	97,060	54,111,048	4,427,149.1	1.79
	October	36	36	54,667,879	4,565,982.3	0.00
	November	20	20	53,985,555	4,417,542.3	0.00
	December	6	6	54,905,938	4,566,446.7	0.00
2016						
	January	7	7	50,767,102	4,228,739.5	0.00
	February	5	5	50,108,669	3,962,797.2	0.00
	March	4	4	50,460,093	4,243,069.2	0.00
	April	2	2	36,487,343	2,985,975.4	0.00
	May	2	2	17,240,289	1,460,006.1	0.00
	June	4	4	17,263,623	1,415,505.7	0.00
	July	1	1	5,547,271	468,853.5	0.00
	August	1	1	4,408,489	329,828.8	0.00
ICD-9-CM codes from FBM, 183 day washout						
2010						
	October	200,887	200,887	54,284,189	4,529,189.7	3.70
	November	198,634	198,634	53,659,168	4,380,734.9	3.70
	December	189,574	189,574	54,883,968	4,544,036.5	3.45
2011						
	January	192,758	192,758	51,450,286	4,270,563.7	3.75
	February	183,552	183,552	50,753,891	3,866,589.3	3.62
	March	215,068	215,068	51,049,641	4,297,763.6	4.21
	April	188,105	188,105	51,030,493	4,165,902.9	3.69
	May	180,875	180,875	50,910,649	4,294,949.2	3.55
	June	178,241	178,241	50,666,460	4,139,401.9	3.52
	July	165,864	165,864	54,641,326	4,585,733.3	3.04
	August	177,758	177,758	54,980,660	4,589,256.6	3.23
	September	166,365	166,365	54,070,032	4,418,135.2	3.08
	October	161,852	161,852	54,563,368	4,556,058.0	2.97
	November	149,413	149,413	53,909,589	4,406,398.6	2.77
	December	138,672	138,672	55,105,343	4,568,429.7	2.52
2012						
	January	137,516	137,516	51,458,841	4,279,937.9	2.67
	February	130,638	130,638	50,763,827	4,010,856.0	2.57
	March	131,540	131,540	50,819,618	4,286,583.3	2.59
	April	120,366	120,366	50,872,824	4,159,874.8	2.37
	May	119,574	119,574	50,767,560	4,288,483.3	2.36
	June	110,222	110,222	50,641,617	4,142,834.5	2.18
	July	115,163	115,163	54,083,149	4,557,493.0	2.13
	August	120,667	120,667	54,551,346	4,547,644.9	2.21
	September	107,045	107,045	53,696,754	4,391,274.9	1.99
	October	118,696	118,696	54,163,242	4,528,982.7	2.19
	November	105,974	105,974	53,542,651	4,381,197.6	1.98
	December	96,800	96,800	54,610,416	4,540,776.9	1.77

		Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2013						
	January	106,938	106,938	51,622,607	4,279,622.6	2.07
	February	93,299	93,299	50,948,376	3,890,400.6	1.83
	March	97,985	97,985	51,473,451	4,343,146.2	1.90
	April	104,798	104,798	51,401,697	4,204,244.8	2.04
	May	96,774	96,774	51,306,149	4,336,203.8	1.89
	June	86,366	86,366	50,997,536	4,174,214.3	1.69
	July	100,707	100,707	54,484,326	4,582,271.4	1.85
	August	100,461	100,461	54,749,423	4,577,617.4	1.83
	September	96,189	96,189	53,874,941	4,407,582.0	1.79
	October	107,479	107,479	54,316,650	4,545,074.5	1.98
	November	92,891	92,891	53,693,580	4,393,838.8	1.73
	December	89,285	89,285	54,785,571	4,548,215.1	1.63
2014						
	January	92,383	92,383	50,808,268	4,228,127.0	1.82
	February	83,859	83,859	50,121,951	3,828,220.7	1.67
	March	90,637	90,637	50,344,759	4,251,380.5	1.80
	April	90,441	90,441	50,335,699	4,116,595.8	1.80
	May	85,651	85,651	50,186,415	4,241,730.9	1.71
	June	82,576	82,576	50,175,206	4,105,155.4	1.65
	July	98,844	98,844	54,613,931	4,587,370.2	1.81
	August	93,405	93,405	54,803,565	4,534,255.1	1.70
	September	98,757	98,757	53,449,358	4,373,101.0	1.85
	October	104,534	104,534	54,333,332	4,527,422.8	1.92
	November	87,870	87,870	53,643,121	4,390,278.2	1.64
	December	94,116	94,116	54,604,119	4,536,790.5	1.72
2015						
	January	90,126	90,126	50,955,391	4,238,674.0	1.77
	February	83,436	83,436	50,277,129	3,802,998.3	1.66
	March	96,393	96,393	50,401,295	4,251,426.9	1.91
	April	93,877	93,877	50,454,844	4,124,143.1	1.86
	May	83,899	83,899	50,384,941	4,258,015.9	1.67
	June	87,637	87,637	50,386,665	4,122,687.8	1.74
	July	97,762	97,762	54,499,568	4,579,626.7	1.79
	August	94,506	94,506	55,008,730	4,577,934.4	1.72
	September	97,058	97,058	54,111,042	4,427,148.1	1.79
	October	35	35	54,667,354	4,565,801.3	0.00
	November	19	19	53,980,131	4,417,019.0	0.00
	December	6	6	54,894,856	4,565,532.0	0.00
2016						
	January	7	7	50,749,924	4,227,463.8	0.00
	February	5	5	50,084,235	3,961,090.5	0.00
	March	4	4	50,425,145	4,240,592.9	0.00
	April	1	1	36,454,461	2,983,495.5	0.00
	May	2	2	17,229,304	1,459,125.3	0.00
	June	4	4	17,252,208	1,414,616.8	0.00
	July	1	1	5,542,817	468,513.8	0.00
	August	0	0	4,404,751	329,587.7	0.00
ICD-10-CM codes from an Algorithm, 183 day washout						
2010						
	October	0	0	54,284,189	4,529,189.7	0.00
	November	0	0	53,659,168	4,380,734.9	0.00
	December	1	1	54,883,968	4,544,036.5	0.00
2011						
	January	0	0	51,450,286	4,270,563.7	0.00
	February	0	0	50,753,891	3,866,589.3	0.00
	March	0	0	51,049,641	4,297,763.6	0.00
	April	1	1	51,099,748	4,168,379.5	0.00
	May	0	0	51,052,795	4,303,623.3	0.00
	June	2	2	50,879,223	4,153,219.3	0.00
	July	0	0	54,923,108	4,604,849.0	0.00
	August	2	2	55,338,495	4,614,169.9	0.00
	September	0	0	54,510,039	4,448,412.8	0.00
	October	0	0	55,082,696	4,593,334.2	0.00
	November	0	0	54,491,495	4,447,758.1	0.00
	December	0	0	55,760,260	4,616,162.1	0.00

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2012					
January	0	0	52,129,622	4,329,517.3	0.00
February	2	2	51,484,510	4,061,215.7	0.00
March	0	0	51,590,369	4,343,608.6	0.00
April	1	1	51,695,082	4,219,278.4	0.00
May	2	2	51,637,279	4,353,916.2	0.00
June	0	0	51,551,455	4,209,710.4	0.00
July	0	0	55,024,254	4,629,106.4	0.00
August	3	3	55,552,769	4,623,328.7	0.00
September	0	0	54,750,675	4,468,660.6	0.00
October	2	2	55,266,444	4,612,428.8	0.00
November	1	1	54,679,880	4,465,647.1	0.00
December	0	0	55,795,459	4,631,307.4	0.00
2013					
January	2	2	52,779,909	4,367,941.5	0.00
February	1	1	52,122,018	3,972,358.5	0.00
March	3	3	52,691,268	4,436,076.6	0.00
April	3	3	52,646,715	4,296,812.8	0.00
May	1	1	52,572,077	4,433,875.8	0.00
June	1	1	52,283,203	4,270,927.6	0.00
July	0	0	55,788,508	4,683,263.8	0.00
August	0	0	56,094,174	4,681,364.6	0.00
September	1	1	55,256,895	4,511,155.6	0.00
October	1	1	55,747,748	4,654,978.7	0.00
November	4	4	55,144,933	4,502,832.5	0.00
December	2	2	56,270,988	4,663,517.7	0.00
2014					
January	3	3	52,221,996	4,337,609.2	0.00
February	3	3	51,546,500	3,928,848.4	0.00
March	2	2	51,800,256	4,364,181.2	0.00
April	4	4	51,811,792	4,227,480.8	0.00
May	10	10	51,689,064	4,358,412.2	0.00
June	0	0	51,687,546	4,220,076.0	0.00
July	3	3	56,142,088	4,706,859.7	0.00
August	4	4	56,360,954	4,654,626.3	0.00
September	6	6	55,028,738	4,492,399.3	0.00
October	7	7	55,955,407	4,653,216.3	0.00
November	1	1	55,281,186	4,514,199.4	0.00
December	9	9	56,280,754	4,667,287.1	0.00
2015					
January	10	10	52,562,365	4,363,771.8	0.00
February	6	6	51,893,798	3,915,630.0	0.00
March	6	6	52,016,787	4,377,547.5	0.00
April	11	11	52,091,747	4,247,782.7	0.00
May	15	15	52,037,674	4,387,457.5	0.00
June	19	19	52,042,673	4,249,016.9	0.00
July	50	50	56,174,641	4,711,046.0	0.00
August	143	143	56,710,972	4,711,454.6	0.00
September	1,012	1,012	55,848,609	4,558,827.6	0.02
October	183,877	183,877	56,458,283	4,706,529.6	3.26
November	174,812	174,812	55,849,202	4,560,008.7	3.13
December	183,447	183,447	56,882,227	4,720,868.8	3.23
2016					
January	178,634	178,634	52,746,791	4,382,073.1	3.39
February	196,790	196,790	52,224,382	4,116,263.3	3.77
March	224,383	224,383	52,789,250	4,419,568.2	4.25
April	174,441	174,441	38,289,843	3,127,099.4	4.56
May	69,660	69,660	17,949,661	1,517,459.5	3.88
June	67,803	67,803	17,946,597	1,469,244.5	3.78
July	20,193	20,193	5,751,483	485,184.0	3.51
August	14,129	14,129	4,565,329	340,745.2	3.09

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-10-CM codes from SFM, 183 day washout					
2010					
October	0	0	54,284,189	4,529,189.7	0.00
November	0	0	53,659,168	4,380,734.9	0.00
December	1	1	54,883,968	4,544,036.5	0.00
2011					
January	0	0	51,450,286	4,270,563.7	0.00
February	0	0	50,753,891	3,866,589.3	0.00
March	0	0	51,049,641	4,297,763.6	0.00
April	1	1	51,099,748	4,168,379.5	0.00
May	0	0	51,052,795	4,303,623.3	0.00
June	2	2	50,879,223	4,153,219.3	0.00
July	1	1	54,923,108	4,604,849.0	0.00
August	2	2	55,338,494	4,614,169.8	0.00
September	1	1	54,510,038	4,448,412.7	0.00
October	0	0	55,082,695	4,593,334.1	0.00
November	0	0	54,491,494	4,447,758.0	0.00
December	0	0	55,760,259	4,616,162.0	0.00
2012					
January	0	0	52,129,621	4,329,517.2	0.00
February	2	2	51,484,509	4,061,215.7	0.00
March	0	0	51,590,368	4,343,608.5	0.00
April	1	1	51,695,080	4,219,278.3	0.00
May	2	2	51,637,277	4,353,916.0	0.00
June	0	0	51,551,453	4,209,710.3	0.00
July	0	0	55,024,252	4,629,106.3	0.00
August	3	3	55,552,767	4,623,328.5	0.00
September	0	0	54,750,673	4,468,660.4	0.00
October	2	2	55,266,442	4,612,428.6	0.00
November	1	1	54,679,878	4,465,647.0	0.00
December	0	0	55,795,457	4,631,307.2	0.00
2013					
January	2	2	52,779,907	4,367,941.3	0.00
February	1	1	52,122,016	3,972,358.4	0.00
March	3	3	52,691,266	4,436,076.4	0.00
April	3	3	52,646,713	4,296,812.6	0.00
May	1	1	52,572,075	4,433,875.6	0.00
June	1	1	52,283,201	4,270,927.4	0.00
July	0	0	55,788,506	4,683,263.6	0.00
August	0	0	56,094,172	4,681,364.4	0.00
September	1	1	55,256,893	4,511,155.4	0.00
October	2	2	55,747,746	4,654,978.6	0.00
November	4	4	55,144,930	4,502,832.3	0.00
December	3	3	56,270,985	4,663,517.4	0.00
2014					
January	4	4	52,221,991	4,337,608.8	0.00
February	5	5	51,546,494	3,928,847.8	0.00
March	2	2	51,800,249	4,364,180.6	0.00
April	4	4	51,811,786	4,227,480.3	0.00
May	10	10	51,689,058	4,358,411.7	0.00
June	0	0	51,687,539	4,220,075.5	0.00
July	3	3	56,142,081	4,706,859.1	0.00
August	5	5	56,360,947	4,654,625.7	0.00
September	7	7	55,028,731	4,492,398.7	0.00
October	8	8	55,955,400	4,653,215.7	0.00
November	1	1	55,281,179	4,514,198.9	0.00
December	10	10	56,280,747	4,667,286.5	0.00

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2015					
January	11	11	52,562,359	4,363,771.3	0.00
February	8	8	51,893,792	3,915,629.5	0.00
March	8	8	52,016,781	4,377,547.0	0.00
April	14	14	52,091,738	4,247,781.9	0.00
May	17	17	52,037,662	4,387,456.6	0.00
June	23	23	52,042,663	4,249,015.8	0.00
July	60	60	56,174,626	4,711,044.6	0.00
August	160	160	56,710,949	4,711,452.3	0.00
September	1,277	1,277	55,848,576	4,558,823.6	0.02
October	218,176	218,176	56,451,447	4,704,905.1	3.86
November	202,086	202,086	55,792,987	4,554,873.4	3.62
December	207,302	207,302	56,761,455	4,711,286.1	3.65
2016					
January	198,218	198,218	52,545,435	4,367,391.1	3.77
February	207,939	207,939	51,915,026	4,095,032.1	4.01
March	223,385	223,385	52,309,032	4,386,273.6	4.27
April	162,864	162,864	37,870,499	3,094,148.3	4.30
May	66,054	66,054	17,765,362	1,502,294.7	3.72
June	63,652	63,652	17,757,583	1,454,187.5	3.58
July	19,417	19,417	5,665,184	477,885.2	3.43
August	13,307	13,307	4,495,774	335,806.5	2.96
ICD-10-CM codes from SFM with cluster logic, 183 day washout					
2010					
October	0	0	54,284,189	4,529,189.7	0.00
November	0	0	53,659,168	4,380,734.9	0.00
December	1	1	54,883,968	4,544,036.5	0.00
2011					
January	0	0	51,450,286	4,270,563.7	0.00
February	0	0	50,753,891	3,866,589.3	0.00
March	0	0	51,049,641	4,297,763.6	0.00
April	1	1	51,099,748	4,168,379.5	0.00
May	0	0	51,052,795	4,303,623.3	0.00
June	2	2	50,879,223	4,153,219.3	0.00
July	1	1	54,923,108	4,604,849.0	0.00
August	2	2	55,338,494	4,614,169.8	0.00
September	1	1	54,510,038	4,448,412.7	0.00
October	0	0	55,082,695	4,593,334.1	0.00
November	0	0	54,491,494	4,447,758.0	0.00
December	0	0	55,760,259	4,616,162.0	0.00
2012					
January	0	0	52,129,621	4,329,517.2	0.00
February	2	2	51,484,509	4,061,215.7	0.00
March	0	0	51,590,368	4,343,608.5	0.00
April	1	1	51,695,080	4,219,278.3	0.00
May	2	2	51,637,277	4,353,916.0	0.00
June	0	0	51,551,453	4,209,710.3	0.00
July	0	0	55,024,252	4,629,106.3	0.00
August	3	3	55,552,767	4,623,328.5	0.00
September	0	0	54,750,673	4,468,660.4	0.00
October	2	2	55,266,442	4,612,428.6	0.00
November	1	1	54,679,878	4,465,647.0	0.00
December	0	0	55,795,457	4,631,307.2	0.00
2013					
January	2	2	52,779,907	4,367,941.3	0.00
February	1	1	52,122,016	3,972,358.4	0.00
March	3	3	52,691,266	4,436,076.4	0.00
April	3	3	52,646,713	4,296,812.6	0.00
May	1	1	52,572,075	4,433,875.6	0.00
June	1	1	52,283,201	4,270,927.4	0.00
July	0	0	55,788,506	4,683,263.6	0.00
August	0	0	56,094,172	4,681,364.4	0.00
September	1	1	55,256,893	4,511,155.4	0.00
October	2	2	55,747,746	4,654,978.6	0.00
November	4	4	55,144,930	4,502,832.3	0.00
December	3	3	56,270,985	4,663,517.4	0.00

		Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2014						
	January	4	4	52,221,991	4,337,608.8	0.00
	February	5	5	51,546,494	3,928,847.8	0.00
	March	2	2	51,800,249	4,364,180.6	0.00
	April	4	4	51,811,786	4,227,480.3	0.00
	May	10	10	51,689,058	4,358,411.7	0.00
	June	0	0	51,687,539	4,220,075.5	0.00
	July	3	3	56,142,081	4,706,859.1	0.00
	August	5	5	56,360,947	4,654,625.7	0.00
	September	7	7	55,028,731	4,492,398.7	0.00
	October	8	8	55,955,400	4,653,215.7	0.00
	November	1	1	55,281,179	4,514,198.9	0.00
	December	10	10	56,280,747	4,667,286.5	0.00
2015						
	January	11	11	52,562,359	4,363,771.3	0.00
	February	8	8	51,893,792	3,915,629.5	0.00
	March	8	8	52,016,781	4,377,547.0	0.00
	April	14	14	52,091,738	4,247,781.9	0.00
	May	17	17	52,037,662	4,387,456.6	0.00
	June	23	23	52,042,663	4,249,015.8	0.00
	July	59	59	56,174,626	4,711,044.6	0.00
	August	160	160	56,710,949	4,711,452.3	0.00
	September	1,261	1,261	55,848,576	4,558,823.6	0.02
	October	217,018	217,018	56,451,759	4,704,964.2	3.84
	November	201,262	201,262	55,795,074	4,555,054.1	3.61
	December	206,720	206,720	56,765,904	4,711,622.6	3.64
2016						
	January	197,918	197,918	52,552,711	4,367,899.8	3.77
	February	207,927	207,927	51,925,666	4,095,749.8	4.00
	March	224,009	224,009	52,324,456	4,387,339.0	4.28
	April	163,667	163,667	37,884,345	3,095,194.9	4.32
	May	66,244	66,244	17,769,647	1,502,638.4	3.73
	June	63,866	63,866	17,761,957	1,454,527.2	3.60
	July	19,458	19,458	5,666,397	477,984.1	3.43
	August	13,341	13,341	4,496,782	335,889.3	2.97
ICD-10-CM codes from FBM, 183 day washout						
2010						
	October	0	0	54,284,189	4,529,189.7	0.00
	November	0	0	53,659,168	4,380,734.9	0.00
	December	1	1	54,883,968	4,544,036.5	0.00
2011						
	January	0	0	51,450,286	4,270,563.7	0.00
	February	0	0	50,753,891	3,866,589.3	0.00
	March	0	0	51,049,641	4,297,763.6	0.00
	April	1	1	51,099,748	4,168,379.5	0.00
	May	0	0	51,052,795	4,303,623.3	0.00
	June	2	2	50,879,223	4,153,219.3	0.00
	July	1	1	54,923,108	4,604,849.0	0.00
	August	2	2	55,338,494	4,614,169.8	0.00
	September	1	1	54,510,038	4,448,412.7	0.00
	October	0	0	55,082,695	4,593,334.1	0.00
	November	0	0	54,491,494	4,447,758.0	0.00
	December	0	0	55,760,259	4,616,162.0	0.00
2012						
	January	0	0	52,129,621	4,329,517.2	0.00
	February	2	2	51,484,509	4,061,215.7	0.00
	March	0	0	51,590,368	4,343,608.5	0.00
	April	1	1	51,695,080	4,219,278.3	0.00
	May	2	2	51,637,277	4,353,916.0	0.00
	June	0	0	51,551,453	4,209,710.3	0.00
	July	0	0	55,024,252	4,629,106.3	0.00
	August	3	3	55,552,767	4,623,328.5	0.00
	September	0	0	54,750,673	4,468,660.4	0.00
	October	2	2	55,266,442	4,612,428.6	0.00
	November	1	1	54,679,878	4,465,647.0	0.00
	December	0	0	55,795,457	4,631,307.2	0.00

		Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2013						
	January	2	2	52,779,907	4,367,941.3	0.00
	February	1	1	52,122,016	3,972,358.4	0.00
	March	3	3	52,691,266	4,436,076.4	0.00
	April	3	3	52,646,713	4,296,812.6	0.00
	May	1	1	52,572,075	4,433,875.6	0.00
	June	1	1	52,283,201	4,270,927.4	0.00
	July	0	0	55,788,506	4,683,263.6	0.00
	August	0	0	56,094,172	4,681,364.4	0.00
	September	1	1	55,256,893	4,511,155.4	0.00
	October	3	3	55,747,746	4,654,978.5	0.00
	November	4	4	55,144,929	4,502,832.2	0.00
	December	3	3	56,270,984	4,663,517.4	0.00
2014						
	January	4	4	52,221,991	4,337,608.8	0.00
	February	5	5	51,546,494	3,928,847.8	0.00
	March	2	2	51,800,249	4,364,180.6	0.00
	April	4	4	51,811,786	4,227,480.3	0.00
	May	10	10	51,689,058	4,358,411.7	0.00
	June	0	0	51,687,539	4,220,075.5	0.00
	July	4	4	56,142,081	4,706,859.1	0.00
	August	5	5	56,360,946	4,654,625.7	0.00
	September	7	7	55,028,730	4,492,398.7	0.00
	October	8	8	55,955,400	4,653,215.7	0.00
	November	1	1	55,281,179	4,514,198.9	0.00
	December	12	12	56,280,747	4,667,286.5	0.00
2015						
	January	11	11	52,562,358	4,363,771.2	0.00
	February	9	9	51,893,791	3,915,629.5	0.00
	March	10	10	52,016,779	4,377,546.9	0.00
	April	16	16	52,091,736	4,247,781.7	0.00
	May	19	19	52,037,660	4,387,456.5	0.00
	June	26	26	52,042,661	4,249,015.5	0.00
	July	61	61	56,174,619	4,711,044.0	0.00
	August	166	166	56,710,939	4,711,451.5	0.00
	September	1,346	1,346	55,848,563	4,558,822.0	0.02
	October	226,680	226,680	56,449,827	4,704,492.4	4.02
	November	208,225	208,225	55,779,523	4,553,643.6	3.73
	December	212,160	212,160	56,734,392	4,709,102.6	3.74
2016						
	January	201,447	201,447	52,503,211	4,364,255.0	3.84
	February	208,948	208,948	51,854,243	4,090,807.5	4.03
	March	221,352	221,352	52,222,263	4,380,112.2	4.24
	April	159,010	159,010	37,789,113	3,087,951.3	4.21
	May	65,124	65,124	17,729,739	1,499,404.9	3.67
	June	62,268	62,268	17,720,453	1,451,281.0	3.51
	July	18,828	18,828	5,644,489	476,232.6	3.34
	August	12,870	12,870	4,478,595	334,532.1	2.87
ICD-9-CM codes from Algorithm, SFM, and FBM, 0 day washout						
2010						
	October	1,395,767	2,118,675	57,716,153	4,834,624.7	24.18
	November	1,373,840	2,077,284	57,083,139	4,676,871.8	24.07
	December	1,359,046	2,065,273	58,361,401	4,851,164.3	23.29
2011						
	January	1,291,778	1,973,705	54,708,355	4,559,066.6	23.61
	February	1,259,457	1,889,304	54,004,537	4,128,109.5	23.32
	March	1,431,004	2,241,430	54,304,661	4,589,505.2	26.35
	April	1,331,377	2,030,298	54,376,438	4,451,813.2	24.48
	May	1,336,802	2,049,610	54,345,382	4,596,809.0	24.60
	June	1,371,154	2,113,178	54,180,080	4,437,454.8	25.31
	July	1,376,690	2,087,356	58,516,097	4,922,622.7	23.53
	August	1,488,086	2,313,087	58,949,591	4,934,256.4	25.24
	September	1,452,215	2,226,372	58,085,767	4,756,913.3	25.00
	October	1,467,052	2,242,656	58,676,595	4,912,248.5	25.00
	November	1,438,870	2,186,652	58,078,196	4,756,987.5	24.77
	December	1,428,660	2,181,896	59,388,173	4,936,750.4	24.06

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2012					
January	1,386,763	2,152,562	55,530,223	4,630,251.0	24.97
February	1,367,352	2,092,869	54,876,327	4,343,731.8	24.92
March	1,436,561	2,240,539	54,975,889	4,646,212.7	26.13
April	1,391,927	2,136,401	55,096,138	4,512,914.6	25.26
May	1,423,677	2,219,250	55,049,184	4,658,029.6	25.86
June	1,378,575	2,122,026	54,978,230	4,504,350.2	25.07
July	1,455,631	2,251,932	58,694,936	4,954,101.6	24.80
August	1,514,225	2,371,508	59,224,748	4,948,556.2	25.57
September	1,415,284	2,155,727	58,386,075	4,782,162.8	24.24
October	1,557,569	2,440,846	58,911,806	4,936,312.3	26.44
November	1,459,318	2,242,862	58,315,915	4,778,740.5	25.02
December	1,393,861	2,132,986	59,471,414	4,955,666.4	23.44
2013					
January	1,435,366	2,272,302	56,197,731	4,670,823.4	25.54
February	1,337,912	2,056,644	55,542,762	4,246,777.7	24.09
March	1,421,123	2,224,638	56,138,854	4,744,073.1	25.31
April	1,490,948	2,377,252	56,104,107	4,595,653.8	26.57
May	1,452,527	2,308,831	56,057,246	4,744,239.6	25.91
June	1,383,185	2,151,760	55,778,760	4,571,072.3	24.80
July	1,520,473	2,408,155	59,556,573	5,016,305.0	25.53
August	1,518,744	2,402,529	59,876,675	5,015,940.4	25.36
September	1,487,805	2,319,683	59,000,407	4,833,576.6	25.22
October	1,610,320	2,570,860	59,493,519	4,988,077.6	27.07
November	1,451,789	2,244,179	58,886,507	4,825,393.1	24.65
December	1,464,601	2,291,728	60,055,310	4,997,010.4	24.39
2014					
January	1,417,125	2,247,657	55,701,673	4,645,703.0	25.44
February	1,347,841	2,086,942	55,017,049	4,207,098.7	24.50
March	1,450,536	2,295,046	55,271,800	4,673,920.9	26.24
April	1,468,578	2,338,731	55,288,350	4,527,701.2	26.56
May	1,426,490	2,264,498	55,167,407	4,668,733.3	25.86
June	1,416,788	2,235,408	55,203,751	4,521,918.7	25.66
July	1,564,101	2,501,306	60,017,841	5,048,903.4	26.06
August	1,499,852	2,371,778	60,258,780	4,995,827.3	24.89
September	1,561,319	2,482,377	58,851,445	4,821,953.3	26.53
October	1,632,356	2,625,097	59,811,527	4,994,616.9	27.29
November	1,433,165	2,211,419	59,123,837	4,845,527.4	24.24
December	1,548,406	2,470,413	60,149,691	5,009,350.1	25.74
2015					
January	1,425,649	2,272,867	56,110,525	4,678,415.9	25.41
February	1,349,763	2,105,862	55,431,573	4,198,556.6	24.35
March	1,531,160	2,466,998	55,562,529	4,693,730.3	27.56
April	1,518,912	2,448,717	55,654,716	4,555,384.6	27.29
May	1,429,534	2,275,709	55,625,323	4,706,910.3	25.70
June	1,510,771	2,438,433	55,657,221	4,559,569.0	27.14
July	1,602,158	2,578,831	60,121,043	5,059,633.5	26.65
August	1,563,669	2,472,493	60,711,514	5,062,973.3	25.76
September	1,589,448	2,485,106	59,802,370	4,899,634.6	26.58
October	1,384	2,301	60,415,951	5,056,566.0	0.02
November	511	778	59,733,371	4,894,566.1	0.01
December	248	415	60,716,875	5,061,375.7	0.00
2016					
January	158	240	56,184,879	4,690,539.7	0.00
February	111	165	55,510,698	4,396,218.4	0.00
March	84	85	55,892,627	4,707,486.7	0.00
April	72	75	40,838,247	3,348,128.0	0.00
May	57	59	18,931,915	1,605,398.3	0.00
June	66	66	18,953,391	1,556,068.3	0.00
July	64	64	6,080,161	514,545.9	0.01
August	35	35	4,828,490	361,293.6	0.01

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
ICD-10-CM codes from an Algorithm, 0 day washout					
2010					
October	2	2	57,716,153	4,834,624.7	0.00
November	0	0	57,083,139	4,676,871.8	0.00
December	2	2	58,361,401	4,851,164.3	0.00
2011					
January	2	2	54,708,355	4,559,066.6	0.00
February	2	2	54,004,537	4,128,109.5	0.00
March	0	0	54,304,661	4,589,505.2	0.00
April	2	2	54,376,438	4,451,813.2	0.00
May	3	3	54,345,382	4,596,809.0	0.00
June	3	3	54,180,080	4,437,454.8	0.00
July	3	3	58,516,097	4,922,622.7	0.00
August	5	5	58,949,591	4,934,256.4	0.00
September	3	3	58,085,767	4,756,913.3	0.00
October	2	2	58,676,595	4,912,248.5	0.00
November	3	3	58,078,196	4,756,987.5	0.00
December	2	2	59,388,173	4,936,750.4	0.00
2012					
January	3	3	55,530,223	4,630,251.0	0.00
February	6	6	54,876,327	4,343,731.8	0.00
March	8	8	54,975,889	4,646,212.7	0.00
April	8	8	55,096,138	4,512,914.6	0.00
May	8	8	55,049,184	4,658,029.6	0.00
June	1	1	54,978,230	4,504,350.2	0.00
July	6	6	58,694,936	4,954,101.6	0.00
August	7	7	59,224,748	4,948,556.2	0.00
September	3	3	58,386,075	4,782,162.8	0.00
October	8	8	58,911,806	4,936,312.3	0.00
November	10	10	58,315,915	4,778,740.5	0.00
December	3	3	59,471,414	4,955,666.4	0.00
2013					
January	15	15	56,197,731	4,670,823.4	0.00
February	10	10	55,542,762	4,246,777.7	0.00
March	20	20	56,138,854	4,744,073.1	0.00
April	18	18	56,104,107	4,595,653.8	0.00
May	3	3	56,057,246	4,744,239.6	0.00
June	10	10	55,778,760	4,571,072.3	0.00
July	10	10	59,556,573	5,016,305.0	0.00
August	10	10	59,876,675	5,015,940.4	0.00
September	12	12	59,000,407	4,833,576.6	0.00
October	10	10	59,493,519	4,988,077.6	0.00
November	19	19	58,886,507	4,825,393.1	0.00
December	13	13	60,055,310	4,997,010.4	0.00
2014					
January	18	20	55,701,673	4,645,703.0	0.00
February	18	18	55,017,049	4,207,098.7	0.00
March	26	26	55,271,800	4,673,920.9	0.00
April	30	30	55,288,350	4,527,701.2	0.00
May	33	36	55,167,407	4,668,733.3	0.00
June	34	34	55,203,751	4,521,918.7	0.00
July	49	49	60,017,841	5,048,903.4	0.00
August	53	58	60,258,780	4,995,827.3	0.00
September	51	51	58,851,445	4,821,953.3	0.00
October	54	54	59,811,527	4,994,616.9	0.00
November	46	46	59,123,837	4,845,527.4	0.00
December	72	73	60,149,691	5,009,350.1	0.00

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2015					
January	123	123	56,110,525	4,678,415.9	0.00
February	110	111	55,431,573	4,198,556.6	0.00
March	143	143	55,562,529	4,693,730.3	0.00
April	151	158	55,654,716	4,555,384.6	0.00
May	213	213	55,625,323	4,706,910.3	0.00
June	332	332	55,657,221	4,559,569.0	0.01
July	637	641	60,121,043	5,059,633.5	0.01
August	3,169	4,683	60,711,514	5,062,973.3	0.05
September	14,384	20,428	59,802,370	4,899,634.6	0.24
October	1,190,269	1,700,674	60,415,951	5,056,566.0	19.70
November	1,103,983	1,557,080	59,733,371	4,894,566.1	18.48
December	1,147,504	1,641,689	60,716,875	5,061,375.7	18.90
2016					
January	1,020,041	1,449,327	56,184,879	4,690,539.7	18.16
February	1,046,930	1,490,260	55,510,698	4,396,218.4	18.86
March	1,120,162	1,616,078	55,892,627	4,707,486.7	20.04
April	872,948	1,249,354	40,838,247	3,348,128.0	21.38
May	312,477	442,599	18,931,915	1,605,398.3	16.51
June	315,721	447,286	18,953,391	1,556,068.3	16.66
July	81,733	104,609	6,080,161	514,545.9	13.44
August	55,691	72,036	4,828,490	361,293.6	11.53

ICD-10-CM codes from SFM, 0 day washout

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2010					
October	2	2	57,716,153	4,834,624.7	0.00
November	0	0	57,083,139	4,676,871.8	0.00
December	2	2	58,361,401	4,851,164.3	0.00
2011					
January	2	2	54,708,355	4,559,066.6	0.00
February	3	3	54,004,537	4,128,109.5	0.00
March	0	0	54,304,661	4,589,505.2	0.00
April	2	2	54,376,438	4,451,813.2	0.00
May	4	4	54,345,382	4,596,809.0	0.00
June	4	4	54,180,080	4,437,454.8	0.00
July	5	5	58,516,097	4,922,622.7	0.00
August	6	6	58,949,591	4,934,256.4	0.00
September	7	7	58,085,767	4,756,913.3	0.00
October	2	2	58,676,595	4,912,248.5	0.00
November	5	5	58,078,196	4,756,987.5	0.00
December	6	6	59,388,173	4,936,750.4	0.00
2012					
January	3	3	55,530,223	4,630,251.0	0.00
February	10	10	54,876,327	4,343,731.8	0.00
March	8	8	54,975,889	4,646,212.7	0.00
April	10	10	55,096,138	4,512,914.6	0.00
May	9	9	55,049,184	4,658,029.6	0.00
June	2	2	54,978,230	4,504,350.2	0.00
July	8	8	58,694,936	4,954,101.6	0.00
August	9	9	59,224,748	4,948,556.2	0.00
September	5	5	58,386,075	4,782,162.8	0.00
October	15	15	58,911,806	4,936,312.3	0.00
November	11	11	58,315,915	4,778,740.5	0.00
December	6	6	59,471,414	4,955,666.4	0.00
2013					
January	18	18	56,197,731	4,670,823.4	0.00
February	13	13	55,542,762	4,246,777.7	0.00
March	24	24	56,138,854	4,744,073.1	0.00
April	20	20	56,104,107	4,595,653.8	0.00
May	6	6	56,057,246	4,744,239.6	0.00
June	14	14	55,778,760	4,571,072.3	0.00
July	18	18	59,556,573	5,016,305.0	0.00
August	15	15	59,876,675	5,015,940.4	0.00
September	21	21	59,000,407	4,833,576.6	0.00
October	13	13	59,493,519	4,988,077.6	0.00
November	24	24	58,886,507	4,825,393.1	0.00
December	22	22	60,055,310	4,997,010.4	0.00

