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

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

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

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Overview for Request: cder_mpl1p_wp069 (Report 1 of 3)

Request ID: cder_mpl1p_wp069_nsdp_v01

Request Description: This query includes post-hoc analyses for a prior request, cder_mpl1p_wp061_nsdp_v01, that involves further stratification by age and/or sex of the Table 1s and the addition of year stratified analyses. A composite cardiac arrhythmia covariate was also added to all Table 1s. In this report, we examined counts of individuals with evidence of a new beta blocker dispensing of interest among the pediatric population in the Sentinel Distributed Database (SDD). This is report 1 of 3. Report 2 contains counts of individuals among the pediatric population without requiring evidence that a beta blocker dispensing be new. Report 3 contains counts of individuals among the pediatric population with evidence of a new beta blocker prescription.

Sentinel Routine Querying Module: Cohort Identification and Descriptive Analysis (CIDA) module, version 11.2.3, with custom programming.

Data Source: We distributed this request to eight Sentinel Data Partners on September 27, 2022. The study period included data from January 1, 2008 through May 31, 2022. Please see Appendix A for a list of dates of available data for each Data Partner.

Study Design: We identified individuals aged 0-17 years with evidence of a new beta blocker dispensing (acebutolol, atenolol, betaxolol, bisoprolol, carvedilol, labetalol, metoprolol, nadolol, nebivolol, pindolol, propranolol, sotalol, or timolol) during the study period. A new dispensing was defined as evidence of no beta blocker dispensing in the six months prior to the dispensing of interest.

To better quantify treatment duration in the absence of disenrollment, an additional cohort was created which required 365 days of postindex enrollment.

This is a Type 2 analysis in the Query Request Package (QRP) documentation.

Exposure of Interest: We defined the exposure of interest as all valid outpatient dispensings of the following beta blockers (index) during the study period using National Drug Codes (NDCs): acebutolol, atenolol, betaxolol, bisoprolol, carvedilol, labetalol, metoprolol, nadolol, nebivolol, pindolol, propranolol, sotalol, or timolol. Please refer to Appendix B for generic names of the medical products used to define exposures and Appendix B.1 for a list of NDCs used to define exposures in this request.

Cohort Eligibility Criteria: To be included in this query, we required individuals to be continuously enrolled in health plans with medical and drug coverage for at least 183 days prior to their first valid outpatient beta blocker dispensing. For patients less than six months of age, individuals were required to have continuous medical and drug coverage since birth. Gaps in coverage of 45 days were allowed. Age groups of interest were 0-1, 2-5, 6-12, and 13-17 years. Eligible individuals had at least one qualifying new beta blocker dispensing during the study period. New use was defined as no previous beta-blocker dispensing in the 183 days prior to the index date (or no prior beta blocker dispensings since birth for patients under six months of age). We created a duplicate cohort with the additional requirement of at least 365 days of post-index medical and drug enrollment.

Follow-up Time: We created exposure episodes based on the number of days supplied per beta blocker dispensing using outpatient pharmacy dispensing data. For each cohort, we varied the allowable treatment episode gap between dispensings as 25%, 50%, or 100% of the prior dispensing's days supply. Follow-up began on the day of the index dispensing and continued until the first occurrence of any of the following: 1) disenrollment; 2) death; 3) the end of the data provided by each Data Partner; 4) the end of the query period; or 5) the end of the treatment episode.



Overview for Request: cder_mpl1p_wp069 (Report 1 of 3)

<u>Health Characteristics</u>: We assessed the following characteristics on the index date of an individual's first valid beta blocker dispensing: age, year, sex, Charlson/Elixhauser combined comorbidity score¹, diagnosis of hypoglycemia, and use of the following beta blockers: selective beta blocker, non-selective beta blocker, acebutolol, atenolol, betaxolol, bisoprolol, carvedilol, labetalol, metoprolol, nadolol, nebivolol, pindolol, propranolol, sotalol, or timolol. Please refer to Appendix C for a list of generic and brand names of medical products used to define covariates and Appendix D for a list of Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes used to define covariates in this request.

We also evaluated these characteristics during the following time windows:

183 days prior through index date: Diagnosis of diabetes.

90 days prior through index date: Diagnosis of hypertension, hemangioma, heart failure, congenital heart disease, atrial fibrillation, long QT syndrome, other cardiac arrhythmias, cardiac arrhythmias (composite), pulmonary hypertension, cardiomyopathy, coronary artery disease, portal hypertension, anxiety disorder, tremor, migraine, thyrotoxicosis, burns, glaucoma, autism, Marfan's syndrome, pheocoromocytoma/paraganglioma, any of the above health characteristics, and none of the above health characteristics. Hypertension, hemangioma, and long QT syndrome were further characterized with use of each beta blocker at index.

1-90 days after index date: Diagnosis of hypoglycemia. Hypoglycemia was further characterized in to include this diagnosis with diabetes, without diabetes, any propranolol dispensing, any metoprolol dispensing, atenolol dispensing, and nadolol dispensing.

91-183 days after index date: Diagnosis of hypoglycemia. Hypoglycemia was further characterized in to include this diagnosis with diabetes, without diabetes, any propranolol dispensing, any metoprolol dispensing, atenolol dispensing, and nadolol dispensing.

184-365 days after index date: Diagnosis of hypoglycemia. Hypoglycemia was further characterized in to include this diagnosis with diabetes, without diabetes, any propranolol dispensing, any metoprolol dispensing, atenolol dispensing, and nadolol dispensing.

<u>Limitations</u>: Algorithms used to define exposures and inclusion and exclusion criteria are imperfect; thus, it is possible that there may be misclassification. Therefore, data should be interpreted with these limitations in mind.

<u>Notes</u>: Please contact the Sentinel Operations Center (info@sentinelsystem.org) for questions and to provide comments/suggestions for future enhancements to this document. For more information on Sentinel's routine querying modules, please refer to the documentation (https://dev.sentinelsystem.org/projects/SENTINEL/repos/sentinel-routine-querying-tool-documentation/browse).

¹ Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759



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

Amount Supplied - number of units (pills, tablets, vials) dispensed. Net amount per NDC per dispensing. **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). The Care Setting, along with the Principal Diagnosis Indicator (PDX), 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.

Charlson/Elixhauser Combined Comorbidity Score - calculated based on comorbidities observed during a requester-defined window around the exposure episode start date (e.g., in the 183 days prior to index).

Code Days - the minimum number of times the diagnosis must be found during the evaluation period in order to fulfill the algorithm to identify the corresponding patient characteristic.

Cohort Definition (drug/exposure) - indicates how the cohort will be defined: 01: Cohort includes only the first valid treatment episode during the query period; 02: Cohort includes all valid treatment episodes during the query period; 03: Cohort includes all valid treatment episodes during the query period until an event occurs.

Computed Start Marketing Date - represents the first observed dispensing date among all valid users within a GROUP (scenario) within each Data Partner site.

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

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.

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

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

Event Deduplication - specifies how events are counted by the Modular Program (MP) algorithm: 0: Counts all occurrences of a health outcome of interest (HOI) during an exposure episode; 1: de-duplicates occurrences of the same HOI code and code type on the same day; 2: de-duplicates occurrences of the same HOI group on the same day (e.g., de-duplicates at the group level). **Exposure Episode Length** - number of days after exposure initiation that is considered "exposed time."

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

Lookback Period - number of days wherein a member is required to have evidence of pre-existing condition (diagnosis/procedure/drug dispensing).

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.

Member-Years - sum of all days of enrollment with medical and drug coverage in the query period preceded by an exposure washout period all divided by 365.25.

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.

Monitoring Period - used to define time periods of interest for both sequential analysis and simple cohort characterization



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.

Switch Evaluation Step Value - value used to differentiate evaluation step. Each switch pattern can support up to 2 evaluation steps (0 = switch pattern evaluation start; 1 = first evaluation; 2 = second evaluation).

Switch Gap Inclusion Indicator - indicator for whether gaps in treatment episodes that are included in a switch episode will be counted as part of the switch episode duration.

Switch Pattern Cohort Inclusion Date - indicates which date to use for inclusion into the switch pattern cohort of interest as well as optionally as the index date of the treatment episode initiating the switch pattern. Valid options are the product approval date, product marketing date, other requester defined date, or computed start marketing date.

Switch Pattern Cohort Inclusion Strategy - indicates how the switch pattern cohort inclusion date will be used: 01: used only as a switch cohort entry date. First treatment episode dispensing date is used as index for computing time to first switch; 02: used as switch cohort entry date and as initial switch step index date for computing time to first switch.

Treatment Episode Truncation Indicator - indicates whether the exposure episode will be truncated at the occurrence of a requester-specified code.

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



| | Beta | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|-------------|--|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Unique patients | 200,926 | N/A | 127,912 | N/A | |
| Episodes | 214,231 | 100.0% | 135,970 | 100.0% | |
| Demographic Characteristics | | | | | |
| Age (years) | 12.5 | 5.6 | 12.6 | 5.5 | |
| Age | | | | | |
| 0-1 years | 28,621 | 13.4% | 17,070 | 12.6% | |
| 2-5 years | 6,366 | 3.0% | 4,062 | 3.0% | |
| 6-12 years | 41,380 | 19.3% | 27,012 | 19.9% | |
| 13-17 years | 137,864 | 64.4% | 87,826 | 64.6% | |
| Sex | | | | | |
| Female | 121,477 | 60.5% | 76,611 | 59.9% | |
| Male | 79,449 | 39.5% | 51,301 | 40.1% | |
| Race ⁴ | | | | | |
| American Indian or Alaska Native | 1,892 | 0.9% | 1,192 | 0.9% | |
| Asian | 1,774 | 0.9% | 1,032 | 0.8% | |
| Black or African American | 12,043 | 6.0% | 7,364 | 5.8% | |
| Native Hawaiian or Other Pacific Islander | 304 | 0.2% | 185 | 0.1% | |
| Unknown | 130,966 | 65.2% | 84,670 | 66.2% | |
| White | 53,947 | 26.8% | 33,469 | 26.2% | |
| Hispanic origin | | | | | |
| Yes | 19,979 | 9.9% | 11,961 | 9.4% | |
| No | 64,233 | 32.0% | 39,247 | 30.7% | |
| Unknown | 116,714 | 58.1% | 76,704 | 60.0% | |
| Year | | | | | |
| 2008 | 6,027 | 2.8% | 4,617 | 3.4% | |
| 2009 | 7,760 | 3.6% | 5,789 | 4.3% | |
| 2010 | 7,496 | 3.5% | 5,636 | 4.1% | |
| 2011 | 7,280 | 3.4% | 5,493 | 4.0% | |
| 2012 | 7,264 | 3.4% | 5,646 | 4.2% | |
| 2013 | 7,790 | 3.6% | 5,846 | 4.3% | |
| 2014 | 12,292 | 5.7% | 9,713 | 7.1% | |
| 2015 | 20,643 | 9.6% | 15,536 | 11.4% | |
| 2016 | 31,696 | 14.8% | 26,057 | 19.2% | |
| 2017 | 38,953 | 18.2% | 29,513 | 21.7% | |
| 2018 | 37,527 | 17.5% | 7,514 | 5.5% | |
| 2019 | 10,187 | 4.8% | 7,835 | 5.8% | |
| 2020 | 8,978 | 4.2% | 6,031 | 4.4% | |



| | Beta | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|-------------|--|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| 2021 | 9,619 | 4.5% | 744 | 0.5% | |
| 2022 | 719 | 0.3% | 0 | 0.0% | |
| Health Characteristics | | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.6 | 1.1 | 0.6 | 1.0 | |
| Hypertension | 14,689 | 6.9% | 9,466 | 7.0% | |
| Hemangioma | 15,682 | 7.3% | 9,375 | 6.9% | |
| Heart Failure | 3,233 | 1.5% | 1,974 | 1.5% | |
| Congenital Heart Disease | 18,146 | 8.5% | 11,283 | 8.3% | |
| Atrial Fibrillation | 611 | 0.3% | 393 | 0.3% | |
| Long QT Syndrome | 2,595 | 1.2% | 1,589 | 1.2% | |
| Other Cardiac Arrhythmias | 36,118 | 16.9% | 22,469 | 16.5% | |
| Cardiac Arrhythmias (Composite) | 37,742 | 17.6% | 23,472 | 17.3% | |
| Pulmonary Hypertension | 1,250 | 0.6% | 713 | 0.5% | |
| Cardiomyopathy | 3,614 | 1.7% | 2,168 | 1.6% | |
| Coronary Artery Disease | 902 | 0.4% | 589 | 0.4% | |
| Portal Hypertension | 317 | 0.1% | 198 | 0.1% | |
| Anxiety Disorder | 46,688 | 21.8% | 28,492 | 21.0% | |
| Tremor | 3,994 | 1.9% | 2,525 | 1.9% | |
| Migraine | 45,346 | 21.2% | 30,132 | 22.2% | |
| Thyrotoxicosis | 5,637 | 2.6% | 3,609 | 2.7% | |
| Burns | 487 | 0.2% | 313 | 0.2% | |
| Glaucoma | 475 | 0.2% | 290 | 0.2% | |
| Autism | 7,132 | 3.3% | 4,463 | 3.3% | |
| Marfan's Syndrome | 961 | 0.4% | 641 | 0.5% | |
| Pheochromocytoma/Paraganglioma | 129 | 0.1% | 84 | 0.1% | |
| Diabetes | 2,277 | 1.1% | 1,449 | 1.1% | |
| Any of the above health characteristics (excluding combined comorbidity score) | 154,656 | 72.2% | 97,792 | 71.9% | |
| None of the above health characteristics (excluding combined comorbidity score) | 59,575 | 27.8% | 38,178 | 28.1% | |
| Hypoglycemia (Day 0) | 130 | 0.1% | 80 | 0.1% | |
| Hypoglycemia (0-3 Months) | 737 | 0.3% | 491 | 0.4% | |
| Hypoglycemia (3-6 Months) | 532 | 0.2% | 382 | 0.3% | |
| Hypoglycemia (6-12 Months) | 695 | 0.3% | 601 | 0.4% | |
| Hypoglycemia (Day 0) and Diabetes | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and Diabetes | 93 | 0.0% | 64 | 0.0% | |
| Hypoglycemia (3-6 Months) and Diabetes | 79 | 0.0% | 57 | 0.0% | |
| Hypoglycemia (6-12 Months) and Diabetes | 90 | 0.0% | 80 | 0.1% | |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|--|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Hypoglycemia (Day 0) and No Diabetes | 122 | 0.1% | 73 | 0.1% | |
| Hypoglycemia (0-3 Months) and No Diabetes | 644 | 0.3% | 427 | 0.3% | |
| Hypoglycemia (3-6 Months) and No Diabetes | 453 | 0.2% | 325 | 0.2% | |
| Hypoglycemia (6-12 Months) and No Diabetes | 605 | 0.3% | 521 | 0.4% | |
| Hypoglycemia (Day 0) and Any Metoprolol | 15 | 0.0% | 11 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 84 | 0.0% | 61 | 0.0% | |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 65 | 0.0% | 51 | 0.0% | |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 78 | 0.0% | 66 | 0.0% | |
| Hypoglycemia (Day 0) and Any Propranolol | 88 | 0.0% | 47 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Propranolol | 473 | 0.2% | 303 | 0.2% | |
| Hypoglycemia (3-6 Months) and Any Propranolol | 329 | 0.2% | 235 | 0.2% | |
| Hypoglycemia (6-12 Months) and Any Propranolol | 427 | 0.2% | 369 | 0.3% | |
| Hypoglycemia (Day 0) and Atenolol | 12 | 0.0% | **** | **** | |
| Hypoglycemia (0-3 Months) and Atenolol | 85 | 0.0% | 69 | 0.1% | |
| Hypoglycemia (3-6 Months) and Atenolol | 76 | 0.0% | 53 | 0.0% | |
| Hypoglycemia (6-12 Months) and Atenolol | 103 | 0.0% | 89 | 0.1% | |
| Hypoglycemia (Day 0) and Nadolol | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and Nadolol | 18 | 0.0% | 13 | 0.0% | |
| Hypoglycemia (3-6 Months) and Nadolol | 15 | 0.0% | 11 | 0.0% | |
| Hypoglycemia (6-12 Months) and Nadolol | 25 | 0.0% | 24 | 0.0% | |
| Selective Beta Blockers | 50,195 | 23.4% | 32,999 | 24.3% | |
| Non-Selective Beta Blockers | 164,084 | 76.6% | 103,005 | 75.8% | |
| Any Metoprolol | 18,174 | 8.5% | 11,540 | 8.5% | |
| Metoprolol (Extended Release) | 10,259 | 4.8% | 6,383 | 4.7% | |
| Metoprolol (Regular) | 7,962 | 3.7% | 5,194 | 3.8% | |
| Any Propranolol | 147,338 | 68.8% | 92,518 | 68.0% | |
| Propranolol (Extended Release) | 16,281 | 7.6% | 10,853 | 8.0% | |
| Propranolol (Regular) | 129,011 | 60.2% | 80,520 | 59.2% | |
| Propranolol (Hemangeol) | 2,463 | 1.1% | 1,409 | 1.0% | |
| Acebutolol | 77 | 0.0% | 56 | 0.0% | |
| Atenolol | 30,660 | 14.3% | 20,520 | 15.1% | |
| Betaxolol | 173 | 0.1% | 118 | 0.1% | |
| Bisoprolol | 584 | 0.3% | 386 | 0.3% | |
| Carvedilol | 4,036 | 1.9% | 2,410 | 1.8% | |
| Labetalol | 4,991 | 2.3% | 2,952 | 2.2% | |
| Nadolol | 6,351 | 3.0% | 4,273 | 3.1% | |
| Nebivolol | 551 | 0.3% | 397 | 0.3% | |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|---|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Pindolol | 275 | 0.1% | 193 | 0.1% | |
| Sotalol | 1,049 | 0.5% | 628 | 0.5% | |
| Timolol | 81 | 0.0% | 56 | 0.0% | |
| Health Characteristics by Beta Blockers | | | | | |
| Hypertension and Any Metoprolol | 3,638 | 1.7% | 2,290 | 1.7% | |
| Hypertension and Metoprolol (Extended Release) | 2,090 | 1.0% | 1,289 | 0.9% | |
| Hypertension and Metoprolol (Regular) | 1,568 | 0.7% | 1,018 | 0.7% | |
| Hypertension and Any Propranolol | 3,869 | 1.8% | 2,507 | 1.8% | |
| Hypertension and Propranolol (Extended Release) | 476 | 0.2% | 330 | 0.2% | |
| Hypertension and Propranolol (Regular) | 3,387 | 1.6% | 2,175 | 1.6% | |
| Hypertension and Acebutolol | **** | * * * * | **** | **** | |
| Hypertension and Atenolol | 4,003 | 1.9% | 2,717 | 2.0% | |
| Hypertension and Betaxolol | **** | * * * * | **** | **** | |
| Hypertension and Bisoprolol | 126 | 0.1% | 90 | 0.1% | |
| Hypertension and Carvedilol | 733 | 0.3% | 429 | 0.3% | |
| Hypertension and Labetalol | 1,938 | 0.9% | 1,179 | 0.9% | |
| Hypertension and Nadolol | 184 | 0.1% | 119 | 0.1% | |
| Hypertension and Nebivolol | 145 | 0.1% | 98 | 0.1% | |
| Hypertension and Pindolol | 13 | 0.0% | **** | **** | |
| Hypertension and Sotalol | 41 | 0.0% | 28 | 0.0% | |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Any Metoprolol | 14 | 0.0% | **** | **** | |
| Hemangioma and Metoprolol (Extended Release) | **** | **** | **** | **** | |
| Hemangioma and Metoprolol (Regular) | 11 | 0.0% | **** | **** | |
| Hemangioma and Any Propranolol | 15,407 | 7.2% | 9,190 | 6.8% | |
| Hemangioma and Propranolol (Extended Release) | 24 | 0.0% | 16 | 0.0% | |
| Hemangioma and Propranolol (Regular) | 13,128 | 6.1% | 7,873 | 5.8% | |
| Hemangioma and Propranolol (Hemangeol) | 2,262 | 1.1% | 1,305 | 1.0% | |
| Hemangioma and Acebutolol | **** | * * * * | **** | **** | |
| Hemangioma and Atenolol | 238 | 0.1% | 163 | 0.1% | |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Carvedilol | **** | * * * * * | **** | **** | |
| Hemangioma and Labetalol | **** | * * * * * | **** | **** | |
| Hemangioma and Nadolol | **** | **** | **** | **** | |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% | |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|--|--|---|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | **** | **** | **** | **** |
| Hemangioma and Timolol | **** | **** | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Release) Long QT Syndrome and Propranolol (Regular) Long QT Syndrome and Acebutolol Long QT Syndrome and Atenolol Long QT Syndrome and Betaxolol | 142 61 81 854 42 809 0 313 ***** | 0.1% 0.0% 0.4% 0.0% 0.4% 0.0% 0.1% | 86 33 53 501 29 471 0 208 ***** | 0.1% 0.0% 0.0% 0.4% 0.0% 0.3% 0.0% 0.2% |
| Long QT Syndrome and Bisoprolol | 11 | 0.0% | **** | **** |
| Long QT Syndrome and Carvedilol Long QT Syndrome and Labetalol | 63 18 | 0.0% | 33 12 | 0.0% 0.0% |
| Long QT Syndrome and Nadolol | 1,130 | 0.5% | 711 | 0.5% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | 62 **** | 0.0% **** | 32 **** | 0.0% **** |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta Blockers | | Beta Blockers (Post-Index Enrollmen Requirement) | |
|---|---------------|---------------------------------|---|------------------------|
| | | Percent/ | | Standard |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Deviation ³ |
| Unique patients | 28,248 | N/A | 16,872 | N/A |
| Episodes | 28,621 | 100.0% | 17,070 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 0.4 | 0.4 | 0.4 | 0.4 |
| Sex | | | | |
| Female | 16,403 | 58.1% | 9,783 | 58.0% |
| Male | 11,845 | 41.9% | 7,089 | 42.0% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 278 | 1.0% | 188 | 1.1% |
| Asian | 305 | 1.1% | 181 | 1.1% |
| Black or African American | 1,735 | 6.1% | 1,114 | 6.6% |
| Native Hawaiian or Other Pacific Islander | 59 | 0.2% | 31 | 0.2% |
| Unknown | 19,791 | 70.1% | 11,669 | 69.2% |
| White | 6,080 | 21.5% | 3,689 | 21.9% |
| Hispanic origin | | | | |
| Yes | 3,429 | 12.1% | 2,206 | 13.1% |
| No | 8,000 | 28.3% | 4,911 | 29.1% |
| Unknown | 16,819 | 59.5% | 9,755 | 57.8% |
| Year | | | | |
| 2008 | 404 | 1.4% | 279 | 1.6% |
| 2009 | 500 | 1.7% | 348 | 2.0% |
| 2010 | 637 | 2.2% | 444 | 2.6% |
| 2011 | 670 | 2.3% | 478 | 2.8% |
| 2012 | 704 | 2.5% | 495 | 2.9% |
| 2013 | 830 | 2.9% | 578 | 3.4% |
| 2014 | 1,865 | 6.5% | 1,421 | 8.3% |
| 2015 | 3,352 | 11.7% | 2,490 | 14.6% |
| 2016 | 4,924 | 17.2% | 3,850 | 22.6% |
| 2017 | 5,528 | 19.3% | 3,953 | 23.2% |
| 2018 | 5,012 | 17.5% | 818 | 4.8% |
| 2019 | 1,322 | 4.6% | 911 | 5.3% |
| 2020 | 1,420 | 5.0% | 900 | 5.3% |
| 2021 | 1,349 | 4.7% | 105 | 0.6% |
| 2022 | 104 | 0.4% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.8 | 1.4 | 0.8 | 1.4 |
| Hypertension | 1,273 | 4.4% | 777 | 4.6% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|---------------|---------------------------------|--|------------------------|
| | | Percent/ | | Standard |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Deviation ³ |
| Hemangioma | 15,033 | 52.5% | 8,942 | 52.4% |
| Heart Failure | 1,615 | 5.6% | 995 | 5.8% |
| Congenital Heart Disease | 10,379 | 36.3% | 6,240 | 36.6% |
| Atrial Fibrillation | 83 | 0.3% | 51 | 0.3% |
| Long QT Syndrome | 625 | 2.2% | 352 | 2.1% |
| Other Cardiac Arrhythmias | 8,315 | 29.1% | 5,014 | 29.4% |
| Cardiac Arrhythmias (Composite) | 8,603 | 30.1% | 5,171 | 30.3% |
| Pulmonary Hypertension | 801 | 2.8% | 427 | 2.5% |
| Cardiomyopathy | 1,055 | 3.7% | 626 | 3.7% |
| Coronary Artery Disease | 212 | 0.7% | 137 | 0.8% |
| Portal Hypertension | 48 | 0.2% | 28 | 0.2% |
| Anxiety Disorder | 40 | 0.1% | 27 | 0.2% |
| Tremor | 44 | 0.2% | 24 | 0.1% |
| Migraine | 25 | 0.1% | 15 | 0.1% |
| Thyrotoxicosis | 83 | 0.3% | 53 | 0.3% |
| Burns | 91 | 0.3% | 61 | 0.4% |
| Glaucoma | 40 | 0.1% | 26 | 0.2% |
| Autism | 13 | 0.0% | * * * * * | **** |
| Marfan's Syndrome | 45 | 0.2% | 29 | 0.2% |
| Pheochromocytoma/Paraganglioma | 48 | 0.2% | 32 | 0.2% |
| Diabetes | 35 | 0.1% | 24 | 0.1% |
| Any of the above health characteristics (excluding combined comorbidity score) None of the above health characteristics (excluding | 26,084 | 91.1% | 15,614 | 91.5% |
| combined comorbidity score) | 2,537 | 8.9% | 1,456 | 8.5% |
| Hypoglycemia (Day 0) | 54 | 0.2% | 25 | 0.1% |
| Hypoglycemia (0-3 Months) | 207 | 0.7% | 124 | 0.7% |
| Hypoglycemia (3-6 Months) | 108 | 0.4% | 73 | 0.4% |
| Hypoglycemia (6-12 Months) | 151 | 0.5% | 126 | 0.7% |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | **** | * * * * | **** | **** |
| Hypoglycemia (3-6 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and No Diabetes | 54 | 0.2% | 25 | 0.1% |
| Hypoglycemia (0-3 Months) and No Diabetes | 204 | 0.7% | 121 | 0.7% |
| Hypoglycemia (3-6 Months) and No Diabetes | 105 | 0.4% | 70 | 0.4% |
| Hypoglycemia (6-12 Months) and No Diabetes | 147 | 0.5% | 122 | 0.7% |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | Beta Blockers (Post-Index E Requirement) | |
|---|-------------|---------------------------------|---|------------------------|
| | | Percent/ | | Standard |
| atient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Deviation ³ |
| ypoglycemia (0-3 Months) and Any Metoprolol | **** | **** | **** | ***** |
| ypoglycemia (3-6 Months) and Any Metoprolol | **** | **** | **** | **** |
| ypoglycemia (6-12 Months) and Any Metoprolol | **** | **** | **** | **** |
| ypoglycemia (Day 0) and Any Propranolol | 51 | 0.2% | 23 | 0.1% |
| ypoglycemia (0-3 Months) and Any Propranolol | 180 | 0.6% | 106 | 0.6% |
| ypoglycemia (3-6 Months) and Any Propranolol | 81 | 0.3% | 54 | 0.3% |
| ypoglycemia (6-12 Months) and Any Propranolol | 121 | 0.4% | 100 | 0.6% |
| ypoglycemia (Day 0) and Atenolol | **** | **** | **** | **** |
| ypoglycemia (0-3 Months) and Atenolol | **** | **** | **** | **** |
| ypoglycemia (3-6 Months) and Atenolol | **** | **** | **** | **** |
| ypoglycemia (6-12 Months) and Atenolol | **** | **** | **** | **** |
| ypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| ypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| ypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| ypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| elective Beta Blockers | 1,307 | 4.6% | 864 | 5.1% |
| on-Selective Beta Blockers | 27,315 | 95.4% | 16,206 | 94.9% |
| ny Metoprolol | 219 | 0.8% | 131 | 0.8% |
| letoprolol (Extended Release) | 54 | 0.2% | 29 | 0.2% |
| letoprolol (Regular) | 165 | 0.6% | 102 | 0.6% |
| ny Propranolol | 25,774 | 90.1% | 15,292 | 89.6% |
| ropranolol (Extended Release) | **** | **** | * * * * | **** |
| ropranolol (Regular) | 23,371 | 81.7% | 13,918 | 81.5% |
| ropranolol (Hemangeol) | 2,401 | 8.4% | 1,372 | 8.0% |
| cebutolol | **** | **** | **** | **** |
| tenolol | 1,075 | 3.8% | 726 | 4.3% |
| etaxolol | 0 | 0.0% | 0 | 0.0% |
| isoprolol | **** | **** | **** | **** |
| arvedilol | 751 | 2.6% | 449 | 2.6% |
| abetalol | 177 | 0.6% | 117 | 0.7% |
| adolol | 57 | 0.2% | 35 | 0.2% |
| ebivolol | **** | **** | **** | **** |
| indolol | 0 | 0.0% | 0 | 0.0% |
| otalol | 583 | 2.0% | 332 | 1.9% |
| imolol | **** | **** | 0 | 0.0% |



| | Beta l | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|--------------|---------------------------------|--|------------------------|
| | | Percent/ | | Standard |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Deviation ³ |
| Hypertension and Metoprolol (Extended Release) | **** | **** | **** | **** |
| Hypertension and Metoprolol (Regular) | **** | **** | **** | **** |
| Hypertension and Any Propranolol | 873 | 3.1% | 530 | 3.1% |
| Hypertension and Propranolol (Extended Release) | **** | **** | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | 863 | 3.0% | 526 | 3.1% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 117 | 0.4% | 77 | 0.5% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | **** | **** | **** | **** |
| Hypertension and Carvedilol | 92 | 0.3% | 54 | 0.3% |
| Hypertension and Labetalol | 130 | 0.5% | 85 | 0.5% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 19 | 0.1% | 11 | 0.1% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | **** | **** | **** | **** |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | **** | **** | **** | **** |
| Hemangioma and Any Propranolol | 14,811 | 51.7% | 8,789 | 51.5% |
| Hemangioma and Propranolol (Extended Release) | **** | **** | **** | **** |
| Hemangioma and Propranolol (Regular) | 12,600 | 44.0% | 7,513 | 44.0% |
| Hemangioma and Propranolol (Hemangeol) | 2,215 | 7.7% | 1,279 | 7.5% |
| Hemangioma and Acebutolol | **** | **** | **** | **** |
| Hemangioma and Atenolol | 204 | 0.7% | 142 | 0.8% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | **** | **** | **** | **** |
| Hemangioma and Labetalol | **** | **** | **** | **** |
| Hemangioma and Nadolol | **** | **** | **** | **** |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Sotalol | **** | **** | **** | **** |
| Hemangioma and Timolol | **** | **** | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol | **** | **** | **** | **** |
| Long QT Syndrome and Metoprolol (Extended Release) | 0 **** | 0.0% **** | 0 **** | 0.0% **** |
| Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol | ***** 524 | 1.8% | 299 | 1.8% |



| | Beta | Blockers | Beta Blockers (Post Require | |
|---|------------------|---|--------------------------------|------------------------------------|
| Patient Characteristics ^{1,2} | Numerican (Noran | Percent/ Standard Deviation ³ | Discussion of the second | Standard Deviation ³ |
| Long QT Syndrome and Propranolol (Extended Release) | Number/Mean 0 | 0.0% | Number/Mean 0 | 0.0% |
| ong QT Syndrome and Propranolol (Regular) | 520 | 1.8% | 297 | 1.7% |
| ong QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| ong QT Syndrome and Atenolol | 21 | 0.1% | **** | **** |
| ong QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| ong QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| ong QT Syndrome and Carvedilol | 21 | 0.1% | 11 | 0.1% |
| ong QT Syndrome and Labetalol | **** | **** | **** | **** |
| ong QT Syndrome and Nadolol | 14 | 0.0% | **** | **** |
| ong QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| ong QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| ong QT Syndrome and Sotalol | 42 | 0.1% | 20 | 0.1% |
| ong QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | Blockers | - | ost-Index Enrollment uirement) |
|---|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 6,090 | N/A | 3,934 | N/A |
| Episodes | 6,366 | 100.0% | 4,062 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 4.2 | 1.2 | 4.2 | 1.2 |
| Sex | | | | |
| Female | 2,896 | 47.6% | 1,864 | 47.4% |
| Male | 3,194 | 52.4% | 2,070 | 52.6% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 75 | 1.2% | **** | **** |
| Asian | 94 | 1.5% | 61 | 1.6% |
| Black or African American | 522 | 8.6% | 331 | 8.4% |
| Native Hawaiian or Other Pacific Islander | 17 | 0.3% | **** | **** |
| Unknown | 3,853 | 63.3% | 2,506 | 63.7% |
| White | 1,529 | 25.1% | 978 | 24.9% |
| Hispanic origin | | | | |
| Yes | 791 | 13.0% | 501 | 12.7% |
| No | 2,149 | 35.3% | 1,363 | 34.6% |
| Unknown | 3,150 | 51.7% | 2,070 | 52.6% |
| Year | | | | |
| 2008 | 207 | 3.3% | 162 | 4.0% |
| 2009 | 231 | 3.6% | 172 | 4.2% |
| 2010 | 208 | 3.3% | 154 | 3.8% |
| 2011 | 206 | 3.2% | 157 | 3.9% |
| 2012 | 177 | 2.8% | 131 | 3.2% |
| 2013 | 200 | 3.1% | 151 | 3.7% |
| 2014 | 352 | 5.5% | 281 | 6.9% |
| 2015 | 677 | 10.6% | 533 | 13.1% |
| 2016 | 1,094 | 17.2% | 918 | 22.6% |
| 2017 | 1,299 | 20.4% | 996 | 24.5% |
| 2018 | 1,187 | 18.6% | 147 | 3.6% |
| 2019 | 195 | 3.1% | 140 | 3.4% |
| 2020 | 177 | 2.8% | **** | **** |
| 2021 | **** | **** | **** | **** |
| 2022 | **** | **** | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 1.1 | 1.6 | 1.0 | 1.5 |
| Hypertension | 733 | 11.5% | 452 | 11.1% |



| | | Blockers | • | ost-Index Enrollment uirement) |
|---|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hemangioma | 413 | 6.5% | 263 | 6.5% |
| Heart Failure | 313 | 4.9% | 177 | 4.4% |
| Congenital Heart Disease | 1,303 | 20.5% | 802 | 19.7% |
| Atrial Fibrillation | 35 | 0.5% | 21 | 0.5% |
| Long QT Syndrome | 273 | 4.3% | 175 | 4.3% |
| Other Cardiac Arrhythmias | 1,897 | 29.8% | 1,202 | 29.6% |
| Cardiac Arrhythmias (Composite) | 2,092 | 32.9% | 1,318 | 32.4% |
| Pulmonary Hypertension | 98 | 1.5% | 64 | 1.6% |
| Cardiomyopathy | 313 | 4.9% | 183 | 4.5% |
| Coronary Artery Disease | 55 | 0.9% | 35 | 0.9% |
| Portal Hypertension | 53 | 0.8% | 31 | 0.8% |
| Anxiety Disorder | 221 | 3.5% | 132 | 3.2% |
| Tremor | 88 | 1.4% | 57 | 1.4% |
| Migraine | 423 | 6.6% | 296 | 7.3% |
| Thyrotoxicosis | 220 | 3.5% | 147 | 3.6% |
| Burns | 78 | 1.2% | 51 | 1.3% |
| Glaucoma | 12 | 0.2% | **** | **** |
| Autism | 227 | 3.6% | 154 | 3.8% |
| Marfan's Syndrome | 134 | 2.1% | 86 | 2.1% |
| Pheochromocytoma/Paraganglioma | 24 | 0.4% | 15 | 0.4% |
| Diabetes | 31 | 0.5% | 21 | 0.5% |
| Any of the above health characteristics <i>(excluding combined comorbidity score)</i> None of the above health characteristics <i>(excluding</i> | 4,633 | 72.8% | 2,951 | 72.6% |
| combined comorbidity score) | 1,733 | 27.2% | 1,111 | 27.4% |
| Hypoglycemia (Day 0) | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) | 48 | 0.8% | 32 | 0.8% |
| Hypoglycemia (3-6 Months) | 35 | 0.5% | 28 | 0.7% |
| Hypoglycemia (6-12 Months) | 28 | 0.4% | 24 | 0.6% |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and No Diabetes | **** | * * * * | **** | **** |
| Hypoglycemia (0-3 Months) and No Diabetes | 43 | 0.7% | 29 | 0.7% |
| Hypoglycemia (3-6 Months) and No Diabetes | 31 | 0.5% | 25 | 0.6% |
| Hypoglycemia (6-12 Months) and No Diabetes | 26 | 0.4% | 22 | 0.5% |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| • • | | | | |



| | Beta | Blockers | - | ost-Index Enrollment uirement) |
|--|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation |
| Hypoglycemia (0-3 Months) and Any Metoprolol | **** | **** | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Any Propranolol | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Any Propranolol | 27 | 0.4% | 18 | 0.4% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 20 | 0.3% | 17 | 0.4% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 16 | 0.3% | 15 | 0.4% |
| lypoglycemia (Day 0) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Atenolol | **** | **** | **** | **** |
| lypoglycemia (6-12 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Nadolol | **** | **** | 0 | 0.0% |
| lypoglycemia (0-3 Months) and Nadolol | **** | **** | **** | **** |
| lypoglycemia (3-6 Months) and Nadolol | **** | **** | **** | **** |
| lypoglycemia (6-12 Months) and Nadolol | **** | **** | **** | **** |
| elective Beta Blockers | 2,066 | 32.5% | 1,392 | 34.3% |
| Ion-Selective Beta Blockers | 4,303 | 67.6% | 2,671 | 65.8% |
| Any Metoprolol | 378 | 5.9% | 252 | 6.2% |
| Metoprolol (Extended Release) | 127 | 2.0% | 84 | 2.1% |
| Metoprolol (Regular) | 252 | 4.0% | 169 | 4.2% |
| Any Propranolol | 3,182 | 50.0% | 1,994 | 49.1% |
| Propranolol (Extended Release) | 20 | 0.3% | 15 | 0.4% |
| Propranolol (Regular) | 3,113 | 48.9% | 1,952 | 48.1% |
| ropranolol (Hemangeol) | 52 | 0.8% | 29 | 0.7% |
| Acebutolol | **** | **** | **** | **** |
| Atenolol | 1,655 | 26.0% | 1,115 | 27.4% |
| Betaxolol | **** | **** | 0 | 0.0% |
| Bisoprolol | 19 | 0.3% | 15 | 0.4% |
| Carvedilol | 464 | 7.3% | 265 | 6.5% |
| abetalol | 249 | 3.9% | 156 | 3.8% |
| Nadolol | 296 | 4.6% | 185 | 4.6% |
| Vebivolol | 11 | 0.2% | **** | **** |
| Pindolol | **** | **** | **** | **** |
| Sotalol | 111 | 1.7% | 69 | 1.7% |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Aypertension and Any Metoprolol | 74 | 1.2% | 46 | 1.1% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|---|--------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Hypertension and Metoprolol (Extended Release) | 18 | 0.3% | 13 | 0.3% | |
| Hypertension and Metoprolol (Regular) | 56 | 0.9% | 33 | 0.8% | |
| Hypertension and Any Propranolol | 217 | 3.4% | 127 | 3.1% | |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Propranolol (Regular) | 217 | 3.4% | 127 | 3.1% | |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Atenolol | 187 | 2.9% | 128 | 3.2% | |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Bisoprolol | **** | **** | **** | **** | |
| Hypertension and Carvedilol | 65 | 1.0% | 35 | 0.9% | |
| Hypertension and Labetalol | 180 | 2.8% | 110 | 2.7% | |
| Hypertension and Nadolol | **** | **** | **** | **** | |
| Hypertension and Nebivolol | **** | **** | **** | **** | |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Sotalol | **** | **** | **** | **** | |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Any Metoprolol | **** | **** | 0 | 0.0% | |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Metoprolol (Regular) | **** | **** | 0 | 0.0% | |
| Hemangioma and Any Propranolol | 393 | 6.2% | 251 | 6.2% | |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Propranolol (Regular) | 347 | 5.5% | 225 | 5.5% | |
| Hemangioma and Propranolol (Hemangeol) | 47 | 0.7% | 26 | 0.6% | |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Atenolol | 15 | 0.2% | **** | **** | |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Carvedilol | **** | * * * * | 0 | 0.0% | |
| Hemangioma and Labetalol | **** | * * * * | **** | **** | |
| Hemangioma and Nadolol | **** | **** | **** | **** | |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Any Metoprolol | **** | **** | **** | **** | |
| Long QT Syndrome and Metoprolol (Extended Release) | **** | **** | **** | **** | |
| Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol | ***** 102 | **** 1.6% | 0 63 | 0.0% 1.6% | |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|---------------|---|--|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Long QT Syndrome and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Propranolol (Regular) | 102 | 1.6% | 63 | 1.6% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Atenolol | 46 | 0.7% | 34 | 0.8% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | **** | **** | **** | **** |
| Long QT Syndrome and Carvedilol | **** | **** | **** | **** |
| Long QT Syndrome and Labetalol | **** | **** | **** | **** |
| Long QT Syndrome and Nadolol | 107 | 1.7% | 66 | 1.6% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol | **** | **** | **** | **** |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | Blockers | | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation |
| Unique patients | 39,081 | N/A | 25,628 | N/A |
| Episodes | 41,380 | 100.0% | 27,012 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 10.4 | 1.9 | 10.4 | 1.9 |
| Sex | | | | |
| Female | 19,069 | 48.8% | 12,297 | 48.0% |
| Male | 20,012 | 51.2% | 13,331 | 52.0% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 384 | 1.0% | 253 | 1.0% |
| Asian | 358 | 0.9% | 218 | 0.9% |
| Black or African American | 2,832 | 7.2% | 1,802 | 7.0% |
| Native Hawaiian or Other Pacific Islander | 56 | 0.1% | 35 | 0.1% |
| Unknown | 24,156 | 61.8% | 16,058 | 62.7% |
| White | 11,295 | 28.9% | 7,262 | 28.3% |
| Hispanic origin | | | | |
| Yes | 4,684 | 12.0% | 2,934 | 11.4% |
| No | 13,995 | 35.8% | 8,894 | 34.7% |
| Unknown | 20,402 | 52.2% | 13,800 | 53.8% |
| Year | | | | |
| 2008 | 1,363 | 3.3% | 1,061 | 3.9% |
| 2009 | 1,677 | 4.1% | 1,287 | 4.8% |
| 2010 | 1,553 | 3.8% | 1,163 | 4.3% |
| 2011 | 1,550 | 3.7% | 1,162 | 4.3% |
| 2012 | 1,441 | 3.5% | 1,144 | 4.2% |
| 2013 | 1,507 | 3.6% | 1,141 | 4.2% |
| 2014 | 2,443 | 5.9% | 1,970 | 7.3% |
| 2015 | 4,207 | 10.2% | 3,233 | 12.0% |
| 2016 | 6,277 | 15.2% | 5,384 | 19.9% |
| 2017 | 8,029 | 19.4% | 6,290 | 23.3% |
| 2018 | 7,317 | 17.7% | 1,139 | 4.2% |
| 2019 | 1,450 | 3.5% | 1,143 | 4.2% |
| 2020 | 1,224 | 3.0% | 801 | 3.0% |
| 2021 | 1,243 | 3.0% | 94 | 0.3% |
| 2022 | 99 | 0.2% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.5 | 1.1 | 0.5 | 1.0 |
| Hypertension | 2,498 | 6.0% | 1,614 | 6.0% |