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2014					
January	25	42	55,701,673	4,645,703.0	0.00
February	28	28	55,017,049	4,207,098.7	0.00
March	35	35	55,271,800	4,673,920.9	0.00
April	39	39	55,288,350	4,527,701.2	0.00
May	45	48	55,167,407	4,668,733.3	0.00
June	37	37	55,203,751	4,521,918.7	0.00
July	66	66	60,017,841	5,048,903.4	0.00
August	66	71	60,258,780	4,995,827.3	0.00
September	69	69	58,851,445	4,821,953.3	0.00
October	76	76	59,811,527	4,994,616.9	0.00
November	67	67	59,123,837	4,845,527.4	0.00
December	91	93	60,149,691	5,009,350.1	0.00
2015					
January	164	164	56,110,525	4,678,415.9	0.00
February	147	149	55,431,573	4,198,556.6	0.00
March	192	192	55,562,529	4,693,730.3	0.00
April	209	218	55,654,716	4,555,384.6	0.00
May	290	290	55,625,323	4,706,910.3	0.01
June	437	438	55,657,221	4,559,569.0	0.01
July	810	815	60,121,043	5,059,633.5	0.01
August	4,193	6,275	60,711,514	5,062,973.3	0.07
September	19,235	27,440	59,802,370	4,899,634.6	0.32
October	1,528,147	2,364,064	60,415,951	5,056,566.0	25.29
November	1,425,178	2,164,295	59,733,371	4,894,566.1	23.86
December	1,480,636	2,289,309	60,716,875	5,061,375.7	24.39
2016					
January	1,343,749	2,061,946	56,184,879	4,690,539.7	23.92
February	1,380,676	2,121,560	55,510,698	4,396,218.4	24.87
March	1,469,889	2,301,060	55,892,627	4,707,486.7	26.30
April	1,148,463	1,779,331	40,838,247	3,348,128.0	28.12
May	417,366	638,194	18,931,915	1,605,398.3	22.05
June	421,467	646,050	18,953,391	1,556,068.3	22.24
July	117,830	161,055	6,080,161	514,545.9	19.38
August	77,404	105,454	4,828,490	361,293.6	16.03
ICD-10-CM codes from SFM with cluster logic, 0 day washout					
2010					
October	2	2	57,716,153	4,834,624.7	0.00
November	0	0	57,083,139	4,676,871.8	0.00
December	2	2	58,361,401	4,851,164.3	0.00
2011					
January	2	2	54,708,355	4,559,066.6	0.00
February	3	3	54,004,537	4,128,109.5	0.00
March	0	0	54,304,661	4,589,505.2	0.00
April	2	2	54,376,438	4,451,813.2	0.00
May	4	4	54,345,382	4,596,809.0	0.00
June	4	4	54,180,080	4,437,454.8	0.00
July	5	5	58,516,097	4,922,622.7	0.00
August	6	6	58,949,591	4,934,256.4	0.00
September	7	7	58,085,767	4,756,913.3	0.00
October	2	2	58,676,595	4,912,248.5	0.00
November	5	5	58,078,196	4,756,987.5	0.00
December	6	6	59,388,173	4,936,750.4	0.00
2012					
January	3	3	55,530,223	4,630,251.0	0.00
February	10	10	54,876,327	4,343,731.8	0.00
March	8	8	54,975,889	4,646,212.7	0.00
April	10	10	55,096,138	4,512,914.6	0.00
May	9	9	55,049,184	4,658,029.6	0.00
June	2	2	54,978,230	4,504,350.2	0.00
July	8	8	58,694,936	4,954,101.6	0.00
August	9	9	59,224,748	4,948,556.2	0.00
September	5	5	58,386,075	4,782,162.8	0.00
October	15	15	58,911,806	4,936,312.3	0.00
November	11	11	58,315,915	4,778,740.5	0.00
December	5	5	59,471,414	4,955,666.4	0.00

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2013					
January	18	18	56,197,731	4,670,823.4	0.00
February	13	13	55,542,762	4,246,777.7	0.00
March	24	24	56,138,854	4,744,073.1	0.00
April	20	20	56,104,107	4,595,653.8	0.00
May	6	6	56,057,246	4,744,239.6	0.00
June	14	14	55,778,760	4,571,072.3	0.00
July	18	18	59,556,573	5,016,305.0	0.00
August	15	15	59,876,675	5,015,940.4	0.00
September	21	21	59,000,407	4,833,576.6	0.00
October	13	13	59,493,519	4,988,077.6	0.00
November	24	24	58,886,507	4,825,393.1	0.00
December	22	22	60,055,310	4,997,010.4	0.00
2014					
January	25	42	55,701,673	4,645,703.0	0.00
February	28	28	55,017,049	4,207,098.7	0.00
March	34	34	55,271,800	4,673,920.9	0.00
April	39	39	55,288,350	4,527,701.2	0.00
May	44	47	55,167,407	4,668,733.3	0.00
June	37	37	55,203,751	4,521,918.7	0.00
July	66	66	60,017,841	5,048,903.4	0.00
August	65	70	60,258,780	4,995,827.3	0.00
September	69	69	58,851,445	4,821,953.3	0.00
October	76	76	59,811,527	4,994,616.9	0.00
November	67	67	59,123,837	4,845,527.4	0.00
December	90	92	60,149,691	5,009,350.1	0.00
2015					
January	163	163	56,110,525	4,678,415.9	0.00
February	145	147	55,431,573	4,198,556.6	0.00
March	192	192	55,562,529	4,693,730.3	0.00
April	206	215	55,654,716	4,555,384.6	0.00
May	288	288	55,625,323	4,706,910.3	0.01
June	434	435	55,657,221	4,559,569.0	0.01
July	805	810	60,121,043	5,059,633.5	0.01
August	4,163	6,236	60,711,514	5,062,973.3	0.07
September	18,992	27,163	59,802,370	4,899,634.6	0.32
October	1,514,447	2,334,758	60,415,951	5,056,566.0	25.07
November	1,412,925	2,139,611	59,733,371	4,894,566.1	23.65
December	1,468,666	2,264,768	60,716,875	5,061,375.7	24.19
2016					
January	1,332,277	2,038,579	56,184,879	4,690,539.7	23.71
February	1,368,714	2,097,565	55,510,698	4,396,218.4	24.66
March	1,457,385	2,274,979	55,892,627	4,707,486.7	26.07
April	1,137,709	1,757,565	40,838,247	3,348,128.0	27.86
May	414,344	631,916	18,931,915	1,605,398.3	21.89
June	418,388	639,945	18,953,391	1,556,068.3	22.07
July	117,183	159,993	6,080,161	514,545.9	19.27
August	77,058	104,866	4,828,490	361,293.6	15.96
ICD-10-CM codes from FBM, 0 day washout					
2010					
October	2	2	57,716,153	4,834,624.7	0.00
November	0	0	57,083,139	4,676,871.8	0.00
December	2	2	58,361,401	4,851,164.3	0.00
2011					
January	2	2	54,708,355	4,559,066.6	0.00
February	3	3	54,004,537	4,128,109.5	0.00
March	0	0	54,304,661	4,589,505.2	0.00
April	2	2	54,376,438	4,451,813.2	0.00
May	4	4	54,345,382	4,596,809.0	0.00
June	4	4	54,180,080	4,437,454.8	0.00
July	5	5	58,516,097	4,922,622.7	0.00
August	7	7	58,949,591	4,934,256.4	0.00
September	8	8	58,085,767	4,756,913.3	0.00
October	2	2	58,676,595	4,912,248.5	0.00
November	5	5	58,078,196	4,756,987.5	0.00
December	6	6	59,388,173	4,936,750.4	0.00

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2012					
January	3	3	55,530,223	4,630,251.0	0.00
February	10	10	54,876,327	4,343,731.8	0.00
March	8	8	54,975,889	4,646,212.7	0.00
April	11	11	55,096,138	4,512,914.6	0.00
May	9	9	55,049,184	4,658,029.6	0.00
June	2	2	54,978,230	4,504,350.2	0.00
July	9	9	58,694,936	4,954,101.6	0.00
August	9	9	59,224,748	4,948,556.2	0.00
September	5	5	58,386,075	4,782,162.8	0.00
October	17	17	58,911,806	4,936,312.3	0.00
November	11	11	58,315,915	4,778,740.5	0.00
December	6	6	59,471,414	4,955,666.4	0.00
2013					
January	18	18	56,197,731	4,670,823.4	0.00
February	13	13	55,542,762	4,246,777.7	0.00
March	25	25	56,138,854	4,744,073.1	0.00
April	21	21	56,104,107	4,595,653.8	0.00
May	6	6	56,057,246	4,744,239.6	0.00
June	15	15	55,778,760	4,571,072.3	0.00
July	20	20	59,556,573	5,016,305.0	0.00
August	16	16	59,876,675	5,015,940.4	0.00
September	23	23	59,000,407	4,833,576.6	0.00
October	17	17	59,493,519	4,988,077.6	0.00
November	26	26	58,886,507	4,825,393.1	0.00
December	23	23	60,055,310	4,997,010.4	0.00
2014					
January	26	43	55,701,673	4,645,703.0	0.00
February	29	29	55,017,049	4,207,098.7	0.00
March	37	37	55,271,800	4,673,920.9	0.00
April	44	44	55,288,350	4,527,701.2	0.00
May	48	51	55,167,407	4,668,733.3	0.00
June	42	42	55,203,751	4,521,918.7	0.00
July	73	73	60,017,841	5,048,903.4	0.00
August	68	73	60,258,780	4,995,827.3	0.00
September	73	73	58,851,445	4,821,953.3	0.00
October	77	77	59,811,527	4,994,616.9	0.00
November	75	75	59,123,837	4,845,527.4	0.00
December	108	110	60,149,691	5,009,350.1	0.00
2015					
January	181	181	56,110,525	4,678,415.9	0.00
February	161	163	55,431,573	4,198,556.6	0.00
March	210	210	55,562,529	4,693,730.3	0.00
April	236	246	55,654,716	4,555,384.6	0.00
May	322	323	55,625,323	4,706,910.3	0.01
June	473	474	55,657,221	4,559,569.0	0.01
July	881	886	60,121,043	5,059,633.5	0.01
August	4,552	6,839	60,711,514	5,062,973.3	0.07
September	20,492	29,633	59,802,370	4,899,634.6	0.34
October	1,611,779	2,553,914	60,415,951	5,056,566.0	26.68
November	1,506,494	2,339,287	59,733,371	4,894,566.1	25.22
December	1,563,937	2,475,326	60,716,875	5,061,375.7	25.76
2016					
January	1,425,557	2,241,506	56,184,879	4,690,539.7	25.37
February	1,466,545	2,309,511	55,510,698	4,396,218.4	26.42
March	1,559,336	2,505,233	55,892,627	4,707,486.7	27.90
April	1,228,325	1,954,756	40,838,247	3,348,128.0	30.08
May	451,144	710,877	18,931,915	1,605,398.3	23.83
June	455,662	720,365	18,953,391	1,556,068.3	24.04
July	135,452	194,162	6,080,161	514,545.9	22.28
August	89,137	127,339	4,828,490	361,293.6	18.46

	Number of Incident Diagnoses	Number of Diagnoses	Eligible Members	Member- Years	Number of Incident Diagnoses / 1K Eligible Members
2015					
ICD-9-CM codes from Algorithm, SFM, and FBM, 90 day washout					
2015					
January	521,886	521,886	53,807,264	4,442,831.2	9.70
February	476,447	476,447	53,086,417	3,986,819.8	8.97
March	547,959	547,959	53,223,228	4,455,461.1	10.30
2016					
ICD-10-CM codes from an Algorithm, 90 day washout					
2016					
January	477,218	477,218	54,343,771	4,496,301.5	8.78
February	492,037	492,037	53,691,244	4,216,426.7	9.16
March	527,598	527,598	54,076,355	4,513,766.7	9.76
ICD-10-CM codes from SFM, 90 day washout					
2016					
January	522,776	522,776	53,891,932	4,455,284.8	9.70
February	537,088	537,088	53,225,829	4,176,848.9	10.09
March	570,525	570,525	53,589,673	4,469,970.5	10.65
ICD-10-CM codes from SFM with cluster logic, 90 day washout					
2016					
January	521,791	521,791	53,908,370	4,456,742.7	9.68
February	535,890	535,890	53,242,232	4,178,224.1	10.07
March	569,454	569,454	53,606,641	4,471,473.2	10.62
ICD-10-CM codes from FBM, 90 day washout					
2016					
January	523,532	523,532	53,790,844	4,446,869.5	9.73
February	538,471	538,471	53,122,220	4,168,673.2	10.14
March	570,427	570,427	53,480,935	4,460,907.1	10.67

Figures 2a-2e. Number of Diabetes Diagnoses by Monitoring Period, Code Type, Code Source, and Washout Period

Figure 2a. 2010-2016 Monitoring Period: Number of Incident Diabetes Diagnoses by Code Type and Code Source, 183-Day Washout

Legend:
- ICD-9-CM codes from Algorithm, 183 day washout
- ICD-9-CM codes from FBM, 183 day washout
- ICD-10-CM codes from SFM, 183 day washout
- ICD-10-CM codes from FBM, 183 day washout
- ICD-9-CM codes from SFM, 183 day washout
- ICD-10-CM codes from an Algorithm, 183 day washout
- ICD-10-CM codes from SFM with cluster logic, 183 day washout

Figure 2b. 2010-2016 Monitoring Period: Number of Prevalent Diabetes Diagnoses by Code Type and Code Source, 0-Day Washout

Legend:
- ICD-9-CM codes from Algorithm, SFM, and FBM, 0 day washout
- ICD-10-CM codes from SFM, 0 day washout
- ICD-10-CM codes from FBM, 0 day washout
- ICD-10-CM codes from an Algorithm, 0 day washout
- ICD-10-CM codes from SFM with cluster logic, 0 day washout

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Figure 2c. 2010-2016 Monitoring Period: Persons with Prevalent Diabetes Diagnoses by Code Type and Code Source, 0-Day Washout

Legend:
- ICD-9-CM codes from Algorithm, SFM, and FBM, 0 day washout
- ICD-10-CM codes from SFM, 0 day washout
- ICD-10-CM codes from FBM, 0 day washout
- ICD-10-CM codes from an Algorithm, 0 day washout
- ICD-10-CM codes from SFM with cluster logic, 0 day washout
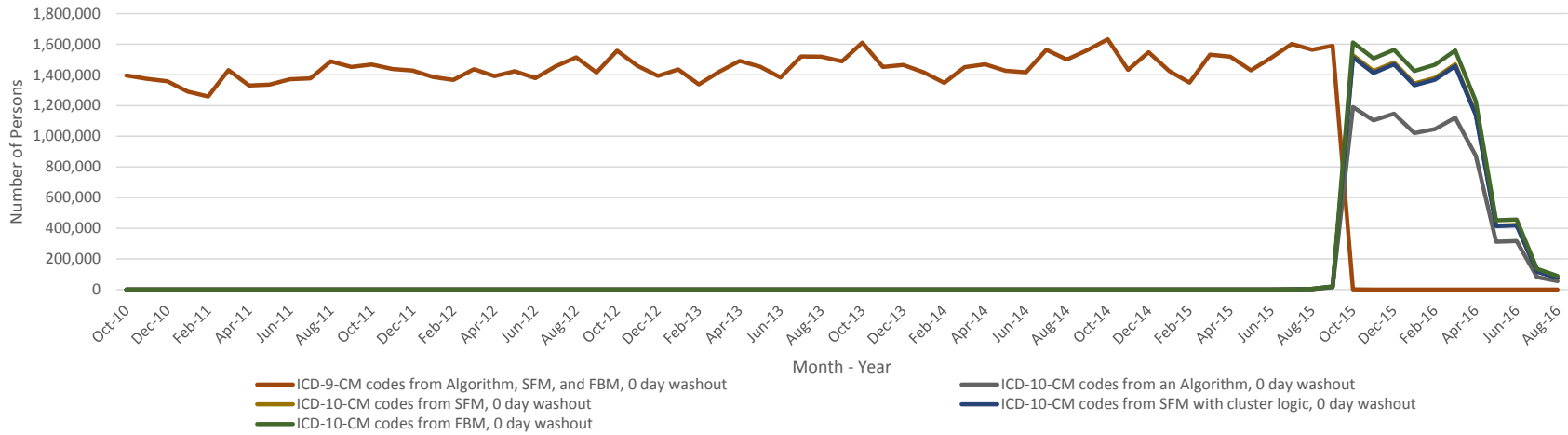
Figure 2d. 2015 Monitoring Period: Number of Incident Diabetes Diagnoses by Code Type and Code Source, 90-Day Washout