| | Beta Blockers | | | ost-Index Enrollment irement) |
|---|---------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hemangioma | 112 | 0.3% | 84 | 0.3% |
| Heart Failure | 489 | 1.2% | 309 | 1.1% |
| Congenital Heart Disease | 2,783 | 6.7% | 1,830 | 6.8% |
| Atrial Fibrillation | 93 | 0.2% | 61 | 0.2% |
| Long QT Syndrome | 800 | 1.9% | 500 | 1.9% |
| Other Cardiac Arrhythmias | 6,611 | 16.0% | 4,143 | 15.3% |
| Cardiac Arrhythmias (Composite) | 7,179 | 17.3% | 4,500 | 16.7% |
| Pulmonary Hypertension | 121 | 0.3% | 75 | 0.3% |
| Cardiomyopathy | 786 | 1.9% | 476 | 1.8% |
| Coronary Artery Disease | 156 | 0.4% | 98 | 0.4% |
| Portal Hypertension | 93 | 0.2% | 70 | 0.3% |
| Anxiety Disorder | 6,113 | 14.8% | 3,867 | 14.3% |
| Tremor | 546 | 1.3% | 340 | 1.3% |
| Migraine | 10,888 | 26.3% | 7,382 | 27.3% |
| Thyrotoxicosis | 1,353 | 3.3% | 855 | 3.2% |
| Burns | 110 | 0.3% | 65 | 0.2% |
| Glaucoma | 111 | 0.3% | 72 | 0.3% |
| Autism | 2,696 | 6.5% | 1,730 | 6.4% |
| Marfan's Syndrome | 369 | 0.9% | 228 | 0.8% |
| Pheochromocytoma/Paraganglioma | 26 | 0.1% | 15 | 0.1% |
| Diabetes | 328 | 0.8% | 201 | 0.7% |
| Any of the above health characteristics (excluding combined comorbidity score) None of the above health characteristics (excluding | 28,401 | 68.6% | 18,587 | 68.8% |
| combined comorbidity score) | 12,979 | 31.4% | 8,425 | 31.2% |
| Hypoglycemia (Day 0) | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) | 81 | 0.2% | 49 | 0.2% |
| Hypoglycemia (3-6 Months) | 67 | 0.2% | 47 | 0.2% |
| Hypoglycemia (6-12 Months) | 98 | 0.2% | 88 | 0.3% |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | 14 | 0.0% | **** | **** |
| Hypoglycemia (3-6 Months) and Diabetes | 12 | 0.0% | **** | **** |
| Hypoglycemia (6-12 Months) and Diabetes | 18 | 0.0% | 17 | 0.1% |
| Hypoglycemia (Day 0) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and No Diabetes | 67 | 0.2% | 40 | 0.1% |
| Hypoglycemia (3-6 Months) and No Diabetes | 55 | 0.1% | 40 | 0.1% |
| Hypoglycemia (6-12 Months) and No Diabetes | 80 | 0.2% | 71 | 0.3% |
| Hypoglycemia (Day 0) and Any Metoprolol | **** | **** | **** | **** |



| | Beta | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---------------------------------|-------------|--|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation | |
| Hypoglycemia (0-3 Months) and Any Metoprolol | **** | **** | **** | **** | |
| Hypoglycemia (3-6 Months) and Any Metoprolol | **** | **** | **** | **** | |
| Hypoglycemia (6-12 Months) and Any Metoprolol | **** | **** | **** | **** | |
| Hypoglycemia (Day 0) and Any Propranolol | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and Any Propranolol | 40 | 0.1% | 24 | 0.1% | |
| Hypoglycemia (3-6 Months) and Any Propranolol | 34 | 0.1% | 25 | 0.1% | |
| Hypoglycemia (6-12 Months) and Any Propranolol | 54 | 0.1% | 48 | 0.2% | |
| Hypoglycemia (Day 0) and Atenolol | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and Atenolol | 17 | 0.0% | 11 | 0.0% | |
| Hypoglycemia (3-6 Months) and Atenolol | 17 | 0.0% | **** | **** | |
| Hypoglycemia (6-12 Months) and Atenolol | 22 | 0.1% | 18 | 0.1% | |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Nadolol | **** | **** | **** | **** | |
| Hypoglycemia (3-6 Months) and Nadolol | **** | **** | **** | **** | |
| Hypoglycemia (6-12 Months) and Nadolol | **** | **** | **** | **** | |
| Selective Beta Blockers | 11,925 | 28.8% | 7,820 | 29.0% | |
| Non-Selective Beta Blockers | 29,463 | 71.2% | 19,197 | 71.1% | |
| Any Metoprolol | 2,899 | 7.0% | 1,826 | 6.8% | |
| Metoprolol (Extended Release) | 1,536 | 3.7% | 946 | 3.5% | |
| Metoprolol (Regular) | 1,367 | 3.3% | 883 | 3.3% | |
| Any Propranolol | 25,675 | 62.0% | 16,784 | 62.1% | |
| Propranolol (Extended Release) | 2,259 | 5.5% | 1,520 | 5.6% | |
| Propranolol (Regular) | 23,481 | 56.7% | 15,302 | 56.6% | |
| Propranolol (Hemangeol) | **** | * * * * * | **** | **** | |
| Acebutolol | 24 | 0.1% | 16 | 0.1% | |
| Atenolol | 8,785 | 21.2% | 5,841 | 21.6% | |
| Betaxolol | 32 | 0.1% | 20 | 0.1% | |
| Bisoprolol | 94 | 0.2% | 55 | 0.2% | |
| Carvedilol | 902 | 2.2% | 545 | 2.0% | |
| abetalol | 670 | 1.6% | 393 | 1.5% | |
| Nadolol | 2,033 | 4.9% | 1,357 | 5.0% | |
| Nebivolol | 96 | 0.2% | 66 | 0.2% | |
| Pindolol | 37 | 0.1% | 26 | 0.1% | |
| Sotalol | 142 | 0.3% | 91 | 0.3% | |
| Timolol | **** | **** | **** | **** | |
| Health Characteristics by Beta Blockers | | | | | |
| Hypertension and Any Metoprolol | 487 | 1.2% | 327 | 1.2% | |



| | Beta Blockers | | • | ost-Index Enrollment irement) |
|---|---------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypertension and Metoprolol (Extended Release) | 256 | 0.6% | 166 | 0.6% |
| Hypertension and Metoprolol (Regular) | 233 | 0.6% | 163 | 0.6% |
| Hypertension and Any Propranolol | 455 | 1.1% | 303 | 1.1% |
| Hypertension and Propranolol (Extended Release) | 22 | 0.1% | 15 | 0.1% |
| Hypertension and Propranolol (Regular) | 433 | 1.0% | 287 | 1.1% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 841 | 2.0% | 573 | 2.1% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | **** | **** | **** | **** |
| Hypertension and Carvedilol | 138 | 0.3% | 73 | 0.3% |
| Hypertension and Labetalol | 518 | 1.3% | 303 | 1.1% |
| Hypertension and Nadolol | 38 | 0.1% | 21 | 0.1% |
| Hypertension and Nebivolol | 11 | 0.0% | **** | **** |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | **** | **** | **** | **** |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | **** | **** | **** | **** |
| Hemangioma and Metoprolol (Extended Release) | **** | **** | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | **** | **** | **** | **** |
| Hemangioma and Any Propranolol | 100 | 0.2% | 78 | 0.3% |
| Hemangioma and Propranolol (Extended Release) | **** | **** | **** | **** |
| Hemangioma and Propranolol (Regular) | 96 | 0.2% | 76 | 0.3% |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | **** | **** | **** | **** |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol | 49 | 0.1% | 31 | 0.1% |
| Long QT Syndrome and Metoprolol (Extended Release) | 20 | 0.0% | 12 | 0.0% |
| Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol | 29 88 | 0.1% 0.2% | 19 50 | 0.1% 0.2% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|---------------|---|--|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Long QT Syndrome and Propranolol (Extended Release) | **** | **** | **** | **** |
| Long QT Syndrome and Propranolol (Regular) | **** | **** | **** | **** |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Atenolol | 113 | 0.3% | 77 | 0.3% |
| Long QT Syndrome and Betaxolol | **** | **** | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | **** | **** | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | **** | **** | **** | **** |
| Long QT Syndrome and Labetalol | **** | **** | **** | **** |
| Long QT Syndrome and Nadolol | 527 | 1.3% | 335 | 1.2% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol | **** | **** | **** | **** |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | a Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|---|-------------|---------------------------------|--|--------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation | |
| Unique patients | 129,931 | N/A | 82,935 | N/A | |
| Episodes | 137,864 | 100.0% | 87,826 | 100.0% | |
| Demographic Characteristics | | | | | |
| Age (years) | 16.0 | 1.3 | 16.0 | 1.3 | |
| Sex | | | | | |
| Female | 84,437 | 65.0% | 53,460 | 64.5% | |
| Male | 45,494 | 35.0% | 29,475 | 35.5% | |
| Race ⁴ | | | | | |
| American Indian or Alaska Native | 1,178 | 0.9% | 713 | 0.9% | |
| Asian | 1,032 | 0.8% | 580 | 0.7% | |
| Black or African American | 7,111 | 5.5% | 4,187 | 5.0% | |
| Native Hawaiian or Other Pacific Islander | 176 | 0.1% | 109 | 0.1% | |
| Unknown | 84,817 | 65.3% | 55,476 | 66.9% | |
| White | 35,617 | 27.4% | 21,870 | 26.4% | |
| lispanic origin | | | | | |
| Yes | 11,247 | 8.7% | 6,392 | 7.7% | |
| No | 40,803 | 31.4% | 24,453 | 29.5% | |
| Unknown | 77,881 | 59.9% | 52,090 | 62.8% | |
| /ear | | | | | |
| 2008 | 4,053 | 2.9% | 3,115 | 3.5% | |
| 2009 | 5,352 | 3.9% | 3,982 | 4.5% | |
| 2010 | 5,098 | 3.7% | 3,875 | 4.4% | |
| 2011 | 4,854 | 3.5% | 3,696 | 4.2% | |
| 2012 | 4,942 | 3.6% | 3,876 | 4.4% | |
| 2013 | 5,253 | 3.8% | 3,976 | 4.5% | |
| 2014 | 7,632 | 5.5% | 6,041 | 6.9% | |
| 2015 | 12,407 | 9.0% | 9,280 | 10.6% | |
| 2016 | 19,401 | 14.1% | 15,905 | 18.1% | |
| 2017 | 24,097 | 17.5% | 18,274 | 20.8% | |
| 2018 | 24,011 | 17.4% | 5,410 | 6.2% | |
| 2019 | 7,220 | 5.2% | 5,641 | 6.4% | |
| 2020 | 6,157 | 4.5% | 4,219 | 4.8% | |
| 2021 | 6,876 | 5.0% | 536 | 0.6% | |
| 2022 | 511 | 0.4% | 0 | 0.0% | |
| Health Characteristics | | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.5 | 0.9 | 0.5 | 0.9 | |
| Hypertension | 10,185 | 7.4% | 6,623 | 7.5% | |



| | Beta | Blockers | - | ost-Index Enrollment uirement) |
|---|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hemangioma | 124 | 0.1% | 86 | 0.1% |
| Heart Failure | 816 | 0.6% | 493 | 0.6% |
| Congenital Heart Disease | 3,681 | 2.7% | 2,411 | 2.7% |
| Atrial Fibrillation | 400 | 0.3% | 260 | 0.3% |
| Long QT Syndrome | 897 | 0.7% | 562 | 0.6% |
| Other Cardiac Arrhythmias | 19,295 | 14.0% | 12,110 | 13.8% |
| Cardiac Arrhythmias (Composite) | 19,868 | 14.4% | 12,483 | 14.2% |
| Pulmonary Hypertension | 230 | 0.2% | 147 | 0.2% |
| Cardiomyopathy | 1,460 | 1.1% | 883 | 1.0% |
| Coronary Artery Disease | 479 | 0.3% | 319 | 0.4% |
| Portal Hypertension | 123 | 0.1% | 69 | 0.1% |
| Anxiety Disorder | 40,314 | 29.2% | 24,466 | 27.9% |
| Tremor | 3,316 | 2.4% | 2,104 | 2.4% |
| Migraine | 34,010 | 24.7% | 22,439 | 25.5% |
| Thyrotoxicosis | 3,981 | 2.9% | 2,554 | 2.9% |
| Burns | 208 | 0.2% | 136 | 0.2% |
| Glaucoma | 312 | 0.2% | 186 | 0.2% |
| Autism | 4,196 | 3.0% | 2,574 | 2.9% |
| Marfan's Syndrome | 413 | 0.3% | 298 | 0.3% |
| Pheochromocytoma/Paraganglioma | 31 | 0.0% | 22 | 0.0% |
| Diabetes | 1,883 | 1.4% | 1,203 | 1.4% |
| Any of the above health characteristics (excluding combined comorbidity score) None of the above health characteristics (excluding | 95,538 | 69.3% | 60,640 | 69.0% |
| combined comorbidity score) | 42,326 | 30.7% | 27,186 | 31.0% |
| Hypoglycemia (Day 0) | 61 | 0.0% | 42 | 0.0% |
| Hypoglycemia (0-3 Months) | 401 | 0.3% | 286 | 0.3% |
| Hypoglycemia (3-6 Months) | 322 | 0.2% | 234 | 0.3% |
| Hypoglycemia (6-12 Months) | 418 | 0.3% | 363 | 0.4% |
| Hypoglycemia (Day 0) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Diabetes | 71 | 0.1% | 49 | 0.1% |
| Hypoglycemia (3-6 Months) and Diabetes | 60 | 0.0% | 44 | 0.1% |
| Hypoglycemia (6-12 Months) and Diabetes | 66 | 0.0% | 57 | 0.1% |
| Hypoglycemia (Day 0) and No Diabetes | 53 | 0.0% | 35 | 0.0% |
| Hypoglycemia (0-3 Months) and No Diabetes | 330 | 0.2% | 237 | 0.3% |
| Hypoglycemia (3-6 Months) and No Diabetes | 262 | 0.2% | 190 | 0.2% |
| Hypoglycemia (6-12 Months) and No Diabetes | 352 | 0.3% | 306 | 0.3% |
| Hypoglycemia (Day 0) and Any Metoprolol | 14 | 0.0% | **** | **** |



| | Beta | a Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|--|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 73 | 0.1% | 54 | 0.1% | |
| lypoglycemia (3-6 Months) and Any Metoprolol | 52 | 0.0% | 39 | 0.0% | |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 65 | 0.0% | 54 | 0.1% | |
| lypoglycemia (Day 0) and Any Propranolol | 29 | 0.0% | 17 | 0.0% | |
| lypoglycemia (0-3 Months) and Any Propranolol | 226 | 0.2% | 155 | 0.2% | |
| lypoglycemia (3-6 Months) and Any Propranolol | 194 | 0.1% | 139 | 0.2% | |
| lypoglycemia (6-12 Months) and Any Propranolol | 236 | 0.2% | 206 | 0.2% | |
| lypoglycemia (Day 0) and Atenolol | **** | **** | **** | **** | |
| lypoglycemia (0-3 Months) and Atenolol | 56 | 0.0% | 48 | 0.1% | |
| lypoglycemia (3-6 Months) and Atenolol | 49 | 0.0% | 35 | 0.0% | |
| lypoglycemia (6-12 Months) and Atenolol | 71 | 0.1% | 63 | 0.1% | |
| lypoglycemia (Day 0) and Nadolol | **** | **** | **** | **** | |
| lypoglycemia (0-3 Months) and Nadolol | **** | **** | **** | * * * * * | |
| lypoglycemia (3-6 Months) and Nadolol | **** | **** | **** | * * * * * | |
| ypoglycemia (6-12 Months) and Nadolol | 17 | 0.0% | 16 | 0.0% | |
| elective Beta Blockers | 34,897 | 25.3% | 22,923 | 26.1% | |
| on-Selective Beta Blockers | 103,003 | 74.7% | 64,931 | 73.9% | |
| ny Metoprolol | 14,678 | 10.6% | 9,331 | 10.6% | |
| Netoprolol (Extended Release) | 8,542 | 6.2% | 5,324 | 6.1% | |
| Aetoprolol (Regular) | 6,178 | 4.5% | 4,040 | 4.6% | |
| ny Propranolol | 92,707 | 67.2% | 58,448 | 66.5% | |
| ropranolol (Extended Release) | 13,992 | 10.1% | 9,311 | 10.6% | |
| ropranolol (Regular) | 79,046 | 57.3% | 49,348 | 56.2% | |
| ropranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% | |
| cebutolol | 48 | 0.0% | 37 | 0.0% | |
| tenolol | 19,145 | 13.9% | 12,838 | 14.6% | |
| etaxolol | 140 | 0.1% | 98 | 0.1% | |
| isoprolol | 467 | 0.3% | 314 | 0.4% | |
| arvedilol | 1,919 | 1.4% | 1,151 | 1.3% | |
| abetalol | 3,895 | 2.8% | 2,286 | 2.6% | |
| ladolol | 3,965 | 2.9% | 2,696 | 3.1% | |
| lebivolol | 437 | 0.3% | 318 | 0.4% | |
| indolol | 235 | 0.2% | 165 | 0.2% | |
| otalol | 213 | 0.2% | 136 | 0.2% | |
| ïmolol | 73 | 0.1% | 52 | 0.1% | |
| lealth Characteristics by Beta Blockers | | | | | |
| lypertension and Any Metoprolol | 3,036 | 2.2% | 1,898 | 2.2% | |



| Patient Characteristics ^{1,2} Iypertension and Metoprolol (Extended Release) Iypertension and Metoprolol (Regular) Iypertension and Any Propranolol Iypertension and Propranolol (Extended Release) Iypertension and Propranolol (Regular) Iypertension and Acebutolol Iypertension and Atenolol | Number/Mean 1,807 1,247 2,324 453 1,874 ***** 2,858 ***** 115 | Percent/ Standard Deviation ³ 1.3% 0.9% 1.7% 0.3% 1.4% ***** 2.1% ***** | Number/Mean 1,107 806 1,547 315 1,235 ***** 1,939 | Percent/ Standard Deviation ³ 1.3% 0.9% 1.8% 0.4% 1.4% ***** |
|--|--|---|--|--|
| lypertension and Metoprolol (Extended Release) lypertension and Metoprolol (Regular) lypertension and Any Propranolol lypertension and Propranolol (Extended Release) lypertension and Propranolol (Regular) lypertension and Acebutolol | 1,807 1,247 2,324 453 1,874 ***** 2,858 ***** | 1.3% 0.9% 1.7% 0.3% 1.4% ***** 2.1% | 1,107 806 1,547 315 1,235 ***** | 1.3% 0.9% 1.8% 0.4% 1.4% |
| Iypertension and Metoprolol (Regular) Iypertension and Any Propranolol Iypertension and Propranolol (Extended Release) Iypertension and Propranolol (Regular) Iypertension and Acebutolol | 1,247 2,324 453 1,874 ***** 2,858 ***** | 0.9% 1.7% 0.3% 1.4% ***** 2.1% | 806 1,547 315 1,235 ***** | 0.9% 1.8% 0.4% 1.4% |
| Iypertension and Any Propranolol Iypertension and Propranolol (Extended Release) Iypertension and Propranolol (Regular) Iypertension and Acebutolol | 2,324 453 1,874 ***** 2,858 ***** | 1.7% 0.3% 1.4% ***** 2.1% | 1,547 315 1,235 ***** | 1.8% 0.4% 1.4% |
| lypertension and Propranolol (Extended Release) lypertension and Propranolol (Regular) lypertension and Acebutolol | 453 1,874 ***** 2,858 ***** | 0.3% 1.4% ***** 2.1% | 315 1,235 ***** | 0.4% 1.4% |
| lypertension and Propranolol (Regular) lypertension and Acebutolol | 1,874 ***** 2,858 ***** | 1.4% ***** 2.1% | 1,235 **** | 1.4% |
| lypertension and Acebutolol | ***** 2,858 ***** | ***** 2.1% | **** | |
| | 2,858 ***** | 2.1% | | **** |
| lypertension and Atenolol | **** | | 1,939 | |
| | | **** | | 2.2% |
| lypertension and Betaxolol | 115 | ጥ ጥ ጥ ጥ ጥ | **** | **** |
| lypertension and Bisoprolol | | 0.1% | 81 | 0.1% |
| lypertension and Carvedilol | 438 | 0.3% | 267 | 0.3% |
| lypertension and Labetalol | 1,110 | 0.8% | 681 | 0.8% |
| lypertension and Nadolol | 140 | 0.1% | 95 | 0.1% |
| lypertension and Nebivolol | 131 | 0.1% | 90 | 0.1% |
| lypertension and Pindolol | 13 | 0.0% | **** | * * * * * |
| lypertension and Sotalol | 17 | 0.0% | 14 | 0.0% |
| lypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| lemangioma and Any Metoprolol | **** | **** | **** | * * * * |
| lemangioma and Metoprolol (Extended Release) | **** | **** | **** | * * * * |
| lemangioma and Metoprolol (Regular) | **** | **** | **** | * * * * |
| lemangioma and Any Propranolol | 103 | 0.1% | 72 | 0.1% |
| lemangioma and Propranolol (Extended Release) | 19 | 0.0% | 13 | 0.0% |
| lemangioma and Propranolol (Regular) | 85 | 0.1% | 59 | 0.1% |
| lemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| lemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| lemangioma and Atenolol | 11 | 0.0% | **** | **** |
| lemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| lemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| lemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| lemangioma and Labetalol | **** | **** | **** | * * * * * |
| lemangioma and Nadolol | **** | **** | **** | **** |
| lemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| lemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |
| lemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| lemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| ong QT Syndrome and Any Metoprolol | 88 | 0.1% | 53 | 0.1% |
| ong QT Syndrome and Metoprolol (Extended Release) | 40 | 0.0% | 20 | 0.0% |
| ong QT Syndrome and Metoprolol (Regular) ong QT Syndrome and Any Propranolol | 48 140 | 0.0% 0.1% | 33 89 | 0.0% 0.1% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|---------------|---|--|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Long QT Syndrome and Propranolol (Extended Release) | 32 | 0.0% | 23 | 0.0% |
| Long QT Syndrome and Propranolol (Regular) | 109 | 0.1% | 67 | 0.1% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Atenolol | 133 | 0.1% | 87 | 0.1% |
| Long QT Syndrome and Betaxolol | **** | **** | **** | **** |
| Long QT Syndrome and Bisoprolol | **** | **** | **** | **** |
| Long QT Syndrome and Carvedilol | 26 | 0.0% | 14 | 0.0% |
| Long QT Syndrome and Labetalol | **** | **** | **** | **** |
| Long QT Syndrome and Nadolol | 482 | 0.3% | 300 | 0.3% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol | 11 | 0.0% | **** | * * * * * |
| Long QT Syndrome and Timolol | **** | **** | **** | **** |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | | | | st-Index Enrollment rement) | |
|---|-------------|---------------------------------|-------------|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Unique patients | 79,449 | N/A | 51,301 | N/A | |
| Episodes | 84,674 | 100.0% | 54,436 | 100.0% | |
| Demographic Characteristics | | | | | |
| Age (years) | 11.9 | 5.7 | 12.0 | 5.6 | |
| Age | | | | | |
| 0-1 years | 12,006 | 14.2% | 7,167 | 13.2% | |
| 2-5 years | 3,343 | 3.9% | 2,141 | 3.9% | |
| 6-12 years | 21,234 | 25.1% | 14,072 | 25.9% | |
| 13-17 years | 48,091 | 56.8% | 31,056 | 57.1% | |
| Race ⁴ | | | | | |
| American Indian or Alaska Native | 745 | 0.9% | 489 | 1.0% | |
| Asian | 753 | 0.9% | 442 | 0.9% | |
| Black or African American | 5,125 | 6.5% | 3,188 | 6.2% | |
| Native Hawaiian or Other Pacific Islander | 135 | 0.2% | 84 | 0.2% | |
| Unknown | 51,364 | 64.7% | 33,666 | 65.6% | |
| White | 21,327 | 26.8% | 13,432 | 26.2% | |
| Hispanic origin | | | | | |
| Yes | 8,063 | 10.1% | 4,934 | 9.6% | |
| No | 26,002 | 32.7% | 16,161 | 31.5% | |
| Unknown | 45,384 | 57.1% | 30,206 | 58.9% | |
| Year | | | | | |
| 2008 | 2,553 | 3.0% | 1,985 | 3.6% | |
| 2009 | 3,246 | 3.8% | 2,433 | 4.5% | |
| 2010 | 3,161 | 3.7% | 2,390 | 4.4% | |
| 2011 | 2,972 | 3.5% | 2,238 | 4.1% | |
| 2012 | 3,019 | 3.6% | 2,339 | 4.3% | |
| 2013 | 3,179 | 3.8% | 2,380 | 4.4% | |
| 2014 | 4,897 | 5.8% | 3,959 | 7.3% | |
| 2015 | 8,265 | 9.8% | 6,276 | 11.5% | |
| 2016 | 12,644 | 14.9% | 10,517 | 19.3% | |
| 2017 | 15,748 | 18.6% | 12,026 | 22.1% | |
| 2018 | 14,807 | 17.5% | 2,737 | 5.0% | |
| 2019 | 3,654 | 4.3% | 2,835 | 5.2% | |
| 2020 | 3,155 | 3.7% | 2,066 | 3.8% | |
| 2021 | 3,154 | 3.7% | 255 | 0.5% | |
| 2022 | 220 | 0.3% | 0 | 0.0% | |



| | Beta E | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.6 | 1.2 | 0.6 | 1.1 |
| Hypertension | 8,080 | 9.5% | 5,268 | 9.7% |
| Hemangioma | 4,418 | 5.2% | 2,621 | 4.8% |
| Heart Failure | 1,758 | 2.1% | 1,078 | 2.0% |
| Congenital Heart Disease | 9,862 | 11.6% | 6,167 | 11.3% |
| Atrial Fibrillation | 372 | 0.4% | 244 | 0.4% |
| Long QT Syndrome | 1,264 | 1.5% | 768 | 1.4% |
| Other Cardiac Arrhythmias | 16,112 | 19.0% | 10,052 | 18.5% |
| Cardiac Arrhythmias (Composite) | 16,903 | 20.0% | 10,549 | 19.4% |
| Pulmonary Hypertension | 699 | 0.8% | 386 | 0.7% |
| Cardiomyopathy | 2,212 | 2.6% | 1,320 | 2.4% |
| Coronary Artery Disease | 546 | 0.6% | 352 | 0.6% |
| Portal Hypertension | 169 | 0.2% | 102 | 0.2% |
| Anxiety Disorder | 15,201 | 18.0% | 9,522 | 17.5% |
| Tremor | 1,883 | 2.2% | 1,213 | 2.2% |
| Migraine | 14,132 | 16.7% | 9,587 | 17.6% |
| Thyrotoxicosis | 1,228 | 1.5% | 822 | 1.5% |
| Burns | 252 | 0.3% | 159 | 0.3% |
| Glaucoma | 201 | 0.2% | 127 | 0.2% |
| Autism | 5,400 | 6.4% | 3,402 | 6.2% |
| Marfan's Syndrome | 569 | 0.7% | 391 | 0.7% |
| Pheochromocytoma/Paraganglioma | 64 | 0.1% | 37 | 0.1% |
| Diabetes | 867 | 1.0% | 550 | 1.0% |
| Any of the above health characteristics <i>(excluding</i> | 60,502 | 71.5% | 38,720 | 71.1% |
| combined comorbidity score) None of the above health characteristics (excluding | 00,502 | /1.5% | 56,720 | /1.1% |
| combined comorbidity score) | 24,172 | 28.5% | 15,716 | 28.9% |
| Hypoglycemia (Day 0) | 53 | 0.1% | 31 | 0.1% |
| Hypoglycemia (0-3 Months) | 258 | 0.3% | 159 | 0.3% |
| Hypoglycemia (3-6 Months) | 178 | 0.2% | 130 | 0.2% |
| Hypoglycemia (6-12 Months) | 243 | 0.3% | 208 | 0.4% |
| Hypoglycemia (Day 0) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Diabetes | 33 | 0.0% | 24 | 0.0% |
| Hypoglycemia (3-6 Months) and Diabetes | 27 | 0.0% | 23 | 0.0% |
| Hypoglycemia (6-12 Months) and Diabetes | 32 | 0.0% | 29 | 0.1% |
| Hypoglycemia (Day 0) and No Diabetes | 50 | 0.1% | 28 | 0.1% |
| Hypoglycemia (0-3 Months) and No Diabetes | 225 | 0.3% | 135 | 0.2% |
| Hypoglycemia (3-6 Months) and No Diabetes | 151 | 0.2% | 107 | 0.2% |
| | | | | |



| Patient Characteristics ^{1,2} Number/MeanStandarHypoglycemia (6-12 Months) and No Diabetes211 | ercent/ rd Deviation ³ 0.2% ***** 0.0% 0.0% 0.0% 0.0% | Number/Mean 179 ***** 18 14 24 | Percent/ Standard Deviation ³ 0.3% ***** 0.0% |
|--|---|---|--|
| Hypoglycemia (6-12 Months) and No Diabetes 211 | 0.2% ***** 0.0% 0.0% 0.0% | 179 ***** 18 14 | 0.3% ***** 0.0% |
| | ***** 0.0% 0.0% 0.0% | ***** 18 14 | ***** 0.0% |
| Hypoglycemia (Day 0) and Any Metoprolol ***** | 0.0% 0.0% 0.0% | 18 14 | 0.0% |
| | 0.0% 0.0% | 14 | |
| Hypoglycemia (0-3 Months) and Any Metoprolol 21 | 0.0% | | 0.001 |
| Hypoglycemia (3-6 Months) and Any Metoprolol 16 | | 24 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol 26 | 0.0% | 24 | 0.0% |
| Hypoglycemia (Day 0) and Any Propranolol 42 | | 22 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Propranolol 175 | 0.2% | 102 | 0.2% |
| Hypoglycemia (3-6 Months) and Any Propranolol 107 | 0.1% | 79 | 0.1% |
| Hypoglycemia (6-12 Months) and Any Propranolol 146 | 0.2% | 122 | 0.2% |
| Hypoglycemia (Day 0) and Atenolol ***** ' | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Atenolol 35 | 0.0% | 24 | 0.0% |
| Hypoglycemia (3-6 Months) and Atenolol 30 | 0.0% | 19 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol 38 | 0.0% | 31 | 0.1% |
| Hypoglycemia (Day 0) and Nadolol ***** | **** | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol ***** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Nadolol ***** | **** | **** | * * * * |
| Hypoglycemia (6-12 Months) and Nadolol ***** | **** | **** | **** |
| Selective Beta Blockers 22,304 2 | 26.3% | 14,791 | 27.2% |
| Non-Selective Beta Blockers 62,384 | 73.7% | 39,655 | 72.8% |
| Any Metoprolol 8,123 | 9.6% | 5,188 | 9.5% |
| Metoprolol (Extended Release) 4,561 | 5.4% | 2,856 | 5.2% |
| Metoprolol (Regular) 3,580 | 4.2% | 2,346 | 4.3% |
| Any Propranolol 55,302 6 | 55.3% | 35,235 | 64.7% |
| Propranolol (Extended Release) 5,768 | 6.8% | 3,885 | 7.1% |
| Propranolol (Regular) 49,025 | 57.9% | 31,088 | 57.1% |
| Propranolol (Hemangeol) 653 | 0.8% | 357 | 0.7% |
| Acebutolol 29 | 0.0% | 22 | 0.0% |
| Atenolol 13,569 | L6.0% | 9,176 | 16.9% |
| Betaxolol 61 | 0.1% | 44 | 0.1% |
| Bisoprolol 258 | 0.3% | 173 | 0.3% |
| | 2.9% | 1,471 | 2.7% |
| | 1.4% | 730 | 1.3% |
| Nadolol 2,705 | 3.2% | 1,779 | 3.3% |
| | 0.3% | 197 | 0.4% |
| | 0.1% | 61 | 0.1% |
| | 0.7% | 377 | 0.7% |
| | 0.0% | 16 | 0.0% |



| | Beta E | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|--|--------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 2,152 | 2.5% | 1,368 | 2.5% |
| Hypertension and Metoprolol (Extended Release) | 1,263 | 1.5% | 781 | 1.4% |
| Hypertension and Metoprolol (Regular) | 900 | 1.1% | 596 | 1.1% |
| Hypertension and Any Propranolol | 1,986 | 2.3% | 1,287 | 2.4% |
| Hypertension and Propranolol (Extended Release) | 242 | 0.3% | 171 | 0.3% |
| Hypertension and Propranolol (Regular) | 1,740 | 2.1% | 1,115 | 2.0% |
| Hypertension and Acebutolol | **** | **** | **** | **** |
| Hypertension and Atenolol | 2,300 | 2.7% | 1,589 | 2.9% |
| Hypertension and Betaxolol | **** | **** | **** | **** |
| Hypertension and Bisoprolol | 67 | 0.1% | 48 | 0.1% |
| Hypertension and Carvedilol | 424 | 0.5% | 251 | 0.5% |
| Hypertension and Labetalol | 919 | 1.1% | 568 | 1.0% |
| Hypertension and Nadolol | 106 | 0.1% | 69 | 0.1% |
| Hypertension and Nebivolol | 97 | 0.1% | 66 | 0.1% |
| Hypertension and Pindolol | **** | **** | **** | **** |
| Hypertension and Sotalol | 26 | 0.0% | 19 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | **** | **** | **** | **** |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | **** | **** | **** | **** |
| Hemangioma and Any Propranolol | 4,342 | 5.1% | 2,571 | 4.7% |
| Hemangioma and Propranolol (Extended Release) | 11 | 0.0% | **** | **** |
| Hemangioma and Propranolol (Regular) | 3,737 | 4.4% | 2,236 | 4.1% |
| Hemangioma and Propranolol (Hemangeol) | 594 | 0.7% | 328 | 0.6% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 65 | 0.1% | 43 | 0.1% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | **** | **** | **** | **** |
| Hemangioma and Labetalol | **** | **** | **** | **** |
| Hemangioma and Nadolol | **** | **** | **** | **** |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol | 71 | 0.1% | 45 | 0.1% |



| | Beta B | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|---|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Long QT Syndrome and Metoprolol (Extended Release) | 29 | 0.0% | 17 | 0.0% | |
| Long QT Syndrome and Metoprolol (Regular) | 42 | 0.0% | 28 | 0.1% | |
| Long QT Syndrome and Any Propranolol | 406 | 0.5% | 237 | 0.4% | |
| Long QT Syndrome and Propranolol (Extended Release) | 14 | 0.0% | 11 | 0.0% | |
| Long QT Syndrome and Propranolol (Regular) | 392 | 0.5% | 226 | 0.4% | |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Atenolol | 143 | 0.2% | 97 | 0.2% | |
| Long QT Syndrome and Betaxolol | **** | **** | **** | **** | |
| Long QT Syndrome and Bisoprolol | **** | **** | **** | **** | |
| Long QT Syndrome and Carvedilol | 31 | 0.0% | 15 | 0.0% | |
| Long QT Syndrome and Labetalol | 14 | 0.0% | **** | **** | |
| Long QT Syndrome and Nadolol | 557 | 0.7% | 342 | 0.6% | |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Sotalol | 35 | 0.0% | 21 | 0.0% | |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% | |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)



| | Beta | Blockers | | ost-Index Enrollment iirement) |
|---|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 121,477 | N/A | 76,611 | N/A |
| Episodes | 129,557 | 100.0% | 81,534 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 12.9 | 5.6 | 13.0 | 5.5 |
| Age | | | | |
| 0-1 years | 16,615 | 12.8% | 9,903 | 12.1% |
| 2-5 years | 3,023 | 2.3% | 1,921 | 2.4% |
| 6-12 years | 20,146 | 15.5% | 12,940 | 15.9% |
| 13-17 years | 89,773 | 69.3% | 56,770 | 69.6% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 1,147 | 0.9% | 703 | 0.9% |
| Asian | 1,021 | 0.8% | 590 | 0.8% |
| Black or African American | 6,918 | 5.7% | 4,176 | 5.5% |
| Native Hawaiian or Other Pacific Islander | 169 | 0.1% | 101 | 0.1% |
| Unknown | 79,602 | 65.5% | 51,004 | 66.6% |
| White | 32,620 | 26.9% | 20,037 | 26.2% |
| Hispanic origin | | | | |
| Yes | 11,916 | 9.8% | 7,027 | 9.2% |
| No | 38,231 | 31.5% | 23,086 | 30.1% |
| Unknown | 71,330 | 58.7% | 46,498 | 60.7% |
| Year | | | | |
| 2008 | 3,474 | 2.7% | 2,632 | 3.2% |
| 2009 | 4,514 | 3.5% | 3,356 | 4.1% |
| 2010 | 4,335 | 3.3% | 3,246 | 4.0% |
| 2011 | 4,308 | 3.3% | 3,255 | 4.0% |
| 2012 | 4,245 | 3.3% | 3,307 | 4.1% |
| 2013 | 4,611 | 3.6% | 3,466 | 4.3% |
| 2014 | 7,395 | 5.7% | 5,754 | 7.1% |
| 2015 | 12,378 | 9.6% | 9,260 | 11.4% |
| 2016 | 19,052 | 14.7% | 15,540 | 19.1% |
| 2017 | 23,205 | 17.9% | 17,487 | 21.4% |
| 2018 | 22,720 | 17.5% | 4,777 | 5.9% |
| 2019 | 6,533 | 5.0% | 5,000 | 6.1% |
| 2020 | 5,823 | 4.5% | 3,965 | 4.9% |
| 2021 | 6,465 | 5.0% | 489 | 0.6% |
| 2022 | 499 | 0.4% | 0 | 0.0% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollm Requirement) | | |
|--|-------------|---------------------------------|---|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Health Characteristics | | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.5 | 1.0 | 0.5 | 1.0 | |
| Hypertension | 6,609 | 5.1% | 4,198 | 5.1% | |
| Hemangioma | 11,264 | 8.7% | 6,754 | 8.3% | |
| Heart Failure | 1,475 | 1.1% | 896 | 1.1% | |
| Congenital Heart Disease | 8,284 | 6.4% | 5,116 | 6.3% | |
| Atrial Fibrillation | 239 | 0.2% | 149 | 0.2% | |
| Long QT Syndrome | 1,331 | 1.0% | 821 | 1.0% | |
| Other Cardiac Arrhythmias | 20,006 | 15.4% | 12,417 | 15.2% | |
| Cardiac Arrhythmias (Composite) | 20,839 | 16.1% | 12,923 | 15.8% | |
| Pulmonary Hypertension | 551 | 0.4% | 327 | 0.4% | |
| Cardiomyopathy | 1,402 | 1.1% | 848 | 1.0% | |
| Coronary Artery Disease | 356 | 0.3% | 237 | 0.3% | |
| Portal Hypertension | 148 | 0.1% | 96 | 0.1% | |
| Anxiety Disorder | 31,487 | 24.3% | 18,970 | 23.3% | |
| Tremor | 2,111 | 1.6% | 1,312 | 1.6% | |
| Migraine | 31,214 | 24.1% | 20,545 | 25.2% | |
| Thyrotoxicosis | 4,409 | 3.4% | 2,787 | 3.4% | |
| Burns | 235 | 0.2% | 154 | 0.2% | |
| Glaucoma | 274 | 0.2% | 163 | 0.2% | |
| Autism | 1,732 | 1.3% | 1,061 | 1.3% | |
| Marfan's Syndrome | 392 | 0.3% | 250 | 0.3% | |
| Pheochromocytoma/Paraganglioma | 65 | 0.1% | 47 | 0.1% | |
| Diabetes | 1,410 | 1.1% | 899 | 1.1% | |
| Any of the above health characteristics (excluding | | | | | |
| <i>combined comorbidity score)</i> None of the above health characteristics <i>(excluding</i> | 94,154 | 72.7% | 59,072 | 72.5% | |
| combined comorbidity score) | 35,403 | 27.3% | 22,462 | 27.5% | |
| Hypoglycemia (Day 0) | 77 | 0.1% | 49 | 0.1% | |
| Hypoglycemia (0-3 Months) | 479 | 0.4% | 332 | 0.4% | |
| Hypoglycemia (3-6 Months) | 354 | 0.3% | 252 | 0.3% | |
| Hypoglycemia (6-12 Months) | 452 | 0.3% | 393 | 0.5% | |
| Hypoglycemia (Day 0) and Diabetes | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and Diabetes | 60 | 0.0% | 40 | 0.0% | |
| Hypoglycemia (3-6 Months) and Diabetes | 52 | 0.0% | 34 | 0.0% | |
| Hypoglycemia (6-12 Months) and Diabetes | 58 | 0.0% | 51 | 0.1% | |
| Hypoglycemia (Day 0) and No Diabetes | 72 | 0.1% | 45 | 0.1% | |
| Hypoglycemia (0-3 Months) and No Diabetes | 419 | 0.3% | 292 | 0.4% | |



| | Beta | Blockers | | ost-Index Enrollment iirement) |
|--|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (3-6 Months) and No Diabetes | 302 | 0.2% | 218 | 0.3% |
| Hypoglycemia (6-12 Months) and No Diabetes | 394 | 0.3% | 342 | 0.4% |
| Hypoglycemia (Day 0) and Any Metoprolol | 11 | 0.0% | **** | **** |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 63 | 0.0% | 43 | 0.1% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 49 | 0.0% | 37 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 52 | 0.0% | 42 | 0.1% |
| Hypoglycemia (Day 0) and Any Propranolol | 46 | 0.0% | 25 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Propranolol | 298 | 0.2% | 201 | 0.2% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 222 | 0.2% | 156 | 0.2% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 281 | 0.2% | 247 | 0.3% |
| Hypoglycemia (Day 0) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Atenolol | 50 | 0.0% | 45 | 0.1% |
| Hypoglycemia (3-6 Months) and Atenolol | 46 | 0.0% | 34 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol | 65 | 0.1% | 58 | 0.1% |
| Hypoglycemia (Day 0) and Nadolol | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Nadolol | 12 | 0.0% | **** | **** |
| Hypoglycemia (3-6 Months) and Nadolol | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Nadolol | 18 | 0.0% | 17 | 0.0% |
| Selective Beta Blockers | 27,891 | 21.5% | 18,208 | 22.3% |
| Non-Selective Beta Blockers | 101,700 | 78.5% | 63,350 | 77.7% |
| Any Metoprolol | 10,051 | 7.8% | 6,352 | 7.8% |
| Metoprolol (Extended Release) | 5,698 | 4.4% | 3,527 | 4.3% |
| Metoprolol (Regular) | 4,382 | 3.4% | 2,848 | 3.5% |
| Any Propranolol | 92,036 | 71.0% | 57,283 | 70.3% |
| Propranolol (Extended Release) | 10,513 | 8.1% | 6,968 | 8.5% |
| Propranolol (Regular) | 79,986 | 61.7% | 49,432 | 60.6% |
| Propranolol (Hemangeol) | 1,810 | 1.4% | 1,052 | 1.3% |
| Acebutolol | 48 | 0.0% | 34 | 0.0% |
| Atenolol | 17,091 | 13.2% | 11,344 | 13.9% |
| Betaxolol | 112 | 0.1% | 74 | 0.1% |
| Bisoprolol | 326 | 0.3% | 213 | 0.3% |
| Carvedilol | 1,585 | 1.2% | 939 | 1.2% |
| Labetalol | 3,792 | 2.9% | 2,222 | 2.7% |
| Nadolol | 3,646 | 2.8% | 2,494 | 3.1% |
| Nebivolol | 275 | 0.2% | 200 | 0.2% |
| Pindolol | 179 | 0.1% | 132 | 0.2% |
| Sotalol | 417 | 0.3% | 251 | 0.3% |



| | Beta | Blockers | • | kers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|-------------|---|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Timolol | 61 | 0.0% | 40 | 0.0% | |
| Health Characteristics by Beta Blockers | | | | | |
| Hypertension and Any Metoprolol | 1,486 | 1.1% | 922 | 1.1% | |
| Hypertension and Metoprolol (Extended Release) | 827 | 0.6% | 508 | 0.6% | |
| Hypertension and Metoprolol (Regular) | 668 | 0.5% | 422 | 0.5% | |
| Hypertension and Any Propranolol | 1,883 | 1.5% | 1,220 | 1.5% | |
| Hypertension and Propranolol (Extended Release) | 234 | 0.2% | 159 | 0.2% | |
| Hypertension and Propranolol (Regular) | 1,647 | 1.3% | 1,060 | 1.3% | |
| Hypertension and Acebutolol | **** | **** | **** | **** | |
| Hypertension and Atenolol | 1,703 | 1.3% | 1,128 | 1.4% | |
| Hypertension and Betaxolol | **** | **** | **** | **** | |
| Hypertension and Bisoprolol | 59 | 0.0% | 42 | 0.1% | |
| Hypertension and Carvedilol | 309 | 0.2% | 178 | 0.2% | |
| Hypertension and Labetalol | 1,019 | 0.8% | 611 | 0.7% | |
| Hypertension and Nadolol | 78 | 0.1% | 50 | 0.1% | |
| Hypertension and Nebivolol | 48 | 0.0% | 32 | 0.0% | |
| Hypertension and Pindolol | **** | **** | **** | **** | |
| Hypertension and Sotalol | 15 | 0.0% | **** | **** | |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Any Metoprolol | **** | **** | **** | **** | |
| Hemangioma and Metoprolol (Extended Release) | **** | **** | **** | **** | |
| Hemangioma and Metoprolol (Regular) | **** | **** | **** | **** | |
| Hemangioma and Any Propranolol | 11,065 | 8.5% | 6,619 | 8.1% | |
| Hemangioma and Propranolol (Extended Release) | 13 | 0.0% | **** | **** | |
| Hemangioma and Propranolol (Regular) | 9,391 | 7.2% | 5,637 | 6.9% | |
| Hemangioma and Propranolol (Hemangeol) | 1,668 | 1.3% | 977 | 1.2% | |
| Hemangioma and Acebutolol | **** | **** | **** | **** | |
| Hemangioma and Atenolol | 173 | 0.1% | 120 | 0.1% | |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Carvedilol | **** | **** | **** | **** | |
| Hemangioma and Labetalol | **** | **** | **** | **** | |
| Hemangioma and Nadolol | **** | **** | **** | **** | |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Sotalol | **** | **** | **** | **** | |
| Hemangioma and Timolol | **** | **** | 0 | 0.0% | |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | | |
|--|---------------|---|--|---|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ | |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended | 71 | 0.1% | 41 | 0.1% | |
| Release) | 32 | 0.0% | 16 | 0.0% | |
| Long QT Syndrome and Metoprolol (Regular) | 39 | 0.0% | 25 | 0.0% | |
| Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended | 448 | 0.3% | 264 | 0.3% | |
| Release) | 28 | 0.0% | 18 | 0.0% | |
| Long QT Syndrome and Propranolol (Regular) | 417 | 0.3% | 245 | 0.3% | |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Atenolol | 170 | 0.1% | 111 | 0.1% | |
| Long QT Syndrome and Betaxolol | **** | **** | 0 | 0.0% | |
| Long QT Syndrome and Bisoprolol | **** | **** | **** | **** | |
| Long QT Syndrome and Carvedilol | 32 | 0.0% | 18 | 0.0% | |
| Long QT Syndrome and Labetalol | **** | **** | **** | **** | |
| Long QT Syndrome and Nadolol | 573 | 0.4% | 369 | 0.5% | |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Sotalol | 27 | 0.0% | 11 | 0.0% | |
| Long QT Syndrome and Timolol | **** | **** | **** | **** | |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)



| | Beta | Blockers | • | ost-Index Enrollment uirement) |
|---|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 11,845 | N/A | 7,089 | N/A |
| Episodes | 12,006 | 100.0% | 7,167 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 0.4 | 0.4 | 0.4 | 0.4 |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 125 | 1.1% | 84 | 1.2% |
| Asian | 128 | 1.1% | 76 | 1.1% |
| Black or African American | 865 | 7.3% | 541 | 7.6% |
| Native Hawaiian or Other Pacific Islander | 26 | 0.2% | 11 | 0.2% |
| Unknown | 8,188 | 69.1% | 4,807 | 67.8% |
| White | 2,513 | 21.2% | 1,570 | 22.1% |
| Hispanic origin | | | | |
| Yes | 1,418 | 12.0% | 932 | 13.1% |
| No | 3,479 | 29.4% | 2,171 | 30.6% |
| Unknown | 6,948 | 58.7% | 3,986 | 56.2% |
| Year | | | | |
| 2008 | 220 | 1.8% | 155 | 2.2% |
| 2009 | 246 | 2.0% | 168 | 2.3% |
| 2010 | 282 | 2.3% | 194 | 2.7% |
| 2011 | 280 | 2.3% | 186 | 2.6% |
| 2012 | 315 | 2.6% | 225 | 3.1% |
| 2013 | 353 | 2.9% | 244 | 3.4% |
| 2014 | 799 | 6.7% | 624 | 8.7% |
| 2015 | 1,432 | 11.9% | 1,047 | 14.6% |
| 2016 | 2,079 | 17.3% | 1,627 | 22.7% |
| 2017 | 2,357 | 19.6% | 1,693 | 23.6% |
| 2018 | 2,119 | 17.6% | 320 | 4.5% |
| 2019 | 490 | 4.1% | 339 | 4.7% |
| 2020 | 508 | 4.2% | 312 | 4.4% |
| 2021 | 499 | 4.2% | 33 | 0.5% |
| 2022 | 27 | 0.2% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 1.1 | 1.5 | 1.1 | 1.5 |
| Hypertension | 765 | 6.4% | 453 | 6.3% |
| Hemangioma | 4,248 | 35.4% | 2,510 | 35.0% |
| Heart Failure | 893 | 7.4% | 538 | 7.5% |
| Congenital Heart Disease | 5,497 | 45.8% | 3,287 | 45.9% |



| | Beta | Blockers | • | ost-Index Enrollment uirement) |
|---|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Atrial Fibrillation | 42 | 0.3% | 29 | 0.4% |
| Long QT Syndrome | 313 | 2.6% | 177 | 2.5% |
| Other Cardiac Arrhythmias | 4,820 | 40.1% | 2,878 | 40.2% |
| Cardiac Arrhythmias (Composite) | 4,952 | 41.2% | 2,955 | 41.2% |
| Pulmonary Hypertension | 463 | 3.9% | 238 | 3.3% |
| Cardiomyopathy | 598 | 5.0% | 349 | 4.9% |
| Coronary Artery Disease | 135 | 1.1% | 85 | 1.2% |
| Portal Hypertension | 23 | 0.2% | 13 | 0.2% |
| Anxiety Disorder | 20 | 0.2% | 13 | 0.2% |
| Tremor | 26 | 0.2% | 16 | 0.2% |
| Migraine | 13 | 0.1% | **** | **** |
| Thyrotoxicosis | 38 | 0.3% | 25 | 0.3% |
| Burns | 53 | 0.4% | 33 | 0.5% |
| Glaucoma | 17 | 0.1% | 12 | 0.2% |
| Autism | **** | **** | **** | **** |
| Marfan's Syndrome | 25 | 0.2% | 16 | 0.2% |
| Pheochromocytoma/Paraganglioma | 17 | 0.1% | **** | **** |
| Diabetes | 20 | 0.2% | 12 | 0.2% |
| Any of the above health characteristics (excluding combined comorbidity score) | 10,827 | 90.2% | 6,454 | 90.1% |
| None of the above health characteristics (excluding combined comorbidity score) | 1,179 | 9.8% | 713 | 9.9% |
| Hypoglycemia (Day 0) | 32 | 0.3% | 16 | 0.2% |
| Hypoglycemia (0-3 Months) | 105 | 0.9% | 56 | 0.8% |
| Hypoglycemia (3-6 Months) | 42 | 0.3% | 27 | 0.4% |
| Hypoglycemia (5 5 Months) Hypoglycemia (6-12 Months) | 64 | 0.5% | 50 | 0.7% |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (5 0 Months) and Diabetes Hypoglycemia (6-12 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and No Diabetes | 32 | 0.3% | 16 | 0.2% |
| Hypoglycemia (0-3 Months) and No Diabetes | 104 | 0.9% | 55 | 0.8% |
| Hypoglycemia (3-6 Months) and No Diabetes | 41 | 0.3% | 26 | 0.8% |
| Hypoglycemia (6-12 Months) and No Diabetes | 63 | 0.5% | 20 49 | 0.4% |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 49 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| | 0 | 0.0% | | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | | | 0 | |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | • | ost-Index Enrollment uirement) |
|--|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and Any Propranolol | 30 | 0.2% | 15 | 0.2% |
| Hypoglycemia (0-3 Months) and Any Propranolol | 93 | 0.8% | 49 | 0.7% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 33 | 0.3% | 22 | 0.3% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 51 | 0.4% | 39 | 0.5% |
| Hypoglycemia (Day 0) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers | 706 | 5.9% | 466 | 6.5% |
| Non-Selective Beta Blockers | 11,301 | 94.1% | 6,701 | 93.5% |
| Any Metoprolol | 133 | 1.1% | 79 | 1.1% |
| Metoprolol (Extended Release) | 36 | 0.3% | 18 | 0.3% |
| Metoprolol (Regular) | 97 | 0.8% | 61 | 0.9% |
| Any Propranolol | 10,444 | 87.0% | 6,206 | 86.6% |
| Propranolol (Extended Release) | **** | **** | **** | **** |
| Propranolol (Regular) | 9,797 | 81.6% | 5,851 | 81.6% |
| Propranolol (Hemangeol) | 641 | 5.3% | 351 | 4.9% |
| Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Atenolol | 566 | 4.7% | 382 | 5.3% |
| Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Bisoprolol | **** | **** | **** | **** |
| Carvedilol | 407 | 3.4% | 235 | 3.3% |
| Labetalol | 100 | 0.8% | 61 | 0.9% |
| Nadolol | 21 | 0.2% | 14 | 0.2% |
| Nebivolol | **** | **** | **** | **** |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | 346 | 2.9% | 197 | 2.7% |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 25 | 0.2% | 12 | 0.2% |
| Hypertension and Metoprolol (Extended Release) | **** | **** | **** | **** |
| Hypertension and Metoprolol (Regular) | **** | **** | * * * * | **** |
| Hypertension and Any Propranolol | 523 | 4.4% | 309 | 4.3% |



| | | Blockers | Beta Blockers (P | ost-Index Enrollment uirement) |
|---|-------------|---------------------------------|------------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | 517 | 4.3% | 306 | 4.3% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 69 | 0.6% | 44 | 0.6% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | **** | **** | **** | **** |
| Hypertension and Carvedilol | 58 | 0.5% | 34 | 0.5% |
| Hypertension and Labetalol | 78 | 0.6% | 46 | 0.6% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 11 | 0.1% | **** | **** |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | **** | **** | **** | **** |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | **** | **** | **** | **** |
| Hemangioma and Any Propranolol | 4,184 | 34.8% | 2,465 | 34.4% |
| Hemangioma and Propranolol (Extended Release) | **** | **** | **** | **** |
| Hemangioma and Propranolol (Regular) | 3,596 | 30.0% | 2,139 | 29.8% |
| Hemangioma and Propranolol (Hemangeol) | 587 | 4.9% | 325 | 4.5% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 58 | 0.5% | 40 | 0.6% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | **** | **** | **** | **** |
| Hemangioma and Labetalol | **** | **** | **** | **** |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol | 0 268 | 0.0% 2.2% | 0 152 | 0.0% 2.1% |
| Long QT Syndrome and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Propranolol (Regular) | 268 | 2.2% | 152 | 2.1% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | • | ost-Index Enrollment Jirement) |
|--|-------------|---|-------------|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Long QT Syndrome and Atenolol | **** | **** | **** | **** |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | **** | **** | **** | **** |
| Long QT Syndrome and Labetalol | **** | **** | **** | **** |
| Long QT Syndrome and Nadolol | **** | **** | **** | **** |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol | 23 | 0.2% | 13 | 0.2% |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)



| Table 1i. Aggregated Characteristics of Beta Blockers and Beta Blockers (Post-Index Enrollment Requirement) in the Sentinel |
|---|
| Distributed Database (SDD) from January 1, 2008 to May 31, 2022 (Age group: 0-1 years, Sex: Female) |

| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 16,403 | N/A | 9,783 | N/A |
| Episodes | 16,615 | 100.0% | 9,903 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 0.4 | 0.4 | 0.4 | 0.4 |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 153 | 0.9% | 104 | 1.1% |
| Asian | 177 | 1.1% | 105 | 1.1% |
| Black or African American | 870 | 5.3% | 573 | 5.9% |
| Native Hawaiian or Other Pacific Islander | 33 | 0.2% | 20 | 0.2% |
| Unknown | 11,603 | 70.7% | 6,862 | 70.1% |
| White | 3,567 | 21.7% | 2,119 | 21.7% |
| Hispanic origin | | | | |
| Yes | 2,011 | 12.3% | 1,274 | 13.0% |
| No | 4,521 | 27.6% | 2,740 | 28.0% |
| Unknown | 9,871 | 60.2% | 5,769 | 59.0% |
| Year | | | | |
| 2008 | 184 | 1.1% | 124 | 1.3% |
| 2009 | 254 | 1.5% | 180 | 1.8% |
| 2010 | 355 | 2.1% | 250 | 2.5% |
| 2011 | 390 | 2.3% | 292 | 2.9% |
| 2012 | 389 | 2.3% | 270 | 2.7% |
| 2013 | 477 | 2.9% | 334 | 3.4% |
| 2014 | 1,066 | 6.4% | 797 | 8.0% |
| 2015 | 1,920 | 11.6% | 1,443 | 14.6% |
| 2016 | 2,845 | 17.1% | 2,223 | 22.4% |
| 2017 | 3,171 | 19.1% | 2,260 | 22.8% |
| 2018 | 2,893 | 17.4% | 498 | 5.0% |
| 2019 | 832 | 5.0% | 572 | 5.8% |
| 2020 | 912 | 5.5% | 588 | 5.9% |
| 2021 | 850 | 5.1% | 72 | 0.7% |
| 2022 | 77 | 0.5% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.6 | 1.2 | 0.6 | 1.2 |
| Hypertension | 508 | 3.1% | 324 | 3.3% |
| Hemangioma | 10,785 | 64.9% | 6,432 | 65.0% |
| Heart Failure | 722 | 4.3% | 457 | 4.6% |
| Congenital Heart Disease | 4,882 | 29.4% | 2,953 | 29.8% |



| | | | Beta Blockers (Post-Index Enrollment Requirement) | | |
|--|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Atrial Fibrillation | 41 | 0.2% | 22 | 0.2% | |
| Long QT Syndrome | 312 | 1.9% | 175 | 1.8% | |
| Other Cardiac Arrhythmias | 3,495 | 21.0% | 2,136 | 21.6% | |
| Cardiac Arrhythmias (Composite) | 3,651 | 22.0% | 2,216 | 22.4% | |
| Pulmonary Hypertension | 338 | 2.0% | 189 | 1.9% | |
| Cardiomyopathy | 457 | 2.8% | 277 | 2.8% | |
| Coronary Artery Disease | 77 | 0.5% | 52 | 0.5% | |
| Portal Hypertension | 25 | 0.2% | 15 | 0.2% | |
| Anxiety Disorder | 20 | 0.1% | 14 | 0.1% | |
| Tremor | 18 | 0.1% | **** | **** | |
| Migraine | 12 | 0.1% | **** | **** | |
| Thyrotoxicosis | 45 | 0.3% | 28 | 0.3% | |
| Burns | 38 | 0.2% | 28 | 0.3% | |
| Glaucoma | 23 | 0.1% | 14 | 0.1% | |
| Autism | * * * * * | **** | * * * * * | **** | |
| Marfan's Syndrome | 20 | 0.1% | 13 | 0.1% | |
| Pheochromocytoma/Paraganglioma | 31 | 0.2% | 22 | 0.2% | |
| Diabetes | 15 | 0.1% | 12 | 0.1% | |
| Any of the above health characteristics (excluding combined comorbidity score) None of the above health characteristics (excluding | 15,257 | 91.8% | 9,160 | 92.5% | |
| combined comorbidity score) | 1,358 | 8.2% | 743 | 7.5% | |
| Hypoglycemia (Day 0) | 22 | 0.1% | **** | **** | |
| Hypoglycemia (0-3 Months) | 102 | 0.6% | 68 | 0.7% | |
| Hypoglycemia (3-6 Months) | 66 | 0.4% | 46 | 0.5% | |
| Hypoglycemia (6-12 Months) | 87 | 0.5% | 76 | 0.8% | |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Diabetes | **** | **** | **** | **** | |
| Hypoglycemia (3-6 Months) and Diabetes | **** | **** | **** | **** | |
| Hypoglycemia (6-12 Months) and Diabetes | **** | **** | **** | **** | |
| Hypoglycemia (Day 0) and No Diabetes | 22 | 0.1% | **** | **** | |
| Hypoglycemia (0-3 Months) and No Diabetes | 100 | 0.6% | 66 | 0.7% | |
| Hypoglycemia (3-6 Months) and No Diabetes | 64 | 0.4% | 44 | 0.4% | |
| Hypoglycemia (6-12 Months) and No Diabetes | 84 | 0.5% | 73 | 0.7% | |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Metoprolol | **** | **** | **** | **** | |
| Hypoglycemia (3-6 Months) and Any Metoprolol | **** | **** | **** | **** | |
| Hypoglycemia (6-12 Months) and Any Metoprolol | **** | **** | **** | **** | |



| | Beta | Blockers | | ost-Index Enrollment iirement) |
|--|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and Any Propranolol | 21 | 0.1% | **** | **** |
| Hypoglycemia (0-3 Months) and Any Propranolol | 87 | 0.5% | 57 | 0.6% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 48 | 0.3% | 32 | 0.3% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 70 | 0.4% | 61 | 0.6% |
| Hypoglycemia (Day 0) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers | 601 | 3.6% | 398 | 4.0% |
| Non-Selective Beta Blockers | 16,014 | 96.4% | 9,505 | 96.0% |
| Any Metoprolol | 86 | 0.5% | 52 | 0.5% |
| Metoprolol (Extended Release) | 18 | 0.1% | 11 | 0.1% |
| Metoprolol (Regular) | 68 | 0.4% | 41 | 0.4% |
| Any Propranolol | 15,330 | 92.3% | 9,086 | 91.7% |
| Propranolol (Extended Release) | **** | **** | **** | **** |
| Propranolol (Regular) | 13,574 | 81.7% | 8,067 | 81.5% |
| Propranolol (Hemangeol) | 1,760 | 10.6% | 1,021 | 10.3% |
| Acebutolol | **** | **** | **** | **** |
| Atenolol | 509 | 3.1% | 344 | 3.5% |
| Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Carvedilol | 344 | 2.1% | 214 | 2.2% |
| Labetalol | 77 | 0.5% | 56 | 0.6% |
| Nadolol | 36 | 0.2% | 21 | 0.2% |
| Nebivolol | **** | **** | **** | * * * * * |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | 237 | 1.4% | 135 | 1.4% |
| Timolol | **** | **** | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 16 | 0.1% | **** | **** |
| Hypertension and Metoprolol (Extended Release) | **** | **** | 0 | 0.0% |
| Hypertension and Metoprolol (Regular) | **** | **** | **** | **** |
| Hypertension and Any Propranolol | 350 | 2.1% | 221 | 2.2% |



| | Beta | Blockers | - | ost-Index Enrollment iirement) |
|---|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypertension and Propranolol (Extended Release) | **** | **** | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | 346 | 2.1% | 220 | 2.2% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 48 | 0.3% | 33 | 0.3% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Carvedilol | 34 | 0.2% | 20 | 0.2% |
| Hypertension and Labetalol | 52 | 0.3% | 39 | 0.4% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | * * * * * | **** | **** | * * * * |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | **** | **** | **** | **** |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | **** | **** | **** | **** |
| Hemangioma and Any Propranolol | 10,627 | 64.0% | 6,324 | 63.9% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | 9,004 | 54.2% | 5,374 | 54.3% |
| Hemangioma and Propranolol (Hemangeol) | 1,628 | 9.8% | 954 | 9.6% |
| Hemangioma and Acebutolol | **** | **** | **** | **** |
| Hemangioma and Atenolol | 146 | 0.9% | 102 | 1.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | * * * * * | **** | **** | * * * * * |
| Hemangioma and Labetalol | * * * * * | **** | **** | * * * * * |
| Hemangioma and Nadolol | * * * * * | **** | **** | * * * * * |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Sotalol | **** | **** | **** | **** |
| Hemangioma and Timolol | **** | **** | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol | **** | **** | **** | **** |
| Long QT Syndrome and Metoprolol (Extended Release) | 0 **** | 0.0% **** | 0 **** | 0.0% **** |
| Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol | 256 | 1.5% | 147 | 1.5% |
| Long QT Syndrome and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Propranolol (Regular) | 252 | 1.5% | 145 | 1.5% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | • | ost-Index Enrollment irement) |
|--|-------------|---|-------------|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Long QT Syndrome and Atenolol | 12 | 0.1% | **** | **** |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | 12 | 0.1% | **** | **** |
| Long QT Syndrome and Labetalol | **** | **** | **** | **** |
| Long QT Syndrome and Nadolol | **** | **** | * * * * * | **** |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol | 19 | 0.1% | * * * * * | **** |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|---|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Unique patients | 3,194 | N/A | 2,070 | N/A | |
| Episodes | 3,343 | 100.0% | 2,141 | 100.0% | |
| Demographic Characteristics | | | | | |
| Age (years) | 4.2 | 1.2 | 4.2 | 1.2 | |
| Race ⁴ | | | | | |
| American Indian or Alaska Native | **** | **** | 30 | 1.4% | |
| Asian | 44 | 1.4% | **** | **** | |
| Black or African American | 284 | 8.9% | 190 | 9.2% | |
| Native Hawaiian or Other Pacific Islander | * * * * * | **** | **** | **** | |
| Unknown | 1,988 | 62.2% | 1,293 | 62.5% | |
| White | 828 | 25.9% | 524 | 25.3% | |
| Hispanic origin | | | | | |
| Yes | 385 | 12.1% | 239 | 11.5% | |
| No | 1,160 | 36.3% | 750 | 36.2% | |
| Unknown | 1,649 | 51.6% | 1,081 | 52.2% | |
| Year | | | | | |
| 2008 | 90 | 2.7% | 80 | 3.7% | |
| 2009 | 127 | 3.8% | 94 | 4.4% | |
| 2010 | 123 | 3.7% | 87 | 4.1% | |
| 2011 | 109 | 3.3% | 85 | 4.0% | |
| 2012 | 98 | 2.9% | 73 | 3.4% | |
| 2013 | 105 | 3.1% | 78 | 3.6% | |
| 2014 | 176 | 5.3% | 139 | 6.5% | |
| 2015 | 351 | 10.5% | 280 | 13.1% | |
| 2016 | 566 | 16.9% | 479 | 22.4% | |
| 2017 | 694 | 20.8% | 542 | 25.3% | |
| 2018 | 640 | 19.1% | 79 | 3.7% | |
| 2019 | 90 | 2.7% | 65 | 3.0% | |
| 2020 | 95 | 2.8% | **** | **** | |
| 2021 | **** | **** | **** | **** | |
| 2022 | **** | **** | 0 | 0.0% | |
| Health Characteristics | | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 1.1 | 1.7 | 1.0 | 1.6 | |
| Hypertension | 413 | 12.4% | 256 | 12.0% | |
| Hemangioma | 89 | 2.7% | 55 | 2.6% | |
| Heart Failure | 150 | 4.5% | 88 | 4.1% | |
| Congenital Heart Disease | 731 | 21.9% | 446 | 20.8% | |



| | Beta | Blockers | - | st-Index Enrollment rement) |
|---|-------------|---------------------------------|-------------|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Atrial Fibrillation | 22 | 0.7% | 13 | 0.6% |
| Long QT Syndrome | 138 | 4.1% | 88 | 4.1% |
| Other Cardiac Arrhythmias | 1,019 | 30.5% | 647 | 30.2% |
| Cardiac Arrhythmias (Composite) | 1,117 | 33.4% | 705 | 32.9% |
| Pulmonary Hypertension | 56 | 1.7% | 36 | 1.7% |
| Cardiomyopathy | 175 | 5.2% | 97 | 4.5% |
| Coronary Artery Disease | 28 | 0.8% | 20 | 0.9% |
| Portal Hypertension | 28 | 0.8% | 16 | 0.7% |
| Anxiety Disorder | 118 | 3.5% | 75 | 3.5% |
| Tremor | 47 | 1.4% | 32 | 1.5% |
| Migraine | 232 | 6.9% | 157 | 7.3% |
| Thyrotoxicosis | 47 | 1.4% | 32 | 1.5% |
| Burns | 41 | 1.2% | 26 | 1.2% |
| Glaucoma | **** | **** | **** | **** |
| Autism | 178 | 5.3% | 118 | 5.5% |
| Marfan's Syndrome | 82 | 2.5% | 49 | 2.3% |
| Pheochromocytoma/Paraganglioma | 14 | 0.4% | * * * * * | **** |
| Diabetes | 17 | 0.5% | 11 | 0.5% |
| Any of the above health characteristics (excluding combined comorbidity score) None of the above health characteristics (excluding | 2,383 | 71.3% | 1,518 | 70.9% |
| combined comorbidity score) | 960 | 28.7% | 623 | 29.1% |
| Hypoglycemia (Day 0) | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) | 18 | 0.5% | 14 | 0.7% |
| Hypoglycemia (3-6 Months) | 18 | 0.5% | 16 | 0.7% |
| Hypoglycemia (6-12 Months) | 14 | 0.4% | 12 | 0.6% |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and No Diabetes | 16 | 0.5% | 12 | 0.6% |
| Hypoglycemia (3-6 Months) and No Diabetes | 16 | 0.5% | 14 | 0.7% |
| Hypoglycemia (6-12 Months) and No Diabetes | 13 | 0.4% | 11 | 0.5% |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | **** | **** | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | - | st-Index Enrollment rement) |
|--|-------------|---------------------------------|-------------|--------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Propranolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Any Propranolol | 12 | 0.4% | 11 | 0.5% |
| Hypoglycemia (6-12 Months) and Any Propranolol | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Nadolol | **** | **** | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Nadolol | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers | 1,160 | 34.7% | 780 | 36.4% |
| Non-Selective Beta Blockers | 2,183 | 65.3% | 1,361 | 63.6% |
| Any Metoprolol | 241 | 7.2% | 160 | 7.5% |
| Metoprolol (Extended Release) | 76 | 2.3% | 54 | 2.5% |
| Metoprolol (Regular) | 166 | 5.0% | 107 | 5.0% |
| Any Propranolol | 1,570 | 47.0% | 993 | 46.4% |
| Propranolol (Extended Release) | **** | **** | **** | **** |
| Propranolol (Regular) | 1,554 | 46.5% | 983 | 45.9% |
| Propranolol (Hemangeol) | **** | **** | **** | **** |
| Acebutolol | **** | **** | * * * * * | * * * * * |
| Atenolol | 900 | 26.9% | 607 | 28.4% |
| Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Bisoprolol | 11 | 0.3% | **** | **** |
| Carvedilol | 244 | 7.3% | 137 | 6.4% |
| abetalol | 160 | 4.8% | 97 | 4.5% |
| Nadolol | 144 | 4.3% | 93 | 4.3% |
| Nebivolol | **** | **** | **** | **** |
| Pindolol | **** | **** | **** | **** |
| Sotalol | 65 | 1.9% | 40 | 1.9% |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 46 | 1.4% | 28 | 1.3% |
| Hypertension and Metoprolol (Extended Release) | **** | **** | **** | **** |
| Hypertension and Metoprolol (Regular) | **** | **** | **** | **** |
| Hypertension and Any Propranolol | 109 | 3.3% | 64 | 3.0% |



| | Beta | Blockers | • | st-Index Enrollment rement) |
|---|-------------|---------------------------------|-------------|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | 109 | 3.3% | 64 | 3.0% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 98 | 2.9% | 68 | 3.2% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | * * * * * | **** | **** | **** |
| Hypertension and Carvedilol | 37 | 1.1% | 22 | 1.0% |
| Hypertension and Labetalol | 116 | 3.5% | 70 | 3.3% |
| Hypertension and Nadolol | **** | **** | **** | **** |
| Hypertension and Nebivolol | **** | **** | **** | **** |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | **** | **** | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | **** | **** | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | **** | **** | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | **** | **** | 0 | 0.0% |
| Hemangioma and Any Propranolol | 85 | 2.5% | 54 | 2.5% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | **** | **** | **** | **** |
| Hemangioma and Propranolol (Hemangeol) | **** | **** | **** | **** |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | **** | **** | **** | **** |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol | **** | **** | 0 | 0.0% |
| Long QT Syndrome and Metoprolol (Extended | 0 **** | 0.0% **** | 0 | 0.0% |
| Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol | ***** 50 | ***** 1.5% | 0 29 | 0.0% 1.4% |
| Long QT Syndrome and Propranolol (Extended | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Propranolol (Regular) | 50 | 1.5% | 29 | 1.4% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |



| Table 1j. Aggregated Characteristics of Beta Blockers and Beta Blockers (Post-Index Enrollment Requirement) in the Sentinel |
|---|
| Distributed Database (SDD) from January 1, 2008 to May 31, 2022 (Age group: 2-5 years, Sex: Male) |

| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|--|-------------|---|--|---|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ | |
| Long QT Syndrome and Atenolol | 24 | 0.7% | 19 | 0.9% | |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Bisoprolol | **** | **** | **** | **** | |
| Long QT Syndrome and Carvedilol | **** | **** | **** | **** | |
| Long QT Syndrome and Labetalol | **** | **** | **** | **** | |
| Long QT Syndrome and Nadolol | 51 | 1.5% | 30 | 1.4% | |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Sotalol | **** | **** | **** | **** | |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% | |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|---------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 2,896 | N/A | 1,864 | N/A |
| Episodes | 3,023 | 100.0% | 1,921 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 4.1 | 1.2 | 4.1 | 1.2 |
| Race⁴ | | | | |
| American Indian or Alaska Native | **** | **** | **** | **** |
| Asian | 50 | 1.7% | 33 | 1.8% |
| Black or African American | 238 | 8.2% | 141 | 7.6% |
| Native Hawaiian or Other Pacific Islander | **** | **** | **** | **** |
| Unknown | 1,865 | 64.4% | 1,213 | 65.1% |
| White | 701 | 24.2% | 454 | 24.4% |
| Hispanic origin | | | | |
| Yes | 406 | 14.0% | 262 | 14.1% |
| No | 989 | 34.2% | 613 | 32.9% |
| Unknown | 1,501 | 51.8% | 989 | 53.1% |
| Year | | | | |
| 2008 | 117 | 3.9% | 82 | 4.3% |
| 2009 | 104 | 3.4% | 78 | 4.1% |
| 2010 | 85 | 2.8% | 67 | 3.5% |
| 2011 | 97 | 3.2% | 72 | 3.7% |
| 2012 | 79 | 2.6% | 58 | 3.0% |
| 2013 | 95 | 3.1% | 73 | 3.8% |
| 2014 | 176 | 5.8% | 142 | 7.4% |
| 2015 | 326 | 10.8% | 253 | 13.2% |
| 2016 | 528 | 17.5% | 439 | 22.9% |
| 2017 | 605 | 20.0% | 454 | 23.6% |
| 2018 | 547 | 18.1% | 68 | 3.5% |
| 2019 | 105 | 3.5% | 75 | 3.9% |
| 2020 | 82 | 2.7% | **** | **** |
| 2021 | **** | **** | **** | **** |
| 2022 | **** | **** | 0 | 0.0% |
| Health Characteristics | | | - | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 1.0 | 1.6 | 1.0 | 1.5 |
| Hypertension | 320 | 10.6% | 196 | 10.2% |
| Hemangioma | 324 | 10.7% | 208 | 10.8% |
| Heart Failure | 163 | 5.4% | 89 | 4.6% |
| Congenital Heart Disease | 572 | 18.9% | 356 | 18.5% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|---------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Atrial Fibrillation | 13 | 0.4% | **** | **** |
| Long QT Syndrome | 135 | 4.5% | 87 | 4.5% |
| Other Cardiac Arrhythmias | 878 | 29.0% | 555 | 28.9% |
| Cardiac Arrhythmias (Composite) | 975 | 32.3% | 613 | 31.9% |
| Pulmonary Hypertension | 42 | 1.4% | 28 | 1.5% |
| Cardiomyopathy | 138 | 4.6% | 86 | 4.5% |
| Coronary Artery Disease | 27 | 0.9% | 15 | 0.8% |
| Portal Hypertension | 25 | 0.8% | 15 | 0.8% |
| Anxiety Disorder | 103 | 3.4% | 57 | 3.0% |
| Tremor | 41 | 1.4% | 25 | 1.3% |
| Migraine | 191 | 6.3% | 139 | 7.2% |
| Thyrotoxicosis | 173 | 5.7% | 115 | 6.0% |
| Burns | 37 | 1.2% | 25 | 1.3% |
| Glaucoma | **** | **** | **** | **** |
| Autism | 49 | 1.6% | 36 | 1.9% |
| Marfan's Syndrome | 52 | 1.7% | 37 | 1.9% |
| Pheochromocytoma/Paraganglioma | **** | **** | **** | **** |
| Diabetes | 14 | 0.5% | **** | **** |
| Any of the above health characteristics <i>(excluding combined comorbidity score)</i> None of the above health characteristics <i>(excluding</i> | 2,250 | 74.4% | 1,433 | 74.6% |
| combined comorbidity score) | 773 | 25.6% | 488 | 25.4% |
| Hypoglycemia (Day 0) | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) | 30 | 1.0% | 18 | 0.9% |
| Hypoglycemia (3-6 Months) | 17 | 0.6% | 12 | 0.6% |
| Hypoglycemia (6-12 Months) | 14 | 0.5% | 12 | 0.6% |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and No Diabetes | 27 | 0.9% | 17 | 0.9% |
| Hypoglycemia (3-6 Months) and No Diabetes | 15 | 0.5% | 11 | 0.6% |
| Hypoglycemia (6-12 Months) and No Diabetes | 13 | 0.4% | 11 | 0.6% |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | * * * * * | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---------------------------------|-------------|--|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Hypoglycemia (Day 0) and Any Propranolol | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and Any Propranolol | 19 | 0.6% | 11 | 0.6% | |
| Hypoglycemia (3-6 Months) and Any Propranolol | **** | **** | **** | **** | |
| Hypoglycemia (6-12 Months) and Any Propranolol | **** | **** | **** | **** | |
| Hypoglycemia (Day 0) and Atenolol | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and Atenolol | **** | **** | **** | **** | |
| Hypoglycemia (3-6 Months) and Atenolol | **** | **** | **** | **** | |
| Hypoglycemia (6-12 Months) and Atenolol | **** | **** | **** | **** | |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Nadolol | **** | **** | **** | **** | |
| Hypoglycemia (3-6 Months) and Nadolol | **** | **** | **** | **** | |
| Hypoglycemia (6-12 Months) and Nadolol | **** | **** | **** | **** | |
| Selective Beta Blockers | 906 | 30.0% | 612 | 31.9% | |
| Non-Selective Beta Blockers | 2,120 | 70.1% | 1,310 | 68.2% | |
| Any Metoprolol | 137 | 4.5% | 92 | 4.8% | |
| Metoprolol (Extended Release) | 51 | 1.7% | 30 | 1.6% | |
| Metoprolol (Regular) | 86 | 2.8% | 62 | 3.2% | |
| Any Propranolol | 1,612 | 53.3% | 1,001 | 52.1% | |
| Propranolol (Extended Release) | **** | **** | **** | **** | |
| Propranolol (Regular) | 1,559 | 51.6% | 969 | 50.4% | |
| Propranolol (Hemangeol) | 45 | 1.5% | 26 | 1.4% | |
| Acebutolol | * * * * | **** | **** | **** | |
| Atenolol | 755 | 25.0% | 508 | 26.4% | |
| Betaxolol | **** | **** | 0 | 0.0% | |
| Bisoprolol | **** | **** | **** | **** | |
| Carvedilol | 220 | 7.3% | 128 | 6.7% | |
| Labetalol | 89 | 2.9% | 59 | 3.1% | |
| Nadolol | 152 | 5.0% | 92 | 4.8% | |
| Nebivolol | **** | **** | **** | **** | |
| Pindolol | **** | **** | **** | **** | |
| Sotalol | 46 | 1.5% | 29 | 1.5% | |
| Timolol | 0 | 0.0% | 0 | 0.0% | |
| Health Characteristics by Beta Blockers | | | | | |
| Hypertension and Any Metoprolol | 28 | 0.9% | 18 | 0.9% | |
| Hypertension and Metoprolol (Extended Release) | **** | **** | **** | **** | |
| Hypertension and Metoprolol (Regular) | **** | **** | **** | **** | |
| Hypertension and Any Propranolol | 108 | 3.6% | 63 | 3.3% | |



| | Beta | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|-------------|--|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Propranolol (Regular) | 108 | 3.6% | 63 | 3.3% | |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Atenolol | 89 | 2.9% | 60 | 3.1% | |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Carvedilol | 28 | 0.9% | 13 | 0.7% | |
| Hypertension and Labetalol | 64 | 2.1% | 40 | 2.1% | |
| Hypertension and Nadolol | **** | **** | **** | **** | |
| Hypertension and Nebivolol | **** | **** | **** | **** | |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Sotalol | **** | **** | **** | **** | |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Any Propranolol | 308 | 10.2% | 197 | 10.3% | |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Propranolol (Regular) | 269 | 8.9% | 174 | 9.1% | |
| Hemangioma and Propranolol (Hemangeol) | 40 | 1.3% | 23 | 1.2% | |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Atenolol | 12 | 0.4% | **** | **** | |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Carvedilol | **** | **** | 0 | 0.0% | |
| Hemangioma and Labetalol | **** | **** | **** | **** | |
| Hemangioma and Nadolol | **** | **** | **** | **** | |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Any Metoprolol | * * * * * | **** | **** | **** | |
| Long QT Syndrome and Metoprolol (Extended Release) | **** | **** | **** | **** | |
| Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol | ***** 52 | **** 1.7% | 0 34 | 0.0% 1.8% | |
| Long QT Syndrome and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Propranolol (Regular) | 52 | 1.7% | 34 | 1.8% | |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% | |



| Table 1k. Aggregated Characteristics of Beta Blockers and Beta Blockers (Post-Index Enrollment Requirement) in the Sentinel |
|---|
| Distributed Database (SDD) from January 1, 2008 to May 31, 2022 (Age group: 2-5 years, Sex: Female) |

| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---|--|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Long QT Syndrome and Atenolol | 22 | 0.7% | 15 | 0.8% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | **** | **** | **** | **** |
| Long QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nadolol | 56 | 1.9% | 36 | 1.9% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol | **** | **** | 0 | 0.0% |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)



| | Beta | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|-------------|--|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Unique patients | 20,012 | N/A | 13,331 | N/A | |
| Episodes | 21,234 | 100.0% | 14,072 | 100.0% | |
| Demographic Characteristics | | | | | |
| Age (years) | 10.3 | 1.9 | 10.3 | 1.9 | |
| Race ⁴ | | | | | |
| American Indian or Alaska Native | 195 | 1.0% | 133 | 1.0% | |
| Asian | 169 | 0.8% | 110 | 0.8% | |
| Black or African American | 1,469 | 7.3% | 951 | 7.1% | |
| Native Hawaiian or Other Pacific Islander | 34 | 0.2% | 20 | 0.2% | |
| Unknown | 12,321 | 61.6% | 8,309 | 62.3% | |
| White | 5,824 | 29.1% | 3,808 | 28.6% | |
| Hispanic origin | | | | | |
| Yes | 2,262 | 11.3% | 1,425 | 10.7% | |
| No | 7,222 | 36.1% | 4,674 | 35.1% | |
| Unknown | 10,528 | 52.6% | 7,232 | 54.2% | |
| Year | | | | | |
| 2008 | 764 | 3.6% | 602 | 4.3% | |
| 2009 | 884 | 4.2% | 689 | 4.9% | |
| 2010 | 812 | 3.8% | 609 | 4.3% | |
| 2011 | 808 | 3.8% | 619 | 4.4% | |
| 2012 | 772 | 3.6% | 618 | 4.4% | |
| 2013 | 786 | 3.7% | 606 | 4.3% | |
| 2014 | 1,232 | 5.8% | 1,006 | 7.1% | |
| 2015 | 2,102 | 9.9% | 1,626 | 11.6% | |
| 2016 | 3,231 | 15.2% | 2,786 | 19.8% | |
| 2017 | 4,189 | 19.7% | 3,290 | 23.4% | |
| 2018 | 3,666 | 17.3% | 593 | 4.2% | |
| 2019 | 725 | 3.4% | 578 | 4.1% | |
| 2020 | 625 | 2.9% | 399 | 2.8% | |
| 2021 | 596 | 2.8% | 51 | 0.4% | |
| 2022 | 42 | 0.2% | 0 | 0.0% | |
| Health Characteristics | | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.5 | 1.1 | 0.5 | 1.0 | |
| Hypertension | 1,338 | 6.3% | 853 | 6.1% | |
| Hemangioma | 41 | 0.2% | 28 | 0.2% | |
| Heart Failure | 255 | 1.2% | 166 | 1.2% | |
| Congenital Heart Disease | 1,561 | 7.4% | 1,054 | 7.5% | |