Legend:
- ICD-9-CM codes from Algorithm, SFM, and FBM, 90 day washout
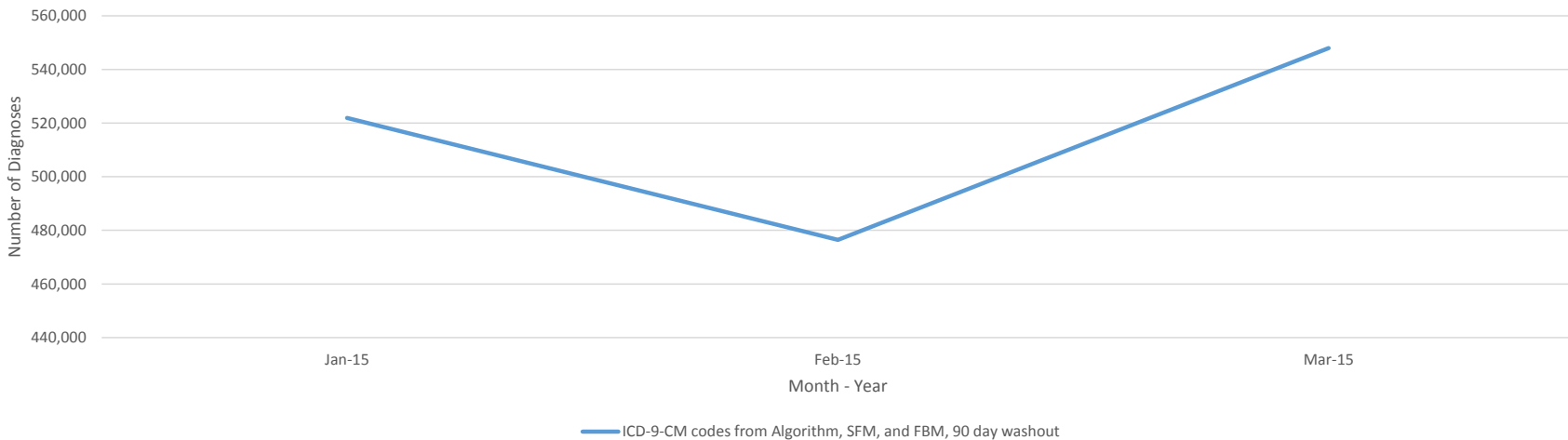
Figure 2e. 2016 Monitoring Period: Number of Incident Diabetes Diagnoses by Code Type and Code Source, 90-Day Washout

ICD-10-CM codes from an Algorithm, 90 day washout
ICD-10-CM codes from SFM, 90 day washout
ICD-10-CM codes from SFM with cluster logic, 90 day washout
ICD-10-CM codes from FBM, 90 day washout

Figure 2f. 2010-2016 Monitoring Period: Number of Incident Diagnoses per 1,000 Eligible Members of Diabetes by Code Type and Code Source, 183-Day Washout
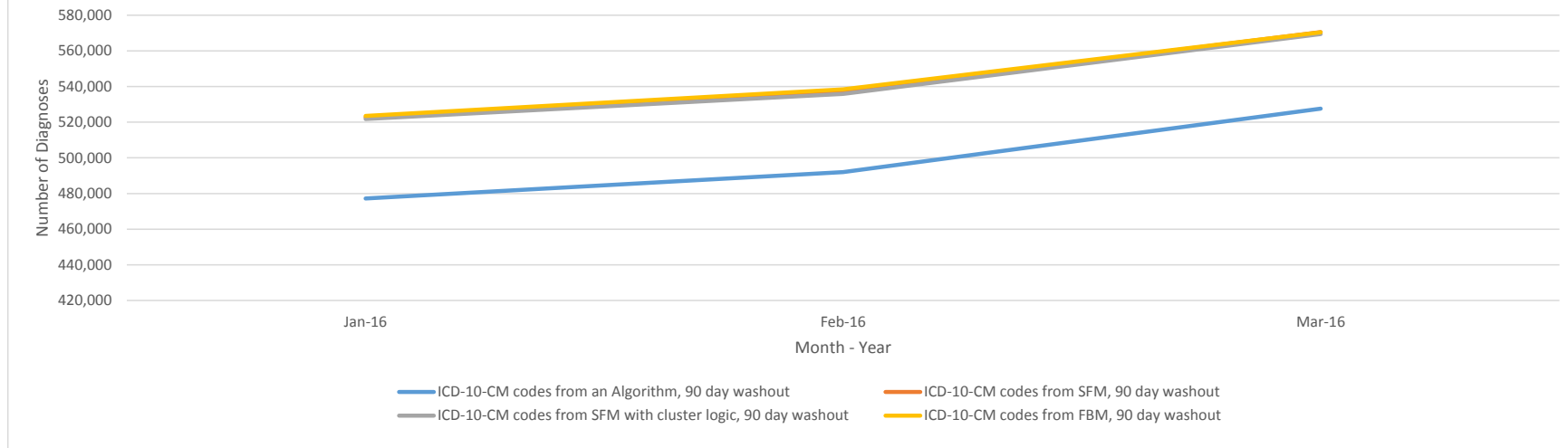
Figure 2g. 2010-2016 Monitoring Period: Number of Incident Diagnoses per 1,000 Eligible Members of Diabetes by Code Type and Code Source, 0-Day Washout
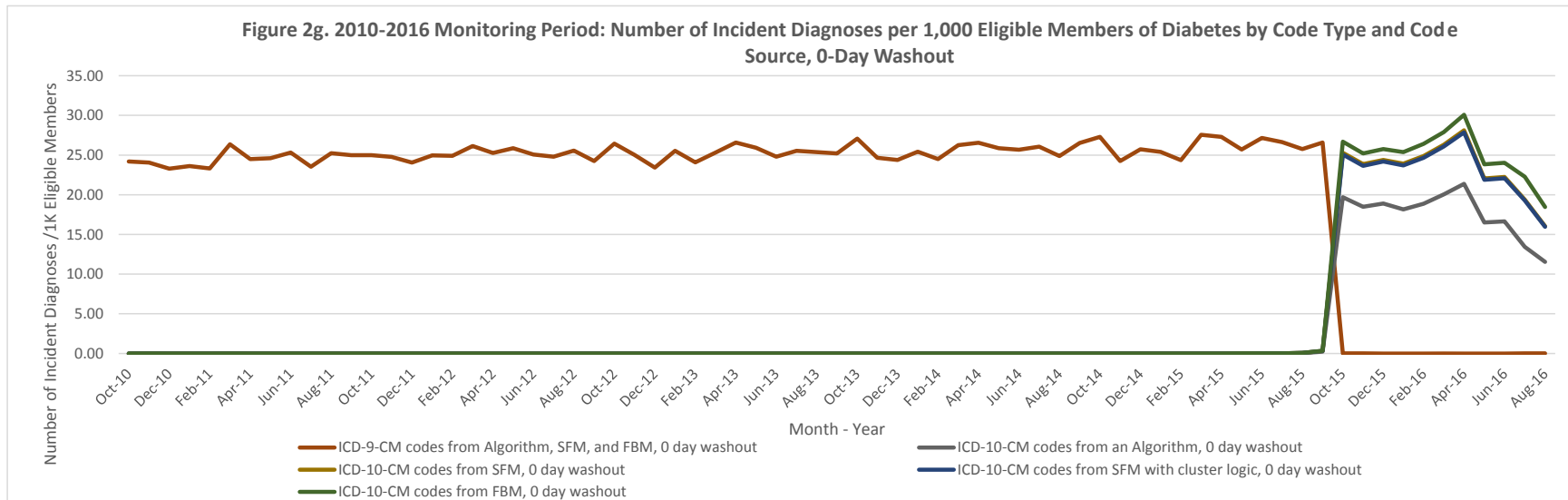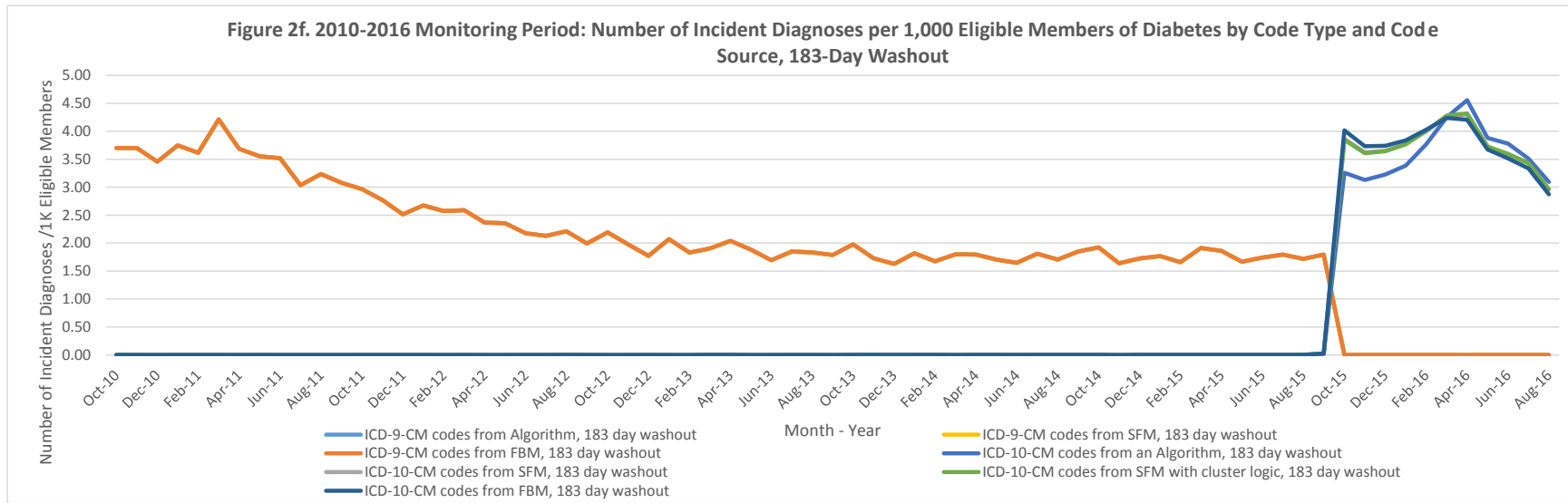
Figure 2h. 2015 Monitoring Period: Number of Incident Diagnoses per 1,000 Eligible Members of Diabetes by Code Type and Code Source, 90-Day Washout

ICD-9-CM codes from Algorithm, SFM, and FBM, 90 day washout
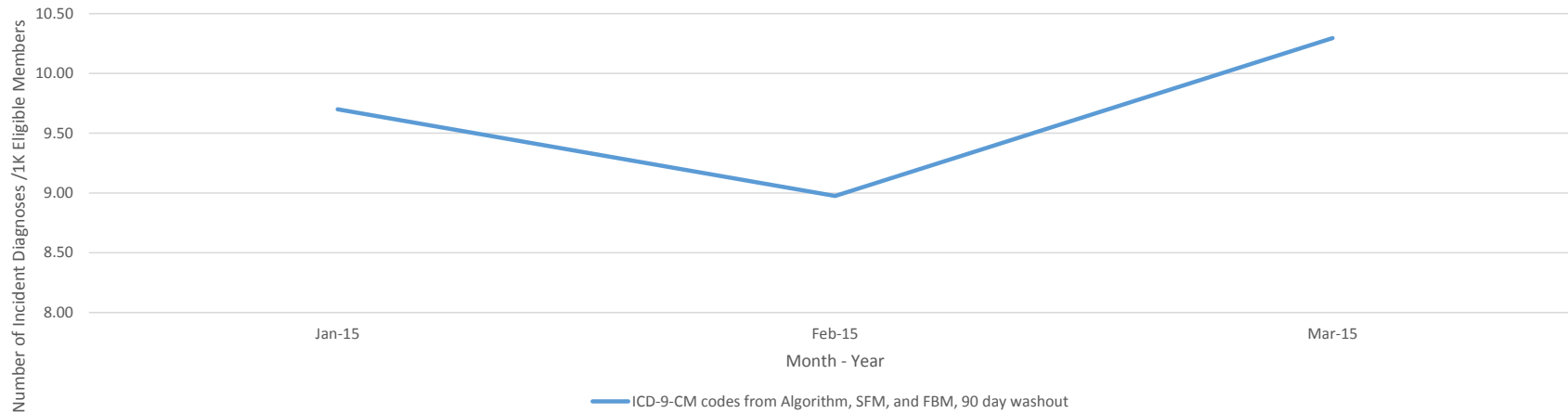
Figure 2i. 2016 Monitoring Period: Number of Incident Diagnoses per 1,000 Eligible Members of Diabetes by Code Type and Code Source, 90-Day Washout

ICD-10-CM codes from an Algorithm, 90 day washout
ICD-10-CM codes from SFM, 90 day washout
ICD-10-CM codes from SFM with cluster logic, 90 day washout
ICD-10-CM codes from FBM, 90 day washout
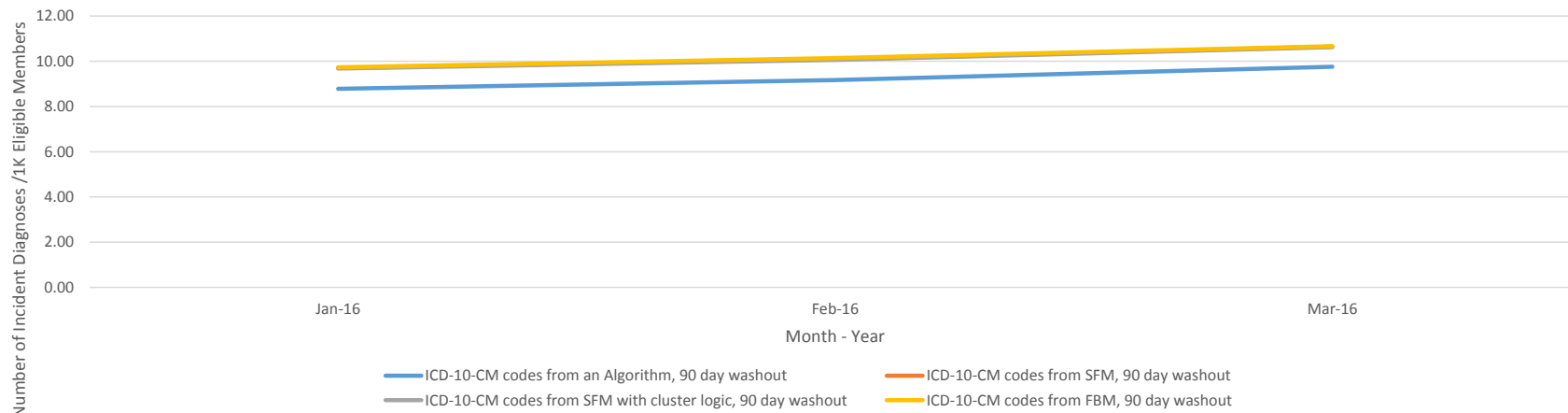
Appendix A. Latest Date of Available Data for Each Data Partner up to Request End Date

DP ID	Start Date	End Date
DP0001	10/1/2010	6/30/2016
DP0002	10/1/2010	4/30/2016
DP0003	10/1/2010	6/30/2016
DP0004	10/1/2010	7/31/2016
DP0005	10/1/2010	7/31/2016
DP0006	10/1/2010	6/30/2016
DP0007	10/1/2010	5/31/2016
DP0008	10/1/2010	7/31/2016
DP0009	10/1/2010	8/31/2016
DP0010	10/1/2010	3/31/2016
DP0011	10/1/2010	4/30/2016

Appendix B. List of Codes Used to Define Hypertension, Algorithm

Code	Description	Code Type
401.0	Essential hypertension, malignant	ICD-9-CM Diagnosis
401.1	Essential hypertension, benign	ICD-9-CM Diagnosis
401.9	Unspecified essential hypertension	ICD-9-CM Diagnosis
402.0	Malignant hypertensive heart disease	ICD-9-CM Diagnosis
402.00	Malignant hypertensive heart disease without heart failure	ICD-9-CM Diagnosis
402.01	Malignant hypertensive heart disease with heart failure	ICD-9-CM Diagnosis
402.1	Benign hypertensive heart disease	ICD-9-CM Diagnosis
402.10	Benign hypertensive heart disease without heart failure	ICD-9-CM Diagnosis
402.11	Benign hypertensive heart disease with heart failure	ICD-9-CM Diagnosis
402.9	Unspecified hypertensive heart disease	ICD-9-CM Diagnosis
402.90	Unspecified hypertensive heart disease without heart failure	ICD-9-CM Diagnosis
402.91	Hypertensive heart disease, unspecified, with heart failure	ICD-9-CM Diagnosis
403.0	Hypertensive chronic kidney disease, malignant	ICD-9-CM Diagnosis
403.00	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
403.01	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
403.1	Hypertensive chronic kidney disease, benign	ICD-9-CM Diagnosis
403.10	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
403.11	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
403.9	Hypertensive chronic kidney disease, unspecified	ICD-9-CM Diagnosis
403.90	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
403.91	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.0	Hypertensive heart and chronic kidney disease, malignant	ICD-9-CM Diagnosis
404.00	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.01	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.02	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.1	Hypertensive heart and chronic kidney disease, benign	ICD-9-CM Diagnosis
404.10	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.11	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.12	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.9	Hypertensive heart and chronic kidney disease, unspecified	ICD-9-CM Diagnosis
404.90	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.91	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.92	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V	ICD-9-CM Diagnosis
405.0	Secondary hypertension, malignant	ICD-9-CM Diagnosis
405.01	Secondary renovascular hypertension, malignant	ICD-9-CM Diagnosis
405.09	Other secondary hypertension, malignant	ICD-9-CM Diagnosis
405.1	Secondary hypertension, benign	ICD-9-CM Diagnosis
405.11	Secondary renovascular hypertension, benign	ICD-9-CM Diagnosis
405.19	Other secondary hypertension, benign	ICD-9-CM Diagnosis