| Patient Characteristics ¹² Number/Mean Standard Deviation ³ Number/Mean Standard Atrial Fibrillation 54 0.3% 38 1 Carg Cyndrome 452 2.1% 282 1 Other Cardiac Arrhythmias 3,168 14.9% 2,230 1 Pulmonary Hypertension 55 0.3% 32 1 Cardiac Arrhythmias (Composite) 3,479 16.4% 2,230 1 Pulmonary Hypertension 55 0.3% 32 1 Arxiety Disorder 3,077 14.5% 2,058 2 Tremor 308 1.5% 198 1 Migraine 5,129 24.2% 3,563 2 Thyrotoxicosis 293 1.4% 190 1 Burns 60 0.3% 40 1 1 Diabetes 17 0.1% 136 1 1 Pheochromocytoma/Paraganglioma 17 0.1% 1 1 1 | Beta Blockers (Post-Index Enrollment Requirement) | | |
|---|--|--|--|
| Atrial Fibrillation 54 0.3% 38 Long QT Syndrome 452 2.1% 282 Other Cardiac Arrhythmias 3,168 14.9% 2,031 1 Cardiac Arrhythmias (Composite) 3,479 16.4% 2,230 1 Pulmonary Hypertension 55 0.3% 32 1 Cardiomyopathy 446 2.1% 277 1 Coronary Artery Disease 94 0.4% 58 1 Portal Hypertension 49 0.2% 37 1 Anxiety Disorder 3,077 14.5% 2,058 1 Tremor 308 1.5% 198 190 Burns 69 0.3% 43 190 Burns 69 0.3% 40 136 Pheochromocytoma/Paraganglioma 17 0.1% 136 Pheochromocytoma/Paraganglioma 17 0.1% 136 Phypoglycemia (Day 0) | ercent/ | | |
| Long QT Syndrome 452 2.1% 282 Other Cardiac Arrhythmias 3,168 14.9% 2,031 1 Cardiac Arrhythmias (Composite) 3,479 16.4% 2,230 1 Pulmonary Hypertension 55 0.3% 32 1 Cardiomyopathy 446 2.1% 277 1 Coronary Artery Disease 94 0.4% 58 1 Portal Hypertension 49 0.2% 37 1 Anxiety Disorder 3,077 14.5% 2,058 1 Tremor 308 1.5% 198 1 Burns 69 0.3% 43 1 Glaucoma 60 0.3% 40 1 Autism 2,125 10.0% 1,383 1 Pheochromocytoma/Paraganglioma 17 0.1% 1 1 Other Cardiac Arrhythmias (0-3 Months) 40 0.2% 2 1 Autism 2,125 10.0% 1,36 1 | rd Deviation [®] | | |
| Other Cardiac Arrhythmias 3,168 14.9% 2,031 1 Cardiac Arrhythmias (Composite) 3,479 16.4% 2,230 1 Pulmonary Hypertension 55 0.3% 32 1 Cardiomyopathy 446 2.1% 277 1 Coronary Artery Disease 94 0.4% 58 1 Portal Hypertension 49 0.2% 37 1 Anxiety Disorder 3,077 14.5% 2,058 2 Tremor 308 1.5% 198 1 1 Migraine 5,129 24.2% 3,563 2 2 Thyrotoxicosis 293 1.4% 190 1 <td>0.3%</td> | 0.3% | | |
| Cardiac Arrhythmia (Composite) 3,479 16.4% 2,230 1 Pulmonary Hypertension 55 0.3% 32 1 Cardiomyopathy 446 2.1% 277 1 Coronary Artery Disease 94 0.4% 58 1 Portal Hypertension 49 0.2% 37 1 Anxiety Disorder 3,077 14.5% 2,058 1 Tremor 308 1.5% 198 1 Migraine 5,129 24.2% 3,563 2 Thyrotoxicosis 293 1.4% 190 1 Burns 69 0.3% 40 1 Autism 2,125 10.0% 1,383 1 Diabetes 157 0.7% 95 1 Any of the above health characteristics (excluding combined comorbidity score) 6,871 32.4% 4,485 3 None of the above health characteristics (excluding combined comorbidity score) 6,871 32.4% 4,485 3 Hypoglycemia (Day 0) ***** ****** ************************************ | 2.0% | | |
| Pulmonary Hypertension 55 0.3% 32 Cardiomyopathy 446 2.1% 277 Coronary Artery Disease 94 0.4% 58 Portal Hypertension 49 0.2% 37 44 Anxiety Disorder 3,077 14.5% 2,058 44 Migraine 5,129 24.2% 3,563 27 Thyrotoxicosis 293 1.4% 190 43 Glaucoma 60 0.3% 43 40 Autism 2,125 10.0% 1,383 43 Diabetes 157 0.1% 446 448 Any of the above health characteristics (excluding combined comorbidity score) 14,363 67.6% 9,587 64 Mypoglycemia (0-3 Months) 40 0.2% 22 4485 34 Hypoglycemia (0-3 Months) 40 0.2% 22 4485 44 Hypoglycemia (0-3 Months) 40 0.2% 22 44 44 44 Hypogl | 14.4% | | |
| Cardiomyophy 446 2.1% 277 Coronary Artery Disease 94 0.4% 58 Portal Hypertension 49 0.2% 37 Anxiety Disorder 3,077 14.5% 2,058 42 Migraine 5,129 24.2% 3,563 22 Thyrotoxicosis 293 1.4% 190 16 Burns 69 0.3% 43 16 Glaucoma 60 0.3% 40 16 Autism 2,125 10.0% 1,383 16 Pheochromocytoma/Paraganglioma 17 0.1% 16 16 Diabetes 17 0.1% 16 16 16 Hypoglycemia (Cay O) 14,363 67.6% 9,587 66 16 | 15.8% | | |
| Coronary Artery Disease 94 0.4% 58 Portal Hypertension 49 0.2% 37 Anxiety Disorder 3,077 14.5% 2,058 17 Tremor 308 1.5% 198 198 Migraine 5,129 24.2% 3,563 23 Thyrotoxicosis 293 1.4% 190 16 Burns 69 0.3% 43 16 Glaucoma 60 0.3% 40 16 Autism 2,125 10.0% 1,383 16 Pheochromocytoma/Paraganglioma 17 0.1% 136 16 Diabetes 157 0.7% 95 16 16 16 16 Hypoglycemia (Day O) ***** ***** ***** 16 17 132.4% 4,485 23 16 Hypoglycemia (Day O) ***** ****** ****** ******* 16 16 16 16 16 16 16 | 0.2% | | |
| Portal Hypertension 49 0.2% 37 Anxiety Disorder 3,077 14.5% 2,058 1 Migraine 5,129 24.2% 3,563 2 Thyrotoxicosis 293 1.4% 190 1 Burns 69 0.3% 43 1 Glaucoma 60 0.3% 40 1 Autism 2,125 10.0% 1,383 1 Pheochromocytoma/Paraganglioma 17 0.1% 136 1 Diabetes 157 0.7% 95 1 <td>2.0%</td> | 2.0% | | |
| Anxiety Disorder 3,077 14.5% 2,058 4 Tremor 308 1.5% 198 1 Migraine 5,129 24.2% 3,563 2 Thyrotoxicosis 293 1.4% 190 1 Burns 69 0.3% 43 1 Glaucoma 60 0.3% 40 1 Autism 2,125 10.0% 1,383 1 Marfan's Syndrome 202 1.0% 136 1 Pheochromocytoma/Paraganglioma 17 0.1% 1 1 Diabetes 157 0.7% 95 1 1 Any of the above health characteristics (excluding combined comorbidity score) 14,363 67.6% 9,587 1 None of the above health characteristics (excluding combined comorbidity score) 6,871 32.4% 4,485 3 Hypoglycemia (Day 0) ***** ***** ***** ***** ***** ***** Hypoglycemia (0-3 Months) 40 0.2% | 0.4% | | |
| Tremor 308 1.5% 198 Migraine 5,129 24.2% 3,563 27 Thyrotoxicosis 293 1.4% 190 Burns 69 0.3% 43 90 Glaucoma 60 0.3% 40 90 Autism 2,125 10.0% 1,383 90 Marfan's Syndrome 202 1.0% 136 90 Pheochromocytoma/Paraganglioma 17 0.1% ****** 90 Diabetes 157 0.7% 95 95 90 | 0.3% | | |
| Migraine5,12924.2%3,56327Thyrotoxicosis2931.4%190Burns690.3%43Glaucoma600.3%40Autism2,12510.0%1,383Marfan's Syndrome2021.0%136Pheochromocytoma/Paraganglioma170.1%******Diabetes1570.7%95Any of the above health characteristics (excluding combined comorbidity score)14,36367.6%9,587None of the above health characteristics (excluding combined comorbidity score)6,87132.4%4,48532Hypoglycemia (Day 0)************************Hypoglycemia (G-12 Months)400.2%22*****Hypoglycemia (3-6 Months) and Diabetes************************Hypoglycemia (3-6 Months) and Diabetes************************Hypoglycemia (0-3 Months) and Diabetes************************Hypoglycemia (3-6 Months) and Diabetes************************Hypoglycemia (3-6 Months) and Diabetes************************Hypoglycemia (0-3 Months) and Diabetes************************Hypoglycemia (0-3 Months) and Diabetes******************Hypoglycemia (0-3 Months) and Diabetes******************Hypoglycemia (0-3 Months) and Diabetes****************** </td <td>14.6%</td> | 14.6% | | |
| Thyrotoxicosis 293 1.4% 190 Burns 69 0.3% 43 Glaucoma 60 0.3% 40 Autism 2,125 10.0% 1,383 Marfan's Syndrome 202 1.0% 136 Pheochromocytoma/Paraganglioma 17 0.1% ****** Diabetes 157 0.7% 95 Any of the above health characteristics (excluding combined comorbidity score) 14,363 67.6% 9,587 68 None of the above health characteristics (excluding combined comorbidity score) 6,871 32.4% 4,485 34 Hypoglycemia (Day 0) ****** ****** ****** ****** 44 Hypoglycemia (Day 0) ****** ****** ****** 44 Hypoglycemia (Ga- Months) 30 0.1% 21 44 Hypoglycemia (Ga- Months) and Diabetes ****** ****** ****** Hypoglycemia (Ga- Months) and Diabetes ****** ****** ****** ****** Hypoglycemia (Ga- Months) and Diabetes ****** ****** ****** ******* <td< td=""><td>1.4%</td></td<> | 1.4% | | |
| Burns 69 0.3% 43 Glaucoma 60 0.3% 40 Autism 2,125 10.0% 1,383 Marfan's Syndrome 202 1.0% 136 Pheochromocytoma/Paraganglioma 17 0.1% ****** Diabetes 157 0.7% 95 Any of the above health characteristics (excluding combined comorbidity score) 14,363 67.6% 9,587 68 None of the above health characteristics (excluding combined comorbidity score) 6,871 32.4% 4,485 36 Hypoglycemia (Day 0) ****** ****** ****** ****** ****** Hypoglycemia (0-3 Months) 40 0.2% 22 4 Hypoglycemia (6-12 Months) 30 0.1% 21 4 Hypoglycemia (0-3 Months) and Diabetes ****** ****** ****** Hypoglycemia (0-3 Months) and Diabetes ****** ****** ****** Hypoglycemia (0-3 Months) and Diabetes ****** ****** ******* Hypoglycemia (0-3 Months) | 25.3% | | |
| Glaucoma600.3%40Autism2,12510.0%1,3831Marfan's Syndrome2021.0%136Pheochromocytoma/Paraganglioma170.1%******Diabetes1570.7%95Any of the above health characteristics (excluding combined comorbidity score)14,36367.6%9,5876None of the above health characteristics (excluding combined comorbidity score)6,87132.4%4,48533Hypoglycemia (Day O)******************************Hypoglycemia (a-6 Months)400.2%224Hypoglycemia (a-6 Months)300.1%214Hypoglycemia (a-6 Months)430.2%364Hypoglycemia (a-6 Months) and Diabetes************************Hypoglycemia (a-6 Months) and No Diabetes33 <td< td=""><td>1.4%</td></td<> | 1.4% | | |
| Autism2,12510.0%1,383Marfan's Syndrome2021.0%136Pheochromocytoma/Paraganglioma170.1%*****Diabetes1570.7%95Any of the above health characteristics (excluding combined comorbidity score)14,36367.6%9,587None of the above health characteristics (excluding combined comorbidity score)6,87132.4%4,48533Hypoglycemia (Day 0)************************Hypoglycemia (3-6 Months)400.2%2244Hypoglycemia (3-6 Months) and Diabetes************************Hypoglycemia (3-6 Months) and Diabetes******************************Hypoglycemia (3-6 Months) and No Diabetes330.2%18#Hypoglycemia (3-6 Months) and No Diabetes240.1%16# | 0.3% | | |
| Marfan's Syndrome2021.0%136Pheochromocytoma/Paraganglioma170.1%************Diabetes1570.7%95******Any of the above health characteristics (excluding combined comorbidity score)14,36367.6%9,5876None of the above health characteristics (excluding combined comorbidity score)6,87132.4%4,48533None of the above health characteristics (excluding combined comorbidity score)6,87132.4%4,48533Hypoglycemia (Day 0)******************************Hypoglycemia (0-3 Months)400.2%2210Hypoglycemia (6-12 Months)430.2%3610Hypoglycemia (0-3 Months) and Diabetes************************Hypoglycemia (3-6 Months) and Diabetes************************Hypoglycemia (0-12 Months) and Diabetes************************Hypoglycemia (0-3 Months) and No Diabetes330.2%18#< | 0.3% | | |
| Pheochromocytoma/Paraganglioma170.1%**********Diabetes1570.7%954Any of the above health characteristics (excluding combined comorbidity score)14,36367.6%9,5876None of the above health characteristics (excluding combined comorbidity score)6,87132.4%4,4853Hypoglycemia (Day 0)******************************Hypoglycemia (0-3 Months)400.2%224Hypoglycemia (3-6 Months)300.1%214Hypoglycemia (0-3 Months)430.2%364Hypoglycemia (0-3 Months)430.2%04Hypoglycemia (3-6 Months)300.1%44Hypoglycemia (0-3 Months) and Diabetes******************Hypoglycemia (0-3 Months) and No Diabetes330.2%18Hypoglycemia (3-6 Months) and No Diabetes240.1%16 | 9.8% | | |
| Diabetes1570.7%95Any of the above health characteristics (excluding combined comorbidity score)14,36367.6%9,5876None of the above health characteristics (excluding combined comorbidity score)6,87132.4%4,48533Hypoglycemia (Day 0)************************Hypoglycemia (0-3 Months)400.2%224Hypoglycemia (3-6 Months)300.1%214Hypoglycemia (Day 0) and Diabetes************************Hypoglycemia (0-3 Months)430.2%364Hypoglycemia (0-3 Months) and Diabetes************************Hypoglycemia (6-12 Months) and Diabetes************************Hypoglycemia (0-3 Months) and Diabetes************************Hypoglycemia (0-3 Months) and Diabetes************************Hypoglycemia (0-3 Months) and No Diabetes330.2%184Hypoglycemia (3-6 Months) and No Diabetes240.1%164 | 1.0% | | |
| Any of the above health characteristics (excluding combined comorbidity score)14,36367.6%9,58768None of the above health characteristics (excluding combined comorbidity score)6,87132.4%4,48533Hypoglycemia (Day 0)**Hypoglycemia (0-3 Months)400.2%2240Hypoglycemia (3-6 Months)300.1%2140Hypoglycemia (6-12 Months)430.2%3640Hypoglycemia (0-3 Months) and Diabetes************************Hypoglycemia (0-3 Months) and Diabetes******************************Hypoglycemia (0-3 Months) and No Diabetes330.2%18#Hypoglycemia (3-6 Months) and No Diabetes240.1%16# | **** | | |
| combined comorbidity score)14,36367.6%9,58766None of the above health characteristics (excluding combined comorbidity score)6,87132.4%4,48533Hypoglycemia (Day 0)************************************Hypoglycemia (0-3 Months)400.2%224Hypoglycemia (3-6 Months)300.1%214Hypoglycemia (6-12 Months)430.2%364Hypoglycemia (0-3 Months) and Diabetes00.0%04Hypoglycemia (0-3 Months) and Diabetes************************Hypoglycemia (0-3 Months) and No Diabetes330.2%18#Hypoglycemia (0-3 Months) and No Diabetes240.1%16* | 0.7% | | |
| combined comorbidity score)6,87132.4%4,48532Hypoglycemia (Day 0)*************************Hypoglycemia (0-3 Months)400.2%2222Hypoglycemia (3-6 Months)300.1%2110Hypoglycemia (6-12 Months)430.2%3610Hypoglycemia (0-3 Months) and Diabetes00.0%010Hypoglycemia (0-3 Months) and Diabetes************************Hypoglycemia (3-6 Months) and Diabetes************************Hypoglycemia (6-12 Months) and Diabetes************************Hypoglycemia (0-3 Months) and Diabetes************************Hypoglycemia (0-3 Months) and No Diabetes330.2%18******Hypoglycemia (0-3 Months) and No Diabetes240.1%16****** | 58.1% | | |
| Hypoglycemia (Day 0)** </td <td>31.9%</td> | 31.9% | | |
| Hypoglycemia (0-3 Months)400.2%22Hypoglycemia (3-6 Months)300.1%21Hypoglycemia (6-12 Months)430.2%36Hypoglycemia (Day 0) and Diabetes00.0%0Hypoglycemia (0-3 Months) and Diabetes***************Hypoglycemia (3-6 Months) and Diabetes***************Hypoglycemia (3-6 Months) and Diabetes***************Hypoglycemia (6-12 Months) and Diabetes***************Hypoglycemia (0-3 Months) and No Diabetes330.2%18Hypoglycemia (3-6 Months) and No Diabetes240.1%16 | **** | | |
| Hypoglycemia (3-6 Months)300.1%21Hypoglycemia (6-12 Months)430.2%36Hypoglycemia (Day 0) and Diabetes00.0%0Hypoglycemia (0-3 Months) and Diabetes***************Hypoglycemia (3-6 Months) and Diabetes***************Hypoglycemia (6-12 Months) and Diabetes***************Hypoglycemia (Day 0) and No Diabetes***************Hypoglycemia (0-3 Months) and No Diabetes330.2%18Hypoglycemia (3-6 Months) and No Diabetes240.1%16 | 0.2% | | |
| Hypoglycemia (6-12 Months)430.2%36Hypoglycemia (Day 0) and Diabetes00.0%0Hypoglycemia (0-3 Months) and Diabetes***************Hypoglycemia (3-6 Months) and Diabetes***************Hypoglycemia (6-12 Months) and Diabetes***************Hypoglycemia (Day 0) and No Diabetes***************Hypoglycemia (0-3 Months) and No Diabetes330.2%18Hypoglycemia (3-6 Months) and No Diabetes240.1%16 | 0.1% | | |
| Hypoglycemia (Day 0) and Diabetes00.0%0Hypoglycemia (0-3 Months) and Diabetes***************Hypoglycemia (3-6 Months) and Diabetes***************Hypoglycemia (6-12 Months) and Diabetes***************Hypoglycemia (6-12 Months) and Diabetes***************Hypoglycemia (0-3 Months) and Diabetes***************Hypoglycemia (0-3 Months) and No Diabetes330.2%18Hypoglycemia (3-6 Months) and No Diabetes240.1%16 | 0.3% | | |
| Hypoglycemia (0-3 Months) and Diabetes*************************Hypoglycemia (3-6 Months) and Diabetes*************************Hypoglycemia (6-12 Months) and Diabetes********************Hypoglycemia (0-3 Months) and No Diabetes********************Hypoglycemia (0-3 Months) and No Diabetes330.2%18Hypoglycemia (3-6 Months) and No Diabetes240.1%16 | 0.0% | | |
| Hypoglycemia (3-6 Months) and Diabetes***************Hypoglycemia (6-12 Months) and Diabetes***************Hypoglycemia (Day 0) and No Diabetes***************Hypoglycemia (0-3 Months) and No Diabetes330.2%18Hypoglycemia (3-6 Months) and No Diabetes240.1%16 | **** | | |
| Hypoglycemia (6-12 Months) and Diabetes********************Hypoglycemia (Day 0) and No Diabetes****************Hypoglycemia (0-3 Months) and No Diabetes330.2%18Hypoglycemia (3-6 Months) and No Diabetes240.1%16 | **** | | |
| Hypoglycemia (Day 0) and No Diabetes***************Hypoglycemia (0-3 Months) and No Diabetes330.2%18Hypoglycemia (3-6 Months) and No Diabetes240.1%16 | **** | | |
| Hypoglycemia (0-3 Months) and No Diabetes330.2%18Hypoglycemia (3-6 Months) and No Diabetes240.1%16 | **** | | |
| Hypoglycemia (3-6 Months) and No Diabetes 24 0.1% 16 | 0.1% | | |
| | 0.1% | | |
| | 0.2% | | |
| | **** | | |
| | **** | | |
| | **** | | |
| Trypogrycenna (5-0 Months) and Any Metoprotor | **** | | |



| | Beta | Blockers | | ost-Index Enrollment irement) |
|--|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and Any Propranolol | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Any Propranolol | 22 | 0.1% | 12 | 0.1% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 15 | 0.1% | 12 | 0.1% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 27 | 0.1% | 23 | 0.2% |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Nadolol | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Nadolol | **** | **** | **** | **** |
| Selective Beta Blockers | 6,050 | 28.5% | 4,029 | 28.6% |
| Non-Selective Beta Blockers | 15,187 | 71.5% | 10,045 | 71.4% |
| Any Metoprolol | 1,557 | 7.3% | 1,002 | 7.1% |
| Metoprolol (Extended Release) | 800 | 3.8% | 500 | 3.6% |
| Metoprolol (Regular) | 760 | 3.6% | 504 | 3.6% |
| Any Propranolol | 13,122 | 61.8% | 8,737 | 62.1% |
| Propranolol (Extended Release) | 1,148 | 5.4% | 781 | 5.6% |
| Propranolol (Regular) | 12,000 | 56.5% | 7,972 | 56.7% |
| Propranolol (Hemangeol) | **** | **** | **** | **** |
| Acebutolol | 16 | 0.1% | 11 | 0.1% |
| Atenolol | 4,338 | 20.4% | 2,924 | 20.8% |
| Betaxolol | 17 | 0.1% | 12 | 0.1% |
| Bisoprolol | 53 | 0.2% | 31 | 0.2% |
| Carvedilol | 556 | 2.6% | 334 | 2.4% |
| Labetalol | 352 | 1.7% | 204 | 1.4% |
| Nadolol | 1,045 | 4.9% | 698 | 5.0% |
| Nebivolol | 72 | 0.3% | 52 | 0.4% |
| Pindolol | 20 | 0.1% | 11 | 0.1% |
| Sotalol | 89 | 0.4% | 59 | 0.4% |
| Timolol | * * * * | **** | **** | **** |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 280 | 1.3% | 182 | 1.3% |
| Hypertension and Metoprolol (Extended Release) | 140 | 0.7% | 82 | 0.6% |
| Hypertension and Metoprolol (Regular) | 141 | 0.7% | 101 | 0.7% |
| Hypertension and Any Propranolol | 229 | 1.1% | 156 | 1.1% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | | |
|---|---------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Hypertension and Propranolol (Extended Release) | **** | **** | **** | **** | |
| Hypertension and Propranolol (Regular) | 219 | 1.0% | 150 | 1.1% | |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Atenolol | 452 | 2.1% | 306 | 2.2% | |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Bisoprolol | **** | **** | **** | **** | |
| Hypertension and Carvedilol | 72 | 0.3% | 34 | 0.2% | |
| Hypertension and Labetalol | 277 | 1.3% | 161 | 1.1% | |
| Hypertension and Nadolol | 21 | 0.1% | **** | **** | |
| Hypertension and Nebivolol | **** | **** | **** | **** | |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Sotalol | **** | **** | **** | **** | |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Any Metoprolol | **** | **** | **** | **** | |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Metoprolol (Regular) | **** | **** | **** | **** | |
| Hemangioma and Any Propranolol | 39 | 0.2% | 27 | 0.2% | |
| Hemangioma and Propranolol (Extended Release) | **** | **** | **** | **** | |
| Hemangioma and Propranolol (Regular) | 36 | 0.2% | 26 | 0.2% | |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Any Metoprolol | 30 | 0.1% | 19 | 0.1% | |
| Long QT Syndrome and Metoprolol (Extended Release) | 13 | 0.1% | **** | **** | |
| Long QT Syndrome and Metoprolol (Regular) | 17 | 0.1% | **** | **** | |
| Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Release) | 44 **** | 0.2% **** | 29 **** | 0.2% **** | |
| Long QT Syndrome and Propranolol (Regular) | **** | **** | **** | **** | |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| | | | | | |



| | Beta | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---|-------------|--|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ | |
| Long QT Syndrome and Atenolol | 62 | 0.3% | 42 | 0.3% | |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Bisoprolol | **** | **** | 0 | 0.0% | |
| Long QT Syndrome and Carvedilol | **** | **** | **** | **** | |
| Long QT Syndrome and Labetalol | **** | **** | **** | **** | |
| Long QT Syndrome and Nadolol | 300 | 1.4% | 188 | 1.3% | |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Sotalol | **** | **** | **** | **** | |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% | |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|---------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 19,069 | N/A | 12,297 | N/A |
| Episodes | 20,146 | 100.0% | 12,940 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 10.5 | 1.9 | 10.5 | 1.9 |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 189 | 1.0% | 120 | 1.0% |
| Asian | 189 | 1.0% | 108 | 0.9% |
| Black or African American | 1,363 | 7.1% | 851 | 6.9% |
| Native Hawaiian or Other Pacific Islander | 22 | 0.1% | 15 | 0.1% |
| Unknown | 11,835 | 62.1% | 7,749 | 63.0% |
| White | 5,471 | 28.7% | 3,454 | 28.1% |
| Hispanic origin | | | | |
| Yes | 2,422 | 12.7% | 1,509 | 12.3% |
| No | 6,773 | 35.5% | 4,220 | 34.3% |
| Unknown | 9,874 | 51.8% | 6,568 | 53.4% |
| Year | | | | |
| 2008 | 599 | 3.0% | 459 | 3.5% |
| 2009 | 793 | 3.9% | 598 | 4.6% |
| 2010 | 741 | 3.7% | 554 | 4.3% |
| 2011 | 742 | 3.7% | 543 | 4.2% |
| 2012 | 669 | 3.3% | 526 | 4.1% |
| 2013 | 721 | 3.6% | 535 | 4.1% |
| 2014 | 1,211 | 6.0% | 964 | 7.4% |
| 2015 | 2,105 | 10.4% | 1,607 | 12.4% |
| 2016 | 3,046 | 15.1% | 2,598 | 20.1% |
| 2017 | 3,840 | 19.1% | 3,000 | 23.2% |
| 2018 | 3,651 | 18.1% | 546 | 4.2% |
| 2019 | 725 | 3.6% | 565 | 4.4% |
| 2020 | 599 | 3.0% | 402 | 3.1% |
| 2021 | 647 | 3.2% | 43 | 0.3% |
| 2022 | 57 | 0.3% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.5 | 1.1 | 0.5 | 1.1 |
| Hypertension | 1,160 | 5.8% | 761 | 5.9% |
| Hemangioma | 71 | 0.4% | 56 | 0.4% |
| Heart Failure | 234 | 1.2% | 143 | 1.1% |
| Congenital Heart Disease | 1,222 | 6.1% | 776 | 6.0% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|---------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Atrial Fibrillation | 39 | 0.2% | 23 | 0.2% |
| Long QT Syndrome | 348 | 1.7% | 218 | 1.7% |
| Other Cardiac Arrhythmias | 3,443 | 17.1% | 2,112 | 16.3% |
| Cardiac Arrhythmias (Composite) | 3,700 | 18.4% | 2,270 | 17.5% |
| Pulmonary Hypertension | 66 | 0.3% | 43 | 0.3% |
| Cardiomyopathy | 340 | 1.7% | 199 | 1.5% |
| Coronary Artery Disease | 62 | 0.3% | 40 | 0.3% |
| Portal Hypertension | 44 | 0.2% | 33 | 0.3% |
| Anxiety Disorder | 3,036 | 15.1% | 1,809 | 14.0% |
| Tremor | 238 | 1.2% | 142 | 1.1% |
| Migraine | 5,759 | 28.6% | 3,819 | 29.5% |
| Thyrotoxicosis | 1,060 | 5.3% | 665 | 5.1% |
| Burns | 41 | 0.2% | 22 | 0.2% |
| Glaucoma | 51 | 0.3% | 32 | 0.2% |
| Autism | 571 | 2.8% | 347 | 2.7% |
| Marfan's Syndrome | 167 | 0.8% | 92 | 0.7% |
| Pheochromocytoma/Paraganglioma | **** | **** | **** | **** |
| Diabetes | 171 | 0.8% | 106 | 0.8% |
| Any of the above health characteristics <i>(excluding combined comorbidity score)</i> None of the above health characteristics <i>(excluding</i> | 14,038 | 69.7% | 9,000 | 69.6% |
| combined comorbidity score) | 6,108 | 30.3% | 3,940 | 30.4% |
| Hypoglycemia (Day 0) | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) | 41 | 0.2% | 27 | 0.2% |
| Hypoglycemia (3-6 Months) | 37 | 0.2% | 26 | 0.2% |
| Hypoglycemia (6-12 Months) | 55 | 0.3% | 52 | 0.4% |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and No Diabetes | 34 | 0.2% | 22 | 0.2% |
| Hypoglycemia (3-6 Months) and No Diabetes | 31 | 0.2% | 24 | 0.2% |
| Hypoglycemia (6-12 Months) and No Diabetes | 45 | 0.2% | 43 | 0.3% |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Any Metoprolol | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Any Metoprolol | **** | **** | **** | **** |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|---------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and Any Propranolol | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Any Propranolol | 18 | 0.1% | 12 | 0.1% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 19 | 0.1% | 13 | 0.1% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 27 | 0.1% | 25 | 0.2% |
| Hypoglycemia (Day 0) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Atenolol | 12 | 0.1% | 11 | 0.1% |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol | **** | **** | **** | **** |
| Selective Beta Blockers | 5,875 | 29.2% | 3,791 | 29.3% |
| Non-Selective Beta Blockers | 14,276 | 70.9% | 9,152 | 70.7% |
| Any Metoprolol | 1,342 | 6.7% | 824 | 6.4% |
| Metoprolol (Extended Release) | 736 | 3.7% | 446 | 3.4% |
| Metoprolol (Regular) | 607 | 3.0% | 379 | 2.9% |
| Any Propranolol | 12,553 | 62.3% | 8,047 | 62.2% |
| Propranolol (Extended Release) | 1,111 | 5.5% | 739 | 5.7% |
| Propranolol (Regular) | 11,481 | 57.0% | 7,330 | 56.6% |
| Propranolol (Hemangeol) | **** | **** | **** | **** |
| Acebutolol | **** | **** | **** | **** |
| Atenolol | 4,447 | 22.1% | 2,917 | 22.5% |
| Betaxolol | 15 | 0.1% | **** | **** |
| Bisoprolol | 41 | 0.2% | 24 | 0.2% |
| Carvedilol | 346 | 1.7% | 211 | 1.6% |
| Labetalol | 318 | 1.6% | 189 | 1.5% |
| Nadolol | 988 | 4.9% | 659 | 5.1% |
| Nebivolol | 24 | 0.1% | 14 | 0.1% |
| Pindolol | 17 | 0.1% | 15 | 0.1% |
| Sotalol | 53 | 0.3% | 32 | 0.2% |
| Timolol | **** | **** | **** | **** |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 207 | 1.0% | 145 | 1.1% |
| Hypertension and Metoprolol (Extended Release) | 116 | 0.6% | 84 | 0.6% |
| Hypertension and Metoprolol (Regular) | 92 | 0.5% | 62 | 0.5% |
| Hypertension and Any Propranolol | 226 | 1.1% | 147 | 1.1% |



| | Beta | Blockers | Beta Blockers (Post-Index Enr Requirement) | |
|---|-------------|---------------------------------|---|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypertension and Propranolol (Extended Release) | 12 | 0.1% | **** | **** |
| Hypertension and Propranolol (Regular) | 214 | 1.1% | 137 | 1.1% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 389 | 1.9% | 267 | 2.1% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | **** | **** | **** | **** |
| Hypertension and Carvedilol | 66 | 0.3% | 39 | 0.3% |
| Hypertension and Labetalol | 241 | 1.2% | 142 | 1.1% |
| Hypertension and Nadolol | 17 | 0.1% | 12 | 0.1% |
| Hypertension and Nebivolol | **** | **** | **** | **** |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | **** | **** | **** | **** |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | **** | **** | **** | * * * * * |
| Hemangioma and Metoprolol (Extended Release) | **** | **** | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | **** | **** | **** | **** |
| Hemangioma and Any Propranolol | 61 | 0.3% | 51 | 0.4% |
| Hemangioma and Propranolol (Extended Release) | **** | **** | **** | **** |
| Hemangioma and Propranolol (Regular) | **** | **** | **** | **** |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | **** | **** | **** | **** |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol | 19 | 0.1% | 12 | 0.1% |
| Long QT Syndrome and Metoprolol (Extended Release) | **** | **** | ***** | **** |
| Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol | 44 | ***** 0.2% | 21 | 0.2% |
| Long QT Syndrome and Propranolol (Extended Release) | **** | **** | **** | **** |
| Long QT Syndrome and Propranolol (Regular) | 39 | 0.2% | 18 | 0.1% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---|--|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Long QT Syndrome and Atenolol | 51 | 0.3% | 35 | 0.3% |
| Long QT Syndrome and Betaxolol | **** | **** | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | **** | **** | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | **** | **** | * * * * * | **** |
| Long QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nadolol | 227 | 1.1% | 147 | 1.1% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol | **** | **** | **** | **** |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | Blockers | | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 45,494 | N/A | 29,475 | N/A |
| Episodes | 48,091 | 100.0% | 31,056 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 15.9 | 1.4 | 15.9 | 1.4 |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 396 | 0.9% | 247 | 0.8% |
| Asian | 416 | 0.9% | 229 | 0.8% |
| Black or African American | 2,576 | 5.7% | 1,536 | 5.2% |
| Native Hawaiian or Other Pacific Islander | 69 | 0.2% | 48 | 0.2% |
| Unknown | 29,628 | 65.1% | 19,746 | 67.0% |
| White | 12,409 | 27.3% | 7,669 | 26.0% |
| Hispanic origin | | | | |
| Yes | 4,079 | 9.0% | 2,372 | 8.0% |
| No | 14,453 | 31.8% | 8,719 | 29.6% |
| Unknown | 26,962 | 59.3% | 18,384 | 62.4% |
| Year | | | | |
| 2008 | 1,479 | 3.1% | 1,148 | 3.7% |
| 2009 | 1,989 | 4.1% | 1,482 | 4.8% |
| 2010 | 1,944 | 4.0% | 1,500 | 4.8% |
| 2011 | 1,775 | 3.7% | 1,348 | 4.3% |
| 2012 | 1,834 | 3.8% | 1,423 | 4.6% |
| 2013 | 1,935 | 4.0% | 1,452 | 4.7% |
| 2014 | 2,690 | 5.6% | 2,190 | 7.1% |
| 2015 | 4,380 | 9.1% | 3,323 | 10.7% |
| 2016 | 6,768 | 14.1% | 5,625 | 18.1% |
| 2017 | 8,508 | 17.7% | 6,501 | 20.9% |
| 2018 | 8,382 | 17.4% | 1,745 | 5.6% |
| 2019 | 2,349 | 4.9% | 1,853 | 6.0% |
| 2020 | 1,927 | 4.0% | 1,299 | 4.2% |
| 2021 | 1,982 | 4.1% | 167 | 0.5% |
| 2022 | 149 | 0.3% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.5 | 1.0 | 0.5 | 1.0 |
| Hypertension | 5,564 | 11.6% | 3,706 | 11.9% |
| Hemangioma | 40 | 0.1% | 28 | 0.1% |
| Heart Failure | 460 | 1.0% | 286 | 0.9% |
| Congenital Heart Disease | 2,073 | 4.3% | 1,380 | 4.4% |



| | Beta Blockers | | | ost-Index Enrollment irement) |
|---|---------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Atrial Fibrillation | 254 | 0.5% | 164 | 0.5% |
| Long QT Syndrome | 361 | 0.8% | 221 | 0.7% |
| Other Cardiac Arrhythmias | 7,105 | 14.8% | 4,496 | 14.5% |
| Cardiac Arrhythmias (Composite) | 7,355 | 15.3% | 4,659 | 15.0% |
| Pulmonary Hypertension | 125 | 0.3% | 80 | 0.3% |
| Cardiomyopathy | 993 | 2.1% | 597 | 1.9% |
| Coronary Artery Disease | 289 | 0.6% | 189 | 0.6% |
| Portal Hypertension | 69 | 0.1% | 36 | 0.1% |
| Anxiety Disorder | 11,986 | 24.9% | 7,376 | 23.8% |
| Tremor | 1,502 | 3.1% | 967 | 3.1% |
| Migraine | 8,758 | 18.2% | 5,858 | 18.9% |
| Thyrotoxicosis | 850 | 1.8% | 575 | 1.9% |
| Burns | 89 | 0.2% | 57 | 0.2% |
| Glaucoma | 115 | 0.2% | 70 | 0.2% |
| Autism | 3,091 | 6.4% | 1,897 | 6.1% |
| Marfan's Syndrome | 260 | 0.5% | 190 | 0.6% |
| Pheochromocytoma/Paraganglioma | 16 | 0.0% | **** | **** |
| Diabetes | 673 | 1.4% | 432 | 1.4% |
| Any of the above health characteristics <i>(excluding combined comorbidity score)</i> None of the above health characteristics <i>(excluding</i> | 32,929 | 68.5% | 21,161 | 68.1% |
| combined comorbidity score) | 15,162 | 31.5% | 9,895 | 31.9% |
| Hypoglycemia (Day 0) | 17 | 0.0% | 12 | 0.0% |
| Hypoglycemia (0-3 Months) | 95 | 0.2% | 67 | 0.2% |
| Hypoglycemia (3-6 Months) | 88 | 0.2% | 66 | 0.2% |
| Hypoglycemia (6-12 Months) | 122 | 0.3% | 110 | 0.4% |
| Hypoglycemia (Day 0) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Diabetes | 23 | 0.0% | 17 | 0.1% |
| Hypoglycemia (3-6 Months) and Diabetes | 18 | 0.0% | 15 | 0.0% |
| Hypoglycemia (6-12 Months) and Diabetes | 22 | 0.0% | 19 | 0.1% |
| Hypoglycemia (Day 0) and No Diabetes | 14 | 0.0% | **** | **** |
| Hypoglycemia (0-3 Months) and No Diabetes | 72 | 0.1% | 50 | 0.2% |
| Hypoglycemia (3-6 Months) and No Diabetes | 70 | 0.1% | 51 | 0.2% |
| Hypoglycemia (6-12 Months) and No Diabetes | 100 | 0.2% | 91 | 0.3% |
| Hypoglycemia (Day 0) and Any Metoprolol | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 17 | 0.0% | 15 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 13 | 0.0% | 11 | 0.0% |
| | 10 | 0.070 | | 0.070 |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|---------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and Any Propranolol | 11 | 0.0% | **** | **** |
| Hypoglycemia (0-3 Months) and Any Propranolol | 52 | 0.1% | 34 | 0.1% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 47 | 0.1% | 34 | 0.1% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 60 | 0.1% | 52 | 0.2% |
| Hypoglycemia (Day 0) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Atenolol | 19 | 0.0% | 15 | 0.0% |
| Hypoglycemia (3-6 Months) and Atenolol | 18 | 0.0% | 13 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol | 23 | 0.0% | 21 | 0.1% |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Nadolol | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Nadolol | **** | **** | **** | **** |
| Selective Beta Blockers | 14,388 | 29.9% | 9,516 | 30.6% |
| Non-Selective Beta Blockers | 33,713 | 70.1% | 21,548 | 69.4% |
| Any Metoprolol | 6,192 | 12.9% | 3,947 | 12.7% |
| Metoprolol (Extended Release) | 3,649 | 7.6% | 2,284 | 7.4% |
| Metoprolol (Regular) | 2,557 | 5.3% | 1,674 | 5.4% |
| Any Propranolol | 30,166 | 62.7% | 19,299 | 62.1% |
| Propranolol (Extended Release) | 4,603 | 9.6% | 3,091 | 10.0% |
| Propranolol (Regular) | 25,674 | 53.4% | 16,282 | 52.4% |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Acebutolol | 12 | 0.0% | **** | **** |
| Atenolol | 7,765 | 16.1% | 5,263 | 16.9% |
| Betaxolol | 44 | 0.1% | 32 | 0.1% |
| Bisoprolol | 190 | 0.4% | 133 | 0.4% |
| Carvedilol | 1,244 | 2.6% | 765 | 2.5% |
| Labetalol | 587 | 1.2% | 368 | 1.2% |
| Nadolol | 1,495 | 3.1% | 974 | 3.1% |
| Nebivolol | 193 | 0.4% | 136 | 0.4% |
| Pindolol | 74 | 0.2% | 49 | 0.2% |
| Sotalol | 132 | 0.3% | 81 | 0.3% |
| Timolol | 16 | 0.0% | 13 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 1,801 | 3.7% | 1,146 | 3.7% |
| Hypertension and Metoprolol (Extended Release) | 1,106 | 2.3% | 687 | 2.2% |
| Hypertension and Metoprolol (Regular) | 705 | 1.5% | 467 | 1.5% |
| Hypertension and Any Propranolol | 1,125 | 2.3% | 758 | 2.4% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollr Requirement) | |
|---|-------------|---------------------------------|---|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypertension and Propranolol (Extended Release) | 232 | 0.5% | 165 | 0.5% |
| Hypertension and Propranolol (Regular) | 895 | 1.9% | 595 | 1.9% |
| Hypertension and Acebutolol | **** | **** | **** | **** |
| Hypertension and Atenolol | 1,681 | 3.5% | 1,171 | 3.8% |
| Hypertension and Betaxolol | * * * * * | **** | **** | **** |
| Hypertension and Bisoprolol | 64 | 0.1% | 45 | 0.1% |
| Hypertension and Carvedilol | 257 | 0.5% | 161 | 0.5% |
| Hypertension and Labetalol | 448 | 0.9% | 291 | 0.9% |
| Hypertension and Nadolol | 81 | 0.2% | 58 | 0.2% |
| Hypertension and Nebivolol | 89 | 0.2% | 61 | 0.2% |
| Hypertension and Pindolol | **** | **** | **** | **** |
| Hypertension and Sotalol | 12 | 0.0% | 11 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 34 | 0.1% | 25 | 0.1% |
| Hemangioma and Propranolol (Extended Release) | **** | **** | **** | **** |
| Hemangioma and Propranolol (Regular) | * * * * * | **** | **** | **** |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | * * * * * | **** | **** | 0.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | * * * * * | **** | **** | **** |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol | 40 | 0.1% | 26 | 0.1% |
| Long QT Syndrome and Metoprolol (Extended Release) | 16 | 0.0% | **** | **** |
| Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol | 24 44 | 0.0% 0.1% | 17 27 | 0.1% 0.1% |
| Long QT Syndrome and Propranolol (Extended Release) | **** | **** | ~/ **** | **** |
| Long QT Syndrome and Propranolol (Regular) | **** | **** | **** | **** |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---|-------------|--|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ | |
| Long QT Syndrome and Atenolol | 48 | 0.1% | 31 | 0.1% | |
| Long QT Syndrome and Betaxolol | **** | **** | **** | **** | |
| Long QT Syndrome and Bisoprolol | **** | **** | **** | **** | |
| Long QT Syndrome and Carvedilol | 13 | 0.0% | **** | **** | |
| Long QT Syndrome and Labetalol | **** | **** | **** | **** | |
| Long QT Syndrome and Nadolol | 202 | 0.4% | 121 | 0.4% | |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Sotalol | **** | **** | **** | **** | |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% | |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | Blockers | | st-Index Enrollment rement) |
|---|-------------|---------------------------------|-------------|--------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation |
| Unique patients | 84,437 | N/A | 53,460 | N/A |
| Episodes | 89,773 | 100.0% | 56,770 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 16.0 | 1.3 | 16.0 | 1.3 |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 782 | 0.9% | 466 | 0.9% |
| Asian | 616 | 0.7% | 351 | 0.7% |
| Black or African American | 4,535 | 5.4% | 2,651 | 5.0% |
| Native Hawaiian or Other Pacific Islander | 107 | 0.1% | 61 | 0.1% |
| Unknown | 55,189 | 65.4% | 35,730 | 66.8% |
| White | 23,208 | 27.5% | 14,201 | 26.6% |
| Hispanic origin | | | | |
| Yes | 7,168 | 8.5% | 4,020 | 7.5% |
| No | 26,350 | 31.2% | 15,734 | 29.4% |
| Unknown | 50,919 | 60.3% | 33,706 | 63.0% |
| Year | | | | |
| 2008 | 2,574 | 2.9% | 1,967 | 3.5% |
| 2009 | 3,363 | 3.7% | 2,500 | 4.4% |
| 2010 | 3,154 | 3.5% | 2,375 | 4.2% |
| 2011 | 3,079 | 3.4% | 2,348 | 4.1% |
| 2012 | 3,108 | 3.5% | 2,453 | 4.3% |
| 2013 | 3,318 | 3.7% | 2,524 | 4.4% |
| 2014 | 4,942 | 5.5% | 3,851 | 6.8% |
| 2015 | 8,027 | 8.9% | 5,957 | 10.5% |
| 2016 | 12,633 | 14.1% | 10,280 | 18.1% |
| 2017 | 15,589 | 17.4% | 11,773 | 20.7% |
| 2018 | 15,629 | 17.4% | 3,665 | 6.5% |
| 2019 | 4,871 | 5.4% | 3,788 | 6.7% |
| 2020 | 4,230 | 4.7% | 2,920 | 5.1% |
| 2021 | 4,894 | 5.5% | 369 | 0.6% |
| 2022 | 362 | 0.4% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.5 | 0.9 | 0.5 | 0.9 |
| Hypertension | 4,621 | 5.1% | 2,917 | 5.1% |
| Hemangioma | 84 | 0.1% | 58 | 0.1% |
| Heart Failure | 356 | 0.4% | 207 | 0.4% |
| Congenital Heart Disease | 1,608 | 1.8% | 1,031 | 1.8% |



| | Beta | Blockers | • | st-Index Enrollment rement) |
|---|-------------|---------------------------------|-------------|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Atrial Fibrillation | 146 | 0.2% | 96 | 0.2% |
| Long QT Syndrome | 536 | 0.6% | 341 | 0.6% |
| Other Cardiac Arrhythmias | 12,190 | 13.6% | 7,614 | 13.4% |
| Cardiac Arrhythmias (Composite) | 12,513 | 13.9% | 7,824 | 13.8% |
| Pulmonary Hypertension | 105 | 0.1% | 67 | 0.1% |
| Cardiomyopathy | 467 | 0.5% | 286 | 0.5% |
| Coronary Artery Disease | 190 | 0.2% | 130 | 0.2% |
| Portal Hypertension | 54 | 0.1% | 33 | 0.1% |
| Anxiety Disorder | 28,328 | 31.6% | 17,090 | 30.1% |
| Tremor | 1,814 | 2.0% | 1,137 | 2.0% |
| Migraine | 25,252 | 28.1% | 16,581 | 29.2% |
| Thyrotoxicosis | 3,131 | 3.5% | 1,979 | 3.5% |
| Burns | 119 | 0.1% | 79 | 0.1% |
| Glaucoma | 197 | 0.2% | 116 | 0.2% |
| Autism | 1,105 | 1.2% | 677 | 1.2% |
| Marfan's Syndrome | 153 | 0.2% | 108 | 0.2% |
| Pheochromocytoma/Paraganglioma | 15 | 0.0% | 12 | 0.0% |
| Diabetes | 1,210 | 1.3% | 771 | 1.4% |
| Any of the above health characteristics (excluding combined comorbidity score) None of the above health characteristics (excluding | 62,609 | 69.7% | 39,479 | 69.5% |
| combined comorbidity score) | 27,164 | 30.3% | 17,291 | 30.5% |
| Hypoglycemia (Day 0) | 44 | 0.0% | 30 | 0.1% |
| Hypoglycemia (0-3 Months) | 306 | 0.3% | 219 | 0.4% |
| Hypoglycemia (3-6 Months) | 234 | 0.3% | 168 | 0.3% |
| Hypoglycemia (6-12 Months) | 296 | 0.3% | 253 | 0.4% |
| Hypoglycemia (Day 0) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Diabetes | 48 | 0.1% | 32 | 0.1% |
| Hypoglycemia (3-6 Months) and Diabetes | 42 | 0.0% | 29 | 0.1% |
| Hypoglycemia (6-12 Months) and Diabetes | 44 | 0.0% | 38 | 0.1% |
| Hypoglycemia (Day 0) and No Diabetes | 39 | 0.0% | 26 | 0.0% |
| Hypoglycemia (0-3 Months) and No Diabetes | 258 | 0.3% | 187 | 0.3% |
| Hypoglycemia (3-6 Months) and No Diabetes | 192 | 0.2% | 139 | 0.2% |
| Hypoglycemia (6-12 Months) and No Diabetes | 252 | 0.3% | 215 | 0.4% |
| Hypoglycemia (Day 0) and Any Metoprolol | 11 | 0.0% | **** | **** |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 56 | 0.1% | 39 | 0.1% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 39 | 0.0% | 28 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 41 | 0.0% | 32 | 0.1% |
| | | | | |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|--|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Hypoglycemia (Day 0) and Any Propranolol | 18 | 0.0% | 11 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Propranolol | 174 | 0.2% | 121 | 0.2% | |
| Hypoglycemia (3-6 Months) and Any Propranolol | 147 | 0.2% | 105 | 0.2% | |
| Hypoglycemia (6-12 Months) and Any Propranolol | 176 | 0.2% | 154 | 0.3% | |
| Hypoglycemia (Day 0) and Atenolol | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and Atenolol | 37 | 0.0% | 33 | 0.1% | |
| Hypoglycemia (3-6 Months) and Atenolol | 31 | 0.0% | 22 | 0.0% | |
| Hypoglycemia (6-12 Months) and Atenolol | 48 | 0.1% | 42 | 0.1% | |
| Hypoglycemia (Day 0) and Nadolol | **** | **** | **** | * * * * * | |
| Hypoglycemia (0-3 Months) and Nadolol | **** | **** | **** | * * * * | |
| Hypoglycemia (3-6 Months) and Nadolol | **** | **** | **** | * * * * * | |
| Hypoglycemia (6-12 Months) and Nadolol | 12 | 0.0% | 11 | 0.0% | |
| Selective Beta Blockers | 20,509 | 22.8% | 13,407 | 23.6% | |
| Non-Selective Beta Blockers | 69,290 | 77.2% | 43,383 | 76.4% | |
| Any Metoprolol | 8,486 | 9.5% | 5,384 | 9.5% | |
| Metoprolol (Extended Release) | 4,893 | 5.5% | 3,040 | 5.4% | |
| Metoprolol (Regular) | 3,621 | 4.0% | 2,366 | 4.2% | |
| Any Propranolol | 62,541 | 69.7% | 39,149 | 69.0% | |
| Propranolol (Extended Release) | 9,389 | 10.5% | 6,220 | 11.0% | |
| Propranolol (Regular) | 53,372 | 59.5% | 33,066 | 58.2% | |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% | |
| Acebutolol | 36 | 0.0% | 27 | 0.0% | |
| Atenolol | 11,380 | 12.7% | 7,575 | 13.3% | |
| Betaxolol | 96 | 0.1% | 66 | 0.1% | |
| Bisoprolol | 277 | 0.3% | 181 | 0.3% | |
| Carvedilol | 675 | 0.8% | 386 | 0.7% | |
| Labetalol | 3,308 | 3.7% | 1,918 | 3.4% | |
| Nadolol | 2,470 | 2.8% | 1,722 | 3.0% | |
| Nebivolol | 244 | 0.3% | 182 | 0.3% | |
| Pindolol | 161 | 0.2% | 116 | 0.2% | |
| Sotalol | 81 | 0.1% | 55 | 0.1% | |
| Timolol | 57 | 0.1% | 39 | 0.1% | |
| Health Characteristics by Beta Blockers | | | | | |
| Hypertension and Any Metoprolol | 1,235 | 1.4% | 752 | 1.3% | |
| Hypertension and Metoprolol (Extended Release) | 701 | 0.8% | 420 | 0.7% | |
| Hypertension and Metoprolol (Regular) | 542 | 0.6% | 339 | 0.6% | |
| Hypertension and Any Propranolol | 1,199 | 1.3% | 789 | 1.4% | |



| | Beta | Blockers | | st-Index Enrollment rement) |
|---|-------------|---------------------------------|-------------|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypertension and Propranolol (Extended Release) | 221 | 0.2% | 150 | 0.3% |
| Hypertension and Propranolol (Regular) | 979 | 1.1% | 640 | 1.1% |
| Hypertension and Acebutolol | **** | **** | **** | **** |
| Hypertension and Atenolol | 1,177 | 1.3% | 768 | 1.4% |
| Hypertension and Betaxolol | **** | **** | **** | **** |
| Hypertension and Bisoprolol | 51 | 0.1% | 36 | 0.1% |
| Hypertension and Carvedilol | 181 | 0.2% | 106 | 0.2% |
| Hypertension and Labetalol | 662 | 0.7% | 390 | 0.7% |
| Hypertension and Nadolol | 59 | 0.1% | 37 | 0.1% |
| Hypertension and Nebivolol | 42 | 0.0% | 29 | 0.1% |
| Hypertension and Pindolol | **** | **** | **** | **** |
| Hypertension and Sotalol | **** | **** | **** | **** |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | **** | **** | **** | **** |
| Hemangioma and Metoprolol (Extended Release) | **** | **** | **** | **** |
| Hemangioma and Metoprolol (Regular) | **** | **** | **** | **** |
| Hemangioma and Any Propranolol | 69 | 0.1% | 47 | 0.1% |
| Hemangioma and Propranolol (Extended Release) | 12 | 0.0% | **** | **** |
| Hemangioma and Propranolol (Regular) | 58 | 0.1% | **** | * * * * |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | **** | **** | **** | **** |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | * * * * * | **** | **** | * * * * |
| Hemangioma and Nadolol | **** | **** | **** | **** |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol | 48 | 0.1% | 27 | 0.0% |
| Long QT Syndrome and Metoprolol (Extended Release) | 24 | 0.0% | 11 | 0.0% |
| Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol | 24 96 | 0.0% 0.1% | 16 62 | 0.0% 0.1% |
| Long QT Syndrome and Propranolol (Extended | 23 | 0.0% | 15 | 0.0% |
| Long QT Syndrome and Propranolol (Regular) | 74 | 0.1% | 48 | 0.1% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---|-------------|--|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ | |
| Long QT Syndrome and Atenolol | 85 | 0.1% | 56 | 0.1% | |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Bisoprolol | **** | **** | **** | **** | |
| Long QT Syndrome and Carvedilol | 13 | 0.0% | **** | **** | |
| Long QT Syndrome and Labetalol | **** | **** | **** | **** | |
| Long QT Syndrome and Nadolol | 280 | 0.3% | 179 | 0.3% | |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Sotalol | **** | **** | **** | **** | |
| Long QT Syndrome and Timolol | **** | **** | **** | **** | |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | Blockers | Beta Blockers (Post-Index Enrollme Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 17,419 | N/A | 11,084 | N/A |
| Episodes | 18,174 | 100.0% | 11,540 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 14.9 | 3.3 | 14.8 | 3.3 |
| Age | | | | |
| 0-1 years | 219 | 1.2% | 131 | 1.1% |
| 2-5 years | 378 | 2.1% | 252 | 2.2% |
| 6-12 years | 2,899 | 16.0% | 1,826 | 15.8% |
| 13-17 years | 14,678 | 80.8% | 9,331 | 80.9% |
| Sex | | | | |
| Female | 9,616 | 55.2% | 6,083 | 54.9% |
| Male | 7,803 | 44.8% | 5,001 | 45.1% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 141 | 0.8% | 86 | 0.8% |
| Asian | 167 | 1.0% | 92 | 0.8% |
| Black or African American | 1,238 | 7.1% | 737 | 6.6% |
| Native Hawaiian or Other Pacific Islander | 27 | 0.2% | 14 | 0.1% |
| Unknown | 11,265 | 64.7% | 7,367 | 66.5% |
| White | 4,581 | 26.3% | 2,788 | 25.2% |
| Hispanic origin | | | | |
| Yes | 1,711 | 9.8% | 984 | 8.9% |
| No | 5,670 | 32.6% | 3,384 | 30.5% |
| Unknown | 10,038 | 57.6% | 6,716 | 60.6% |
| Year | | | | |
| 2008 | 706 | 3.9% | 539 | 4.7% |
| 2009 | 767 | 4.2% | 580 | 5.0% |
| 2010 | 753 | 4.1% | 568 | 4.9% |
| 2011 | 683 | 3.8% | 524 | 4.5% |
| 2012 | 650 | 3.6% | 496 | 4.3% |
| 2013 | 660 | 3.6% | 491 | 4.3% |
| 2014 | 979 | 5.4% | 768 | 6.7% |
| 2015 | 1,640 | 9.0% | 1,227 | 10.6% |
| 2016 | 2,460 | 13.5% | 1,984 | 17.2% |
| 2017 | 3,443 | 18.9% | 2,618 | 22.7% |
| 2018 | 3,270 | 18.0% | 653 | 5.7% |
| 2019 | 796 | 4.4% | 609 | 5.3% |
| 2020 | 666 | 3.7% | 419 | 3.6% |



| | Beta | Blockers | - | ost-Index Enrollment iirement) |
|---|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | 638 | 3.5% | 64 | 0.6% |
| 2022 | 63 | 0.3% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.7 | 1.3 | 0.7 | 1.3 |
| Hypertension | 3,638 | 20.0% | 2,290 | 19.8% |
| Hemangioma | 14 | 0.1% | **** | **** |
| Heart Failure | 397 | 2.2% | 240 | 2.1% |
| Congenital Heart Disease | 1,664 | 9.2% | 1,103 | 9.6% |
| Atrial Fibrillation | 190 | 1.0% | 127 | 1.1% |
| Long QT Syndrome | 142 | 0.8% | 86 | 0.7% |
| Other Cardiac Arrhythmias | 6,498 | 35.8% | 3,992 | 34.6% |
| Cardiac Arrhythmias (Composite) | 6,587 | 36.2% | 4,050 | 35.1% |
| Pulmonary Hypertension | 109 | 0.6% | 71 | 0.6% |
| Cardiomyopathy | 731 | 4.0% | 438 | 3.8% |
| Coronary Artery Disease | 288 | 1.6% | 185 | 1.6% |
| Portal Hypertension | 20 | 0.1% | **** | **** |
| Anxiety Disorder | 2,899 | 16.0% | 1,794 | 15.5% |
| Tremor | 127 | 0.7% | 83 | 0.7% |
| Migraine | 2,355 | 13.0% | 1,532 | 13.3% |
| Thyrotoxicosis | 282 | 1.6% | 181 | 1.6% |
| Burns | 31 | 0.2% | 20 | 0.2% |
| Glaucoma | 49 | 0.3% | 38 | 0.3% |
| Autism | 410 | 2.3% | 236 | 2.0% |
| Marfan's Syndrome | 96 | 0.5% | 61 | 0.5% |
| Pheochromocytoma/Paraganglioma | 12 | 0.1% | **** | **** |
| Diabetes | 429 | 2.4% | 273 | 2.4% |
| Any of the above health characteristics <i>(excluding combined comorbidity score)</i> None of the above health characteristics <i>(excluding</i> | 13,309 | 73.2% | 8,387 | 72.7% |
| combined comorbidity score) | 4,865 | 26.8% | 3,153 | 27.3% |
| Hypoglycemia (Day 0) | 15 | 0.1% | 11 | 0.1% |
| Hypoglycemia (0-3 Months) | 84 | 0.5% | 61 | 0.5% |
| Hypoglycemia (3-6 Months) | 65 | 0.4% | 51 | 0.4% |
| Hypoglycemia (6-12 Months) | 78 | 0.4% | 66 | 0.6% |
| Hypoglycemia (Day 0) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Diabetes | 18 | 0.1% | 14 | 0.1% |
| Hypoglycemia (3-6 Months) and Diabetes | 11 | 0.1% | **** | **** |
| Hypoglycemia (6-12 Months) and Diabetes | 14 | 0.1% | 11 | 0.1% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and No Diabetes | 13 | 0.1% | **** | **** |
| Hypoglycemia (0-3 Months) and No Diabetes | 66 | 0.4% | 47 | 0.4% |
| Hypoglycemia (3-6 Months) and No Diabetes | 54 | 0.3% | 43 | 0.4% |
| Hypoglycemia (6-12 Months) and No Diabetes | 64 | 0.4% | 55 | 0.5% |
| Hypoglycemia (Day 0) and Any Metoprolol | 15 | 0.1% | 11 | 0.1% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 84 | 0.5% | 61 | 0.5% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 65 | 0.4% | 51 | 0.4% |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 78 | 0.4% | 66 | 0.6% |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers | 18,174 | 100.0% | 11,540 | 100.0% |
| Non-Selective Beta Blockers | 26 | 0.1% | 19 | 0.2% |
| Any Metoprolol | 18,174 | 100.0% | 11,540 | 100.0% |
| Metoprolol (Extended Release) | 10,259 | 56.4% | 6,383 | 55.3% |
| Metoprolol (Regular) | 7,962 | 43.8% | 5,194 | 45.0% |
| Any Propranolol | 18 | 0.1% | 15 | 0.1% |
| Propranolol (Extended Release) | **** | **** | **** | **** |
| Propranolol (Regular) | **** | * * * * | **** | **** |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Atenolol | 19 | 0.1% | 14 | 0.1% |
| Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Carvedilol | **** | **** | **** | **** |
| Labetalol | **** | **** | 0 | 0.0% |
| Nadolol | 0 | 0.0% | 0 | 0.0% |
| Nebivolol | **** | **** | **** | **** |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | **** | **** | **** | **** |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 3,638 | 20.0% | 2,290 | 19.8% |
| Hypertension and Metoprolol (Extended Release) | 2,090 | 11.5% | 1,289 | 11.2% |
| Hypertension and Metoprolol (Regular) | 1,568 | 8.6% | 1,018 | 8.8% |
| Hypertension and Any Propranolol | **** | **** | **** | **** |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | **** | * * * * * | **** | **** |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | **** | **** | **** | **** |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 14 | 0.1% | **** | **** |
| Hemangioma and Metoprolol (Extended Release) | **** | * * * * * | **** | **** |
| Hemangioma and Metoprolol (Regular) | **** | **** | **** | **** |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|--------------------------------|--|--|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Release) Long QT Syndrome and Propranolol (Regular) | 142 61 81 0 0 0 | 0.8% 0.3% 0.4% 0.0% 0.0% 0.0% | 86 33 53 0 0 0 | 0.7% 0.3% 0.5% 0.0% 0.0% 0.0% |
| Long QT Syndrome and Acebutolol Long QT Syndrome and Atenolol Long QT Syndrome and Betaxolol | 0 0 0 | 0.0% 0.0% 0.0% | 0 0 0 | 0.0% 0.0% 0.0% |
| Long QT Syndrome and Bisoprolol Long QT Syndrome and Carvedilol | 0 ***** | 0.0% | 0 ***** | 0.0% |
| Long QT Syndrome and Labetalol Long QT Syndrome and Nadolol | 0 0 | 0.0% 0.0% | 0 0 | 0.0% 0.0% |
| Long QT Syndrome and Nebivolol Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | 0 0 | 0.0% 0.0% | 0 0 | 0.0% 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| Unique patients 9,921 N/A 6,192 N/A Episodes 10,259 100.0% 6,383 100.0% Demographic Characteristics | | Beta | Blockers | | ost-Index Enrollment uirement) |
|--|---|-------------|---------------------------------|-------------|-----------------------------------|
| Unique patients9,921N/A6,192N/AEpisodes10,259100.0%6,383100.0%Demographic Characteristis********************************* | | | Percent/ | | Percent/ |
| Episodes 10,259 100,0% 6,333 100,0% Demognit Characteristic | Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Demographic Characteristics Age 15.1 2.9 15.1 2.8 Age 0 9 9 0.5% 29 0.5% 0-1 years 54 0.5% 29 0.5% 6-12 years 1.27 1.2% 84 1.3% 6-12 years 1.536 15.0% 946 1.48% 13-17 years 8,542 8.3.3% 5,324 8.3.4% Sex Female 5,494 55.4% 3,414 55.1% Male 4,427 44.6% 2,778 44.9% Race ⁴ | Unique patients | 9,921 | N/A | 6,192 | N/A |
| Age (vers) 15.1 2.9 15.1 2.8 Age 0.1 years 54 0.5% 29 0.5% 2-5 years 127 1.5% 94 1.48% 13-17 years 1.536 15.0% 946 1.48% 13-17 years 8,542 83.3% 5,324 83.4% Sex | Episodes | 10,259 | 100.0% | 6,383 | 100.0% |
| No $2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 +$ | Demographic Characteristics | | | | |
| 0-1 years540.5%290.5%2-5 years1271.2%841.3%6-12 years1,53615.0%94644.8%13-17 years8,54083.3%5,24083.4%13-17 years5,49455.4%3,41455.1%American Indian or Alaska Native740.7%440.7%American Indian or Alaska Native740.7%440.7%Asian1031.0%540.9%Black or African American6516.6%3706.0%Native Hawailan or Other Pacific Islander180.2%110.2%Unknown6,63366.9%4,30569.5%White2,4223.4%1,6782.7.1%Unknown2,98630.1%1,6782.7.1%Vear20093873.8%2.904.5%20103923.8%2.904.5%20113563.5%2.644.1%20123573.5%2.644.1%20133613.5%2.644.1%20143563.5%2.644.1%20158118.7%4.166.5%20145455.3%4.166.5%20158118.7%6.7410.6%20161,2971,26%1,05416.5%20161,2971,26%1,05416.5%20161,2941,8541,65%3,146.5% | Age (years) | 15.1 | 2.9 | 15.1 | 2.8 |
| 2-years 127 1.2% 84 1.3% 6-12 years 1,536 15.0% 946 14.8% 13-17 years 8,542 83.3% 5,324 83.4% 13-17 years 8,542 83.3% 5,324 83.4% 13-17 years 8,494 83.3% 5,324 83.4% Sec | Age | | | | |
| 6-1 years 1,536 15.0% 946 14.8% 13-17 years 8,542 83.3% 5,324 83.4% Set | 0-1 years | 54 | 0.5% | 29 | 0.5% |
| 13-17 years8,54283.3%5,32483.4%SexFemale5,49455.4%3,41455.1%Male4,2744.6%2,778M4.9%Marcian Indian or Alaska Native740.7%440.7%American Indian or Alaska Native740.7%440.7%Asian1031.0%540.9%Black or African American6516.6%3706.0%Native Hawaiian or Other Pacific Islander180.2%110.2%Unknown6,63366.9%4,30569.5%White2,9422,46%4,30569.5%White2,98630.1%1,6782,71%Unknown6,0146.06%3.9664.5%Vear23.8%2.904.5%20093873.8%2.904.5%20103563.5%2.544.0%20113563.5%2.544.0%20123573.5%2.644.1%20133773.7%2.704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%10.5415%20151,89418.5%37113.8%20161,29712.6%10.5415%20151,89418.5%37115.8%20161,8941,89418.5%37120161,894 </td <td>2-5 years</td> <td>127</td> <td>1.2%</td> <td>84</td> <td>1.3%</td> | 2-5 years | 127 | 1.2% | 84 | 1.3% |
| Sex Female 5,494 55.4% 3,414 55.1% Male 4,427 44.6% 2,778 44.9% Marican Indian or Alaska Native 74 0.7% 44 0.9% American Indian or Alaska Native 74 0.7% 44 0.9% Black or African American 651 6.6% 370 6.0% Native Hawaiian or Other Pacific Islander 18 0.2% 11 0.2% Uhknown 6,633 66.9% 4,305 69.5% White 2,442 24.6% 1,408 22.7% Uhknown 6,014 60.6% 3,996 64.5% Unknown 6,014 60.6% 3,996 64.5% Unknown 6,014 60.6% 3,996 64.5% 2008 442 4.3% 344 5.2% 2010 387 3.8% 290 4.5% 2011 356 3.5% 264 4.1% 2012 357 3.5% | 6-12 years | 1,536 | 15.0% | 946 | 14.8% |
| Female5,49455.4%3,41455.1%Male4,42744.6%2,77844.9%Mace ⁴ 740.7%440.7%Asin1031.0%540.9%Black or African American6516.6%3706.0%Native Hawaiian or Other Pacific Islander180.2%110.2%Uhknown6,63366.9%4,305695%White2,42224.6%1,40822.7%Uhknown6,61460.1%1,67827.1%No2,98630.1%1,67827.1%Unknown6,01460.6%3.99664.5%Year219.3%5188.4%No2,98630.1%1,6782.7%2008424.3%3345.2%20103873.8%2904.5%20113563.5%2644.1%20123573.5%2644.1%20133773.7%2704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05113.6%201719.4%19.0%1,47123.0%201819.9%1,47423.0%3.6%20145455.3%41.66.5%201561.9%1,29712.6%1,05420161,29712.6%1,0546.5%201519.9% </td <td>13-17 years</td> <td>8,542</td> <td>83.3%</td> <td>5,324</td> <td>83.4%</td> | 13-17 years | 8,542 | 83.3% | 5,324 | 83.4% |
| Male 4,427 44.6% 2,778 44.9% Race ⁴ 74 0.7% 44 0.7% Asian 103 1.0% 54 0.9% Black or African American 651 6.6% 370 6.0% Native Hawaiian or Other Pacific Islander 18 0.2% 11 0.2% Unknown 6,633 66.9% 4,305 69.5% White 2,426 24.6% 1,408 22.7% Unknown 6,633 66.9% 4,305 69.5% White 2,986 30.1% 1,678 27.1% Unknown 6,014 60.6% 3,996 64.5% 2008 442 4.3% 334 5.2% 2010 387 3.8% 297 4.7% | Sex | | | | |
| American Indian or Alaska Native 74 0.7% 44 0.7% Asian 103 1.0% 54 0.9% Black or African American 651 6.6% 370 6.0% Native Hawaiian or Other Pacific Islander 18 0.2% 11 0.2% Unknown 6.633 66.9% 4,305 69.5% White 2.42 24.6% 1,408 22.6% Itspanic origin 74 9.3% 518 8.4% No 2.986 30.1% 1,678 27.1% Unknown 6.014 60.6% 3.996 64.5% 2009 387 3.8% 2.97 4.7% 2010 357 3.5% 2.64 4 | Female | 5,494 | 55.4% | 3,414 | 55.1% |
| American Indian or Alaska Native 74 0.7% 44 0.7% Asian 103 1.0% 54 0.9% Black or African American 651 6.6% 370 6.0% Native Hawaiian or Other Pacific Islander 18 0.2% 11 0.2% Unknown 6.633 66.9% 4,305 69.5% White 2,442 24.6% 1,408 22.7% Hispanic origin 2,986 30.1% 1,678 27.1% Ver 2,986 30.1% 1,678 27.1% Outknown 6,014 60.6% 3,996 64.5% Ver 2008 442 4.3% 334 5.2% 2009 387 3.8% 297 4.7% 2010 392 3.8% 290 4.5% 2011 355 5.5% 264 4.1% 2013 377 3.7% 270 4.2% 2014 545 5.3% 416 6.5% <td>Male</td> <td>4,427</td> <td>44.6%</td> <td>2,778</td> <td>44.9%</td> | Male | 4,427 | 44.6% | 2,778 | 44.9% |
| Asian1031.0%540.9%Back or African American6516.6%3706.0%Native Hawaiian or Other Pacific Islander180.2%110.2%Unknown6.63366.9%4,30569.5%White2,44224.6%1,40822.7%Hispanic origin79.3%5188.4%No2,98630.1%1,67827.1%Unknown6,01460.6%3,99664.5%Ver73.8%2974.7%20084424.3%3345.2%20093873.8%2974.7%20103923.8%2904.5%20113563.5%2644.1%20133573.7%2704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%20171,94519.0%1,47123.0%20181,89418.5%3715.8% | Race ⁴ | | | | |
| Black or African American 651 6.6% 370 6.0% Native Hawaiian or Other Pacific Islander 18 0.2% 11 0.2% Unknown 6.633 66.9% 4,305 69.5% White 2,442 24.6% 1,408 22.7% White 2,422 24.6% 1,408 22.7% Unknown 6,014 60.6% 3,996 64.5% 2008 442 4.3% 334 5.2% 2010 387 3.8% 297 4.7% 2011 356 3.5% 264 4.1% 2012 357 3.5% 264 4.1% | American Indian or Alaska Native | 74 | 0.7% | 44 | 0.7% |
| Native Hawaiian or Other Pacific Islander 18 0.2% 11 0.2% Unknown 6,633 66.9% 4,305 69.5% White 2,442 24.6% 1,408 22.7% Hispanic origin 2,986 30.1% 1,678 27.1% Unknown 6,014 60.6% 3,996 64.5% Unknown 6,014 60.6% 3,996 64.5% Year 2008 442 4.3% 334 5.2% 2009 387 3.8% 297 4.7% 2010 392 3.8% 290 4.5% 2011 356 3.5% 254 4.0% 2012 357 3.5% 264 4.1% 2013 377 3.7% 270 4.2% 2014 545 5.3% 416 6.5% 2015 891 8.7% 674 10.6% 2016 1,297 12.6% 1,054 16.5% 201 | Asian | 103 | 1.0% | 54 | 0.9% |
| Unknown6,63366.9%4,30569.5%White2,44224.6%1,40822.7%Hspanic origin9.3%5188.4%No2,98630.1%1,67827.1%Unknown6,0430.966.536.5%20084424.3%3345.2%20093873.8%2974.7%20103923.8%2904.5%20113563.5%2644.1%20133773.5%2644.1%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%20171,94519.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | Black or African American | 651 | 6.6% | 370 | 6.0% |
| White2,44224.6%1,40822.7%Hispanic origin9219.3%5188.4%No2,98630.1%1,67827.1%Unknown6,01460.6%3,9966.45%Year74.3%3345.2%20084424.3%3345.2%20093873.8%2974.7%20103923.8%2904.5%20113563.5%2644.1%20123573.5%2644.1%20133773.7%2704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%20171,94519.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | Native Hawaiian or Other Pacific Islander | 18 | 0.2% | 11 | 0.2% |
| Yes9219.3%5.188.4%No2,98630.1%1,67827.1%Unknown6,01460.6%3,99664.5%2084424.3%3345.2%2093873.8%2974.7%20103923.8%2904.5%20113563.5%2544.0%20123573.5%2644.1%20133773.7%2704.2%20145455.3%4166.5%20156918.7%67410.6%20161,29712.6%1,05416.5%20171,94519.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | Unknown | 6,633 | 66.9% | 4,305 | 69.5% |
| Yes9219.3%5188.4%No2,98630.1%1,67827.1%Unknown6,01460.6%3,99664.5%Year3345.2%20084424.3%3345.2%20093873.8%2974.7%20103923.8%2904.5%20113563.5%2544.0%20123573.5%2644.1%20133773.7%2704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%20171,94519.0%1,47123.0%20181,8944.5%3715.8%20194784.7%3555.6% | White | 2,442 | 24.6% | 1,408 | 22.7% |
| No2,98630.1%1,67827.1%Unknown6,01460.6%3,99664.5%Year70084424.3%3345.2%20093873.8%2974.7%20103923.8%2904.5%20113563.5%2544.0%20123573.5%2644.1%20133773.7%2704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%20171,94519.0%1,47123.0%20184784.7%3555.6% | Hispanic origin | | | | |
| Unknown6,01460.6%3,99664.5%Year20084424.3%3345.2%20093873.8%2974.7%20103923.8%2904.5%20113563.5%2544.0%20123573.5%2644.1%20133773.7%2704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%20171,94519.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | Yes | 921 | 9.3% | 518 | 8.4% |
| Year20084424.3%3345.2%20093873.8%2974.7%20103923.8%2904.5%20113563.5%2544.0%20123573.5%2644.1%20133773.7%2704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%20181,89418.5%3715.8%20194784.7%3555.6% | No | 2,986 | 30.1% | 1,678 | 27.1% |
| 20084424.3%3345.2%20093873.8%2974.7%20103923.8%2904.5%20113563.5%2544.0%20123573.5%2644.1%20133773.7%2704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%20171,94519.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | Unknown | 6,014 | 60.6% | 3,996 | 64.5% |
| 20093873.8%2974.7%20103923.8%2904.5%20113563.5%2544.0%20123573.5%2644.1%20133773.7%2704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%20171,94519.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | Year | | | | |
| 20103923.8%2904.5%20113563.5%2544.0%20123573.5%2644.1%20133773.7%2704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%20171,94519.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | 2008 | 442 | 4.3% | 334 | 5.2% |
| 20113563.5%2544.0%20123573.5%2644.1%20133773.7%2704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%201719.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | 2009 | 387 | 3.8% | 297 | 4.7% |
| 20123573.5%2644.1%20133773.7%2704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%201719.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | 2010 | 392 | 3.8% | 290 | 4.5% |
| 20133773.7%2704.2%20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%201719.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | 2011 | 356 | 3.5% | 254 | 4.0% |
| 20145455.3%4166.5%20158918.7%67410.6%20161,29712.6%1,05416.5%201719.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | 2012 | 357 | 3.5% | 264 | 4.1% |
| 20158918.7%67410.6%20161,29712.6%1,05416.5%20171,94519.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | 2013 | 377 | 3.7% | 270 | 4.2% |
| 20161,29712.6%1,05416.5%20171,94519.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | 2014 | 545 | 5.3% | 416 | 6.5% |
| 20171,94519.0%1,47123.0%20181,89418.5%3715.8%20194784.7%3555.6% | 2015 | 891 | 8.7% | 674 | 10.6% |
| 20181,89418.5%3715.8%20194784.7%3555.6% | 2016 | 1,297 | 12.6% | 1,054 | 16.5% |
| 2019 478 4.7% 355 5.6% | 2017 | 1,945 | 19.0% | 1,471 | 23.0% |
| | 2018 | 1,894 | 18.5% | 371 | 5.8% |
| 2020 414 4.0% 293 4.6% | 2019 | 478 | 4.7% | 355 | 5.6% |
| | 2020 | 414 | 4.0% | 293 | 4.6% |