Appendix B. List of Codes Used to Define Hypertension, Algorithm

Code	Description	Code Type
405.9	Unspecified secondary hypertension, unspecified	ICD-9-CM Diagnosis
405.91	Secondary renovascular hypertension, unspecified	ICD-9-CM Diagnosis
405.99	Other secondary hypertension, unspecified	ICD-9-CM Diagnosis
I10	Essential (primary) hypertension	ICD-10-CM Diagnosis
I11	Hypertensive heart disease	ICD-10-CM Diagnosis
I11.0	Hypertensive heart disease with heart failure	ICD-10-CM Diagnosis
I11.9	Hypertensive heart disease without heart failure	ICD-10-CM Diagnosis
I12	Hypertensive chronic kidney disease	ICD-10-CM Diagnosis
I12.0	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease	ICD-10-CM Diagnosis
I12.9	Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM Diagnosis
I13	Hypertensive heart and chronic kidney disease	ICD-10-CM Diagnosis
I13.0	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM Diagnosis
I13.1	Hypertensive heart and chronic kidney disease without heart failure	ICD-10-CM Diagnosis
I13.10	Hypertensive heart and chronic kidney disease without heart failure, with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM Diagnosis
I13.11	Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM Diagnosis
I13.2	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM Diagnosis
I15	Secondary hypertension	ICD-10-CM Diagnosis
I15.0	Renovascular hypertension	ICD-10-CM Diagnosis
I15.1	Hypertension secondary to other renal disorders	ICD-10-CM Diagnosis
I15.2	Hypertension secondary to endocrine disorders	ICD-10-CM Diagnosis
I15.8	Other secondary hypertension	ICD-10-CM Diagnosis
I15.9	Secondary hypertension, unspecified	ICD-10-CM Diagnosis

Appendix C. List of Codes Used to Define Hypertension, Simple Forward Mapping (SFM)

Code	Description	Code Type
401.0	Essential hypertension, malignant	ICD-9-CM Diagnosis
401.1	Essential hypertension, benign	ICD-9-CM Diagnosis
401.9	Unspecified essential hypertension	ICD-9-CM Diagnosis
402.00	Malignant hypertensive heart disease without heart failure	ICD-9-CM Diagnosis
402.01	Malignant hypertensive heart disease with heart failure	ICD-9-CM Diagnosis
402.10	Benign hypertensive heart disease without heart failure	ICD-9-CM Diagnosis
402.11	Benign hypertensive heart disease with heart failure	ICD-9-CM Diagnosis
402.90	Unspecified hypertensive heart disease without heart failure	ICD-9-CM Diagnosis
402.91	Hypertensive heart disease, unspecified, with heart failure	ICD-9-CM Diagnosis
403.00	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
403.01	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
403.10	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
403.11	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
403.90	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
403.91	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.00	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.01	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.02	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.10	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.11	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.12	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.90	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.91	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.92	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
405.01	Secondary renovascular hypertension, malignant	ICD-9-CM Diagnosis
405.09	Other secondary hypertension, malignant	ICD-9-CM Diagnosis
405.11	Secondary renovascular hypertension, benign	ICD-9-CM Diagnosis
405.19	Other secondary hypertension, benign	ICD-9-CM Diagnosis
405.91	Secondary renovascular hypertension, unspecified	ICD-9-CM Diagnosis
405.99	Other secondary hypertension, unspecified	ICD-9-CM Diagnosis
I10	Essential (primary) hypertension	ICD-10-CM Diagnosis
I16.9	Hypertensive crisis, unspecified	ICD-10-CM Diagnosis
I11.9	Hypertensive heart disease without heart failure	ICD-10-CM Diagnosis
I11.0	Hypertensive heart disease with heart failure	ICD-10-CM Diagnosis
I12.9	Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM Diagnosis
I12.0	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease	ICD-10-CM Diagnosis

Appendix C. List of Codes Used to Define Hypertension, Simple Forward Mapping (SFM)

Code	Description	Code Type
I13.10	Hypertensive heart and chronic kidney disease without heart failure, with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM Diagnosis
I13.0	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM Diagnosis
I13.11	Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM Diagnosis
I13.2	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM Diagnosis
I15.0	Renovascular hypertension	ICD-10-CM Diagnosis
I15.8	Other secondary hypertension	ICD-10-CM Diagnosis

Appendix D. List of Codes Used to Define Hypertension, Forward Backward Mapping (FBM)

Code	Description	Code Type
401.0	Essential hypertension, malignant	ICD-9-CM Diagnosis
401.1	Essential hypertension, benign	ICD-9-CM Diagnosis
401.9	Unspecified essential hypertension	ICD-9-CM Diagnosis
402.00	Malignant hypertensive heart disease without heart failure	ICD-9-CM Diagnosis
402.01	Malignant hypertensive heart disease with heart failure	ICD-9-CM Diagnosis
402.10	Benign hypertensive heart disease without heart failure	ICD-9-CM Diagnosis
402.11	Benign hypertensive heart disease with heart failure	ICD-9-CM Diagnosis
402.90	Unspecified hypertensive heart disease without heart failure	ICD-9-CM Diagnosis
402.91	Hypertensive heart disease, unspecified, with heart failure	ICD-9-CM Diagnosis
403.00	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
403.01	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
403.10	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
403.11	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
403.90	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
403.91	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.00	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.01	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.02	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.10	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.11	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.12	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.90	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.91	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM Diagnosis
404.92	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM Diagnosis
405.01	Secondary renovascular hypertension, malignant	ICD-9-CM Diagnosis
405.09	Other secondary hypertension, malignant	ICD-9-CM Diagnosis
405.11	Secondary renovascular hypertension, benign	ICD-9-CM Diagnosis
405.19	Other secondary hypertension, benign	ICD-9-CM Diagnosis
405.91	Secondary renovascular hypertension, unspecified	ICD-9-CM Diagnosis
405.99	Other secondary hypertension, unspecified	ICD-9-CM Diagnosis
I10	Essential (primary) hypertension	ICD-10-CM Diagnosis
I16.9	Hypertensive crisis, unspecified	ICD-10-CM Diagnosis
I11.9	Hypertensive heart disease without heart failure	ICD-10-CM Diagnosis
I11.0	Hypertensive heart disease with heart failure	ICD-10-CM Diagnosis
I12.9	Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney	ICD-10-CM Diagnosis
I12.0	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease	ICD-10-CM Diagnosis
I13.10	Hypertensive heart and chronic kidney disease without heart failure, with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM Diagnosis
I13.0	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM Diagnosis
I13.11	Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage	ICD-10-CM Diagnosis
I13.2	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage	ICD-10-CM Diagnosis
I15.0	Renovascular hypertension	ICD-10-CM Diagnosis
I15.8	Other secondary hypertension	ICD-10-CM Diagnosis

Appendix D. List of Codes Used to Define Hypertension, Forward Backward Mapping (FBM)

Code	Description	Code Type
N26.2	Page kidney	ICD-10-CM Diagnosis
I15.1	Hypertension secondary to other renal disorders	ICD-10-CM Diagnosis
I15.2	Hypertension secondary to endocrine disorders	ICD-10-CM Diagnosis
I15.9	Secondary hypertension, unspecified	ICD-10-CM Diagnosis
I16.0	Hypertensive urgency	ICD-10-CM Diagnosis
I16.1	Hypertensive emergency	ICD-10-CM Diagnosis

Appendix E. List of Codes Used to Define Diabetes, Algorithm

Code	Description	Code Type
250	Diabetes mellitus	ICD-9-CM Diagnosis
250.0	Diabetes mellitus without mention of complication	ICD-9-CM Diagnosis
250.00	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.01	Diabetes mellitus without mention of complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.02	Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.03	Diabetes mellitus without mention of complication, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.1	Diabetes with ketoacidosis	ICD-9-CM Diagnosis
250.10	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.11	Diabetes with ketoacidosis, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.12	Diabetes with ketoacidosis, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.13	Diabetes with ketoacidosis, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.2	Diabetes with hyperosmolarity	ICD-9-CM Diagnosis
250.20	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.21	Diabetes with hyperosmolarity, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.22	Diabetes with hyperosmolarity, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.23	Diabetes with hyperosmolarity, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.3	Diabetes with other coma	ICD-9-CM Diagnosis
250.30	Diabetes with other coma, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.31	Diabetes with other coma, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.32	Diabetes with other coma, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.33	Diabetes with other coma, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.4	Diabetes with renal manifestations	ICD-9-CM Diagnosis
250.40	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.41	Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.42	Diabetes with renal manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.43	Diabetes with renal manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.5	Diabetes with ophthalmic manifestations	ICD-9-CM Diagnosis
250.50	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.6	Diabetes with neurological manifestations	ICD-9-CM Diagnosis
250.60	Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.61	Diabetes with neurological manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.62	Diabetes with neurological manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.63	Diabetes with neurological manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.7	Diabetes with peripheral circulatory disorders	ICD-9-CM Diagnosis
250.70	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.71	Diabetes with peripheral circulatory disorders, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.72	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.73	Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.8	Diabetes with other specified manifestations	ICD-9-CM Diagnosis
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.82	Diabetes with other specified manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.83	Diabetes with other specified manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.9	Diabetes with unspecified complication	ICD-9-CM Diagnosis
250.90	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.91	Diabetes with unspecified complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.92	Diabetes with unspecified complication, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.93	Diabetes with unspecified complication, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
E10.1	Type 1 diabetes mellitus with ketoacidosis	ICD-10-CM Diagnosis
E10.2	Type 1 diabetes mellitus with kidney complications	ICD-10-CM Diagnosis
E10.3	Type 1 diabetes mellitus with ophthalmic complications	ICD-10-CM Diagnosis
E10.4	Type 1 diabetes mellitus with neurological complications	ICD-10-CM Diagnosis
E10.5	Type 1 diabetes mellitus with circulatory complications	ICD-10-CM Diagnosis
E10.6	Type 1 diabetes mellitus with other specified complications	ICD-10-CM Diagnosis
E10.8	Type 1 diabetes mellitus with unspecified complications	ICD-10-CM Diagnosis
E10.9	Type 1 diabetes mellitus without complications	ICD-10-CM Diagnosis
E11.0	Type 2 diabetes mellitus with hyperosmolarity	ICD-10-CM Diagnosis
E11.2	Type 2 diabetes mellitus with kidney complications	ICD-10-CM Diagnosis

Appendix E. List of Codes Used to Define Diabetes, Algorithm

Code	Description	Code Type
E11.3	Type 2 diabetes mellitus with ophthalmic complications	ICD-10-CM Diagnosis
E11.4	Type 2 diabetes mellitus with neurological complications	ICD-10-CM Diagnosis
E11.5	Type 2 diabetes mellitus with circulatory complications	ICD-10-CM Diagnosis
E11.6	Type 2 diabetes mellitus with other specified complications	ICD-10-CM Diagnosis
E11.8	Type 2 diabetes mellitus with unspecified complications	ICD-10-CM Diagnosis
E11.9	Type 2 diabetes mellitus without complications	ICD-10-CM Diagnosis
E13.0	Other specified diabetes mellitus with hyperosmolarity	ICD-10-CM Diagnosis
E13.1	Other specified diabetes mellitus with ketoacidosis	ICD-10-CM Diagnosis
E13.2	Other specified diabetes mellitus with kidney complications	ICD-10-CM Diagnosis
E13.3	Other specified diabetes mellitus with ophthalmic complications	ICD-10-CM Diagnosis
E13.4	Other specified diabetes mellitus with neurological complications	ICD-10-CM Diagnosis
E13.5	Other specified diabetes mellitus with circulatory complications	ICD-10-CM Diagnosis
E13.6	Other specified diabetes mellitus with other specified complications	ICD-10-CM Diagnosis
E13.8	Other specified diabetes mellitus with unspecified complications	ICD-10-CM Diagnosis
E13.9	Other specified diabetes mellitus without complications	ICD-10-CM Diagnosis

Appendix F. List of Codes Used to Define Diabetes, Simple Forward Mapping (SFM)

Code	Description	Code Type
250	Diabetes mellitus	ICD-9-CM Diagnosis
250.0	Diabetes mellitus without mention of complication	ICD-9-CM Diagnosis
250.00	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.01	Diabetes mellitus without mention of complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.02	Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.03	Diabetes mellitus without mention of complication, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.1	Diabetes with ketoacidosis	ICD-9-CM Diagnosis
250.10	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.11	Diabetes with ketoacidosis, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.12	Diabetes with ketoacidosis, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.13	Diabetes with ketoacidosis, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.2	Diabetes with hyperosmolarity	ICD-9-CM Diagnosis
250.20	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.21	Diabetes with hyperosmolarity, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.22	Diabetes with hyperosmolarity, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.23	Diabetes with hyperosmolarity, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.3	Diabetes with other coma	ICD-9-CM Diagnosis
250.30	Diabetes with other coma, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.31	Diabetes with other coma, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.32	Diabetes with other coma, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.33	Diabetes with other coma, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.4	Diabetes with renal manifestations	ICD-9-CM Diagnosis
250.40	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.41	Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.42	Diabetes with renal manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.43	Diabetes with renal manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.5	Diabetes with ophthalmic manifestations	ICD-9-CM Diagnosis
250.50	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.6	Diabetes with neurological manifestations	ICD-9-CM Diagnosis
250.60	Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.61	Diabetes with neurological manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.62	Diabetes with neurological manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.63	Diabetes with neurological manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.7	Diabetes with peripheral circulatory disorders	ICD-9-CM Diagnosis
250.70	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.71	Diabetes with peripheral circulatory disorders, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.72	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.73	Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.8	Diabetes with other specified manifestations	ICD-9-CM Diagnosis
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.82	Diabetes with other specified manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.83	Diabetes with other specified manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.9	Diabetes with unspecified complication	ICD-9-CM Diagnosis
250.90	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.91	Diabetes with unspecified complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.92	Diabetes with unspecified complication, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.93	Diabetes with unspecified complication, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
E11.9	Type 2 diabetes mellitus without complications	ICD-10-CM Diagnosis
E10.9	Type 1 diabetes mellitus without complications	ICD-10-CM Diagnosis
E11.65	Type 2 diabetes mellitus with hyperglycemia	ICD-10-CM Diagnosis
E10.65	Type 1 diabetes mellitus with hyperglycemia	ICD-10-CM Diagnosis
E11.69	Type 2 diabetes mellitus with other specified complication	ICD-10-CM Diagnosis
E13.10	Other specified diabetes mellitus with ketoacidosis without coma	ICD-10-CM Diagnosis
E10.10	Type 1 diabetes mellitus with ketoacidosis without coma	ICD-10-CM Diagnosis
E11.00	Type 2 diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	ICD-10-CM Diagnosis
E11.01	Type 2 diabetes mellitus with hyperosmolarity with coma	ICD-10-CM Diagnosis
E10.69	Type 1 diabetes mellitus with other specified complication	ICD-10-CM Diagnosis
E11.641	Type 2 diabetes mellitus with hypoglycemia with coma	ICD-10-CM Diagnosis
E10.11	Type 1 diabetes mellitus with ketoacidosis with coma	ICD-10-CM Diagnosis

Appendix F. List of Codes Used to Define Diabetes, Simple Forward Mapping (SFM)