| | Beta | Blockers | • | ost-Index Enrollment uirement) |
|--|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | 442 | 4.3% | 40 | 0.6% |
| 2022 | 42 | 0.4% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.6 | 1.2 | 0.6 | 1.2 |
| Hypertension | 2,090 | 20.4% | 1,289 | 20.2% |
| Hemangioma | * * * * * | **** | **** | **** |
| Heart Failure | 171 | 1.7% | 103 | 1.6% |
| Congenital Heart Disease | 835 | 8.1% | 547 | 8.6% |
| Atrial Fibrillation | 109 | 1.1% | 73 | 1.1% |
| Long QT Syndrome | 61 | 0.6% | 33 | 0.5% |
| Other Cardiac Arrhythmias | 3,721 | 36.3% | 2,275 | 35.6% |
| Cardiac Arrhythmias (Composite) | 3,761 | 36.7% | 2,301 | 36.0% |
| Pulmonary Hypertension | 48 | 0.5% | 30 | 0.5% |
| Cardiomyopathy | 383 | 3.7% | 226 | 3.5% |
| Coronary Artery Disease | 135 | 1.3% | 83 | 1.3% |
| Portal Hypertension | **** | **** | **** | **** |
| Anxiety Disorder | 1,660 | 16.2% | 979 | 15.3% |
| Tremor | 57 | 0.6% | 38 | 0.6% |
| Migraine | 1,469 | 14.3% | 932 | 14.6% |
| Thyrotoxicosis | 147 | 1.4% | 90 | 1.4% |
| Burns | 14 | 0.1% | **** | **** |
| Glaucoma | 30 | 0.3% | 22 | 0.3% |
| Autism | 212 | 2.1% | 123 | 1.9% |
| Marfan's Syndrome | 60 | 0.6% | 38 | 0.6% |
| Pheochromocytoma/Paraganglioma | **** | **** | **** | **** |
| Diabetes | 202 | 2.0% | 124 | 1.9% |
| Any of the above health characteristics (excluding | | | | |
| <i>combined comorbidity score)</i> None of the above health characteristics <i>(excluding</i> | 7,638 | 74.5% | 4,728 | 74.1% |
| combined comorbidity score) | 2,621 | 25.5% | 1,655 | 25.9% |
| Hypoglycemia (Day 0) | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) | 43 | 0.4% | 34 | 0.5% |
| Hypoglycemia (3-6 Months) | 31 | 0.3% | 22 | 0.3% |
| Hypoglycemia (6-12 Months) | 42 | 0.4% | 37 | 0.6% |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Diabetes | * * * * * | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Diabetes | **** | **** | **** | **** |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|--|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Hypoglycemia (Day 0) and No Diabetes | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and No Diabetes | 35 | 0.3% | 27 | 0.4% | |
| Hypoglycemia (3-6 Months) and No Diabetes | 25 | 0.2% | 17 | 0.3% | |
| Hypoglycemia (6-12 Months) and No Diabetes | 36 | 0.4% | 31 | 0.5% | |
| Hypoglycemia (Day 0) and Any Metoprolol | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 43 | 0.4% | 34 | 0.5% | |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 31 | 0.3% | 22 | 0.3% | |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 42 | 0.4% | 37 | 0.6% | |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Selective Beta Blockers | 10,259 | 100.0% | 6,383 | 100.0% | |
| Non-Selective Beta Blockers | 16 | 0.2% | 12 | 0.2% | |
| Any Metoprolol | 10,259 | 100.0% | 6,383 | 100.0% | |
| Metoprolol (Extended Release) | 10,259 | 100.0% | 6,383 | 100.0% | |
| Metoprolol (Regular) | 47 | 0.5% | 37 | 0.6% | |
| Any Propranolol | 11 | 0.1% | **** | **** | |
| Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Propranolol (Regular) | 11 | 0.1% | **** | **** | |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% | |
| Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Atenolol | 15 | 0.1% | 11 | 0.2% | |
| Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Carvedilol | **** | **** | **** | **** | |
| Labetalol | **** | **** | 0 | 0.0% | |
| Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Nebivolol | 0 | 0.0% | 0 | 0.0% | |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | 0 | 0.0% | 0 | 0.0% |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 2,090 | 20.4% | 1,289 | 20.2% |
| Hypertension and Metoprolol (Extended Release) | 2,090 | 20.4% | 1,289 | 20.2% |
| Hypertension and Metoprolol (Regular) | 20 | 0.2% | 17 | 0.3% |
| Hypertension and Any Propranolol | **** | **** | **** | **** |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | **** | **** | **** | **** |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | **** | **** | **** | **** |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | **** | **** | **** | **** |
| Hemangioma and Metoprolol (Extended Release) | **** | **** | **** | **** |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | • | ost-Index Enrollment Jirement) |
|---|--|--|---|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Release) Long QT Syndrome and Propranolol (Regular) Long QT Syndrome and Acebutolol Long QT Syndrome and Atenolol | 61 61 0 0 0 0 0 0 | 0.6% 0.6% 0.0% 0.0% 0.0% 0.0% 0.0% | 33 33 0 0 0 0 0 0 0 | 0.5% 0.5% 0.0% 0.0% 0.0% 0.0% 0.0% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol Long QT Syndrome and Carvedilol | 0 0 | 0.0% 0.0% | 0 0 | 0.0% 0.0% |
| Long QT Syndrome and Labetalol | 0 | 0.0% 0.0% | 0 | 0.0% 0.0% |
| Long QT Syndrome and Nadolol Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 0 | 0.0% |
| Long QT Syndrome and Pindolol Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | 0 0 0 | 0.0% 0.0% 0.0% | 0 0 0 | 0.0% 0.0% 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | | Blockers | - | ost-Index Enrollment uirement) |
|---|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 7,620 | N/A | 4,975 | N/A |
| Episodes | 7,962 | 100.0% | 5,194 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 14.5 | 3.8 | 14.5 | 3.7 |
| Age | | | | |
| 0-1 years | 165 | 2.1% | 102 | 2.0% |
| 2-5 years | 252 | 3.2% | 169 | 3.3% |
| 6-12 years | 1,367 | 17.2% | 883 | 17.0% |
| 13-17 years | 6,178 | 77.6% | 4,040 | 77.8% |
| Sex | | | | |
| Female | 4,192 | 55.0% | 2,714 | 54.6% |
| Male | 3,428 | 45.0% | 2,261 | 45.4% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 69 | 0.9% | 43 | 0.9% |
| Asian | **** | **** | * * * * * | * * * * * |
| Black or African American | 599 | 7.9% | 377 | 7.6% |
| Native Hawaiian or Other Pacific Islander | * * * * * | * * * * * | * * * * * | * * * * * |
| Unknown | 4,698 | 61.7% | 3,104 | 62.4% |
| White | 2,181 | 28.6% | 1,410 | 28.3% |
| Hispanic origin | | | | |
| Yes | 799 | 10.5% | 467 | 9.4% |
| No | 2,735 | 35.9% | 1,743 | 35.0% |
| Unknown | 4,086 | 53.6% | 2,765 | 55.6% |
| Year | | | | |
| 2008 | 275 | 3.5% | 213 | 4.1% |
| 2009 | 383 | 4.8% | 286 | 5.5% |
| 2010 | 362 | 4.5% | 279 | 5.4% |
| 2011 | 327 | 4.1% | 270 | 5.2% |
| 2012 | 293 | 3.7% | 232 | 4.5% |
| 2013 | 286 | 3.6% | 224 | 4.3% |
| 2014 | 435 | 5.5% | 352 | 6.8% |
| 2015 | 755 | 9.5% | 559 | 10.8% |
| 2016 | 1,170 | 14.7% | 937 | 18.0% |
| 2017 | 1,506 | 18.9% | 1,154 | 22.2% |
| 2018 | 1,379 | 17.3% | 283 | 5.4% |
| 2019 | 318 | 4.0% | 254 | 4.9% |
| 2020 | 254 | 3.2% | 127 | 2.4% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | 198 | 2.5% | 24 | 0.5% |
| 2022 | 21 | 0.3% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.8 | 1.5 | 0.8 | 1.4 |
| Hypertension | 1,568 | 19.7% | 1,018 | 19.6% |
| Hemangioma | 11 | 0.1% | **** | **** |
| Heart Failure | 226 | 2.8% | 137 | 2.6% |
| Congenital Heart Disease | 830 | 10.4% | 557 | 10.7% |
| Atrial Fibrillation | 81 | 1.0% | 54 | 1.0% |
| Long QT Syndrome | 81 | 1.0% | 53 | 1.0% |
| Other Cardiac Arrhythmias | 2,790 | 35.0% | 1,725 | 33.2% |
| Cardiac Arrhythmias (Composite) | 2,839 | 35.7% | 1,757 | 33.8% |
| Pulmonary Hypertension | 61 | 0.8% | 41 | 0.8% |
| Cardiomyopathy | 350 | 4.4% | 213 | 4.1% |
| Coronary Artery Disease | 153 | 1.9% | 102 | 2.0% |
| Portal Hypertension | 17 | 0.2% | **** | **** |
| Anxiety Disorder | 1,245 | 15.6% | 820 | 15.8% |
| Tremor | 70 | 0.9% | 45 | 0.9% |
| Migraine | 893 | 11.2% | 607 | 11.7% |
| Thyrotoxicosis | 135 | 1.7% | 91 | 1.8% |
| Burns | 17 | 0.2% | 13 | 0.3% |
| Glaucoma | 19 | 0.2% | 16 | 0.3% |
| Autism | 198 | 2.5% | 113 | 2.2% |
| Marfan's Syndrome | 36 | 0.5% | 23 | 0.4% |
| Pheochromocytoma/Paraganglioma | **** | **** | **** | **** |
| Diabetes | 229 | 2.9% | 151 | 2.9% |
| Any of the above health characteristics (excluding | 5 700 | 74 70/ | 2 600 | 74.00/ |
| <i>combined comorbidity score)</i> None of the above health characteristics <i>(excluding</i> | 5,708 | 71.7% | 3,690 | 71.0% |
| combined comorbidity score) | 2,254 | 28.3% | 1,504 | 29.0% |
| Hypoglycemia (Day 0) | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) | 41 | 0.5% | 27 | 0.5% |
| Hypoglycemia (3-6 Months) | 34 | 0.4% | 29 | 0.6% |
| Hypoglycemia (6-12 Months) | 37 | 0.5% | 30 | 0.6% |
| Hypoglycemia (Day 0) and Diabetes | **** | **** | * * * * * | **** |
| Hypoglycemia (0-3 Months) and Diabetes | **** | **** | * * * * * | **** |
| Hypoglycemia (3-6 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Diabetes | * * * * * | **** | * * * * * | **** |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|--|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Hypoglycemia (Day 0) and No Diabetes | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and No Diabetes | **** | **** | **** | **** | |
| Hypoglycemia (3-6 Months) and No Diabetes | 29 | 0.4% | 26 | 0.5% | |
| Hypoglycemia (6-12 Months) and No Diabetes | 29 | 0.4% | 25 | 0.5% | |
| Hypoglycemia (Day 0) and Any Metoprolol | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 41 | 0.5% | 27 | 0.5% | |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 34 | 0.4% | 29 | 0.6% | |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 37 | 0.5% | 30 | 0.6% | |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Selective Beta Blockers | 7,962 | 100.0% | 5,194 | 100.0% | |
| Non-Selective Beta Blockers | **** | **** | **** | **** | |
| Any Metoprolol | 7,962 | 100.0% | 5,194 | 100.0% | |
| Metoprolol (Extended Release) | 47 | 0.6% | 37 | 0.7% | |
| Metoprolol (Regular) | 7,962 | 100.0% | 5,194 | 100.0% | |
| Any Propranolol | * * * * | **** | **** | **** | |
| Propranolol (Extended Release) | **** | **** | **** | **** | |
| Propranolol (Regular) | **** | **** | **** | **** | |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% | |
| Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Atenolol | * * * * * | **** | **** | **** | |
| Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Carvedilol | **** | **** | **** | **** | |
| Labetalol | 0 | 0.0% | 0 | 0.0% | |
| Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Nebivolol | **** | **** | **** | **** | |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|---------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | **** | **** | **** | **** |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 1,568 | 19.7% | 1,018 | 19.6% |
| Hypertension and Metoprolol (Extended Release) | 20 | 0.3% | 17 | 0.3% |
| Hypertension and Metoprolol (Regular) | 1,568 | 19.7% | 1,018 | 19.6% |
| Hypertension and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 11 | 0.1% | **** | **** |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 11 | 0.1% | **** | **** |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|---|--|---|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Release) Long QT Syndrome and Propranolol (Regular) Long QT Syndrome and Acebutolol Long QT Syndrome and Atenolol Long QT Syndrome and Betaxolol | 81 0 81 0 0 0 0 0 0 | 1.0% 0.0% 1.0% 0.0% 0.0% 0.0% 0.0% 0.0% | 53 0 53 0 0 0 0 0 0 0 0 | 1.0% 0.0% 1.0% 0.0% 0.0% 0.0% 0.0% 0.0% |
| Long QT Syndrome and Bisoprolol Long QT Syndrome and Carvedilol | U **** | 0.0% | U **** | 0.0% |
| Long QT Syndrome and Labetalol Long QT Syndrome and Nadolol Long QT Syndrome and Nebivolol Long QT Syndrome and Pindolol Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | 0 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% 0.0% | 0 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| Unique patients 139,518 N/A 87,789 N/A Episodes 147,338 100.0% 92,518 100.0% Demographic Characteristics 12.0 6.1 12.2 5.9 Age (years) 12.0 6.1 12.2 5.9 O-1 years 25,774 17.5% 15,292 16.5% 2-5 years 3,182 2.2% 1,994 2.2% 6-12 years 25,675 17.4% 16,784 18.1% 13-17 years 92,707 62.9% 58,448 63.2% Sex 54,257 61.8% Male 87,050 62.4% 54,257 61.8% Male 1,364 1.0% 863 1.0% Asian 1,141 0.8% 660 0.8% | | Beta | Blockers | | ost-Index Enrollment Jirement) |
|--|---|-------------|----------|-------------|-----------------------------------|
| Unique patients 139,518 N/A 87,789 N/A Episodes 147,338 100.0% 92,518 100.0% Demographic Characteristics | | | Percent/ | | Percent/ |
| Episodes 147,338 100.0% 92,518 100.0% Demogribi Characteristic | Patient Characteristics ^{1,2} | Number/Mean | | Number/Mean | Standard Deviation ³ |
| Demographic Characteristics 12.0 6.1 12.2 5.9 Age - | Unique patients | 139,518 | N/A | 87,789 | N/A |
| Age (years) 12.0 6.1 12.2 5.9 Age -< | Episodes | 147,338 | 100.0% | 92,518 | 100.0% |
| No No 24^{e1} 25,77417.5%15,29216.5%2-5 years3,1822.2%16,78418.1%3-17 years25,67517.4%16,78418.1%3-17 years25,0750.2.9%58,44863.2%Sex </td <td>Demographic Characteristics</td> <td></td> <td></td> <td></td> <td></td> | Demographic Characteristics | | | | |
| 0-1 years25,77417.5%15,29216.5%2-5 years3,1822.2%1,9942.2%6-12 years25,67517.4%16.78418.1%13-17 years29,67517.4%16.7846.3213-17 years29,776.2.9%58,4486.32SevFemale87,0506.2.4%54,2576.1.8%Male52,46837.6%33,53238.2%American Indian or Alaska Native1,3641.0%8631.0%Asian1,4140.8%6.600.8%Black or African American6,9415.0%4,2954.9%Native Hawaiian or Other Pacific Islander1870.1%1150.1%Unknown91,22865.3%58,14066.2%No44,43531.8%26,93630.7%Unknown13,6429.8%8,1699.3%No44,43531.8%26,93630.7%Vear20094,4413.0%3.3813.7%20104,4443.0%3.3813.7%20114,5063.1%3.3923.6%20126,6203.1%3.5924.1%20148,3765.7%6.5777.1%201514,6609.5%10.59211.4%201621,73914.8%20,7622.5%201826,81518.2%5.4415.9% | Age (years) | 12.0 | 6.1 | 12.2 | 5.9 |
| 2-5 years 3,182 2.2% 1,994 2.2% 6-12 years 25,675 17.4% 16,784 18.1% 13-17 years 92,707 62.9% 58,448 63.2% Sex | Age | | | | |
| 6-12 years25,67517.4%16,78418.1%13-17 years92,70762.9%58,44863.2%Sex********************************* | 0-1 years | 25,774 | 17.5% | 15,292 | 16.5% |
| 13.17 years 92,707 62.9% 58,448 63.2% Sex Female 87,050 62.4% 54,257 61.8% Male 52,468 37.6% 33,532 38.2% Marcican Indian or Alaska Native 1,364 1.0% 863 1.0% Asian 1,141 0.8% 660 0.8% Black or African American 6,941 5.0% 4,295 4.9% Native Hawailan or Other Pacific Islander 187 0.1% 115 0.1% Unknown 91,128 65.3% 58,140 662.2% White 35,642 9.8% 8,169 9.3% Ibanor 13,642 9.8% 8,169 9.3% Iuknown 13,642 9.8% 8,169 9.3% Unknown 81,441 58.4% 52,684 60.0% Ver 13,642 9.8% 3,813 3.7% 2008 3,434 2.3% 2,635 2.8% 2009 4,441 3.0% 3,381 3.7% 2011 4,506 3.1% | 2-5 years | 3,182 | 2.2% | 1,994 | 2.2% |
| Sex Female 87,050 62.4% 54,257 61.8% Male 52,468 37.6% 33,532 38.2% American Indian or Alaska Native 1,364 1.0% 863 1.0% Asian 1,141 0.8% 660 0.8% Black or African American 6,941 5.0% 4.295 4.9% Native Hawaiian or Other Pacific Islander 187 0.1% 115 0.1% Unknown 91,128 65.3% 58,140 662% White 38,757 27.8% 23,716 27.0% Hispanic origin 1 13642 9.8% 8,169 9.3% No 44,435 31.8% 26,936 60.0% Unknown 81,441 58.4% 52,684 60.0% Vear 13,642 9.8% 8,169 9.3% Outs 3,434 2.3% 2,635 2.8% 2008 3,434 2.3% 3,636 2.8% 2010 4,620< | 6-12 years | 25,675 | 17.4% | 16,784 | 18.1% |
| Fenale 87,050 62.4% 54,257 61.8% Male 52,468 37.6% 33,532 38.2% Race ⁴ | 13-17 years | 92,707 | 62.9% | 58,448 | 63.2% |
| Male 52,468 37.6% 33,532 38.2% Race ⁴ 1,364 1.0% 863 1.0% Asian 1,141 0.8% 660 0.8% Black or African American 6,941 5.0% 4,295 4.9% Native Hawaiian or Other Pacific Islander 187 0.1% 6.2% 6.2% Unknown 91,128 65.3% 88,140 6.2% White 38,757 27.8% 8,616 2.7% Hypanic origin 13,642 9.8% 8,169 9.3% No 44,435 31.8% 26,936 30.7% Unknown 81,441 3.0% 3,281 6.6% Vear 3 3,434 2.3% 2,635 2.8% 2008 3,434 3.0% 3,381 3.7% 2010 4,441 3.0% 3,381 3.7% 2011 4,506 3.1% 3,590 3.9% 2012 4,620 3.1% 3,590 | Sex | | | | |
| Rarei 1,364 1.0% 863 1.0% Asian 1,141 0.8% 660 0.8% Black or African American 6,941 5.0% 4,295 4.9% Native Hawaiian or Other Pacific Islander 187 0.1% 115 0.1% Unknown 91,128 65.3% 58,140 66.2% White 38,57 27.8% 23,716 23,87 Hispanic origin 1 58,440 66.2% 30,7% No 44,435 31.8% 26,636 30,7% Unknown 81,441 58,4% 52,684 60.0% Unknown 81,441 3.0% 3,290 3.6% Ver 2008 3,434 2.3% 2,635 2.8% 2010 4,441 3.0% 3,381 3.7% 2011 4,620 3.1% 3,590 3.9% 2012 4,620 3.1% 3,590 3.9% 2013 5,023 3,4% 3,66 | Female | 87,050 | 62.4% | 54,257 | 61.8% |
| American Indian or Alaska Native1,3641.0%8631.0%Asian1,1410.8%6600.8%Black or African American6,9415.0%4,2954.9%Native Hawaiian or Other Pacific Islander1870.1%1150.1%Unknown91,12865.3%58,14066.2%White38,75727.8%23,71627.0%Hispanic origin7786.330.7%Yes13,6429.8%8,1699.3%No44,43531.8%26,93630.7%Unknown81,44158.4%52,68460.0%Year20083,4342.3%2,6352.8%20094,4413.0%3,2903.6620104,4443.0%3,2903.6%20114,5063.1%3,3923.7%20136,6273.1%3,5903.9%20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,7662.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | Male | 52,468 | 37.6% | 33,532 | 38.2% |
| Asian1,1410.8%6600.8%Black or African American6,9415.0%4,2954.9%Native Hawaiian or Other Pacific Islander1870.1%1150.1%Unknown91,12865.3%58,14066.2%White38,75727.8%23,71627.0%Hispanic origin13,6429.8%8,1699.3%No44,43531.8%26,93630.7%Unknown81,44158.4%52,68460.0%Vear20083,4342.3%2,6352.8%20094,4413.0%3,2903.6%20104,4443.0%3,3813.7%20114,5063.1%3,5903.9%201320,233.4%3,7664.1%201450,233.4%3,7664.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201826,81518.2%5,4815.9% | Race ⁴ | | | | |
| Black or African American 6,941 5.0% 4,295 4,9% Native Hawaiian or Other Pacific Islander 187 0.1% 115 0.1% Unknown 91,128 65.3% 58,140 66.2% White 38,757 27.8% 23,716 27.0% Hispanic origin 31,642 9.8% 8,169 9.3% No 44,435 31.8% 26,936 30.7% Unknown 81,441 58.4% 52,684 60.0% Year 2008 3,434 2.3% 2,635 2.8% 2010 4,441 3.0% 3,290 3.6% 2011 4,506 3.1% 3,392 3.7% 2012 4,620 3.1% 3,590 3.9% 2013 5,023 3.4% 3,766 4.1% 2014 8,376 5.7% 6,577 7.1% 2015 14,060 9.5% 10,592 11.4% 2016 21,739 14.8% 17,888 </td <td>American Indian or Alaska Native</td> <td>1,364</td> <td>1.0%</td> <td>863</td> <td>1.0%</td> | American Indian or Alaska Native | 1,364 | 1.0% | 863 | 1.0% |
| Native Hawaiian or Other Pacific Islander 187 0.1% 115 0.1% Unknown 91,128 65.3% 58,140 66.2% White 38,757 27.8% 23,716 27.0% Hispanic origin 13,642 9.8% 8,169 9.3% No 44,435 31.8% 26,936 30.7% Unknown 81,441 58.4% 52,684 60.0% Year 2008 3,434 2.3% 2,635 2.8% 2009 4,441 3.0% 3,290 3.6% 2010 4,620 3.1% 3,392 3.7% 2011 4,506 3.1% 3,590 3.9% 2012 4,620 3.1% 3,590 3.9% 2013 5,023 3.4% 3,766 4.1% 2014 8,376 5.7% 6,577 7.1% 2015 14,060 9.5% 10,592 11.4% 2016 21,739 14.8% 20,776 22.5% | Asian | 1,141 | 0.8% | 660 | 0.8% |
| Unknown91,12865.3%58,14066.2%White38,75727.8%23,71627.0%Hispanic origin13,6429.8%8,1699.3%No44,43531.8%26,93630.7%Unknown81,44158.4%52,6840.0%Year20083,4342.3%2,6352.8%20094,4413.0%3,2903.6%20104,4443.0%3,3813.7%20114,5063.1%3,3923.7%20124,6203.1%3,5903.9%20135,0233.4%3,7664.1%20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | Black or African American | 6,941 | 5.0% | 4,295 | 4.9% |
| White38,75727.8%23,71627.0%Hispanic originYes13,6429.8%8,1699.3%No44,43531.8%26,93630.7%Unknown8,14458.4%52,68460.0%Year32,3732,6352.8%20083,4342.3%2,6352.8%20094,4413.0%3,2903.6%20104,4443.0%3,3813.7%20114,5063.1%3,3923.7%20124,6203.1%3,5903.9%20135,0233.4%3,7664.1%20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,76622.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | Native Hawaiian or Other Pacific Islander | 187 | 0.1% | 115 | 0.1% |
| Yes 13,642 9.8% 8,169 9.3% No 44,435 31.8% 26,936 30.7% Unknown 81,441 58.4% 52,684 60.0% Yer 7 7 7 7 7 7 2008 3,434 2.3% 2,635 2.8% 3 7 2009 4,441 3.0% 3,290 3.6% 3 3 7 2010 4,444 3.0% 3,381 3.7% 3 3 3 7 2011 4,506 3.1% 3,392 3.7% 3 3 3 3 3 2012 4,620 3.1% 3,590 3.9% 3 | Unknown | 91,128 | 65.3% | 58,140 | 66.2% |
| Yes13,6429.8%8,1699.3%No44,43531.8%26,93630.7%Unknown81,44158.4%52,68460.0%Year77720083,4342.3%2,6352.8%20094,4413.0%3,2903.6%20104,4443.0%3,3813.7%20114,5063.1%3,3923.7%20124,6203.1%3,5903.9%20135,0233.4%3,7664.1%20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201826,81518.2%5,8776,4% | White | 38,757 | 27.8% | 23,716 | 27.0% |
| No44,43531.8%26,93630.7%Unknown81,44158.4%52,68460.0%Year70083,4342.3%2,6352.8%20094,4413.0%3,2903.6%20104,4443.0%3,3813.7%20114,5063.1%3,3923.7%20124,6203.1%3,5903.9%20135,0233.4%3,7664.1%20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | Hispanic origin | | | | |
| Unknown81,44158.4%52,68460.0%Year20083,4342.3%2,6352.8%20094,4413.0%3,2903.6%20104,4443.0%3,3813.7%20114,5063.1%3,3923.7%20124,6203.1%3,5903.9%20135,0233.4%3,7664.1%20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201820,7685.2%5,8776,4% | Yes | 13,642 | 9.8% | 8,169 | 9.3% |
| Year20083,4342.3%2,6352.8%20094,4413.0%3,2903.6%20104,4443.0%3,3813.7%20114,5063.1%3,3923.7%20124,6203.1%3,5903.9%20135,0233.4%3,7664.1%20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | No | 44,435 | 31.8% | 26,936 | 30.7% |
| 20083,4342.3%2,6352.8%20094,4413.0%3,2903.6%20104,4443.0%3,3813.7%20114,5063.1%3,3923.7%20124,6203.1%3,5903.9%20135,0233.4%3,7664.1%20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | Unknown | 81,441 | 58.4% | 52,684 | 60.0% |
| 20094,4413.0%3,2903.6%20104,4443.0%3,3813.7%20114,5063.1%3,3923.7%20124,6203.1%3,5903.9%20135,0233.4%3,7664.1%20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%20,77622.5%201727,17318.2%5,4815.9%20197,6885.2%5,8776.4% | Year | | | | |
| 20104,4443.0%3,3813.7%20114,5063.1%3,3923.7%20124,6203.1%3,5903.9%20135,0233.4%3,7664.1%20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | 2008 | 3,434 | 2.3% | 2,635 | 2.8% |
| 20114,5063.1%3,3923.7%20124,6203.1%3,5903.9%20135,0233.4%3,7664.1%20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | 2009 | 4,441 | 3.0% | 3,290 | 3.6% |
| 20124,6203.1%3,5903.9%20135,0233.4%3,7664.1%20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | 2010 | 4,444 | 3.0% | 3,381 | 3.7% |
| 20135,0233.4%3,7664.1%20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | 2011 | 4,506 | 3.1% | 3,392 | 3.7% |
| 20148,3765.7%6,5777.1%201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | 2012 | 4,620 | 3.1% | 3,590 | 3.9% |
| 201514,0609.5%10,59211.4%201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | 2013 | 5,023 | 3.4% | 3,766 | 4.1% |
| 201621,73914.8%17,88819.3%201727,17318.4%20,77622.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | 2014 | 8,376 | 5.7% | 6,577 | 7.1% |
| 201727,17318.4%20,77622.5%201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | 2015 | 14,060 | 9.5% | 10,592 | 11.4% |
| 201826,81518.2%5,4815.9%20197,6885.2%5,8776.4% | 2016 | 21,739 | 14.8% | 17,888 | 19.3% |
| 2019 7,688 5.2% 5,877 6.4% | 2017 | 27,173 | 18.4% | 20,776 | 22.5% |
| | 2018 | 26,815 | 18.2% | 5,481 | 5.9% |
| 2020 6,840 4.6% 4,699 5.1% | 2019 | 7,688 | 5.2% | 5,877 | 6.4% |
| | 2020 | 6,840 | 4.6% | 4,699 | 5.1% |



| | Beta | Blockers | - | ost-Index Enrollment iirement) |
|--|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | 7,639 | 5.2% | 574 | 0.6% |
| 2022 | 540 | 0.4% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.5 | 0.9 | 0.5 | 0.9 |
| Hypertension | 3,869 | 2.6% | 2,507 | 2.7% |
| Hemangioma | 15,407 | 10.5% | 9,190 | 9.9% |
| Heart Failure | 1,100 | 0.7% | 661 | 0.7% |
| Congenital Heart Disease | 9,814 | 6.7% | 5,874 | 6.3% |
| Atrial Fibrillation | 100 | 0.1% | 64 | 0.1% |
| Long QT Syndrome | 854 | 0.6% | 501 | 0.5% |
| Other Cardiac Arrhythmias | 14,490 | 9.8% | 8,765 | 9.5% |
| Cardiac Arrhythmias (Composite) | 14,960 | 10.2% | 9,031 | 9.8% |
| Pulmonary Hypertension | 681 | 0.5% | 368 | 0.4% |
| Cardiomyopathy | 764 | 0.5% | 441 | 0.5% |
| Coronary Artery Disease | 210 | 0.1% | 143 | 0.2% |
| Portal Hypertension | 213 | 0.1% | 139 | 0.2% |
| Anxiety Disorder | 38,644 | 26.2% | 23,335 | 25.2% |
| Tremor | 3,551 | 2.4% | 2,225 | 2.4% |
| Migraine | 37,030 | 25.1% | 24,426 | 26.4% |
| Thyrotoxicosis | 2,392 | 1.6% | 1,519 | 1.6% |
| Burns | 384 | 0.3% | 243 | 0.3% |
| Glaucoma | 308 | 0.2% | 186 | 0.2% |
| Autism | 5,806 | 3.9% | 3,622 | 3.9% |
| Marfan's Syndrome | 87 | 0.1% | 48 | 0.1% |
| Pheochromocytoma/Paraganglioma | 66 | 0.0% | 43 | 0.0% |
| Diabetes | 1,078 | 0.7% | 657 | 0.7% |
| Any of the above health characteristics (excluding combined comorbidity score) None of the above health characteristics (excluding | 106,268 | 72.1% | 66,396 | 71.8% |
| combined comorbidity score) | 41,070 | 27.9% | 26,122 | 28.2% |
| Hypoglycemia (Day 0) | 88 | 0.1% | 47 | 0.1% |
| Hypoglycemia (0-3 Months) | 473 | 0.3% | 303 | 0.3% |
| Hypoglycemia (3-6 Months) | 329 | 0.2% | 235 | 0.3% |
| Hypoglycemia (6-12 Months) | 427 | 0.3% | 369 | 0.4% |
| Hypoglycemia (Day 0) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Diabetes | 48 | 0.0% | 27 | 0.0% |
| Hypoglycemia (3-6 Months) and Diabetes | 42 | 0.0% | 33 | 0.0% |
| Hypoglycemia (6-12 Months) and Diabetes | 44 | 0.0% | 42 | 0.0% |



| typoglycemia (Day 0) and No Diabetes 86 0.1% 45 0.0% typoglycemia (J-3 Months) and No Diabetes 287 0.2% 202 0.2% typoglycemia (J-2 Months) and No Diabetes 283 0.3% 327 0.4% typoglycemia (J-2 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (J-3 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (J-4 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (J-4 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (J-6 Months) and Any Propranolol 473 0.3% 303 0.3% typoglycemia (J-6 Months) and Any Propranolol 427 0.3% 369 0.4% typoglycemia (J-6 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (J-6 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (J-6 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (J-6 Months) and Atenolol 0 0.0% | | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|--|-------------|---------------------------------|--|---------------------------------|
| typoglycemia (Day 0) and No Diabetes 86 0.1% 45 0.0% typoglycemia (J-3 Months) and No Diabetes 287 0.2% 202 0.2% typoglycemia (J-2 Months) and No Diabetes 283 0.3% 327 0.4% typoglycemia (J-2 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (J-3 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (J-4 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (J-6 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (J-6 Months) and Any Propranolol 473 0.3% 303 0.3% typoglycemia (J-6 Months) and Any Propranolol 427 0.3% 369 0.4% typoglycemia (J-6 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (J-6 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (J-6 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (J-6 Months) and Atenolol 0 0.0% | | | Percent/ | | Percent/ |
| Arroglycemia (0-3 Months) and No Diabetes 425 0.3% 276 0.3% 4ypoglycemia (3-6 Months) and No Diabetes 287 0.2% 202 0.2% typoglycemia (0-3 Months) and No Diabetes 383 0.3% 327 0.4% typoglycemia (0-3 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Any Propranolol 473 0.3% 303 0.3% typoglycemia (3-6 Months) and Any Propranolol 427 0.3% 369 0.4% typoglycemia (3-6 Months) and Any Propranolol 427 0.3% 369 0.4% typoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Madolol 0 | Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| And Section And Section And Section And Section Appoglycemia [6:3 Months] and No Diabetes 383 0.3% 327 0.4% Appoglycemia [0:3 Months] and Any Metoprolol 0 0.0% 0 0.0% Appoglycemia [0:3 Months] and Any Metoprolol 0 0.0% 0 0.0% Appoglycemia [0:3 Months] and Any Metoprolol 0 0.0% 0 0.0% Appoglycemia [0:3 Months] and Any Propranolol 488 0.1% 47 0.1% Appoglycemia [0:3 Months] and Any Propranolol 427 0.3% 303 0.3% Appoglycemia [0:3 Months] and Any Propranolol 427 0.3% 369 0.4% Appoglycemia [0:3 Months] and Atenolol 0 0.0% 0 0.0% Appoglycemia [0:3 Months] and Atenolol 0 0.0% 0 0.0% Appoglycemia [0:3 Months] and Atenolol 0 0.0% 0 0.0% Appoglycemia [0:4 Months] and Atenolol 0 0.0% 0 0.0% Appoglycemia [0:5 Months] and Atenolol 0 0.0% 0 | Hypoglycemia (Day 0) and No Diabetes | 86 | 0.1% | 45 | 0.0% |
| Npoglycenia (6-12 Months) and No Diabetes 383 0.3% 327 0.4% 4ypoglycenia (0-3 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycenia (0-3 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycenia (3-5 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycenia (3-5 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycenia (3-5 Months) and Any Propranolol 473 0.3% 303 0.3% typoglycenia (6-12 Months) and Any Propranolol 427 0.3% 369 0.0% typoglycenia (5-12 Months) and Any Propranolol 427 0.3% 369 0.0% typoglycenia (5-12 Months) and Atenolol 0 0.0% 0 0.0% typoglycenia (5-2 Months) and Atenolol 0 0.0% 0 0.0% typoglycenia (5-12 Months) and Atenolol 0 0.0% 0 0.0% typoglycenia (5-12 Months) and Atenolol 0 0.0% 0 0.0% typoglycenia (5-3 Months) and Nadolol 0 | Hypoglycemia (0-3 Months) and No Diabetes | 425 | 0.3% | 276 | 0.3% |
| Typoglycemia (Day 0) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (G-3 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (G-2 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (G-2 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (G-3 Months) and Any Propranolol 88 0.3% 303 0.3% typoglycemia (G-3 Months) and Any Propranolol 229 0.2% 225 0.3% typoglycemia (G-12 Months) and Any Propranolol 227 0.3% 369 0.4% typoglycemia (G-3 Months) and Any Propranolol 0 0.0% 0 0.0% typoglycemia (G-3 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (G-3 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (G-3 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (G-3 Months) and Madolol 0 0.0% 0 0.0% typoglycemia (G-12 Months) and Madolol 0 0.0% </td <td>Hypoglycemia (3-6 Months) and No Diabetes</td> <td>287</td> <td>0.2%</td> <td>202</td> <td>0.2%</td> | Hypoglycemia (3-6 Months) and No Diabetes | 287 | 0.2% | 202 | 0.2% |
| typoglycemia (0-3 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (6-12 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (6-12 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (Day 0) and Any Propranolol 88 0.1% 47 0.1% typoglycemia (0-3 Months) and Any Propranolol 329 0.2% 235 0.3% typoglycemia (0-3 Months) and Any Propranolol 427 0.3% 369 0.4% typoglycemia (0-3 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (0-3 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Nadolol 0 0.0% <td< td=""><td>Hypoglycemia (6-12 Months) and No Diabetes</td><td>383</td><td>0.3%</td><td>327</td><td>0.4%</td></td<> | Hypoglycemia (6-12 Months) and No Diabetes | 383 | 0.3% | 327 | 0.4% |
| Nypoglycemia (3-6 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Any Metoprolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Any Propranolol 88 0.1% 47 0.1% typoglycemia (3-6 Months) and Any Propranolol 229 0.2% 235 0.3% typoglycemia (5-12 Months) and Any Propranolol 229 0.2% 235 0.3% typoglycemia (5-12 Months) and Any Propranolol 0 0.0% 0 0.0% typoglycemia (5-12 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (5-12 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (5-12 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Madolol 0 0.0% 0 0.0% typoglycemia (3-6 Months) and Nadolol 0 0.0% | Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Number of the second | Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Number of the second | Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Propranolol 473 0.3% 303 0.3% Hypoglycemia (3-6 Months) and Any Propranolol 329 0.2% 235 0.3% Hypoglycemia (6-12 Months) and Any Propranolol 427 0.3% 369 0.4% Hypoglycemia (0a) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (5-12 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (5-12 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (5-12 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (5-12 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (5-12 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (5-12 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (5-12 Months) and Nadolol 0 0.0% 0 0.0% Non-Selective Beta Blockers 147.338 100.0% 15 | Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Number Number Number Number Hypoglycemia (3-6 Months) and Any Propranolol 427 0.3% 369 0.4% Hypoglycemia (Day 0) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (0-3 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Von-Selective Beta Blockers 31 0.0% 24 0.0% Nany Metoprolol <t< td=""><td>Hypoglycemia (Day 0) and Any Propranolol</td><td>88</td><td>0.1%</td><td>47</td><td>0.1%</td></t<> | Hypoglycemia (Day 0) and Any Propranolol | 88 | 0.1% | 47 | 0.1% |
| And the set of the se | Hypoglycemia (0-3 Months) and Any Propranolol | 473 | 0.3% | 303 | 0.3% |
| Hypoglycemia (Day 0) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (0-3 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (6-12 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (0-3 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (0-3 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (6-12 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (6-12 Months) and Nadolol 0 0.0% 0 0.0% Selective Beta Blockers 31 0.0% 24 0.0% Any Metoprolol 18 0.0% 15 0.0% Any Propranolol 147,338 100.0% 92,518 100.0% Propranolol (Regular) 129,011 87.6% 80.520 87.0% Propranolol (Regular) < | Hypoglycemia (3-6 Months) and Any Propranolol | 329 | 0.2% | 235 | 0.3% |
| Number Number Number Number Hypoglycemia (3-3 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (6-12 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (Day 0) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (6-12 Months) and Nadolol 0 0.0% 0 0.0% Selective Beta Blockers 31 0.0% 24 0.0% Non-Selective Beta Blockers 147,338 100.0% 15 0.0% Any Metoprolol 18 0.0% 92,518 100.0% Propranolol (Regular) 147,338 100.0% 92,518 10.0% Propranolol (Regular) 129,011 87 | Hypoglycemia (6-12 Months) and Any Propranolol | 427 | 0.3% | 369 | 0.4% |
| Hypoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (6-12 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (1-12 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (0-3 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Selective Beta Blockers 31 0.0% 24 0.0% Non-Selective Beta Blockers 147,338 100.0% 92,518 100.0% Any Propranolol 147,338 100.0% 92,518 100.0% Propr | Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol 0 0.0% 0 0.0% Hypoglycemia (0-3 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (0-3 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (6-12 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (6-12 Months) and Nadolol 0 0.0% 0 0.0% Selective Beta Blockers 31 0.0% 92,518 100.0% Non-Selective Beta Blockers 147,338 100.0% 92,518 100.0% Any Metoprolol 18 0.0% 92,518 100.0% Any Propranolol (Regular) 147,338 100.0% 92,518 10.0% Propranolol (Regular) 129,011 87.6% 80,520 87.0% Propranolol (Regular) 2,463 1.7% 1,409 1.5% Acebutolol | Hypoglycemia (0-3 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (Day 0) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (D-3 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (G-12 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (G-12 Months) and Nadolol 0 0.0% 0 0.0% Selective Beta Blockers 31 0.0% 24 0.0% Non-Selective Beta Blockers 147,338 100.0% 92,518 100.0% Non-Selective Beta Blockers 147,338 100.0% 92,518 100.0% Any Metoprolol (Regular) ****** ****** ****** ****** Any Propranolol (Extended Release) 16,281 11.1% 10,853 11.7% Propranolol (Regular) 2,463 1.7% 1,409 1.5% Acebutolol 0 0.0% 0 0.0% Acebutolol 0 0.0% 0 0.0% Acebutolol 0 0.0% | Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Aypoglycemia (0-3 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (6-12 Months) and Nadolol 0 0.0% 0 0.0% Idpoglycemia (6-12 Months) and Nadolol 0 0.0% 0 0.0% Selective Beta Blockers 31 0.0% 24 0.0% Non-Selective Beta Blockers 147,338 100.0% 24 0.0% Non-Selective Beta Blockers 147,338 100.0% 15 0.0% Metoprolol (Extended Release) ****** ****** ****** ****** Metoprolol (Regular) 147,338 100.0% 100.0% 100.0% Propranolol (Extended Release) 16,281 11.1% 10,853 11.7% Propranolol (Regular) 2,463 1.7% 1,409 1.5% Acebutolol 0 0.0% 0 0.0% Atenolol (Hemangeol) 13 0.0% 0 0.0% Bisoprolol 0 0. | Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 0.0% Hypoglycemia (6-12 Months) and Nadolol 0 0.0% 0 0.0% Selective Beta Blockers 31 0.0% 24 0.0% Non-Selective Beta Blockers 147,338 100.0% 92,518 100.0% Non-Selective Beta Blockers 147,338 0.0% 92,518 0.0% Any Metoprolol 18 0.0% 15 0.0% Metoprolol (Regular) ****** ****** ****** ****** Any Propranolol (Regular) 147,338 100.0% 92,518 100.0% Propranolol (Regular) 147,338 100.0% 92,518 100.0% Propranolol (Regular) 147,338 100.0% 92,518 100.0% Propranolol (Regular) 129,011 87.6% 80,520 87.0% Propranolol (Regular) 2,463 1.7% 1,409 1.5% Acebutolol 0 0.0% 0 0.0% 0.0% Sisoprolol 0 | Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol 0 0.0% 0.0% Selective Beta Blockers 31 0.0% 24 0.0% Non-Selective Beta Blockers 147,338 100.0% 92,518 100.0% Non-Selective Beta Blockers 147,338 0.0% 15 0.0% Any Metoprolol 18 0.0% 15 0.0% Metoprolol (Extended Release) ****** ****** ****** Any Propranolol (Regular) 147,338 100.0% 92,518 100.0% Propranolol (Regular) 129,011 87.6% 80,520 87.0% Acebutolol 0 0.0% 0 0.0% Acebutolol 0 0.0% 0 0.0% Sisoprolol 0 0.0% 0 0.0% | Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers 31 0.0% 24 0.0% Non-Selective Beta Blockers 147,338 100.0% 92,518 100.0% Any Metoprolol 18 0.0% 15 0.0% Metoprolol (Extended Release) ****** ****** ****** Metoprolol (Regular) ****** ****** ****** Any Propranolol 147,338 100.0% 92,518 100.0% Propranolol (Regular) ****** ****** ****** ****** Any Propranolol (Extended Release) 16,281 11.1% 10,853 11.7% Propranolol (Regular) 129,011 87.6% 80,520 87.0% Propranolol (Hemangeol) 2,463 1.7% 1,409 1.5% Acebutolol 0 0.0% 0 0.0% Bisoprolol 0.13 0.0% 0 0.0% Bisoprolol 0 0.0% 0 0.0% Carvedilol 0 0.0% 0 0.0% Atenolol | Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Non-Selective Beta Blockers 147,338 100.0% 92,518 100.0% Any Metoprolol 18 0.0% 15 0.0% Metoprolol (Extended Release) ***** ***** ***** ***** Metoprolol (Regular) ***** ***** ***** ***** Any Propranolol 147,338 100.0% 92,518 100.0% Propranolol (Regular) 147,338 100.0% 92,518 100.0% Propranolol (Extended Release) 16,281 11.1% 10,853 11.7% Propranolol (Regular) 2,463 1.7% 1,409 1.5% Acebutolol 0 0.0% 0 0.0% Acebutolol 0 0.0% 0 0.0% Betaxolol 0 0.0% 0 0.0% Carvedilol 0 0.0% 0 0.0% Betatolol 0 0.0% 0 0.0% Carvedilol 0 0.0% 0 0.0% Labetalol 0 | Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Any Metoprolol 18 0.0% 15 0.0% Metoprolol (Extended Release) ****** ****** ****** ****** Any Propranolol (Regular) ****** ****** ****** ****** Any Propranolol (Extended Release) 147,338 100.0% 92,518 100.0% Propranolol (Extended Release) 16,281 11.1% 10,853 11.7% Propranolol (Regular) 129,011 87.6% 80,520 87.0% Propranolol (Hemangeol) 2,463 1.7% 1,409 1.5% Acebutolol 0 0.0% 0 0.0% Atenolol 13 0.0% 0 0.0% Bataxolol 0 0.0% 0 0.0% Carvedilol 0 0.0% 0 0.0% Carvedilol 0 0.0% 0 0.0% | Selective Beta Blockers | 31 | 0.0% | 24 | 0.0% |
| Metoprolol (Extended Release) ***** ***** ***** ***** Metoprolol (Regular) ***** ***** ***** ***** Any Propranolol 147,338 100.0% 92,518 100.0% Propranolol (Extended Release) 16,281 11.1% 10,853 11.7% Propranolol (Regular) 129,011 87.6% 80,520 87.0% Propranolol (Hemangeol) 2,463 1.7% 1,409 1.5% Acebutolol 0 0.0% 0 0.0% Atenolol 13 0.0% 0 0.0% Bisoprolol 0 0.0% 0 0.0% Carvedilol 0 0.0% 0 0.0% Abetalol 0 0.0% 0 0.0% | Non-Selective Beta Blockers | 147,338 | 100.0% | 92,518 | 100.0% |
| Metoprolol (Regular) ***** ***** ***** ***** ***** Any Propranolol 147,338 100.0% 92,518 100.0% Propranolol (Extended Release) 16,281 11.1% 10,853 11.7% Propranolol (Regular) 129,011 87.6% 80,520 87.0% Propranolol (Hemangeol) 2,463 1.7% 1,409 1.5% Acebutolol 0 0.0% 0 0.0% Atenolol 13 0.0% ****** ****** Betaxolol 0 0.0% 0 0.0% Carvedilol 7 0.0% 0 0.0% Adelol 0.0% 0 0.0% 0 0.0% | Any Metoprolol | 18 | 0.0% | 15 | 0.0% |
| Any Propranolol 147,338 100.0% 92,518 100.0% Propranolol (Extended Release) 16,281 11.1% 10,853 11.7% Propranolol (Regular) 129,011 87.6% 80,520 87.0% Propranolol (Hemangeol) 2,463 1.7% 1,409 1.5% Acebutolol 0 0.0% 0 0.0% Atenolol 13 0.0% 0 0.0% Betaxolol 0 0.0% 0 0.0% Carvedilol 0 0.0% 0 0.0% Carvedilol 0 0.0% 0 0.0% Carvedilol ****** 0 0.0% 0.0% | Metoprolol (Extended Release) | **** | **** | **** | **** |
| Propranolol (Extended Release)16,28111.1%10,85311.7%Propranolol (Regular)129,01187.6%80,52087.0%Propranolol (Hemangeol)2,4631.7%1,4091.5%Acebutolol00.0%00.0%Acebutolol00.0%00.0%Atenolol130.0%**********Betaxolol00.0%00.0%Bisoprolol00.0%00.0%Carvedilol**********00.0%Labetalol00.0%00.0%Madolol******************** | Metoprolol (Regular) | **** | **** | **** | **** |
| Propranolol (Regular)129,01187.6%80,52087.0%Propranolol (Hemangeol)2,4631.7%1,4091.5%Acebutolol00.0%00.0%Atenolol130.0%**********Betaxolol00.0%00.0%Bisoprolol00.0%00.0%Carvedilol**********00.0%Labetalol00.0%00.0%Madolol******************** | Any Propranolol | 147,338 | 100.0% | 92,518 | 100.0% |
| Propranolol (Hemangeol) 2,463 1.7% 1,409 1.5% Acebutolol 0 0.0% 0 0.0% Atenolol 13 0.0% ***** ***** Betaxolol 0 0.0% 0 0.0% Bisoprolol 0 0.0% 0 0.0% Carvedilol ***** 0 0.0% Labetalol 0 0.0% 0 0.0% Nadolol ***** ***** ***** ***** | Propranolol (Extended Release) | 16,281 | 11.1% | 10,853 | 11.7% |
| Acebutolol00.0%00.0%Atenolol130.0%**********Betaxolol00.0%00.0%Bisoprolol00.0%00.0%Carvedilol*********00.0%Labetalol00.0%00.0%Nadolol******************** | Propranolol (Regular) | 129,011 | 87.6% | 80,520 | 87.0% |
| Atenolol 13 0.0% ***** ***** Betaxolol 0 0.0% 0 0.0% Bisoprolol 0 0.0% 0 0.0% Carvedilol ***** 0 0.0% Labetalol 0 0.0% 0 0.0% Vadolol ***** ***** ***** ***** ***** | Propranolol (Hemangeol) | 2,463 | 1.7% | 1,409 | 1.5% |
| Activitie 15 0.0% Betaxolol 0 0.0% 0 0.0% Bisoprolol 0 0.0% 0 0.0% Carvedilol ***** ***** 0 0.0% Labetalol 0 0.0% 0 0.0% Nadolol ***** ***** ***** ***** | Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Bisoprolol 0 0.0% 0 0.0% Carvedilol **** ***** 0 0.0% Labetalol 0 0.0% 0 0.0% Nadolol ***** ***** ***** ***** ***** | Atenolol | 13 | 0.0% | **** | **** |
| Carvedilol ***** 0 0.0% Labetalol 0 0.0% 0 0.0% Nadolol ***** ***** ***** ***** | Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Labetalol 0 0.0% 0 0.0% Nadolol **** ***** ***** ***** | Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Nadolol ***** **** **** **** | Carvedilol | **** | **** | 0 | 0.0% |
| | Labetalol | 0 | 0.0% | 0 | 0.0% |
| Nebivolol 0 0.0% 0 0.0% | Nadolol | **** | **** | **** | **** |
| | Nebivolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | • | ost-Index Enrollment µirement) |
|---|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Pindolol | **** | **** | **** | **** |
| Sotalol | 25 | 0.0% | 17 | 0.0% |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | **** | **** | **** | **** |
| Hypertension and Metoprolol (Extended Release) | **** | **** | **** | **** |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Any Propranolol | 3,869 | 2.6% | 2,507 | 2.7% |
| Hypertension and Propranolol (Extended Release) | 476 | 0.3% | 330 | 0.4% |
| Hypertension and Propranolol (Regular) | 3,387 | 2.3% | 2,175 | 2.4% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | **** | **** | **** | **** |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 15,407 | 10.5% | 9,190 | 9.9% |
| Hemangioma and Propranolol (Extended Release) | 24 | 0.0% | 16 | 0.0% |
| Hemangioma and Propranolol (Regular) | 13,128 | 8.9% | 7,873 | 8.5% |
| Hemangioma and Propranolol (Hemangeol) | 2,262 | 1.5% | 1,305 | 1.4% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollmen Requirement) | |
|--|--------------------|---|---|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol | 0 0 0 854 | 0.0% 0.0% 0.0% 0.6% | 0 0 501 | 0.0% 0.0% 0.0% 0.5% |
| Long QT Syndrome and Propranolol (Extended Release) | 42 | 0.0% | 29 | 0.0% |
| Long QT Syndrome and Propranolol (Regular) | 809 | 0.5% | 471 | 0.5% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol | **** | **** | **** | **** |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | | a Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 15,680 | N/A | 10,483 | N/A |
| Episodes | 16,281 | 100.0% | 10,853 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 15.4 | 2.2 | 15.3 | 2.2 |
| Age | | | | |
| 0-1 years | **** | **** | **** | **** |
| 2-5 years | **** | **** | **** | **** |
| 6-12 years | 2,259 | 13.9% | 1,520 | 14.0% |
| 13-17 years | 13,992 | 85.9% | 9,311 | 85.8% |
| Sex | | | | |
| Female | 10,139 | 64.7% | 6,733 | 64.2% |
| Male | 5,541 | 35.3% | 3,750 | 35.8% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 141 | 0.9% | 94 | 0.9% |
| Asian | 61 | 0.4% | **** | **** |
| Black or African American | 766 | 4.9% | 452 | 4.3% |
| Native Hawaiian or Other Pacific Islander | 13 | 0.1% | **** | **** |
| Unknown | 10,216 | 65.2% | 7,062 | 67.4% |
| White | 4,483 | 28.6% | 2,829 | 27.0% |
| Hispanic origin | | | | |
| Yes | 897 | 5.7% | 552 | 5.3% |
| No | 4,930 | 31.4% | 3,039 | 29.0% |
| Unknown | 9,853 | 62.8% | 6,892 | 65.7% |
| Year | | | | |
| 2008 | 651 | 4.0% | 492 | 4.5% |
| 2009 | 882 | 5.4% | 639 | 5.9% |
| 2010 | 851 | 5.2% | 647 | 6.0% |
| 2011 | 826 | 5.1% | 623 | 5.7% |
| 2012 | 777 | 4.8% | 604 | 5.6% |
| 2013 | 812 | 5.0% | 616 | 5.7% |
| 2014 | 1,085 | 6.7% | 819 | 7.5% |
| 2015 | 1,521 | 9.3% | 1,217 | 11.2% |
| 2016 | 2,290 | 14.1% | 1,923 | 17.7% |
| 2017 | 2,626 | 16.1% | 1,930 | 17.8% |
| 2018 | 2,289 | 14.1% | 502 | 4.6% |
| 2019 | 619 | 3.8% | 463 | 4.3% |
| 2020 | 489 | 3.0% | 345 | 3.2% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | 506 | 3.1% | 33 | 0.3% |
| 2022 | 57 | 0.4% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.3 | 0.6 | 0.2 | 0.6 |
| Hypertension | 476 | 2.9% | 330 | 3.0% |
| Hemangioma | 24 | 0.1% | 16 | 0.1% |
| Heart Failure | **** | **** | **** | **** |
| Congenital Heart Disease | 89 | 0.5% | 69 | 0.6% |
| Atrial Fibrillation | **** | **** | **** | **** |
| _ong QT Syndrome | 42 | 0.3% | 29 | 0.3% |
| Other Cardiac Arrhythmias | 658 | 4.0% | 409 | 3.8% |
| Cardiac Arrhythmias (Composite) | 690 | 4.2% | 432 | 4.0% |
| Pulmonary Hypertension | **** | **** | **** | **** |
| Cardiomyopathy | 12 | 0.1% | **** | **** |
| Coronary Artery Disease | **** | **** | **** | **** |
| Portal Hypertension | **** | **** | **** | **** |
| Anxiety Disorder | 2,893 | 17.8% | 1,813 | 16.7% |
| Tremor | 586 | 3.6% | 381 | 3.5% |
| Vigraine | 8,398 | 51.6% | 5,723 | 52.7% |
| Thyrotoxicosis | 112 | 0.7% | 83 | 0.8% |
| Burns | 24 | 0.1% | 13 | 0.1% |
| Glaucoma | 31 | 0.2% | 23 | 0.2% |
| Autism | 447 | 2.7% | 304 | 2.8% |
| Marfan's Syndrome | **** | **** | **** | **** |
| Pheochromocytoma/Paraganglioma | 0 | 0.0% | 0 | 0.0% |
| Diabetes | 112 | 0.7% | 77 | 0.7% |
| Any of the above health characteristics <i>(excluding</i> | | U ,U | | •••• |
| combined comorbidity score) | 11,272 | 69.2% | 7,563 | 69.7% |
| None of the above health characteristics (excluding combined comorbidity score) | 5,009 | 30.8% | 3,290 | 30.3% |
| Hypoglycemia (Day 0) | **** | **** | **** | **** |
| Typoglycemia (0-3 Months) | 29 | 0.2% | 21 | 0.2% |
| Hypoglycemia (3-6 Months) | 29 | 0.2% | 19 | 0.2% |
| Hypoglycemia (6-12 Months) | 35 | 0.2% | 28 | 0.3% |
| Hypoglycemia (Day 0) and Diabetes | >> **** | U.2 <i>7</i> 0 **** | 20 **** | U.5 <i>7</i> 0 **** |
| Hypoglycemia (0-3 Months) and Diabetes | **** | **** | **** | **** |
| | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Diabetes Hypoglycemia (6-12 Months) and Diabetes | **** | **** | **** | **** |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and No Diabetes | 28 | 0.2% | 20 | 0.2% |
| Hypoglycemia (3-6 Months) and No Diabetes | 24 | 0.1% | 16 | 0.1% |
| Hypoglycemia (6-12 Months) and No Diabetes | 34 | 0.2% | 27 | 0.2% |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Any Propranolol | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Any Propranolol | 29 | 0.2% | 21 | 0.2% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 29 | 0.2% | 19 | 0.2% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 35 | 0.2% | 28 | 0.3% |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers | **** | **** | **** | **** |
| Non-Selective Beta Blockers | 16,281 | 100.0% | 10,853 | 100.0% |
| Any Metoprolol | **** | **** | **** | **** |
| Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Metoprolol (Regular) | **** | **** | **** | **** |
| Any Propranolol | 16,281 | 100.0% | 10,853 | 100.0% |
| Propranolol (Extended Release) | 16,281 | 100.0% | 10,853 | 100.0% |
| Propranolol (Regular) | 406 | 2.5% | 257 | 2.4% |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Atenolol | **** | **** | **** | **** |
| Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Labetalol | 0 | 0.0% | 0 | 0.0% |
| Nadolol | **** | **** | **** | **** |
| Nebivolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | - | ost-Index Enrollment iirement) |
|---|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | 0 | 0.0% | 0 | 0.0% |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Any Propranolol | 476 | 2.9% | 330 | 3.0% |
| Hypertension and Propranolol (Extended Release) | 476 | 2.9% | 330 | 3.0% |
| Hypertension and Propranolol (Regular) | **** | **** | **** | **** |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 24 | 0.1% | 16 | 0.1% |
| Hemangioma and Propranolol (Extended Release) | 24 | 0.1% | 16 | 0.1% |
| Hemangioma and Propranolol (Regular) | **** | **** | 0 | 0.0% |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| Table 1t. Aggregated Characteristics of Beta Blockers and Beta Blockers (Post-Index Enrollment Requirement) in the Sentinel |
|---|
| Distributed Database (SDD) from January 1, 2008 to May 31, 2022 (Propranolol (Extended Release)) |