Code	Description	Code Type
E10.641	Type 1 diabetes mellitus with hypoglycemia with coma	ICD-10-CM Diagnosis
E11.29	Type 2 diabetes mellitus with other diabetic kidney complication	ICD-10-CM Diagnosis
E10.29	Type 1 diabetes mellitus with other diabetic kidney complication	ICD-10-CM Diagnosis
E11.21	Type 2 diabetes mellitus with diabetic nephropathy	ICD-10-CM Diagnosis
E10.21	Type 1 diabetes mellitus with diabetic nephropathy	ICD-10-CM Diagnosis
E11.311	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM Diagnosis
E11.319	Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM Diagnosis
E11.36	Type 2 diabetes mellitus with diabetic cataract	ICD-10-CM Diagnosis
E11.39	Type 2 diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM Diagnosis
E10.311	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM Diagnosis
E10.319	Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM Diagnosis
E10.36	Type 1 diabetes mellitus with diabetic cataract	ICD-10-CM Diagnosis
E10.37X1	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM Diagnosis
E10.37X2	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM Diagnosis
E10.37X3	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM Diagnosis
E10.37X9	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM Diagnosis
E10.39	Type 1 diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM Diagnosis
E11.40	Type 2 diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM Diagnosis
E10.40	Type 1 diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM Diagnosis
E11.51	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM Diagnosis
E10.51	Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM Diagnosis
E11.618	Type 2 diabetes mellitus with other diabetic arthropathy	ICD-10-CM Diagnosis
E11.620	Type 2 diabetes mellitus with diabetic dermatitis	ICD-10-CM Diagnosis
E11.621	Type 2 diabetes mellitus with foot ulcer	ICD-10-CM Diagnosis
E11.622	Type 2 diabetes mellitus with other skin ulcer	ICD-10-CM Diagnosis
E11.628	Type 2 diabetes mellitus with other skin complications	ICD-10-CM Diagnosis
E11.630	Type 2 diabetes mellitus with periodontal disease	ICD-10-CM Diagnosis
E11.638	Type 2 diabetes mellitus with other oral complications	ICD-10-CM Diagnosis
E11.649	Type 2 diabetes mellitus with hypoglycemia without coma	ICD-10-CM Diagnosis
E10.618	Type 1 diabetes mellitus with other diabetic arthropathy	ICD-10-CM Diagnosis
E10.620	Type 1 diabetes mellitus with diabetic dermatitis	ICD-10-CM Diagnosis
E10.621	Type 1 diabetes mellitus with foot ulcer	ICD-10-CM Diagnosis
E10.622	Type 1 diabetes mellitus with other skin ulcer	ICD-10-CM Diagnosis
E10.628	Type 1 diabetes mellitus with other skin complications	ICD-10-CM Diagnosis
E10.630	Type 1 diabetes mellitus with periodontal disease	ICD-10-CM Diagnosis
E10.638	Type 1 diabetes mellitus with other oral complications	ICD-10-CM Diagnosis
E10.649	Type 1 diabetes mellitus with hypoglycemia without coma	ICD-10-CM Diagnosis
E11.8	Type 2 diabetes mellitus with unspecified complications	ICD-10-CM Diagnosis
E10.8	Type 1 diabetes mellitus with unspecified complications	ICD-10-CM Diagnosis

Appendix G. List of Codes Used to Define Diabetes, Simple Forward Mapping (SFM) with Clusters

Code	Description	Code Type
250	Diabetes mellitus	ICD-9-CM Diagnosis
250.0	Diabetes mellitus without mention of complication	ICD-9-CM Diagnosis
250.00	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.01	Diabetes mellitus without mention of complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.02	Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.03	Diabetes mellitus without mention of complication, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.1	Diabetes with ketoacidosis	ICD-9-CM Diagnosis
250.10	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.11	Diabetes with ketoacidosis, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.12	Diabetes with ketoacidosis, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.13	Diabetes with ketoacidosis, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.2	Diabetes with hyperosmolarity	ICD-9-CM Diagnosis
250.20	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.21	Diabetes with hyperosmolarity, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.22	Diabetes with hyperosmolarity, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.23	Diabetes with hyperosmolarity, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.3	Diabetes with other coma	ICD-9-CM Diagnosis
250.30	Diabetes with other coma, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.31	Diabetes with other coma, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.32	Diabetes with other coma, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.33	Diabetes with other coma, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.4	Diabetes with renal manifestations	ICD-9-CM Diagnosis
250.40	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.41	Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.42	Diabetes with renal manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.43	Diabetes with renal manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.5	Diabetes with ophthalmic manifestations	ICD-9-CM Diagnosis
250.50	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.6	Diabetes with neurological manifestations	ICD-9-CM Diagnosis
250.60	Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.61	Diabetes with neurological manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.62	Diabetes with neurological manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.63	Diabetes with neurological manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.7	Diabetes with peripheral circulatory disorders	ICD-9-CM Diagnosis
250.70	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.71	Diabetes with peripheral circulatory disorders, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.72	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.73	Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.8	Diabetes with other specified manifestations	ICD-9-CM Diagnosis
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.82	Diabetes with other specified manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.83	Diabetes with other specified manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.9	Diabetes with unspecified complication	ICD-9-CM Diagnosis
250.90	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.91	Diabetes with unspecified complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.92	Diabetes with unspecified complication, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.93	Diabetes with unspecified complication, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
E11.9	Type 2 diabetes mellitus without complications	ICD-10-CM Diagnosis
E10.9	Type 1 diabetes mellitus without complications	ICD-10-CM Diagnosis
E11.65	Type 2 diabetes mellitus with hyperglycemia	ICD-10-CM Diagnosis
E10.65	Type 1 diabetes mellitus with hyperglycemia	ICD-10-CM Diagnosis
E11.69	Type 2 diabetes mellitus with other specified complication	ICD-10-CM Diagnosis
E13.10	Other specified diabetes mellitus with ketoacidosis without coma	ICD-10-CM Diagnosis
E10.10	Type 1 diabetes mellitus with ketoacidosis without coma	ICD-10-CM Diagnosis
E11.00	Type 2 diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	ICD-10-CM Diagnosis
E11.01	Type 2 diabetes mellitus with hyperosmolarity with coma	ICD-10-CM Diagnosis
E10.69	Type 1 diabetes mellitus with other specified complication	ICD-10-CM Diagnosis
E11.641	Type 2 diabetes mellitus with hypoglycemia with coma	ICD-10-CM Diagnosis
E10.11	Type 1 diabetes mellitus with ketoacidosis with coma	ICD-10-CM Diagnosis

Appendix G. List of Codes Used to Define Diabetes, Simple Forward Mapping (SFM) with Clusters

Code	Description	Code Type
E10.641	Type 1 diabetes mellitus with hypoglycemia with coma	ICD-10-CM Diagnosis
E11.29	Type 2 diabetes mellitus with other diabetic kidney complication	ICD-10-CM Diagnosis
E10.29	Type 1 diabetes mellitus with other diabetic kidney complication	ICD-10-CM Diagnosis
E11.21	Type 2 diabetes mellitus with diabetic nephropathy	
AND	AND	ICD-10-CM Diagnosis
E11.65	Type 2 diabetes mellitus with hyperglycemia	
E10.21	Type 1 diabetes mellitus with diabetic nephropathy	
AND	AND	ICD-10-CM Diagnosis
E10.65	Type 1 diabetes mellitus with hyperglycemia	
E11.311	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM Diagnosis
E11.319	Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM Diagnosis
E11.36	Type 2 diabetes mellitus with diabetic cataract	ICD-10-CM Diagnosis
E11.39	Type 2 diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM Diagnosis
E10.311	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM Diagnosis
E10.319	Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM Diagnosis
E10.36	Type 1 diabetes mellitus with diabetic cataract	ICD-10-CM Diagnosis
E10.37X1	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM Diagnosis
E10.37X2	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM Diagnosis
E10.37X3	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM Diagnosis
E10.37X9	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM Diagnosis
E10.39	Type 1 diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM Diagnosis
E11.40	Type 2 diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM Diagnosis
E10.40	Type 1 diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM Diagnosis
E11.51	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM Diagnosis
E10.51	Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM Diagnosis
E11.618	Type 2 diabetes mellitus with other diabetic arthropathy	ICD-10-CM Diagnosis
E11.620	Type 2 diabetes mellitus with diabetic dermatitis	ICD-10-CM Diagnosis
E11.621	Type 2 diabetes mellitus with foot ulcer	ICD-10-CM Diagnosis
E11.622	Type 2 diabetes mellitus with other skin ulcer	ICD-10-CM Diagnosis
E11.628	Type 2 diabetes mellitus with other skin complications	ICD-10-CM Diagnosis
E11.630	Type 2 diabetes mellitus with periodontal disease	ICD-10-CM Diagnosis
E11.638	Type 2 diabetes mellitus with other oral complications	ICD-10-CM Diagnosis
E11.649	Type 2 diabetes mellitus with hypoglycemia without coma	ICD-10-CM Diagnosis
E10.618	Type 1 diabetes mellitus with other diabetic arthropathy	ICD-10-CM Diagnosis
E10.620	Type 1 diabetes mellitus with diabetic dermatitis	ICD-10-CM Diagnosis
E10.621	Type 1 diabetes mellitus with foot ulcer	ICD-10-CM Diagnosis
E10.622	Type 1 diabetes mellitus with other skin ulcer	ICD-10-CM Diagnosis
E10.628	Type 1 diabetes mellitus with other skin complications	ICD-10-CM Deagnosis
E10.630	Type 1 diabetes mellitus with periodontal disease	ICD-10-CM Diagnosis
E10.638	Type 1 diabetes mellitus with other oral complications	ICD-10-CM Diagnosis
E10.649	Type 1 diabetes mellitus with hypoglycemia without coma	ICD-10-CM Diagnosis
E11.8	Type 2 diabetes mellitus with unspecified complications	ICD-10-CM Diagnosis
E10.8	Type 1 diabetes mellitus with unspecified complications	ICD-10-CM Diagnosis

Appendix H. Generalized Equivalence Mappings (GEMs) - 2017 Cluster Mapping for Diabetes

ICD-9-CM Code	ICD-9-CM Code Description	ICD-10-CM Code	Flag	ICD-10-CM Description	Mapping	Summarized Mapping	Summarized Mapping -- Omitting duplicates from AND scenarios
250.00	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled	E11.9	10000	Type 2 diabetes mellitus without complications	250.00 = E11.9		
250.01	Diabetes mellitus without mention of complication, type I [juvenile type], not stated as uncontrolled	E10.9	10000	Type 1 diabetes mellitus without complications	250.01 = E10.9	(250.00 OR 250.01 OR 250.02 OR 250.03 OR 250.10 OR 250.11 OR 250.20 OR	(250.00 OR 250.01 OR 250.02 OR 250.03 OR 250.10 OR 250.11 OR 250.20 OR
250.02	Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled	E11.65	10000	Type 2 diabetes mellitus with hyperglycemia	250.02 = E11.65	250.21 OR 250.30 OR 250.31 OR 250.40 OR 250.41 OR 250.50 OR 250.51 OR 250.60	250.21 OR 250.30 OR 250.31 OR 250.40 OR 250.41 OR 250.50 OR 250.51 OR 250.60
250.03	Diabetes mellitus without mention of complication, type I [juvenile type], uncontrolled	E10.65	10000	Type 1 diabetes mellitus with hyperglycemia	250.03 = E10.65	OR 250.61 OR 250.70 OR 250.71 OR 250.80 OR 250.81 OR 250.90 OR 250.91)	OR 250.61 OR 250.70 OR 250.71 OR 250.80 OR 250.81 OR 250.90 OR 250.91 OR
250.10	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled	E11.69	10000	Type 2 diabetes mellitus with other specified complication	250.10 = E11.69	=	250.23 OR 250.33 OR 250.53 OR 250.63 OR 250.73 OR 250.83 OR 250.93 OR 250.12 OR 250.22
250.10	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled	E13.10	10000	Other specified diabetes mellitus with ketoacidosis without coma	250.10 = E13.10	(E11.9 OR E11.8 OR E10.8 OR E10.9 OR E11.65 OR E10.65 OR E11.69 OR E13.10	OR 250.32 OR OR 250.52 OR 250.62 OR 250.72 OR 250.82 OR 250.92)
250.11	Diabetes with ketoacidosis, type I [juvenile type], not stated as uncontrolled	E10.10	10000	Type 1 diabetes mellitus with ketoacidosis without coma	250.11 = E10.10	OR E10.10 OR E11.00 OR E11.01 OR E10.69 OR E11.641 OR E10.11 OR E10.641 OR	=
250.12	Diabetes with ketoacidosis, type II or unspecified type, uncontrolled	E11.65	10112	Type 2 diabetes mellitus with hyperglycemia	250.12 = (E13.10 AND E11.65) OR (E11.69 AND E11.65)	E11.29	(E11.9 OR E11.8 OR E10.8 OR E10.9 OR E11.65 OR E10.65 OR E11.69 OR E13.10
250.12	Diabetes with ketoacidosis, type II or unspecified type, uncontrolled	E11.69	10111	Type 2 diabetes mellitus with other specified complication		OR E10.29 OR E11.311 OR E11.319 OR E11.36 OR E11.39 OR E10.311 OR E10.319 OR	OR E10.10 OR E11.00 OR E11.01 OR E10.69 OR E11.641 OR E10.11 OR E10.641 OR
250.12	Diabetes with ketoacidosis, type II or unspecified type, uncontrolled	E13.10	10111	Other specified diabetes mellitus with ketoacidosis without coma	250.13 = (E10.10 AND E10.65)	E10.36	OR E10.29 OR E11.311 OR E11.319 OR E11.36 OR E11.39 OR E10.311 OR E10.319 OR E10.36
250.13	Diabetes with ketoacidosis, type I [juvenile type], uncontrolled	E10.10	10111	Type 1 diabetes mellitus with ketoacidosis without coma		OR E10.39 OR E11.40 OR E10.40 OR E11.51 OR E10.51 OR E11.618 OR E11.620 OR E11.621	OR E10.39 OR E11.40 OR E10.40 OR E11.51 OR E10.51 OR E11.618 OR E11.620 OR E11.621
250.13	Diabetes with ketoacidosis, type I [juvenile type], uncontrolled	E10.65	10112	Type 1 diabetes mellitus with hyperglycemia		OR E11.622 OR E11.628 OR E11.630 OR E11.638 OR E11.649 OR E10.618 OR E10.620 OR	OR E11.622 OR E11.628 OR E11.630 OR E11.638 OR E11.649 OR E10.618 OR E10.620 OR
250.20	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled	E11.00	10000	Type 2 diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	250.20 = E11.00	OR E10.621 OR E10.628 OR E10.630 OR E10.638 OR E10.649 OR E11.8 OR E10.8 OR	E10.621 OR E10.628 OR E10.630 OR E10.638 OR E10.649 OR E11.8 OR E10.8 OR
250.20	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled	E11.01	10000	Type 2 diabetes mellitus with hyperosmolarity with coma	250.20 = E11.01	OR E10.622 OR E10.628 OR E10.630 OR E10.638 OR E10.649 OR E10.621	E10.37X1 OR E10.37X2 OR E10.37X3 OR E10.37X9)
250.21	Diabetes with hyperosmolarity, type I [juvenile type], not stated as uncontrolled	E10.69	10000	Type 1 diabetes mellitus with other specified complication	250.21 = E10.69	E10.37X1 OR E10.37X2 OR E10.37X3 OR E10.37X9)	
250.22	Diabetes with hyperosmolarity, type II or unspecified type, uncontrolled	E11.00	10111	Type 2 diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	250.22 = (E11.00 AND E11.65)		OR
						OR	
250.22	Diabetes with hyperosmolarity, type I or unspecified type, uncontrolled	E11.65	10112	Type 2 diabetes mellitus with hyperglycemia			250.42 = (E11.21 AND 11.65)
250.23	Diabetes with hyperosmolarity, type I [juvenile type], uncontrolled	E10.65	10112	Type 1 diabetes mellitus with hyperglycemia	250.23 = (E10.69 AND E10.65)	(250.12 OR 250.22 OR 250.32 OR 250.42 OR 250.52 OR 250.62 OR 250.72 OR 250.82 OR	OR
250.23	Diabetes with hyperosmolarity, type I [juvenile type], uncontrolled	E10.69	10111	Type 1 diabetes mellitus with other specified complication	250.92)	=	250.43 = (E10.21 AND 10.65)
250.30	Diabetes with other coma, type II or unspecified type, not stated as uncontrolled	E11.641	10000	Type 2 diabetes mellitus with hypoglycemia with coma	250.30 = E11.641		
250.31	Diabetes with other coma, type I [juvenile type], not stated as uncontrolled	E10.11	10000	Type 1 diabetes mellitus with ketoacidosis with coma	250.31 = E10.11	[[E13.10 OR E11.69 OR E11.00 OR E11.21 OR E11.311 OR E11.319 OR E11.40	
250.31	Diabetes with other coma, type I [juvenile type], not stated as uncontrolled	E10.641	10000	Type 1 diabetes mellitus with hypoglycemia with coma	250.31 = E10.641	OR E11.36 OR E11.39 OR E11.51 OR E11.69 OR E11.8) AND 11.65]	
250.32	Diabetes with other coma, type II or unspecified type, uncontrolled	E11.01	10111	Type 2 diabetes mellitus with hyperosmolarity with coma	250.32 = (E11.01 AND E11.65)		
250.32	Diabetes with other coma, type II or unspecified type, uncontrolled	E11.65	10112	Type 2 diabetes mellitus with hyperglycemia		OR	
250.33	Diabetes with other coma, type I [juvenile type], uncontrolled	E10.11	10111	Type 1 diabetes mellitus with ketoacidosis with coma	250.33 = (E10.11 AND E10.65)		
250.33	Diabetes with other coma, type I [juvenile type], uncontrolled	E10.65	10112	Type 1 diabetes mellitus with hyperglycemia		(250.13 OR 250.23 OR 250.33 OR 250.43 OR 250.53 OR 250.63 OR 250.73 OR 250.83 OR	
250.40	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled	E11.29	10000	Type 2 diabetes mellitus with other diabetic kidney complication	250.40 = E11.29	250.93)	
250.41	Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled	E10.29	10000	Type 1 diabetes mellitus with other diabetic kidney complication	250.41 = E10.29	=	
250.42	Diabetes with renal manifestations, type II or unspecified type, uncontrolled	E11.21	10111	Type 2 diabetes mellitus with diabetic nephropathy	250.42 = (E11.21 AND E11.65)	[(E10.10 OR E10.69 OR E10.11 OR E10.21 OR E10.311 OR E10.40 OR E10.51 OR E10.69	
250.42	Diabetes with renal manifestations, type II or unspecified type, uncontrolled	E11.65	10112	Type 2 diabetes mellitus with hyperglycemia		OR E10.8 OR E10.319 OR E10.36 OR E10.39) AND 10.65]	
250.43	Diabetes with renal manifestations, type I [juvenile type], uncontrolled	E10.21	10111	Type 1 diabetes mellitus with diabetic nephropathy	250.43 = (E10.21 AND E10.65)		
250.43	Diabetes with renal manifestations, type I [juvenile type], uncontrolled	E10.65	10112	Type 1 diabetes mellitus with hyperglycemia			
250.50	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled	E11.311	10000	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema	250.50 = E11.311		
250.50	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled	E11.319	10000	Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema	250.50 = E11.319		
250.50	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled	E11.36	10000	Type 2 diabetes mellitus with diabetic cataract	250.50 = E11.36		
250.50	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled	E11.39	10000	Type 2 diabetes mellitus with other diabetic ophthalmic complication	250.50 = E11.39		
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	E10.311	10000	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema	250.51 = E10.311		
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	E10.319	10000	Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema	250.51 = 10.319		
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	E10.36	10000	Type 1 diabetes mellitus with diabetic cataract	250.51 = E10.36		
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	E10.37X1	10000	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	250.51= E10.37X1		
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	E10.37X2	10000	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	250.51= E10.37X2		
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	E10.37X3	10000	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	250.51= E10.37X3		
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	E10.37X9	10000	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	250.51= E10.37X9		
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	E10.39	10000	Type 1 diabetes mellitus with other diabetic ophthalmic complication	250.51 = E10.39		
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	E11.311	10111	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema	250.52 = (E11.311 AND E11.65) OR (E11.319 AND E11.65) OR (E11.36		
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	E11.319	10111	Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema	AND E11.65) OR (E11.39 AND E11.65)		
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	E11.36	10111	Type 2 diabetes mellitus with diabetic cataract			
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	E11.39	10111	Type 2 diabetes mellitus with other diabetic ophthalmic complication			
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	E11.65	10112	Type 2 diabetes mellitus with hyperglycemia			
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	E10.311	10111	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema	250.53 = (E10.311 AND E10.65) OR (E10.319 AND E10.65) OR (E10.36		
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	E10.319	10111	Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema	AND E10.65) OR (E10.39 AND E10.65)		
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	E10.36	10111	Type 1 diabetes mellitus with diabetic cataract			
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	E10.39	10111	Type 1 diabetes mellitus with other diabetic ophthalmic complication			
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	E10.65	10112	Type 1 diabetes mellitus with hyperglycemia			
250.60	Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled	E11.40	10000	Type 2 diabetes mellitus with diabetic neuropathy, unspecified	250.60 = E11.40		
250.61	Diabetes with neurological manifestations, type I [juvenile type], not stated as uncontrolled	E10.40	10000	Type 1 diabetes mellitus with diabetic neuropathy, unspecified	250.61 = E10.40		
250.62	Diabetes with neurological manifestations, type II or unspecified type, uncontrolled	E11.40	10111	Type 2 diabetes mellitus with diabetic neuropathy, unspecified	250.62 = (E11.40 AND E11.65)		
250.62	Diabetes with neurological manifestations, type II or unspecified type, uncontrolled	E11.65	10112	Type 2 diabetes mellitus with hyperglycemia			
250.63	Diabetes with neurological manifestations, type I [juvenile type], uncontrolled	E10.40	10111	Type 1 diabetes mellitus with diabetic neuropathy, unspecified	250.63 = (E10.40 AND E10.65)		
250.63	Diabetes with neurological manifestations, type I [juvenile type], uncontrolled	E10.65	10112	Type 1 diabetes mellitus with hyperglycemia			
250.70	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled	E11.51	10000	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene	250.70 = E11.51		
250.71	Diabetes with peripheral circulatory disorders, type I [juvenile type], not stated as uncontrolled	E10.51	10000	Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene	250.71 = E10.51		
250.72	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled	E11.51	10111	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene	250.72 = (E11.51 AND E11.65)		
250.72	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled	E11.65	10112	Type 2 diabetes mellitus with hyperglycemia			
250.73	Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled	E10.51	10111	Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene	250.73 = (E10.51 AND E10.65)		
250.73	Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled	E10.65	10112	Type 1 diabetes mellitus with hyperglycemia			
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	E11.618	10000	Type 2 diabetes mellitus with other diabetic arthropathy	250.80 = E11.618		
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	E11.620	10000	Type 2 diabetes mellitus with diabetic dermatitis	250.80 = E11.620		
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	E11.621	10000	Type 2 diabetes mellitus with foot ulcer	250.80 = E11.621		
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	E11.622	10000	Type 2 diabetes mellitus with other skin ulcer	250.80 = E11.622		
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	E11.628	10000	Type 2 diabetes mellitus with other skin complications	250.80 = E11.628		
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	E11.630	10000	Type 2 diabetes mellitus with periodontal disease	250.80 = E11.630		
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	E11.638	10000	Type 2 diabetes mellitus with other oral complications	250.80 = E11.638		
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	E11.649	10000	Type 2 diabetes mellitus with hypoglycemia without coma	250.80 = E11.649		
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	E11.65	10000	Type 2 diabetes mellitus with hyperglycemia	250.80 = E11.65		
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	E11.69	10000	Type 2 diabetes mellitus with other specified complication	250.80 = E11.69		
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	E10.618	10000	Type 1 diabetes mellitus with other diabetic arthropathy	250.81 = E10.618		
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	E10.620	10000	Type 1 diabetes mellitus with diabetic dermatitis	250.81 = E10.620		
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	E10.621	10000	Type 1 diabetes mellitus with foot ulcer	250.81 = E10.621		
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	E10.622	10000	Type 1 diabetes mellitus with other skin ulcer	250.81 = E10.622		
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	E10.628	10000	Type 1 diabetes mellitus with other skin complications	250.81 = E10.628		
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	E10.630	10000	Type 1 diabetes mellitus with periodontal disease	250.81 = E10.630		
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	E10.638	10000	Type 1 diabetes mellitus with other oral complications	250.81 = E10.638		
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	E10.649	10000	Type 1 diabetes mellitus with hypoglycemia without coma	250.81 = E10.649		
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	E10.65	10000	Type 1 diabetes mellitus with hyperglycemia	250.81 = E10.65		
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	E10.69	10000	Type 1 diabetes mellitus with other specified complication	250.81 = E10.69		
250.82	Diabetes with other specified manifestations, type II or unspecified type, uncontrolled	E11.65	10112	Type 2 diabetes mellitus with hyperglycemia	250.82 = E11.69 AND E11.65)		
250.82	Diabetes with other specified manifestations, type II or unspecified type, uncontrolled	E11.69	10111	Type 2 diabetes mellitus with other specified complication			
250.83	Diabetes with other specified manifestations, type I [juvenile type], uncontrolled	E10.65	10112	Type 1 diabetes mellitus with hyperglycemia	250.83 = (E10.69 AND E10.65)		
250.83	Diabetes with other specified manifestations, type I [juvenile type], uncontrolled	E10.69	10111	Type 1 diabetes mellitus with other specified complication			
250.90	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled	E11.8	10000	Type 2 diabetes mellitus with unspecified complications	250.90 = E11.8		
250.91	Diabetes with unspecified complication, type I [juvenile type], not stated as uncontrolled	E10.8	10000	Type 1 diabetes mellitus with unspecified complications	250.91 = E10.8		
250.92	Diabetes with unspecified complication, type II or unspecified type, uncontrolled	E11.65	10112	Type 2 diabetes mellitus with hyperglycemia	250.92 = (E11.8 AND E11.65)		
250.92	Diabetes with unspecified complication, type II or unspecified type, uncontrolled	E11.8	10111	Type 2 diabetes mellitus with unspecified complications			
250.93	Diabetes with unspecified complication, type I [juvenile type], uncontrolled	E10.65	10112	Type 1 diabetes mellitus with hyperglycemia	250.93 = (E10.8 AND E10.65)		
250.93	Diabetes with unspecified complication, type I [juvenile type], uncontrolled	E10.8	10111	Type 1 diabetes mellitus with unspecified complications			