| | Beta | Blockers | • | ost-Index Enrollment iirement) |
|--|-------------|---|-------------|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) Long QT Syndrome and Metoprolol (Regular) | 0 0 0 | 0.0% 0.0% 0.0% | 0 0 0 | 0.0% 0.0% 0.0% |
| Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Release) | 42 42 | 0.3% 0.3% | 29 29 | 0.3% 0.3% |
| Long QT Syndrome and Propranolol (Regular) | **** | **** | **** | **** |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 122,366 | N/A | 76,527 | |
| Episodes | 129,011 | 100.0% | 80,520 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 11.9 | 6.1 | 11.9 | 6.0 |
| Age | | | | |
| 0-1 years | 23,371 | 18.1% | 13,918 | 17.3% |
| 2-5 years | 3,113 | 2.4% | 1,952 | 2.4% |
| 6-12 years | 23,481 | 18.2% | 15,302 | 19.0% |
| 13-17 years | 79,046 | 61.3% | 49,348 | 61.3% |
| Sex | | | | |
| Female | 75,746 | 61.9% | 46,885 | 61.3% |
| Male | 46,620 | 38.1% | 29,642 | 38.7% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 1,226 | 1.0% | 768 | 1.0% |
| Asian | 1,049 | 0.9% | 606 | 0.8% |
| Black or African American | 6,153 | 5.0% | 3,830 | 5.0% |
| Native Hawaiian or Other Pacific Islander | 171 | 0.1% | 104 | 0.1% |
| Unknown | 79,669 | 65.1% | 50,416 | 65.9% |
| White | 34,098 | 27.9% | 20,803 | 27.2% |
| Hispanic origin | | | | |
| Yes | 12,552 | 10.3% | 7,492 | 9.8% |
| No | 39,317 | 32.1% | 23,808 | 31.1% |
| Unknown | 70,497 | 57.6% | 45,227 | 59.1% |
| Year | | | | |
| 2008 | 2,792 | 2.2% | 2,151 | 2.7% |
| 2009 | 3,569 | 2.8% | 2,660 | 3.3% |
| 2010 | 3,605 | 2.8% | 2,744 | 3.4% |
| 2011 | 3,690 | 2.9% | 2,778 | 3.5% |
| 2012 | 3,859 | 3.0% | 2,997 | 3.7% |
| 2013 | 4,225 | 3.3% | 3,162 | 3.9% |
| 2014 | 7,269 | 5.6% | 5,738 | 7.1% |
| 2015 | 12,355 | 9.6% | 9,239 | 11.5% |
| 2016 | 19,052 | 14.8% | 15,645 | 19.4% |
| 2017 | 24,078 | 18.7% | 18,524 | 23.0% |
| 2018 | 24,102 | 18.7% | 4,870 | 6.0% |
| 2019 | 6,917 | 5.4% | 5,307 | 6.6% |
| 2020 | 6,128 | 4.7% | 4,180 | 5.2% |



| | Beta | Blockers | • | ost-Index Enrollment irement) |
|--|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | 6,902 | 5.3% | 525 | 0.7% |
| 2022 | 468 | 0.4% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.5 | 0.9 | 0.5 | 0.9 |
| Hypertension | 3,387 | 2.6% | 2,175 | 2.7% |
| Hemangioma | 13,128 | 10.2% | 7,873 | 9.8% |
| Heart Failure | 1,090 | 0.8% | 654 | 0.8% |
| Congenital Heart Disease | 9,387 | 7.3% | 5,616 | 7.0% |
| Atrial Fibrillation | 96 | 0.1% | 62 | 0.1% |
| Long QT Syndrome | 809 | 0.6% | 471 | 0.6% |
| Other Cardiac Arrhythmias | 13,786 | 10.7% | 8,335 | 10.4% |
| Cardiac Arrhythmias (Composite) | 14,222 | 11.0% | 8,577 | 10.7% |
| Pulmonary Hypertension | 671 | 0.5% | 362 | 0.4% |
| Cardiomyopathy | 744 | 0.6% | 430 | 0.5% |
| Coronary Artery Disease | 199 | 0.2% | 136 | 0.2% |
| Portal Hypertension | 209 | 0.2% | 136 | 0.2% |
| Anxiety Disorder | 35,834 | 27.8% | 21,568 | 26.8% |
| Tremor | 2,975 | 2.3% | 1,849 | 2.3% |
| Migraine | 28,869 | 22.4% | 18,846 | 23.4% |
| Thyrotoxicosis | 2,282 | 1.8% | 1,437 | 1.8% |
| Burns | 358 | 0.3% | 228 | 0.3% |
| Glaucoma | 279 | 0.2% | 165 | 0.2% |
| Autism | 5,370 | 4.2% | 3,322 | 4.1% |
| Marfan's Syndrome | 80 | 0.1% | 42 | 0.1% |
| Pheochromocytoma/Paraganglioma | 64 | 0.0% | 42 | 0.1% |
| Diabetes | 967 | 0.7% | 581 | 0.7% |
| Any of the above health characteristics (excluding | | | | |
| <i>combined comorbidity score)</i> None of the above health characteristics <i>(excluding</i> | 93,022 | 72.1% | 57,706 | 71.7% |
| combined comorbidity score) | 35,989 | 27.9% | 22,814 | 28.3% |
| Hypoglycemia (Day 0) | 85 | 0.1% | 45 | 0.1% |
| Hypoglycemia (0-3 Months) | 442 | 0.3% | 281 | 0.3% |
| Hypoglycemia (3-6 Months) | 296 | 0.2% | 215 | 0.3% |
| Hypoglycemia (6-12 Months) | 387 | 0.3% | 336 | 0.4% |
| Hypoglycemia (Day 0) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Diabetes | 47 | 0.0% | 26 | 0.0% |
| Hypoglycemia (3-6 Months) and Diabetes | 37 | 0.0% | 30 | 0.0% |
| Hypoglycemia (6-12 Months) and Diabetes | 43 | 0.0% | 41 | 0.1% |



| | Beta | Blockers | • | ost-Index Enrollment irement) |
|--|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and No Diabetes | 84 | 0.1% | 44 | 0.1% |
| Hypoglycemia (0-3 Months) and No Diabetes | 395 | 0.3% | 255 | 0.3% |
| Hypoglycemia (3-6 Months) and No Diabetes | 259 | 0.2% | 185 | 0.2% |
| Hypoglycemia (6-12 Months) and No Diabetes | 344 | 0.3% | 295 | 0.4% |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Any Propranolol | 85 | 0.1% | 45 | 0.1% |
| Hypoglycemia (0-3 Months) and Any Propranolol | 442 | 0.3% | 281 | 0.3% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 296 | 0.2% | 215 | 0.3% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 387 | 0.3% | 336 | 0.4% |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers | 28 | 0.0% | 22 | 0.0% |
| Non-Selective Beta Blockers | 129,011 | 100.0% | 80,520 | 100.0% |
| Any Metoprolol | 17 | 0.0% | 14 | 0.0% |
| Metoprolol (Extended Release) | **** | **** | **** | **** |
| Metoprolol (Regular) | **** | **** | **** | **** |
| Any Propranolol | 129,011 | 100.0% | 80,520 | 100.0% |
| Propranolol (Extended Release) | 406 | 0.3% | 257 | 0.3% |
| Propranolol (Regular) | 129,011 | 100.0% | 80,520 | 100.0% |
| Propranolol (Hemangeol) | 11 | 0.0% | **** | **** |
| Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Atenolol | 11 | 0.0% | **** | **** |
| Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Carvedilol | **** | **** | 0 | 0.0% |
| Labetalol | 0 | 0.0% | 0 | 0.0% |
| Nadolol | **** | **** | **** | **** |
| Nebivolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Pindolol | **** | **** | **** | **** |
| Sotalol | 25 | 0.0% | 17 | 0.0% |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | **** | **** | **** | **** |
| Hypertension and Metoprolol (Extended Release) | **** | * * * * * | **** | **** |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Any Propranolol | 3,387 | 2.6% | 2,175 | 2.7% |
| Hypertension and Propranolol (Extended Release) | **** | **** | **** | **** |
| Hypertension and Propranolol (Regular) | 3,387 | 2.6% | 2,175 | 2.7% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | **** | **** | **** | **** |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 13,128 | 10.2% | 7,873 | 9.8% |
| Hemangioma and Propranolol (Extended Release) | **** | **** | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | 13,128 | 10.2% | 7,873 | 9.8% |
| Hemangioma and Propranolol (Hemangeol) | **** | **** | **** | **** |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-----------------------------|---|--|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Release) | 0 0 0 809 ***** | 0.0% 0.0% 0.6% ***** | 0 0 471 ***** | 0.0% 0.0% 0.0% 0.6% ***** |
| Long QT Syndrome and Propranolol (Regular) | 809 | 0.6% | 471 | 0.6% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | **** 0 | ***** 0.0% | **** 0 | ***** 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 2,437 | N/A | 1,400 | N/A |
| Episodes | 2,463 | 100.0% | 1,409 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 0.5 | 0.7 | 0.5 | 0.7 |
| Age | | | | |
| 0-1 years | 2,401 | 97.5% | 1,372 | 97.4% |
| 2-5 years | **** | **** | **** | **** |
| 6-12 years | **** | **** | **** | **** |
| 13-17 years | 0 | 0.0% | 0 | 0.0% |
| Sex | | | | |
| Female | 1,791 | 73.5% | 1,044 | 74.6% |
| Male | 646 | 26.5% | 356 | 25.4% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | **** | **** | **** | **** |
| Asian | 36 | 1.5% | 19 | 1.4% |
| Black or African American | 61 | 2.5% | 33 | 2.4% |
| Native Hawaiian or Other Pacific Islander | **** | **** | **** | **** |
| Unknown | 1,870 | 76.7% | 1,083 | 77.4% |
| White | 458 | 18.8% | 256 | 18.3% |
| Hispanic origin | | | | |
| Yes | 234 | 9.6% | 149 | 10.6% |
| No | 503 | 20.6% | 272 | 19.4% |
| Unknown | 1,700 | 69.8% | 979 | 69.9% |
| Year | | | | |
| 2008 | 0 | 0.0% | 0 | 0.0% |
| 2009 | 0 | 0.0% | 0 | 0.0% |
| 2010 | 0 | 0.0% | 0 | 0.0% |
| 2011 | 0 | 0.0% | 0 | 0.0% |
| 2012 | 0 | 0.0% | 0 | 0.0% |
| 2013 | 0 | 0.0% | 0 | 0.0% |
| 2014 | 52 | 2.1% | 44 | 3.1% |
| 2015 | 235 | 9.5% | 174 | 12.3% |
| 2016 | 459 | 18.6% | 365 | 25.9% |
| 2017 | 535 | 21.7% | 365 | 25.9% |
| 2018 | 493 | 20.0% | 134 | 9.5% |
| 2019 | 174 | 7.1% | 123 | 8.7% |
| 2020 | 241 | 9.8% | 185 | 13.1% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | 256 | 10.4% | 19 | 1.3% |
| 2022 | 18 | 0.7% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.1 | 0.5 | 0.1 | 0.5 |
| Hypertension | **** | **** | **** | **** |
| Hemangioma | 2,262 | 91.8% | 1,305 | 92.6% |
| Heart Failure | **** | **** | **** | **** |
| Congenital Heart Disease | 341 | 13.8% | 191 | 13.6% |
| Atrial Fibrillation | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome | **** | **** | **** | **** |
| Other Cardiac Arrhythmias | 68 | 2.8% | 38 | 2.7% |
| Cardiac Arrhythmias (Composite) | 70 | 2.8% | 39 | 2.8% |
| Pulmonary Hypertension | **** | **** | **** | **** |
| Cardiomyopathy | **** | **** | **** | **** |
| Coronary Artery Disease | **** | **** | **** | **** |
| Portal Hypertension | 0 | 0.0% | 0 | 0.0% |
| Anxiety Disorder | **** | **** | **** | **** |
| Tremor | **** | **** | **** | **** |
| Migraine | **** | **** | **** | **** |
| Thyrotoxicosis | 0 | 0.0% | 0 | 0.0% |
| Burns | **** | **** | **** | **** |
| Glaucoma | **** | **** | **** | **** |
| Autism | **** | **** | **** | **** |
| Marfan's Syndrome | 0 | 0.0% | 0 | 0.0% |
| Pheochromocytoma/Paraganglioma | **** | **** | **** | **** |
| Diabetes | **** | **** | **** | **** |
| Any of the above health characteristics (excluding | | | | |
| <i>combined comorbidity score)</i> None of the above health characteristics <i>(excluding</i> | 2,291 | 93.0% | 1,324 | 94.0% |
| combined comorbidity score) | 172 | 7.0% | 85 | 6.0% |
| Hypoglycemia (Day 0) | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and No Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and No Diabetes | * * * * * | **** | **** | **** |
| Hypoglycemia (6-12 Months) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Propranolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Any Propranolol | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Any Propranolol | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers | 0 | 0.0% | 0 | 0.0% |
| Non-Selective Beta Blockers | 2,463 | 100.0% | 1,409 | 100.0% |
| Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Any Propranolol | 2,463 | 100.0% | 1,409 | 100.0% |
| Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Regular) | 11 | 0.4% | **** | **** |
| Propranolol (Hemangeol) | 2,463 | 100.0% | 1,409 | 100.0% |
| Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Atenolol | 0 | 0.0% | 0 | 0.0% |
| Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Labetalol | 0 | 0.0% | 0 | 0.0% |
| Nadolol | 0 | 0.0% | 0 | 0.0% |
| Nebivolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | 0 | 0.0% | 0 | 0.0% |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Any Propranolol | **** | * * * * | * * * * | **** |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 2,262 | 91.8% | 1,305 | 92.6% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | **** | **** | **** | **** |
| Hemangioma and Propranolol (Hemangeol) | 2,262 | 91.8% | 1,305 | 92.6% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta Blockers | | • | st-Index Enrollment rement) |
|--|----------------------|---|----------------------|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol | 0 0 0 ***** | 0.0% 0.0% 0.0% ***** | 0 0 0 ***** | 0.0% 0.0% 0.0% ***** |
| Long QT Syndrome and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | 0 0 | 0.0% 0.0% | 0 0 | 0.0% 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 75 | N/A | 54 | N/A |
| Episodes | 77 | 100.0% | 56 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 13.2 | 4.5 | 13.5 | 4.0 |
| Age | | | | |
| 0-1 years | **** | **** | **** | **** |
| 2-5 years | **** | **** | **** | **** |
| 6-12 years | **** | **** | **** | **** |
| 13-17 years | 48 | 62.3% | 37 | 66.1% |
| Sex | | | | |
| Female | 48 | 64.0% | 34 | 63.0% |
| Male | 27 | 36.0% | 20 | 37.0% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 0 | 0.0% | 0 | 0.0% |
| Asian | 0 | 0.0% | 0 | 0.0% |
| Black or African American | **** | **** | **** | **** |
| Native Hawaiian or Other Pacific Islander | 0 | 0.0% | 0 | 0.0% |
| Unknown | 52 | 69.3% | 40 | 74.1% |
| White | **** | **** | **** | **** |
| Hispanic origin | | | | |
| Yes | 0 | 0.0% | 0 | 0.0% |
| No | 18 | 24.0% | **** | **** |
| Unknown | 57 | 76.0% | **** | **** |
| Year | | | | |
| 2008 | **** | **** | **** | **** |
| 2009 | 15 | 19.5% | **** | **** |
| 2010 | **** | **** | **** | **** |
| 2011 | **** | **** | **** | **** |
| 2012 | **** | **** | **** | **** |
| 2013 | **** | **** | **** | **** |
| 2014 | 11 | 14.3% | **** | **** |
| 2015 | **** | **** | **** | **** |
| 2016 | **** | **** | **** | **** |
| 2017 | **** | **** | **** | **** |
| 2018 | **** | **** | **** | **** |
| 2019 | **** | **** | **** | **** |
| 2020 | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | * * * * * | **** | 0 | 0.0% |
| 2022 | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.4 | 0.5 | 0.4 | 0.5 |
| Hypertension | **** | **** | **** | **** |
| Hemangioma | * * * * * | **** | * * * * | **** |
| Heart Failure | 0 | 0.0% | 0 | 0.0% |
| Congenital Heart Disease | **** | **** | **** | **** |
| Atrial Fibrillation | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome | 0 | 0.0% | 0 | 0.0% |
| Other Cardiac Arrhythmias | 26 | 33.8% | 18 | 32.1% |
| Cardiac Arrhythmias (Composite) | 26 | 33.8% | 18 | 32.1% |
| Pulmonary Hypertension | 0 | 0.0% | 0 | 0.0% |
| Cardiomyopathy | 0 | 0.0% | 0 | 0.0% |
| Coronary Artery Disease | **** | **** | **** | **** |
| Portal Hypertension | 0 | 0.0% | 0 | 0.0% |
| Anxiety Disorder | 15 | 19.5% | **** | **** |
| Tremor | 0 | 0.0% | 0 | 0.0% |
| Migraine | **** | **** | **** | **** |
| Thyrotoxicosis | 0 | 0.0% | 0 | 0.0% |
| Burns | 0 | 0.0% | 0 | 0.0% |
| Glaucoma | 0 | 0.0% | 0 | 0.0% |
| Autism | **** | **** | **** | **** |
| Marfan's Syndrome | 0 | 0.0% | 0 | 0.0% |
| Pheochromocytoma/Paraganglioma | 0 | 0.0% | 0 | 0.0% |
| Diabetes | 0 | 0.0% | 0 | 0.0% |
| Any of the above health characteristics (excluding | | | | |
| <i>combined comorbidity score)</i> None of the above health characteristics <i>(excluding</i> | 47 | 61.0% | 34 | 60.7% |
| combined comorbidity score) | 30 | 39.0% | 22 | 39.3% |
| Hypoglycemia (Day 0) | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |



| Patient Characteristics12Number/MeanStandard Deviation3Number/MeanStandardHypoglycemia (Day 0) and No Diabetes***********************Hypoglycemia (0-3 Months) and No Diabetes******************Hypoglycemia (3-6 Months) and No Diabetes00.0%00.0Hypoglycemia (6-12 Months) and No Diabetes00.0%00.0Hypoglycemia (0-3 Months) and Any Metoprolol00.0%00.0Hypoglycemia (0-3 Months) and Any Metoprolol00.0%00.0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%00.0Hypoglycemia (0-3 Months) and Any Metoprolol00.0%00.0Hypoglycemia (0-3 Months) and Any Metoprolol00.0%00.0Hypoglycemia (3-6 Months) and Any Propranolol00.0%00.0Hypoglycemia (0-3 Months) and Any Propranolol00.0%00.0Hypoglycemia (0-3 Months) and Any Propranolol00.0%00.0Hypoglycemia (3-6 Months) and Any Propranolol00.0%00.0Hypoglycemia (0-3 Months) and Any Propranolol00.0%00.0Hypoglycemia (0-3 Months) and Any Propranolol00.0%00.0Hypoglycemia (3-6 Months) and Atenolol00.0%00.0Hypoglycemia (3-6 Months) and Atenolol00.0%00.0Hypoglycemia (0-3 Months) and Nadolol00.0%00.0 <th>cent/ Deviation³ *** *** 0% 0% 0%</th> | cent/ Deviation ³ *** *** 0% 0% 0% |
|---|---|
| Hypoglycemia (Day 0) and No Diabetes********************Hypoglycemia (0-3 Months) and No Diabetes*****************Hypoglycemia (3-6 Months) and No Diabetes00.0%0Hypoglycemia (6-12 Months) and No Diabetes00.0%0Hypoglycemia (Day 0) and Any Metoprolol00.0%0Hypoglycemia (0-3 Months) and Any Metoprolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%0Hypoglycemia (3-6 Months) and Nadolol0< | *** *** 0% 0% |
| Hypoglycemia (D3 Months) and No Diabetes***************Hypoglycemia (3-6 Months) and No Diabetes00.0%00.0Hypoglycemia (3-6 Months) and No Diabetes00.0%00.0Hypoglycemia (D3 Months) and Any Detoprolol00.0%00.0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%00.0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%00.0Hypoglycemia (5-12 Months) and Any Metoprolol00.0%00.0Hypoglycemia (3-6 Months) and Any Propranolol00.0%00.0Hypoglycemia (3-6 Months) and Atenolol00.0%00.0Hypoglycemia (3-6 Months) and Atenolol00.0%00.0Hypoglycemia (3-6 Months) and Natolol00.0%00.0Hypoglycemia (3-6 Months) and Natolol00.0%00.0Hypoglycemia (3-6 Months) and Natolol00.0%00.0Hypoglycemia (3-6 Months) and Natolol00.0%00.0Hypoglycemia (3-16 Months) and Natolol< | *** *** 0% |
| Hypoglycemia (0-3 Months) and No Diabetes ***** ***** ***** Hypoglycemia (3-6 Months) and No Diabetes 0 0.0% 0 0.04 Hypoglycemia (0-3 Months) and No Diabetes 0 0.0% 0 0.04 Hypoglycemia (0-3 Months) and Any Metoprolol 0 0.0% 0 0.04 Hypoglycemia (0-3 Months) and Any Metoprolol 0 0.0% 0 0.04 Hypoglycemia (6-12 Months) and Any Metoprolol 0 0.0% 0 0.04 Hypoglycemia (0-3 Months) and Any Metoprolol 0 0.0% 0 0.04 Hypoglycemia (0-3 Months) and Any Propranolol 0 0.0% 0 0.04 Hypoglycemia (3-6 Months) and Any Propranolol 0 0.0% 0 0.04 Hypoglycemia (3-6 Months) and Any Propranolol 0 0.0% 0 0.04 Hypoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.04 Hypoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.04 Hypoglycemia (3-6 Months) and Atenolol 0 0.0% | .0% .0% |
| Hypoglycemia (3-1 Months) and No Diabetes 0 0.0% 0 0.1 Hypoglycemia (Day 0) and Any Metoprolol 0 0.0% 0 0.0 Hypoglycemia (0-3 Months) and Any Metoprolol 0 0.0% 0 0.0 Hypoglycemia (0-3 Months) and Any Metoprolol 0 0.0% 0 0.0 Hypoglycemia (3-6 Months) and Any Metoprolol 0 0.0% 0 0.0 Hypoglycemia (6-12 Months) and Any Metoprolol 0 0.0% 0 0.0 Hypoglycemia (6-3 Months) and Any Propranolol 0 0.0% 0 0.0 Hypoglycemia (6-3 Months) and Any Propranolol 0 0.0% 0 0.0 Hypoglycemia (6-12 Months) and Any Propranolol 0 0.0% 0 0.0 Hypoglycemia (10ay 0) and Atenolol 0 0.0% 0 0.0 0.0 Hypoglycemia (10-3 Months) and Atenolol 0 0.0% 0 0.0 0.0 Hypoglycemia (10-3 Months) and Atenolol 0 0.0% 0 0.0 0.0 0.0 0.0 0.0 | .0% .0% |
| Hypoglycemia (Day 0) and Any Metoprolol 0 0.0% 0 0.000 Hypoglycemia (0-3 Months) and Any Metoprolol 0 0.0% 0 0.000 Hypoglycemia (3-6 Months) and Any Metoprolol 0 0.0% 0 0.000 Hypoglycemia (6-12 Months) and Any Metoprolol 0 0.0% 0 0.000 Hypoglycemia (Day 0) and Any Propranolol 0 0.0% 0 0.000 Hypoglycemia (3-6 Months) and Any Propranolol 0 0.0% 0 0.000 Hypoglycemia (3-6 Months) and Any Propranolol 0 0.0% 0 0.000 Hypoglycemia (3-6 Months) and Any Propranolol 0 0.0% 0 0.000 Hypoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.000 0. | .0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol00.0%00.04Hypoglycemia (3-6 Months) and Any Metoprolol00.0%00.04Hypoglycemia (6-12 Months) and Any Metoprolol00.0%00.04Hypoglycemia (Day 0) and Any Propranolol00.0%00.04Hypoglycemia (0-3 Months) and Any Propranolol00.0%00.04Hypoglycemia (3-6 Months) and Atenolol00.0%00.04Hypoglycemia (0-3 Months) and Atenolol00.0%00.04Hypoglycemia (3-6 Months) and Atenolol00.0%00.04Hypoglycemia (3-6 Months) and Atenolol00.0%00.04Hypoglycemia (0-3 Months) and Atenolol00.0%00.04Hypoglycemia (3-6 Months) and Nadolol00.0%00.04Hypoglycemia (3-6 Months) and Nadolol0 </td <td></td> | |
| Hypoglycemia (3-6 Months) and Any Metoprolol00.0%00.0Hypoglycemia (6-12 Months) and Any Metoprolol00.0%00.0Hypoglycemia (Day 0) and Any Propranolol00.0%00.0Hypoglycemia (0-3 Months) and Any Propranolol00.0%00.0Hypoglycemia (3-6 Months) and Any Propranolol00.0%00.0Hypoglycemia (6-12 Months) and Any Propranolol00.0%00.0Hypoglycemia (6-12 Months) and Any Propranolol00.0%00.0Hypoglycemia (1-2 Months) and Atenolol00.0%00.0Hypoglycemia (0-3 Months) and Atenolol00.0%00.0Hypoglycemia (3-6 Months) and Atenolol00.0%00.0Hypoglycemia (3-6 Months) and Atenolol00.0%00.0Hypoglycemia (1-2 Months) and Atenolol00.0%00.0Hypoglycemia (3-6 Months) and Atenolol00.0%00.0Hypoglycemia (3-6 Months) and Nadolol00.0%00.0Hypoglycemia (5-12 Months) and Nadolol00.0%00.0Non-Selective Beta Blockers00.0%00. | 0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol00.0%0Hypoglycemia (Day 0) and Any Propranolol00.0%0.0%Hypoglycemia (0-3 Months) and Any Propranolol00.0%0.0%Hypoglycemia (3-6 Months) and Any Propranolol00.0%0.0%Hypoglycemia (6-12 Months) and Any Propranolol00.0%0.0%Hypoglycemia (6-12 Months) and Any Propranolol00.0%0.0%Hypoglycemia (6-12 Months) and Any Propranolol00.0%0.0%Hypoglycemia (0-3 Months) and Atenolol00.0%0.0%Hypoglycemia (0-3 Months) and Atenolol00.0%0.0%Hypoglycemia (3-6 Months) and Atenolol00.0%0.0%Hypoglycemia (6-12 Months) and Atenolol00.0%0.0%Hypoglycemia (6-12 Months) and Atenolol00.0%0.0%Hypoglycemia (3-6 Months) and Atenolol00.0%0.0%Hypoglycemia (3-6 Months) and Nadolol00.0%0.0%Hypoglycemia (3-6 Months) and Nadolol00.0%0.0%Hypoglycemia (3-6 Months) and Nadolol00.0%0.0%Selective Beta Blockers77100.0%0.0%Non-Selective Beta Blockers00.0%0.0%Non-Selective Beta Blockers00.0%0.0%Metoprolol00.0%0.0%0.0%Metoprolol (Extended Release)00.0%0.0%Metoprolol (Regular)00.0%0.0% | 0,0 |
| Hypoglycemia (Day 0) and Any Propranolol00.0%00.0%Hypoglycemia (0-3 Months) and Any Propranolol00.0%00.0%Hypoglycemia (3-6 Months) and Any Propranolol00.0%00.0%Hypoglycemia (6-12 Months) and Any Propranolol00.0%00.0%Hypoglycemia (1-2 Months) and Any Propranolol00.0%00.0%Hypoglycemia (2-3 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (2-3 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Selective Beta Blockers77100.0%561000Non-Selective Beta Blockers00.0%00.0%Non-Selective Beta Blockers00.0%00.0% <t< td=""><td>.0%</td></t<> | .0% |
| Hypoglycemia (0-3 Months) and Any Propranolol00.0%00.0%Hypoglycemia (3-6 Months) and Any Propranolol00.0%00.0%Hypoglycemia (6-12 Months) and Any Propranolol00.0%00.0%Hypoglycemia (Day O) and Atenolol00.0%00.0%Hypoglycemia (0-3 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (5-12 Months) and Atenolol00.0%00.0%Hypoglycemia (C-3 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (6-12 Months) and Nadolol00.0%00.0%Selective Beta Blockers77100.0%561000Non-Selective Beta Blockers00.0%00.0%Any Metoprolol00.0%00.0%0Metoprolol (Extended Release)00.0%00.0%Metoprolol (Regular)00.0%00.0% | .0% |
| Hypoglycemia (3-6 Months) and Any Propranolol00.0%00.0%Hypoglycemia (6-12 Months) and Any Propranolol00.0%00.0%Hypoglycemia (Day 0) and Atenolol00.0%00.0%Hypoglycemia (0-3 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (6-12 Months) and Atenolol00.0%00.0%Hypoglycemia (Day 0) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (3-12 Months) and Nadolol00.0%00.0%Hypoglycemia (3-12 Months) and Nadolol00.0%00.0%Hypoglycemia (3-12 Months) and Nadolol00.0%00.0%Selective Beta Blockers77100.0%561000Non-Selective Beta Blockers00.0%00.0%Any Metoprolol00.0%00.0%0Metoprolol (Extended Release)00.0%00.0%Metoprolol (Regular)00.0%00.0%0 | .0% |
| Hypoglycemia (6-12 Months) and Any Propranolol 0 0.0% 0 0.0 Hypoglycemia (Day 0) and Atenolol 0 0.0% 0 0.0 Hypoglycemia (0-3 Months) and Atenolol 0 0.0% 0 0.0 Hypoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0 Hypoglycemia (3-6 Months) and Atenolol 0 0.0% 0 0.0 Hypoglycemia (6-12 Months) and Atenolol 0 0.0% 0 0.0 Hypoglycemia (6-12 Months) and Atenolol 0 0.0% 0 0.0 Hypoglycemia (0-3 Months) and Atenolol 0 0.0% 0 0.0 0.0 Hypoglycemia (0-3 Months) and Nadolol 0 0.0% 0 0.0< | .0% |
| Hypoglycemia (Day 0) and Atenolol00.0%00.0%Hypoglycemia (0-3 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (6-12 Months) and Atenolol00.0%00.0%Hypoglycemia (Day 0) and Nadolol00.0%00.0%Hypoglycemia (Day 0) and Nadolol00.0%00.0%Hypoglycemia (0-3 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (6-12 Months) and Nadolol00.0%00.0%Selective Beta Blockers77100.0%56100Non-Selective Beta Blockers00.0%00.0%Metoprolol (Extended Release)00.0%00.0%Metoprolol (Regular)00.0%00.0% | .0% |
| Hypoglycemia (0-3 Months) and Atenolol00.0%00.0Hypoglycemia (3-6 Months) and Atenolol00.0%00.0Hypoglycemia (6-12 Months) and Atenolol00.0%00.0Hypoglycemia (Day 0) and Nadolol00.0%00.0Hypoglycemia (0-3 Months) and Atenolol00.0%00.0Hypoglycemia (0-3 Months) and Nadolol00.0%00.0Hypoglycemia (0-3 Months) and Nadolol00.0%00.0Hypoglycemia (3-6 Months) and Nadolol00.0%00.0Hypoglycemia (6-12 Months) and Nadolol00.0%00.0Selective Beta Blockers77100.0%56100Non-Selective Beta Blockers00.0%00.0Metoprolol (Extended Release)00.0%00.0Metoprolol (Regular)00.0%00.0 | .0% |
| Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (6-12 Months) and Atenolol00.0%00.0%Hypoglycemia (Day 0) and Nadolol00.0%00.0%Hypoglycemia (0-3 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (6-12 Months) and Nadolol00.0%00.0%Selective Beta Blockers77100.0%561000Non-Selective Beta Blockers00.0%00.0%Any Metoprolol00.0%00.0%0Metoprolol (Regular)00.0%00.0%0 | .0% |
| Hypoglycemia (6-12 Months) and Atenolol00.0%00.0Hypoglycemia (Day 0) and Nadolol00.0%00.0Hypoglycemia (0-3 Months) and Nadolol00.0%00.0Hypoglycemia (3-6 Months) and Nadolol00.0%00.0Hypoglycemia (3-6 Months) and Nadolol00.0%00.0Hypoglycemia (6-12 Months) and Nadolol00.0%00.0Selective Beta Blockers77100.0%56100Non-Selective Beta Blockers00.0%00.0Any Metoprolol00.0%00.0Metoprolol (Extended Release)00.0%00.0Metoprolol (Regular)00.0%00.0 | .0% |
| Hypoglycemia (Day 0) and Nadolol00.0%00.0%Hypoglycemia (0-3 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (6-12 Months) and Nadolol00.0%00.0%Selective Beta Blockers77100.0%56100Non-Selective Beta Blockers00.0%00.0%Any Metoprolol00.0%00.0%Metoprolol (Extended Release)00.0%00.0%Metoprolol (Regular)00.0%00.0% | .0% |
| Hypoglycemia (0-3 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (6-12 Months) and Nadolol00.0%00.0%Selective Beta Blockers77100.0%56100Non-Selective Beta Blockers00.0%00.0%Any Metoprolol00.0%00.0%Metoprolol (Extended Release)00.0%00.0%Metoprolol (Regular)00.0%00.0% | .0% |
| Hypoglycemia (3-6 Months) and Nadolol00.0%00.0Hypoglycemia (6-12 Months) and Nadolol00.0%00.0Selective Beta Blockers77100.0%56100Non-Selective Beta Blockers00.0%00.0Any Metoprolol00.0%00.0Metoprolol (Extended Release)00.0%00.0Metoprolol (Regular)00.0%00.0 | .0% |
| Hypoglycemia (6-12 Months) and Nadolol00.0%00.0%Selective Beta Blockers77100.0%56100Non-Selective Beta Blockers00.0%00.0%Any Metoprolol00.0%00.0%Metoprolol (Extended Release)00.0%00.0%Metoprolol (Regular)00.0%00.0% | .0% |
| Selective Beta Blockers77100.0%56100Non-Selective Beta Blockers00.0%00.0%Any Metoprolol00.0%00.0%Metoprolol (Extended Release)00.0%00.0%Metoprolol (Regular)00.0%00.0% | .0% |
| Non-Selective Beta Blockers00.0%00.0%Any Metoprolol00.0%00.0%Metoprolol (Extended Release)00.0%00.0%Metoprolol (Regular)00.0%00.0% | .0% |
| Any Metoprolol 0 0.0% 0 0.0 Metoprolol (Extended Release) 0 0.0% 0 0.0 Metoprolol (Regular) 0 0.0% 0 0.0 | 0.0% |
| Metoprolol (Extended Release)00.0%00.0Metoprolol (Regular)00.0%00.0% | .0% |
| Metoprolol (Regular) 0 0.0% 0 0.0 | .0% |
| | .0% |
| Any Propranolol 0 0.0% 0 0.0 | .0% |
| | .0% |
| Propranolol (Extended Release) 0 0.0% 0 0.0 | .0% |
| Propranolol (Regular) 0 0.0% 0 0.0 | .0% |
| Propranolol (Hemangeol) 0 0.0% 0 0.0 | .0% |
| Acebutolol 77 100.0% 56 100 | 0.0% |
| Atenolol 0 0.0% 0 0.0 | .0% |
| Betaxolol 0 0.0% 0 0.0 | .0% |
| Bisoprolol 0 0.0% 0 0.0 | .0% |
| Carvedilol 0 0.0% 0 0.0 | .0% |
| Labetalol 0 0.0% 0 0.0 | .0% |
| Nadolol 0 0.0% 0 0.0 | |
| Nebivolol 0 0.0% 0 0.0 | .0% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|--|--------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | 0 | 0.0% | 0 | 0.0% |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Acebutolol | **** | **** | **** | **** |
| Hypertension and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | **** | **** | **** | **** |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | • | st-Index Enrollment rement) |
|---|---------------------------------|--|--------------------------------------|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Release) Long QT Syndrome and Propranolol (Regular) Long QT Syndrome and Acebutolol Long QT Syndrome and Acebutolol | 0 0 0 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% | 0 0 0 0 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% |
| Long QT Syndrome and Betaxolol Long QT Syndrome and Bisoprolol | 0 | 0.0% 0.0% | 0 0 | 0.0% 0.0% |
| Long QT Syndrome and Carvedilol Long QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% 0.0% |
| Long QT Syndrome and Nadolol Long QT Syndrome and Nebivolol | 0 0 | 0.0% 0.0% | 0 0 | 0.0% 0.0% |
| Long QT Syndrome and Pindolol Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | 0 0 0 | 0.0% 0.0% 0.0% | 0 0 0 | 0.0% 0.0% 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | a Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 28,587 | N/A | 19,259 | N/A |
| Episodes | 30,660 | 100.0% | 20,520 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 13.0 | 4.3 | 13.0 | 4.3 |
| Age | | | | |
| 0-1 years | 1,075 | 3.5% | 726 | 3.5% |
| 2-5 years | 1,655 | 5.4% | 1,115 | 5.4% |
| 6-12 years | 8,785 | 28.7% | 5,841 | 28.5% |
| 13-17 years | 19,145 | 62.4% | 12,838 | 62.6% |
| Sex | | | | |
| Female | 16,001 | 56.0% | 10,672 | 55.4% |
| Male | 12,586 | 44.0% | 8,587 | 44.6% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 223 | 0.8% | 151 | 0.8% |
| Asian | 318 | 1.1% | 191 | 1.0% |
| Black or African American | 2,060 | 7.2% | 1,290 | 6.7% |
| Native Hawaiian or Other Pacific Islander | 47 | 0.2% | 28 | 0.1% |
| Unknown | 18,905 | 66.1% | 12,880 | 66.9% |
| White | 7,034 | 24.6% | 4,719 | 24.5% |
| Hispanic origin | | | | |
| Yes | 3,081 | 10.8% | 1,908 | 9.9% |
| No | 8,806 | 30.8% | 5,746 | 29.8% |
| Unknown | 16,700 | 58.4% | 11,605 | 60.3% |
| Year | | | | |
| 2008 | 1,266 | 4.1% | 973 | 4.7% |
| 2009 | 1,680 | 5.5% | 1,263 | 6.2% |
| 2010 | 1,488 | 4.9% | 1,100 | 5.4% |
| 2011 | 1,349 | 4.4% | 1,018 | 5.0% |
| 2012 | 1,236 | 4.0% | 985 | 4.8% |
| 2013 | 1,330 | 4.3% | 1,022 | 5.0% |
| 2014 | 1,863 | 6.1% | 1,516 | 7.4% |
| 2015 | 3,151 | 10.3% | 2,410 | 11.7% |
| 2016 | 4,841 | 15.8% | 4,049 | 19.7% |
| 2017 | 4,989 | 16.3% | 3,724 | 18.1% |
| 2018 | 4,443 | 14.5% | 898 | 4.4% |
| 2019 | 1,120 | 3.7% | 894 | 4.4% |
| 2020 | 924 | 3.0% | 590 | 2.9% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | 889 | 2.9% | 78 | 0.4% |
| 2022 | 91 | 0.3% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.7 | 1.1 | 0.7 | 1.1 |
| Hypertension | 4,003 | 13.1% | 2,717 | 13.2% |
| Hemangioma | 238 | 0.8% | 163 | 0.8% |
| Heart Failure | 338 | 1.1% | 233 | 1.1% |
| Congenital Heart Disease | 3,876 | 12.6% | 2,619 | 12.8% |
| Atrial Fibrillation | 156 | 0.5% | 96 | 0.5% |
| Long QT Syndrome | 313 | 1.0% | 208 | 1.0% |
| Other Cardiac Arrhythmias | 10,372 | 33.8% | 6,782 | 33.1% |
| Cardiac Arrhythmias (Composite) | 10,594 | 34.6% | 6,936 | 33.8% |
| Pulmonary Hypertension | 166 | 0.5% | 111 | 0.5% |
| Cardiomyopathy | 680 | 2.2% | 449 | 2.2% |
| Coronary Artery Disease | 150 | 0.5% | 104 | 0.5% |
| Portal Hypertension | 18 | 0.1% | 11 | 0.1% |
| Anxiety Disorder | 3,511 | 11.5% | 2,309 | 11.3% |
| Tremor | 238 | 0.8% | 165 | 0.8% |
| Migraine | 3,609 | 11.8% | 2,501 | 12.2% |
| Thyrotoxicosis | 2,906 | 9.5% | 1,866 | 9.1% |
| Burns | 48 | 0.2% | 33 | 0.2% |
| Glaucoma | 76 | 0.2% | 42 | 0.2% |
| Autism | 566 | 1.8% | 374 | 1.8% |
| Marfan's Syndrome | 745 | 2.4% | 507 | 2.5% |
| Pheochromocytoma/Paraganglioma | 13 | 0.0% | **** | **** |
| Diabetes | 454 | 1.5% | 306 | 1.5% |
| Any of the above health characteristics (excluding combined comorbidity score) | 22,865 | 74.6% | 15,253 | 74.3% |
| None of the above health characteristics (excluding | 7,795 | 25.4% | 5,267 | 25.7% |
| combined comorbidity score) | 12 | 0.0% | **** | ×*** |
| Hypoglycemia (Day 0) Hypoglycemia (0.2 Monthe) | 85 | 0.3% | 69 | 0.3% |
| Hypoglycemia (0-3 Months) | 76 | | | |
| Hypoglycemia (3-6 Months) | | 0.2% | 53 80 | 0.3% |
| Hypoglycemia (6-12 Months) | 103 **** | 0.3% **** | 89 **** | 0.4% **** |
| Hypoglycemia (Day 0) and Diabetes | | | | |
| Hypoglycemia (0-3 Months) and Diabetes | 15 | 0.0% | 14 **** | 0.1% **** |
| Hypoglycemia (3-6 Months) and Diabetes | 16 | 0.1% | | |
| Hypoglycemia (6-12 Months) and Diabetes | 17 | 0.1% | 14 | 0.1% |