Appendix I. List of Codes Used to Define Diabetes, Forward Backward Mapping (FBM)

Code	Description	Code Type
250	Diabetes mellitus	ICD-9-CM Diagnosis
250.0	Diabetes mellitus without mention of complication	ICD-9-CM Diagnosis
250.00	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.01	Diabetes mellitus without mention of complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.02	Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.03	Diabetes mellitus without mention of complication, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.1	Diabetes with ketoacidosis	ICD-9-CM Diagnosis
250.10	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.11	Diabetes with ketoacidosis, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.12	Diabetes with ketoacidosis, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.13	Diabetes with ketoacidosis, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.2	Diabetes with hyperosmolarity	ICD-9-CM Diagnosis
250.20	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.21	Diabetes with hyperosmolarity, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.22	Diabetes with hyperosmolarity, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.23	Diabetes with hyperosmolarity, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.3	Diabetes with other coma	ICD-9-CM Diagnosis
250.30	Diabetes with other coma, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.31	Diabetes with other coma, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.32	Diabetes with other coma, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.33	Diabetes with other coma, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.4	Diabetes with renal manifestations	ICD-9-CM Diagnosis
250.40	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.41	Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.42	Diabetes with renal manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.43	Diabetes with renal manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.5	Diabetes with ophthalmic manifestations	ICD-9-CM Diagnosis
250.50	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.6	Diabetes with neurological manifestations	ICD-9-CM Diagnosis
250.60	Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.61	Diabetes with neurological manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.62	Diabetes with neurological manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.63	Diabetes with neurological manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.7	Diabetes with peripheral circulatory disorders	ICD-9-CM Diagnosis
250.70	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.71	Diabetes with peripheral circulatory disorders, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.72	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.73	Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.8	Diabetes with other specified manifestations	ICD-9-CM Diagnosis
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.82	Diabetes with other specified manifestations, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.83	Diabetes with other specified manifestations, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
250.9	Diabetes with unspecified complication	ICD-9-CM Diagnosis
250.90	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM Diagnosis
250.91	Diabetes with unspecified complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM Diagnosis
250.92	Diabetes with unspecified complication, type II or unspecified type, uncontrolled	ICD-9-CM Diagnosis
250.93	Diabetes with unspecified complication, type I [juvenile type], uncontrolled	ICD-9-CM Diagnosis
E11.9	Type 2 diabetes mellitus without complications	ICD-10-CM Diagnosis
E10.9	Type 1 diabetes mellitus without complications	ICD-10-CM Diagnosis
E11.65	Type 2 diabetes mellitus with hyperglycemia	ICD-10-CM Diagnosis
E10.65	Type 1 diabetes mellitus with hyperglycemia	ICD-10-CM Diagnosis
E11.69	Type 2 diabetes mellitus with other specified complication	ICD-10-CM Diagnosis
E13.10	Other specified diabetes mellitus with ketoacidosis without coma	ICD-10-CM Diagnosis
E10.10	Type 1 diabetes mellitus with ketoacidosis without coma	ICD-10-CM Diagnosis
E11.00	Type 2 diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	ICD-10-CM Diagnosis
E11.01	Type 2 diabetes mellitus with hyperosmolarity with coma	ICD-10-CM Diagnosis
E10.69	Type 1 diabetes mellitus with other specified complication	ICD-10-CM Diagnosis
E11.641	Type 2 diabetes mellitus with hypoglycemia with coma	ICD-10-CM Diagnosis
E10.11	Type 1 diabetes mellitus with ketoacidosis with coma	ICD-10-CM Diagnosis

Appendix I. List of Codes Used to Define Diabetes, Forward Backward Mapping (FBM)

Code	Description	Code Type
E10.641	Type 1 diabetes mellitus with hypoglycemia with coma	ICD-10-CM Diagnosis
E11.29	Type 2 diabetes mellitus with other diabetic kidney complication	ICD-10-CM Diagnosis
E10.29	Type 1 diabetes mellitus with other diabetic kidney complication	ICD-10-CM Diagnosis
E11.21	Type 2 diabetes mellitus with diabetic nephropathy	ICD-10-CM Diagnosis
E10.21	Type 1 diabetes mellitus with diabetic nephropathy	ICD-10-CM Diagnosis
E11.311	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM Diagnosis
E11.319	Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM Diagnosis
E11.36	Type 2 diabetes mellitus with diabetic cataract	ICD-10-CM Diagnosis
E11.39	Type 2 diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM Diagnosis
E10.311	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM Diagnosis
E10.319	Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM Diagnosis
E10.36	Type 1 diabetes mellitus with diabetic cataract	ICD-10-CM Diagnosis
E10.37X1	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM Diagnosis
E10.37X2	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM Diagnosis
E10.37X3	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM Diagnosis
E10.37X9	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM Diagnosis
E10.39	Type 1 diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM Diagnosis
E11.40	Type 2 diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM Diagnosis
E10.40	Type 1 diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM Diagnosis
E11.51	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM Diagnosis
E10.51	Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM Diagnosis
E11.618	Type 2 diabetes mellitus with other diabetic arthropathy	ICD-10-CM Diagnosis
E11.620	Type 2 diabetes mellitus with diabetic dermatitis	ICD-10-CM Diagnosis
E11.621	Type 2 diabetes mellitus with foot ulcer	ICD-10-CM Diagnosis
E11.622	Type 2 diabetes mellitus with other skin ulcer	ICD-10-CM Diagnosis
E11.628	Type 2 diabetes mellitus with other skin complications	ICD-10-CM Diagnosis
E11.630	Type 2 diabetes mellitus with periodontal disease	ICD-10-CM Diagnosis
E11.638	Type 2 diabetes mellitus with other oral complications	ICD-10-CM Diagnosis
E11.649	Type 2 diabetes mellitus with hypoglycemia without coma	ICD-10-CM Diagnosis
E10.618	Type 1 diabetes mellitus with other diabetic arthropathy	ICD-10-CM Diagnosis
E10.620	Type 1 diabetes mellitus with diabetic dermatitis	ICD-10-CM Diagnosis
E10.621	Type 1 diabetes mellitus with foot ulcer	ICD-10-CM Diagnosis
E10.622	Type 1 diabetes mellitus with other skin ulcer	ICD-10-CM Diagnosis
E10.628	Type 1 diabetes mellitus with other skin complications	ICD-10-CM Diagnosis
E10.630	Type 1 diabetes mellitus with periodontal disease	ICD-10-CM Diagnosis
E10.638	Type 1 diabetes mellitus with other oral complications	ICD-10-CM Diagnosis
E10.649	Type 1 diabetes mellitus with hypoglycemia without coma	ICD-10-CM Diagnosis
E11.8	Type 2 diabetes mellitus with unspecified complications	ICD-10-CM Diagnosis
E10.8	Type 1 diabetes mellitus with unspecified complications	ICD-10-CM Diagnosis
E13.9	Other specified diabetes mellitus without complications	ICD-10-CM Diagnosis
E13.00	Other specified diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	ICD-10-CM Diagnosis
E13.01	Other specified diabetes mellitus with hyperosmolarity with coma	ICD-10-CM Diagnosis
E13.11	Other specified diabetes mellitus with ketoacidosis with coma	ICD-10-CM Diagnosis
E13.641	Other specified diabetes mellitus with hypoglycemia with coma	ICD-10-CM Diagnosis
E13.21	Other specified diabetes mellitus with diabetic nephropathy	ICD-10-CM Diagnosis
E13.22	Other specified diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM Diagnosis
E13.29	Other specified diabetes mellitus with other diabetic kidney complication	ICD-10-CM Diagnosis
E11.22	Type 2 diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM Diagnosis
E10.22	Type 1 diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM Diagnosis
E11.3211	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM Diagnosis
E11.3212	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM Diagnosis
E11.3213	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM Diagnosis
E11.3219	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM Diagnosis
E11.3291	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM Diagnosis
E11.3292	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM Diagnosis
E11.3293	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM Diagnosis
E11.3299	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM Diagnosis
E11.3311	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM Diagnosis
E11.3312	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM Diagnosis
E11.3313	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM Diagnosis

Appendix I. List of Codes Used to Define Diabetes, Forward Backward Mapping (FBM)

Code	Description	Code Type
E11.3319	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM Diagnosis
E11.3391	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM Diagnosis
E11.3392	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM Diagnosis
E11.3393	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM Diagnosis
E11.3399	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM Diagnosis
E11.3411	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM Diagnosis
E11.3412	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM Diagnosis
E11.3413	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM Diagnosis
E11.3419	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM Diagnosis
E11.3491	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM Diagnosis
E11.3492	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM Diagnosis
E11.3493	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM Diagnosis
E11.3499	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM Diagnosis
E11.3511	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM Diagnosis
E11.3512	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM Diagnosis
E11.3513	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM Diagnosis
E11.3519	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM Diagnosis
E11.3521	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM Diagnosis
E11.3522	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM Diagnosis
E11.3523	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM Diagnosis
E11.3529	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM Diagnosis
E11.3531	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM Diagnosis
E11.3532	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM Diagnosis
E11.3533	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM Diagnosis
E11.3539	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM Diagnosis
E11.3541	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM Diagnosis
E11.3542	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM Diagnosis
E11.3543	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM Diagnosis
E11.3549	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM Diagnosis
E11.3551	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM Diagnosis
E11.3552	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM Diagnosis
E11.3553	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM Diagnosis
E11.3559	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM Diagnosis
E11.3591	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM Diagnosis
E11.3592	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM Diagnosis
E11.3593	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM Diagnosis
E11.3599	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM Diagnosis
E13.3211	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM Diagnosis
E13.3212	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM Diagnosis
E13.3213	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM Diagnosis
E13.3219	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM Diagnosis

Appendix I. List of Codes Used to Define Diabetes, Forward Backward Mapping (FBM)

Code	Description	Code Type
E13.3291	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM Diagnosis
E13.3292	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM Diagnosis
E13.3293	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM Diagnosis
E13.3299	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM Diagnosis
E13.3311	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM Diagnosis
E13.3312	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM Diagnosis
E13.3313	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM Diagnosis
E13.3319	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM Diagnosis
E13.3391	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM Diagnosis
E13.3392	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM Diagnosis
E13.3393	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM Diagnosis
E13.3399	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM Diagnosis
E13.3411	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM Diagnosis
E13.3412	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM Diagnosis
E13.3413	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM Diagnosis
E13.3419	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM Diagnosis
E13.3491	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM Diagnosis
E13.3492	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM Diagnosis
E13.3493	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM Diagnosis
E13.3499	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM Diagnosis
E13.3511	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM Diagnosis
E13.3512	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM Diagnosis
E13.3513	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM Diagnosis
E13.3519	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM Diagnosis
E13.3521	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM Diagnosis
E13.3522	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM Diagnosis
E13.3523	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM Diagnosis
E13.3529	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM Diagnosis
E13.3531	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM Diagnosis
E13.3532	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM Diagnosis
E13.3533	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM Diagnosis
E13.3539	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM Diagnosis
E13.3541	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM Diagnosis

Appendix I. List of Codes Used to Define Diabetes, Forward Backward Mapping (FBM)

Code	Description	Code Type
E13.3542	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM Diagnosis
E13.3543	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM Diagnosis
E13.3549	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM Diagnosis
E13.3551	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM Diagnosis
E13.3552	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM Diagnosis
E13.3553	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM Diagnosis
E13.3559	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM Diagnosis
E13.3591	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM Diagnosis
E13.3592	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM Diagnosis
E13.3593	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM Diagnosis
E13.3599	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM Diagnosis
E13.311	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM Diagnosis
E13.319	Other specified diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM Diagnosis
E13.36	Other specified diabetes mellitus with diabetic cataract	ICD-10-CM Diagnosis
E13.37X1	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM Diagnosis
E13.37X2	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM Diagnosis
E13.37X3	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM Diagnosis
E13.37X9	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM Diagnosis
E13.39	Other specified diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM Diagnosis
E11.37X1	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM Diagnosis
E11.37X2	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM Diagnosis
E11.37X3	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM Diagnosis
E11.37X9	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM Diagnosis
E10.3211	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM Diagnosis
E10.3212	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM Diagnosis
E10.3213	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM Diagnosis
E10.3219	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM Diagnosis
E10.3291	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM Diagnosis
E10.3292	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM Diagnosis
E10.3293	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM Diagnosis
E10.3299	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM Diagnosis
E10.3311	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM Diagnosis
E10.3312	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM Diagnosis
E10.3313	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM Diagnosis
E10.3319	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM Diagnosis
E10.3391	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM Diagnosis
E10.3392	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM Diagnosis
E10.3393	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM Diagnosis
E10.3399	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM Diagnosis
E10.3411	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM Diagnosis
E10.3412	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM Diagnosis
E10.3413	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM Diagnosis
E10.3419	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM Diagnosis
E10.3491	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM Diagnosis
E10.3492	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM Diagnosis
E10.3493	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM Diagnosis
E10.3499	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM Diagnosis
E10.3511	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM Diagnosis
E10.3512	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM Diagnosis
E10.3513	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM Diagnosis
E10.3519	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM Diagnosis

Appendix I. List of Codes Used to Define Diabetes, Forward Backward Mapping (FBM)

Code	Description	Code Type
E10.3521	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM Diagnosis
E10.3522	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM Diagnosis
E10.3523	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM Diagnosis
E10.3529	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM Diagnosis
E10.3531	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM Diagnosis
E10.3532	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM Diagnosis
E10.3533	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM Diagnosis
E10.3539	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM Diagnosis
E10.3541	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM Diagnosis
E10.3542	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM Diagnosis
E10.3543	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM Diagnosis
E10.3549	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM Diagnosis
E10.3551	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM Diagnosis
E10.3552	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM Diagnosis
E10.3553	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM Diagnosis
E10.3559	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM Diagnosis
E10.3591	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM Diagnosis
E10.3592	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM Diagnosis

Appendix I. List of Codes Used to Define Diabetes, Forward Backward Mapping (FBM)

Code	Description	Code Type
E10.3593	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM Diagnosis
E10.3599	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM Diagnosis
E13.40	Other specified diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM Diagnosis
E13.41	Other specified diabetes mellitus with diabetic mononeuropathy	ICD-10-CM Diagnosis
E13.42	Other specified diabetes mellitus with diabetic polyneuropathy	ICD-10-CM Diagnosis
E13.43	Other specified diabetes mellitus with diabetic autonomic (poly)neuropathy	ICD-10-CM Diagnosis
E13.44	Other specified diabetes mellitus with diabetic amyotrophy	ICD-10-CM Diagnosis
E13.49	Other specified diabetes mellitus with other diabetic neurological complication	ICD-10-CM Diagnosis
E13.610	Other specified diabetes mellitus with diabetic neuropathic arthropathy	ICD-10-CM Diagnosis
E11.41	Type 2 diabetes mellitus with diabetic mononeuropathy	ICD-10-CM Diagnosis
E11.42	Type 2 diabetes mellitus with diabetic polyneuropathy	ICD-10-CM Diagnosis
E11.43	Type 2 diabetes mellitus with diabetic autonomic (poly)neuropathy	ICD-10-CM Diagnosis
E11.44	Type 2 diabetes mellitus with diabetic amyotrophy	ICD-10-CM Diagnosis
E11.49	Type 2 diabetes mellitus with other diabetic neurological complication	ICD-10-CM Diagnosis
E11.610	Type 2 diabetes mellitus with diabetic neuropathic arthropathy	ICD-10-CM Diagnosis
E10.41	Type 1 diabetes mellitus with diabetic mononeuropathy	ICD-10-CM Diagnosis
E10.42	Type 1 diabetes mellitus with diabetic polyneuropathy	ICD-10-CM Diagnosis
E10.43	Type 1 diabetes mellitus with diabetic autonomic (poly)neuropathy	ICD-10-CM Diagnosis
E10.44	Type 1 diabetes mellitus with diabetic amyotrophy	ICD-10-CM Diagnosis
E10.49	Type 1 diabetes mellitus with other diabetic neurological complication	ICD-10-CM Diagnosis
E10.610	Type 1 diabetes mellitus with diabetic neuropathic arthropathy	ICD-10-CM Diagnosis
E13.51	Other specified diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM Diagnosis
E13.52	Other specified diabetes mellitus with diabetic peripheral angiopathy with gangrene	ICD-10-CM Diagnosis
E13.59	Other specified diabetes mellitus with other circulatory complications	ICD-10-CM Diagnosis
E11.52	Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene	ICD-10-CM Diagnosis
E11.59	Type 2 diabetes mellitus with other circulatory complications	ICD-10-CM Diagnosis
E10.52	Type 1 diabetes mellitus with diabetic peripheral angiopathy with gangrene	ICD-10-CM Diagnosis
E10.59	Type 1 diabetes mellitus with other circulatory complications	ICD-10-CM Diagnosis
E13.618	Other specified diabetes mellitus with other diabetic arthropathy	ICD-10-CM Diagnosis
E13.620	Other specified diabetes mellitus with diabetic dermatitis	ICD-10-CM Diagnosis
E13.621	Other specified diabetes mellitus with foot ulcer	ICD-10-CM Diagnosis
E13.622	Other specified diabetes mellitus with other skin ulcer	ICD-10-CM Diagnosis
E13.628	Other specified diabetes mellitus with other skin complications	ICD-10-CM Diagnosis
E13.630	Other specified diabetes mellitus with periodontal disease	ICD-10-CM Diagnosis
E13.638	Other specified diabetes mellitus with other oral complications	ICD-10-CM Diagnosis
E13.649	Other specified diabetes mellitus with hypoglycemia without coma	ICD-10-CM Diagnosis
E13.65	Other specified diabetes mellitus with hyperglycemia	ICD-10-CM Diagnosis
E13.69	Other specified diabetes mellitus with other specified complication	ICD-10-CM Diagnosis
E13.8	Other specified diabetes mellitus with unspecified complications	ICD-10-CM Diagnosis

CIDA Specifications for ICD-10 Level 1 Request Part Two: Hypertension

Sentinel's Cohort Identification and Descriptive Analysis (CIDA) tool, version 3.3.2, was used to compare the frequency of diagnoses for a selection of health outcomes using ICD-9 versus ICD-10 codes.

Enrollment Gap: 45 Days
Age Groups: 0-17, 18-49, 50-64, 65+
Enrollment Requirement: 183 Days
Coverage Requirement: Medical Coverage

Scenario	Code Source	Query Start Date	Query End Date	Event	Incident w/ respect to:	Washout (days)	Cohort Definition	Caresetting
1	Algorithm	10/1/2010	Current	Hypertension diagnosis (**only** ICD-9 code: See Hypertension algorithm code list for 45 codes)	Hypertension diagnosis (ICD-9 code **or** ICD-10 code: See Hypertension algorithm code list for 64 codes)	183	01	Any
2	SFM	10/1/2010	Current	Hypertension diagnosis (**only** ICD-9: See Hypertension SFM code list for 33 codes)	Hypertension diagnosis (ICD-9 **or** ICD-10: See Hypertension SFM code list for all 45 codes)	183	01	Any
3	FBM	10/1/2010	Current	Hypertension diagnosis (**only** ICD-9: See Hypertension FBM code list for 33 codes)	Hypertension diagnosis (ICD-9 **or** ICD-10: See Hypertension FBM code list for all 51 codes)	183	01	Any
4	Algorithm	10/1/2010	Current	Hypertension diagnosis (**only** ICD-10 code: See Hypertension algorithm code list for 19 codes)	Hypertension diagnosis (ICD-9 code **or** ICD-10 code: See Hypertension algorithm code list for 64 codes)	183	01	Any
5	SFM	10/1/2010	Current	Hypertension diagnosis (**only** ICD-10: See Hypertension SFM code list for 12 codes)	Hypertension diagnosis (ICD-9 **or** ICD-10: See Hypertension SFM code list for all 45 codes)	183	01	Any
6	FBM	10/1/2010	Current	Hypertension diagnosis (**only** ICD-10: See Hypertension FBM code list for 18 codes)	Hypertension diagnosis (ICD-9 **or** ICD-10: See Hypertension FBM code list for all 51 codes)	183	01	Any
7	Algorithm	1/1/2015	3/31/2015	Hypertension diagnosis (**only** ICD-9 code: See Hypertension algorithm code list for 45 codes)	Hypertension diagnosis (**only** ICD-9 code: See Hypertension algorithm code list for 45 codes)	90	01	Any
8	SFM and FBM	1/1/2015	3/31/2015	Hypertension diagnosis (**only** ICD-9: See Hypertension SFM code list for 33 codes)	Hypertension diagnosis (**only** ICD-9: See Hypertension SFM code list for 33 codes)	90	01	Any
9	Algorithm	1/1/2016	3/31/2016	Hypertension diagnosis (**only** ICD-10 code: See Hypertension algorithm code list for 19 codes)	Hypertension diagnosis (**only** ICD-10 code: See Hypertension algorithm code list for 19 codes)	90	01	Any
10	SFM	1/1/2016	3/31/2016	Hypertension diagnosis (**only** ICD-10: See Hypertension SFM code list for 12 codes)	Hypertension diagnosis (**only** ICD-10: See Hypertension SFM code list for 12 codes)	90	01	Any
11	FBM	1/1/2016	3/31/2016	Hypertension diagnosis (**only** ICD-10: See Hypertension FBM code list for 18 codes)	Hypertension diagnosis (**only** ICD-10: See Hypertension FBM code list for 18 codes)	90	01	Any
12	Algorithm	10/1/2010	Current	Hypertension diagnosis (**only** ICD-9 code: See Hypertension algorithm code list for 45 codes)	NA	0	02	Any
13	SFM and FBM	10/1/2010	Current	Hypertension diagnosis (**only** ICD-9: See Hypertension SFM code list for 33 codes)	NA	0	02	Any
14	Algorithm	10/1/2010	Current	Hypertension diagnosis (**only** ICD-10 code: See Hypertension algorithm code list for 19 codes)	NA	0	02	Any
15	SFM	10/1/2010	Current	Hypertension diagnosis (**only** ICD-10: See Hypertension SFM code list for 12 codes)	NA	0	02	Any
16	FBM	10/1/2010	Current	Hypertension diagnosis (**only** ICD-10: See Hypertension FBM code list for 18 codes)	NA	0	02	Any

CIDA Specifications for ICD-10 Level 1 Request Part Two: Diabetes

Sentinel's Cohort Identification and Descriptive Analysis (CIDA) tool, version 3.3.2, was used to compare the frequency of diagnoses for a selection of health outcomes using ICD-9 versus ICD-10 codes.

Enrollment Gap: 45 Days
Age Groups: 0-17, 18-49, 50-64, 65+
Enrollment Requirement: 183 Days
Coverage Requirement: Medical Coverage

Scenario	Code Source	Query Start Date	Query End Date	Event	Incident w/ respect to:	Washout (days)	Cohort Definition	Caresetting
1	Algorithm	10/1/2010	Current	Diabetes diagnosis (**only** ICD-9: 250*)	Diabetes diagnosis (ICD-9: 250* **or** ICD-10: See Diabetes algorithm code list for 25 codes)	183	01	Any
2	SFM	10/1/2010	Current	Diabetes diagnosis (**only** ICD-9: 250*)	Diabetes diagnosis (ICD-9: 250* **or** ICD-10: See Diabetes SFM code list for 51 codes)	183	01	Any
3	FBM	10/1/2010	Current	Diabetes diagnosis (**only** ICD-9: 250*)	Diabetes diagnosis (ICD-9: 250* **or** ICD-10: See Diabetes FBM code list for 254 codes; **no** cluster logic)	183	01	Any
4	Algorithm	10/1/2010	Current	Diabetes diagnosis (**only** ICD-10: See Diabetes algorithm code list for 25 codes)	Diabetes diagnosis (ICD-9: 250* **or** ICD-10: See Diabetes algorithm code list for 25 codes)	183	01	Any
5	SFM	10/1/2010	Current	Diabetes diagnosis (**only** ICD-10: See Diabetes SFM code list for 51 codes; cluster logic)	Diabetes diagnosis (ICD-9: 250* **or** ICD-10: See Diabetes SFM code list for 51 codes)	183	01	Any
6	SFM	10/1/2010	Current	Diabetes diagnosis (**only** ICD-10: See Diabetes SFM code list for 51 codes; **no** cluster logic)	Diabetes diagnosis (ICD-9: 250* **or** ICD-10: See Diabetes SFM code list for 51 codes)	183	01	Any
7	FBM	10/1/2010	Current	Diabetes diagnosis (**only** ICD-10: See Diabetes FBM code list for 254 codes; **no** cluster logic)	Diabetes diagnosis (ICD-9: 250* **or** ICD-10: See Diabetes FBM code list for 254 codes; **no** cluster logic)	183	01	Any
8	Algorithm, SFM, and FBM	1/1/2015	3/31/2015	Diabetes diagnosis (**only** ICD-9: 250*)	Diabetes diagnosis (**only** ICD-9: 250*)	90	01	Any
9	Algorithm	1/1/2016	3/31/2016	Diabetes diagnosis (**only** ICD-10: See Diabetes algorithm code list for 25 codes)	Diabetes diagnosis (**only** ICD-10: See Diabetes algorithm code list for 25 codes)	90	01	Any
10	SFM	1/1/2016	3/31/2016	Diabetes diagnosis (**only** ICD-10: See Diabetes SFM code list for 51 codes; cluster logic)	Diabetes diagnosis (**only** ICD-10: See Diabetes SFM code list for 51 codes)	90	01	Any
11	SFM	1/1/2016	3/31/2016	Diabetes diagnosis (**only** ICD-10: See Diabetes SFM code list for 51 codes; **no** cluster logic)	Diabetes diagnosis (**only** ICD-10: See Diabetes SFM code list for 51 codes)	90	01	Any
12	FBM	1/1/2016	3/31/2016	Diabetes diagnosis (**only** ICD-10: See Diabetes FBM code list for 254 codes; **no** cluster logic)	Diabetes diagnosis (**only** ICD-10: See Diabetes FBM code list for 254 codes; **no** cluster logic)	90	01	Any
13	Algorithm, SFM, and FBM	10/1/2010	Current	Diabetes diagnosis (**only** ICD-9: 250*)	NA	0	02	Any
14	Algorithm	10/1/2010	Current	Diabetes diagnosis (**only** ICD-10: See Diabetes algorithm code list for 25 codes)	NA	0	02	Any
15	SFM	10/1/2010	Current	Diabetes diagnosis (**only** ICD-10: See Diabetes SFM code list for 51 codes; cluster logic)	NA	0	02	Any
16	SFM	10/1/2010	Current	Diabetes diagnosis (**only** ICD-10: See Diabetes SFM code list for 51 codes; **no** cluster logic)	NA	0	02	Any
17	FBM	10/1/2010	Current	Diabetes diagnosis (**only** ICD-10: See Diabetes FBM code list for 254 codes; **no** cluster logic)	NA	0	02	Any