| | Beta | Blockers | • | ost-Index Enrollment irement) |
|--|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and No Diabetes | 11 | 0.0% | **** | **** |
| Hypoglycemia (0-3 Months) and No Diabetes | 70 | 0.2% | 55 | 0.3% |
| Hypoglycemia (3-6 Months) and No Diabetes | 60 | 0.2% | 44 | 0.2% |
| Hypoglycemia (6-12 Months) and No Diabetes | 86 | 0.3% | 75 | 0.4% |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Atenolol | 12 | 0.0% | **** | **** |
| Hypoglycemia (0-3 Months) and Atenolol | 85 | 0.3% | 69 | 0.3% |
| Hypoglycemia (3-6 Months) and Atenolol | 76 | 0.2% | 53 | 0.3% |
| Hypoglycemia (6-12 Months) and Atenolol | 103 | 0.3% | 89 | 0.4% |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers | 30,660 | 100.0% | 20,520 | 100.0% |
| Non-Selective Beta Blockers | 22 | 0.1% | 15 | 0.1% |
| Any Metoprolol | 19 | 0.1% | 14 | 0.1% |
| Metoprolol (Extended Release) | 15 | 0.0% | 11 | 0.1% |
| Metoprolol (Regular) | **** | **** | **** | **** |
| Any Propranolol | 13 | 0.0% | **** | **** |
| Propranolol (Extended Release) | **** | **** | **** | **** |
| Propranolol (Regular) | 11 | 0.0% | **** | **** |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Atenolol | 30,660 | 100.0% | 20,520 | 100.0% |
| Betaxolol | **** | **** | **** | **** |
| Bisoprolol | **** | **** | **** | **** |
| Carvedilol | **** | **** | **** | **** |
| Labetalol | **** | **** | **** | **** |
| Nadolol | **** | **** | **** | **** |
| Nebivolol | **** | **** | **** | **** |



| | Beta | Blockers | • | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | **** | **** | **** | **** |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | **** | **** | **** | **** |
| Hypertension and Metoprolol (Extended Release) | **** | **** | **** | **** |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Any Propranolol | **** | **** | **** | **** |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | **** | **** | **** | **** |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 4,003 | 13.1% | 2,717 | 13.2% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | **** | **** | **** | **** |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Labetalol | **** | **** | **** | **** |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 238 | 0.8% | 163 | 0.8% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | • | st-Index Enrollment irement) |
|---|-----------------------------------|--|-----------------------------------|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Release) Long QT Syndrome and Propranolol (Regular) Long QT Syndrome and Acebutolol Long QT Syndrome and Acebutolol | 0 0 0 0 0 0 313 | 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 1.0% | 0 0 0 0 0 0 208 | 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 1.0% |
| Long QT Syndrome and Betaxolol Long QT Syndrome and Bisoprolol | 0 0 | 0.0% 0.0% | 0 0 | 0.0% 0.0% |
| Long QT Syndrome and Carvedilol Long QT Syndrome and Labetalol | 0 0 | 0.0% 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nebivolol Long QT Syndrome and Pindolol | 0 0 | 0.0% 0.0% | 0 0 | 0.0% 0.0% |
| Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | 0 0 | 0.0% 0.0% | 0 0 | 0.0% 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Bet | a Blockers | | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 168 | N/A | 115 | N/A |
| Episodes | 173 | 100.0% | 118 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 15.0 | 2.3 | 15.3 | 2.2 |
| Age | | | | |
| 0-1 years | 0 | 0.0% | 0 | 0.0% |
| 2-5 years | **** | **** | 0 | 0.0% |
| 6-12 years | **** | **** | 20 | 16.9% |
| 13-17 years | 140 | 80.9% | 98 | 83.1% |
| Sex | | | | |
| Female | 109 | 64.9% | 72 | 62.6% |
| Male | 59 | 35.1% | 43 | 37.4% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 0 | 0.0% | 0 | 0.0% |
| Asian | **** | **** | 0 | 0.0% |
| Black or African American | **** | **** | **** | **** |
| Native Hawaiian or Other Pacific Islander | **** | **** | 0 | 0.0% |
| Unknown | 121 | 72.0% | 86 | 74.8% |
| White | 43 | 25.6% | **** | **** |
| Hispanic origin | | | | |
| Yes | * * * * * | * * * * | **** | * * * * |
| No | **** | **** | **** | **** |
| Unknown | 131 | 78.0% | 90 | 78.3% |
| Year | | | | |
| 2008 | **** | **** | **** | **** |
| 2009 | **** | **** | **** | **** |
| 2010 | 17 | 9.8% | 13 | 11.0% |
| 2011 | **** | **** | **** | **** |
| 2012 | 12 | 6.9% | **** | **** |
| 2013 | **** | **** | **** | **** |
| 2014 | 20 | 11.6% | 18 | 15.3% |
| 2015 | 17 | 9.8% | **** | **** |
| 2016 | 19 | 11.0% | 14 | 11.9% |
| 2017 | 20 | 11.6% | 18 | 15.3% |
| 2018 | 18 | 10.4% | **** | **** |
| 2019 | **** | **** | **** | **** |
| 2020 | **** | **** | **** | **** |



| | Bet | a Blockers | • | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | **** | **** | **** | **** |
| 2022 | **** | **** | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 1.0 | 1.0 | 0.9 | 0.9 |
| Hypertension | * * * * | **** | **** | **** |
| Hemangioma | 0 | 0.0% | 0 | 0.0% |
| Heart Failure | **** | **** | 0 | 0.0% |
| Congenital Heart Disease | 16 | 9.2% | 12 | 10.2% |
| Atrial Fibrillation | **** | **** | **** | **** |
| Long QT Syndrome | **** | **** | **** | **** |
| Other Cardiac Arrhythmias | 107 | 61.8% | 66 | 55.9% |
| Cardiac Arrhythmias (Composite) | 109 | 63.0% | 67 | 56.8% |
| Pulmonary Hypertension | 0 | 0.0% | 0 | 0.0% |
| Cardiomyopathy | 0 | 0.0% | 0 | 0.0% |
| Coronary Artery Disease | 0 | 0.0% | 0 | 0.0% |
| Portal Hypertension | **** | **** | 0 | 0.0% |
| Anxiety Disorder | 42 | 24.3% | 33 | 28.0% |
| Tremor | **** | **** | **** | **** |
| Migraine | 15 | 8.7% | 11 | 9.3% |
| Thyrotoxicosis | **** | **** | **** | **** |
| Burns | **** | **** | **** | **** |
| Glaucoma | 0 | 0.0% | 0 | 0.0% |
| Autism | **** | **** | **** | **** |
| Marfan's Syndrome | 0 | 0.0% | 0 | 0.0% |
| Pheochromocytoma/Paraganglioma | 0 | 0.0% | 0 | 0.0% |
| Diabetes | 0 | 0.0% | 0 | 0.0% |
| Any of the above health characteristics (excluding | | | | |
| combined comorbidity score) | 136 | 78.6% | 91 | 77.1% |
| None of the above health characteristics (excluding combined comorbidity score) | 37 | 21.4% | 27 | 22.9% |
| Hypoglycemia (Day 0) | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) | **** | * * * * | **** | **** |
| Hypoglycemia (6-12 Months) | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |



| | Beta | a Blockers | - | ost-Index Enrollment irement) |
|--|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and No Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and No Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers | 173 | 100.0% | 118 | 100.0% |
| Non-Selective Beta Blockers | 0 | 0.0% | 0 | 0.0% |
| Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Atenolol | **** | **** | **** | **** |
| Betaxolol | 173 | 100.0% | 118 | 100.0% |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Labetalol | 0 | 0.0% | 0 | 0.0% |
| | 0 | 0.070 | 0 | 010/0 |
| Nadolol | 0 | 0.0% | 0 | 0.0% |



| | Bet | a Blockers | Beta Blockers (Post-Index Enrollmen Requirement) | | |
|---|-------------|---------------------------------|---|--------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation | |
| Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Sotalol | 0 | 0.0% | 0 | 0.0% | |
| Timolol | 0 | 0.0% | 0 | 0.0% | |
| Health Characteristics by Beta Blockers | | | | | |
| Hypertension and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Betaxolol | **** | * * * * | **** | **** | |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% | |
| lypertension and Labetalol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Appertension and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% | |
| Iemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% | |
| Iemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| lemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| lemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| lemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Iemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% | |
| - Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% | |



| | Beta Blockers | | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|----------------------------|--|----------------------------|--|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ | |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Release) Long QT Syndrome and Propranolol (Regular) Long QT Syndrome and Acebutolol | 0 0 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% | 0 0 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% | |
| Long QT Syndrome and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Betaxolol Long QT Syndrome and Bisoprolol Long QT Syndrome and Carvedilol | ***** 0 0 | ***** 0.0% 0.0% | ***** 0 0 | ***** 0.0% 0.0% | |
| Long QT Syndrome and Labetalol Long QT Syndrome and Nadolol Long QT Syndrome and Nebivolol | 0 0 0 | 0.0% 0.0% 0.0% | 0 0 0 | 0.0% 0.0% 0.0% | |
| Long QT Syndrome and Pindolol Long QT Syndrome and Sotalol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% | |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | | Blockers | | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 568 | N/A | 375 | N/A |
| Episodes | 584 | 100.0% | 386 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 14.6 | 3.5 | 14.7 | 3.5 |
| Age | | | | |
| 0-1 years | **** | **** | **** | **** |
| 2-5 years | **** | **** | **** | **** |
| 6-12 years | 94 | 16.1% | 55 | 14.2% |
| 13-17 years | 467 | 80.0% | 314 | 81.3% |
| Sex | | | | |
| Female | 318 | 56.0% | 206 | 54.9% |
| Male | 250 | 44.0% | 169 | 45.1% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | **** | **** | **** | **** |
| Asian | **** | **** | **** | **** |
| Black or African American | **** | **** | **** | **** |
| Native Hawaiian or Other Pacific Islander | 0 | 0.0% | 0 | 0.0% |
| Unknown | 415 | 73.1% | 282 | 75.2% |
| White | 110 | 19.4% | 70 | 18.7% |
| Hispanic origin | | | | |
| Yes | 46 | 8.1% | 28 | 7.5% |
| No | 135 | 23.8% | 76 | 20.3% |
| Unknown | 387 | 68.1% | 271 | 72.3% |
| Year | | | | |
| 2008 | 30 | 5.1% | 25 | 6.5% |
| 2009 | 46 | 7.9% | 33 | 8.5% |
| 2010 | 34 | 5.8% | 30 | 7.8% |
| 2011 | 28 | 4.8% | 20 | 5.2% |
| 2012 | 29 | 5.0% | 23 | 6.0% |
| 2013 | 21 | 3.6% | 17 | 4.4% |
| 2014 | 25 | 4.3% | 23 | 6.0% |
| 2015 | 55 | 9.4% | 41 | 10.6% |
| 2016 | 64 | 11.0% | 49 | 12.7% |
| 2017 | 90 | 15.4% | 75 | 19.4% |
| 2018 | 87 | 14.9% | 21 | 5.4% |
| 2019 | 19 | 3.3% | 16 | 4.1% |
| 2020 | **** | **** | **** | **** |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollmer Requirement) | |
|---|-------------|---------------------------------|---|--------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation |
| 2021 | 35 | 6.0% | **** | **** |
| 2022 | **** | **** | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.4 | 1.0 | 0.3 | 1.0 |
| Hypertension | 126 | 21.6% | 90 | 23.3% |
| Hemangioma | 0 | 0.0% | 0 | 0.0% |
| Heart Failure | **** | **** | **** | **** |
| Congenital Heart Disease | 40 | 6.8% | 22 | 5.7% |
| Atrial Fibrillation | **** | **** | **** | **** |
| Long QT Syndrome | 11 | 1.9% | **** | **** |
| Other Cardiac Arrhythmias | 153 | 26.2% | 94 | 24.4% |
| Cardiac Arrhythmias (Composite) | 159 | 27.2% | 97 | 25.1% |
| Pulmonary Hypertension | **** | **** | **** | **** |
| Cardiomyopathy | **** | **** | **** | **** |
| Coronary Artery Disease | **** | **** | **** | **** |
| Portal Hypertension | 0 | 0.0% | 0 | 0.0% |
| Anxiety Disorder | 85 | 14.6% | 51 | 13.2% |
| Tremor | **** | **** | **** | **** |
| Migraine | 46 | 7.9% | 30 | 7.8% |
| Thyrotoxicosis | **** | **** | **** | **** |
| Burns | 0 | 0.0% | 0 | 0.0% |
| Glaucoma | 0 | 0.0% | 0 | 0.0% |
| Autism | 21 | 3.6% | 11 | 2.8% |
| Marfan's Syndrome | **** | **** | **** | **** |
| , Pheochromocytoma/Paraganglioma | 0 | 0.0% | 0 | 0.0% |
| Diabetes | 12 | 2.1% | **** | **** |
| Any of the above health characteristics (excluding | | | | |
| combined comorbidity score) | 366 | 62.7% | 235 | 60.9% |
| None of the above health characteristics (excluding combined comorbidity score) | 218 | 37.3% | 151 | 39.1% |
| Hypoglycemia (Day 0) | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (5-0 Months) and Diabetes Hypoglycemia (6-12 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |



| | Beta Blockers (Post-Inde Beta Blockers Requirement | | | |
|--|---|---------------------------------|-------------|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and No Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and No Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and No Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers | 584 | 100.0% | 386 | 100.0% |
| Non-Selective Beta Blockers | 0 | 0.0% | 0 | 0.0% |
| Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Atenolol | **** | **** | **** | **** |
| Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Bisoprolol | 584 | 100.0% | 386 | 100.0% |
| Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Labetalol | 0 | 0.0% | 0 | 0.0% |
| Nadolol | 0 | 0.0% | 0 | 0.0% |
| Nebivolol | **** | **** | 0 | 0.0% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|---|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Sotalol | 0 | 0.0% | 0 | 0.0% | |
| Timolol | 0 | 0.0% | 0 | 0.0% | |
| Health Characteristics by Beta Blockers | | | | | |
| Hypertension and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Atenolol | **** | **** | **** | **** | |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Bisoprolol | 126 | 21.6% | 90 | 23.3% | |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Nebivolol | **** | **** | 0 | 0.0% | |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% | |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|----------------------------|--|--|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Release) Long QT Syndrome and Propranolol (Regular) Long QT Syndrome and Acebutolol | 0 0 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% | 0 0 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% |
| Long QT Syndrome and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 11 | 1.9% | * * * * * | **** |
| Long QT Syndrome and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | 0 0 | 0.0% 0.0% | 0 0 | 0.0% 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | Blockers | Beta Blockers (Post-Index Enrollme Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 3,730 | N/A | 2,246 | N/A |
| Episodes | 4,036 | 100.0% | 2,410 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 10.4 | 6.2 | 10.4 | 6.2 |
| Age | | | | |
| 0-1 years | 751 | 18.6% | 449 | 18.6% |
| 2-5 years | 464 | 11.5% | 265 | 11.0% |
| 6-12 years | 902 | 22.3% | 545 | 22.6% |
| 13-17 years | 1,919 | 47.5% | 1,151 | 47.8% |
| Sex | | | | |
| Female | 1,476 | 39.6% | 882 | 39.3% |
| Male | 2,254 | 60.4% | 1,364 | 60.7% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 52 | 1.4% | 29 | 1.3% |
| Asian | **** | **** | **** | **** |
| Black or African American | 436 | 11.7% | 258 | 11.5% |
| Native Hawaiian or Other Pacific Islander | **** | **** | **** | **** |
| Unknown | 2,289 | 61.4% | 1,416 | 63.0% |
| White | 899 | 24.1% | 512 | 22.8% |
| Hispanic origin | | | | |
| Yes | 498 | 13.4% | 286 | 12.7% |
| No | 1,369 | 36.7% | 778 | 34.6% |
| Unknown | 1,863 | 49.9% | 1,182 | 52.6% |
| Year | | | | |
| 2008 | 102 | 2.5% | 78 | 3.2% |
| 2009 | 122 | 3.0% | 84 | 3.5% |
| 2010 | 115 | 2.8% | 82 | 3.4% |
| 2011 | 112 | 2.8% | 92 | 3.8% |
| 2012 | 129 | 3.2% | 95 | 3.9% |
| 2013 | 133 | 3.3% | 91 | 3.8% |
| 2014 | 199 | 4.9% | 164 | 6.8% |
| 2015 | 389 | 9.6% | 271 | 11.2% |
| 2016 | 680 | 16.8% | 552 | 22.9% |
| 2017 | 927 | 23.0% | 655 | 27.2% |
| 2018 | 802 | 19.9% | 88 | 3.7% |
| 2019 | 124 | 3.1% | 100 | 4.1% |
| 2020 | 110 | 2.7% | **** | **** |



| | Beta | Blockers | • | ost-Index Enrollment iirement) |
|---|-------------|---------------------------------|-------------|-----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | **** | **** | **** | **** |
| 2022 | **** | **** | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 2.1 | 2.2 | 2.1 | 2.2 |
| Hypertension | 733 | 18.2% | 429 | 17.8% |
| Hemangioma | **** | **** | **** | **** |
| Heart Failure | 1,134 | 28.1% | 683 | 28.3% |
| Congenital Heart Disease | 1,424 | 35.3% | 880 | 36.5% |
| Atrial Fibrillation | 32 | 0.8% | 20 | 0.8% |
| Long QT Syndrome | 63 | 1.6% | 33 | 1.4% |
| Other Cardiac Arrhythmias | 1,276 | 31.6% | 773 | 32.1% |
| Cardiac Arrhythmias (Composite) | 1,296 | 32.1% | 781 | 32.4% |
| Pulmonary Hypertension | 167 | 4.1% | 100 | 4.1% |
| Cardiomyopathy | 1,174 | 29.1% | 672 | 27.9% |
| Coronary Artery Disease | 182 | 4.5% | 109 | 4.5% |
| Portal Hypertension | **** | **** | **** | **** |
| Anxiety Disorder | 259 | 6.4% | 147 | 6.1% |
| Tremor | **** | **** | **** | **** |
| Migraine | 80 | 2.0% | 40 | 1.7% |
| Thyrotoxicosis | 11 | 0.3% | **** | **** |
| Burns | **** | **** | **** | **** |
| Glaucoma | 13 | 0.3% | **** | **** |
| Autism | 81 | 2.0% | 53 | 2.2% |
| Marfan's Syndrome | **** | **** | **** | **** |
| Pheochromocytoma/Paraganglioma | **** | **** | **** | **** |
| Diabetes | 100 | 2.5% | 69 | 2.9% |
| Any of the above health characteristics (excluding | | | | |
| combined comorbidity score) | 3,021 | 74.9% | 1,806 | 74.9% |
| None of the above health characteristics (excluding combined comorbidity score) | 1,015 | 25.1% | 604 | 25.1% |
| Hypoglycemia (Day 0) | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) | 24 | 0.6% | 14 | 0.6% |
| Hypoglycemia (3-6 Months) | 20 | 0.5% | 13 | 0.5% |
| Hypoglycemia (6-12 Months) | 33 | 0.8% | 28 | 1.2% |
| Hypoglycemia (Day 0) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and Diabetes | **** | **** | **** | **** |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|--|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Hypoglycemia (Day 0) and No Diabetes | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and No Diabetes | 20 | 0.5% | **** | **** | |
| Hypoglycemia (3-6 Months) and No Diabetes | 16 | 0.4% | **** | **** | |
| Hypoglycemia (6-12 Months) and No Diabetes | 27 | 0.7% | 22 | 0.9% | |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Selective Beta Blockers | **** | **** | **** | **** | |
| Non-Selective Beta Blockers | 4,036 | 100.0% | 2,410 | 100.0% | |
| Any Metoprolol | **** | **** | **** | **** | |
| Metoprolol (Extended Release) | **** | **** | **** | **** | |
| Metoprolol (Regular) | **** | **** | **** | **** | |
| Any Propranolol | **** | **** | 0 | 0.0% | |
| Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Propranolol (Regular) | **** | **** | 0 | 0.0% | |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% | |
| Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Atenolol | **** | **** | **** | **** | |
| Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Carvedilol | 4,036 | 100.0% | 2,410 | 100.0% | |
| Labetalol | , **** | **** | 0 | 0.0% | |
| Nadolol | | | | | |
| | 0 | 0.0% | 0 | 0.0% | |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|---------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | **** | **** | **** | **** |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Carvedilol | 733 | 18.2% | 429 | 17.8% |
| Hypertension and Labetalol | **** | **** | 0 | 0.0% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | **** | **** | **** | **** |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|---------------|---|--|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol | **** | **** | **** | **** |
| Long QT Syndrome and Metoprolol (Extended Long QT Syndrome and Metoprolol (Regular) | 0 **** | 0.0% **** | 0 **** | 0.0% **** |
| Long QT Syndrome and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Propranolol (Extended | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | 63 | 1.6% | 33 | 1.4% |
| Long QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | Blockers | - | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 4,852 | N/A | 2,874 | N/A |
| Episodes | 4,991 | 100.0% | 2,952 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 14.5 | 4.4 | 14.4 | 4.5 |
| Age | | | | |
| 0-1 years | 177 | 3.5% | 117 | 4.0% |
| 2-5 years | 249 | 5.0% | 156 | 5.3% |
| 6-12 years | 670 | 13.4% | 393 | 13.3% |
| 13-17 years | 3,895 | 78.0% | 2,286 | 77.4% |
| Sex | | | | |
| Female | 3,715 | 76.6% | 2,180 | 75.9% |
| Male | 1,137 | 23.4% | 694 | 24.1% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 61 | 1.3% | 34 | 1.2% |
| Asian | 40 | 0.8% | **** | **** |
| Black or African American | 1,026 | 21.1% | 578 | 20.1% |
| Native Hawaiian or Other Pacific Islander | 14 | 0.3% | **** | **** |
| Unknown | 2,524 | 52.0% | 1,514 | 52.7% |
| White | 1,187 | 24.5% | 720 | 25.1% |
| Hispanic origin | | | | |
| Yes | 601 | 12.4% | 324 | 11.3% |
| No | 2,258 | 46.5% | 1,306 | 45.4% |
| Unknown | 1,993 | 41.1% | 1,244 | 43.3% |
| Year | | | | |
| 2008 | 149 | 3.0% | 108 | 3.7% |
| 2009 | 196 | 3.9% | 146 | 4.9% |
| 2010 | 192 | 3.8% | 132 | 4.5% |
| 2011 | 157 | 3.1% | 116 | 3.9% |
| 2012 | 145 | 2.9% | 106 | 3.6% |
| 2013 | 126 | 2.5% | 94 | 3.2% |
| 2014 | 278 | 5.6% | 210 | 7.1% |
| 2015 | 580 | 11.6% | 395 | 13.4% |
| 2016 | 862 | 17.3% | 674 | 22.8% |
| 2017 | 1,075 | 21.5% | 734 | 24.9% |
| 2018 | 909 | 18.2% | 75 | 2.5% |
| 2019 | 108 | 2.2% | 89 | 3.0% |
| 2020 | 141 | 2.8% | **** | **** |



| | Beta | Blockers | • | st-Index Enrollment rement) |
|---|-------------|---------------------------------|-------------|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | **** | **** | * * * * | **** |
| 2022 | **** | **** | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.9 | 1.8 | 0.8 | 1.7 |
| Hypertension | 1,938 | 38.8% | 1,179 | 39.9% |
| Hemangioma | **** | **** | **** | * * * * |
| Heart Failure | 69 | 1.4% | 43 | 1.5% |
| Congenital Heart Disease | 248 | 5.0% | 143 | 4.8% |
| Atrial Fibrillation | **** | **** | **** | **** |
| Long QT Syndrome | 18 | 0.4% | 12 | 0.4% |
| Other Cardiac Arrhythmias | 493 | 9.9% | 279 | 9.5% |
| Cardiac Arrhythmias (Composite) | 504 | 10.1% | 288 | 9.8% |
| Pulmonary Hypertension | 39 | 0.8% | 17 | 0.6% |
| Cardiomyopathy | 44 | 0.9% | 25 | 0.8% |
| Coronary Artery Disease | 19 | 0.4% | 13 | 0.4% |
| Portal Hypertension | 11 | 0.2% | **** | **** |
| Anxiety Disorder | 365 | 7.3% | 217 | 7.4% |
| Tremor | **** | **** | **** | **** |
| Migraine | 128 | 2.6% | 86 | 2.9% |
| Thyrotoxicosis | 24 | 0.5% | 19 | 0.6% |
| Burns | **** | **** | **** | **** |
| Glaucoma | 12 | 0.2% | **** | **** |
| Autism | 55 | 1.1% | 43 | 1.5% |
| Marfan's Syndrome | **** | **** | **** | **** |
| Pheochromocytoma/Paraganglioma | 30 | 0.6% | 20 | 0.7% |
| Diabetes | 127 | 2.5% | 80 | 2.7% |
| Any of the above health characteristics (excluding | | | | |
| combined comorbidity score) | 2,359 | 47.3% | 1,427 | 48.3% |
| None of the above health characteristics (excluding combined comorbidity score) | 2,632 | 52.7% | 1,525 | 51.7% |
| Hypoglycemia (Day 0) | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) | 38 | 0.8% | 21 | 0.7% |
| Hypoglycemia (3-6 Months) | 13 | 0.3% | **** | **** |
| Hypoglycemia (6-12 Months) | 15 | 0.3% | 13 | 0.4% |
| Hypoglycemia (Day 0) and Diabetes | ***** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (5-0 Months) and Diabetes | **** | **** | **** | **** |



| | Beta | Blockers | - | st-Index Enrollment rement) |
|--|-------------|---------------------------------|-------------|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and No Diabetes | 31 | 0.6% | 15 | 0.5% |
| Hypoglycemia (3-6 Months) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Atenolol | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers | **** | **** | **** | **** |
| Non-Selective Beta Blockers | 4,991 | 100.0% | 2,952 | 100.0% |
| Any Metoprolol | **** | **** | 0 | 0.0% |
| Metoprolol (Extended Release) | **** | **** | 0 | 0.0% |
| Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Atenolol | **** | **** | **** | **** |
| Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Carvedilol | * * * * * | **** | 0 | 0.0% |
| Labetalol | 4,991 | 100.0% | 2,952 | 100.0% |
| Nadolol | 0 | 0.0% | 0 | 0.0% |
| Nebivolol | 0 | 0.0% | 0 | 0.0% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|---------------|---------------------------------|--|--------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | 0 | 0.0% | 0 | 0.0% |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | **** | **** | **** | **** |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Carvedilol | **** | **** | 0 | 0.0% |
| Hypertension and Labetalol | 1,938 | 38.8% | 1,179 | 39.9% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | **** | **** | **** | **** |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|---------------|---|--|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) | 0 | 0.0% 0.0% | 0 0 | 0.0% 0.0% |
| Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Release) | 0 0 0 | 0.0% 0.0% 0.0% | 0 0 0 | 0.0% 0.0% 0.0% |
| Long QT Syndrome and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Labetalol | 18 | 0.4% | 12 | 0.4% |
| Long QT Syndrome and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | Blockers | | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 5,865 | N/A | 3,988 | N/A |
| Episodes | 6,351 | 100.0% | 4,273 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 13.3 | 3.7 | 13.4 | 3.7 |
| Age | | | | |
| 0-1 years | 57 | 0.9% | 35 | 0.8% |
| 2-5 years | 296 | 4.7% | 185 | 4.3% |
| 6-12 years | 2,033 | 32.0% | 1,357 | 31.8% |
| 13-17 years | 3,965 | 62.4% | 2,696 | 63.1% |
| Sex | | | | |
| Female | 3,389 | 57.8% | 2,342 | 58.7% |
| Male | 2,476 | 42.2% | 1,646 | 41.3% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 38 | 0.6% | **** | **** |
| Asian | 52 | 0.9% | 33 | 0.8% |
| Black or African American | 290 | 4.9% | 168 | 4.2% |
| Native Hawaiian or Other Pacific Islander | 15 | 0.3% | **** | **** |
| Unknown | 4,151 | 70.8% | 2,883 | 72.3% |
| White | 1,319 | 22.5% | 872 | 21.9% |
| Hispanic origin | | | | |
| Yes | 385 | 6.6% | 222 | 5.6% |
| No | 1,487 | 25.4% | 935 | 23.4% |
| Unknown | 3,993 | 68.1% | 2,831 | 71.0% |
| Year | | | | |
| 2008 | 270 | 4.3% | 208 | 4.9% |
| 2009 | 398 | 6.3% | 314 | 7.3% |
| 2010 | 365 | 5.7% | 268 | 6.3% |
| 2011 | 350 | 5.5% | 258 | 6.0% |
| 2012 | 349 | 5.5% | 272 | 6.4% |
| 2013 | 396 | 6.2% | 304 | 7.1% |
| 2014 | 424 | 6.7% | 338 | 7.9% |
| 2015 | 551 | 8.7% | 435 | 10.2% |
| 2016 | 757 | 11.9% | 627 | 14.7% |
| 2017 | 932 | 14.7% | 682 | 16.0% |
| 2018 | 876 | 13.8% | 216 | 5.1% |
| 2019 | 256 | 4.0% | 189 | 4.4% |
| 2020 | 212 | 3.3% | 150 | 3.5% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | **** | **** | 12 | 0.3% |
| 2022 | **** | **** | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.7 | 1.0 | 0.6 | 1.0 |
| Hypertension | 184 | 2.9% | 119 | 2.8% |
| Hemangioma | **** | **** | **** | **** |
| Heart Failure | 62 | 1.0% | 31 | 0.7% |
| Congenital Heart Disease | 446 | 7.0% | 280 | 6.6% |
| Atrial Fibrillation | 45 | 0.7% | 29 | 0.7% |
| Long QT Syndrome | 1,130 | 17.8% | 711 | 16.6% |
| Other Cardiac Arrhythmias | 1,748 | 27.5% | 1,113 | 26.0% |
| Cardiac Arrhythmias (Composite) | 2,543 | 40.0% | 1,612 | 37.7% |
| Pulmonary Hypertension | 22 | 0.3% | **** | **** |
| Cardiomyopathy | 150 | 2.4% | 93 | 2.2% |
| Coronary Artery Disease | 25 | 0.4% | 15 | 0.4% |
| Portal Hypertension | 43 | 0.7% | 25 | 0.6% |
| Anxiety Disorder | 608 | 9.6% | 405 | 9.5% |
| Tremor | 57 | 0.9% | 36 | 0.8% |
| Migraine | 1,898 | 29.9% | 1,380 | 32.3% |
| Thyrotoxicosis | 17 | 0.3% | 12 | 0.3% |
| Burns | 11 | 0.2% | **** | **** |
| Glaucoma | 13 | 0.2% | **** | **** |
| Autism | 105 | 1.7% | 67 | 1.6% |
| Marfan's Syndrome | 11 | 0.2% | **** | **** |
| Pheochromocytoma/Paraganglioma | **** | **** | **** | **** |
| Diabetes | 54 | 0.9% | 42 | 1.0% |
| Any of the above health characteristics (excluding | | | | |
| combined comorbidity score) | 4,812 | 75.8% | 3,236 | 75.7% |
| None of the above health characteristics (excluding combined comorbidity score) | 1,539 | 24.2% | 1,037 | 24.3% |
| Hypoglycemia (Day 0) | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) | 18 | 0.3% | 13 | 0.3% |
| Hypoglycemia (3-6 Months) | 15 | 0.2% | 11 | 0.3% |
| Hypoglycemia (6-12 Months) | 25 | 0.4% | 24 | 0.6% |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | **** | **** | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (5-0 Months) and Diabetes | **** | **** | **** | **** |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|--|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Hypoglycemia (Day 0) and No Diabetes | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and No Diabetes | 17 | 0.3% | **** | **** | |
| Hypoglycemia (3-6 Months) and No Diabetes | 14 | 0.2% | **** | **** | |
| Hypoglycemia (6-12 Months) and No Diabetes | 24 | 0.4% | 23 | 0.5% | |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (Day 0) and Nadolol | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and Nadolol | 18 | 0.3% | 13 | 0.3% | |
| Hypoglycemia (3-6 Months) and Nadolol | 15 | 0.2% | 11 | 0.3% | |
| Hypoglycemia (6-12 Months) and Nadolol | 25 | 0.4% | 24 | 0.6% | |
| Selective Beta Blockers | **** | **** | **** | **** | |
| Non-Selective Beta Blockers | 6,351 | 100.0% | 4,273 | 100.0% | |
| Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Any Propranolol | **** | **** | **** | **** | |
| Propranolol (Extended Release) | **** | **** | **** | **** | |
| Propranolol (Regular) | **** | **** | **** | **** | |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% | |
| Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Atenolol | **** | **** | **** | **** | |
| Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Carvedilol | 0 | 0.0% | 0 | 0.0% | |
| Labetalol | 0 | 0.0% | 0 | 0.0% | |
| Nadolol | 6,351 | 100.0% | 4,273 | 100.0% | |
| Nebivolol | 0 | 0.0% | 0 | 0.0% | |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollm Requirement) | |
|---|-------------|---------------------------------|---|--------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | 0 | 0.0% | 0 | 0.0% |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nadolol | 184 | 2.9% | 119 | 2.8% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Iemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| lemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | **** | **** | **** | **** |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|---------------|---|--|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended | 0 | 0.0% | 0 | 0.0% |
| Release) | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended | 0 | 0.0% | 0 | 0.0% |
| Release) | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nadolol | 1,130 | 17.8% | 711 | 16.6% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | a Blockers | - | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 530 | N/A | 382 | N/A |
| Episodes | 551 | 100.0% | 397 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 14.9 | 3.5 | 14.9 | 3.5 |
| Age | | | | |
| 0-1 years | **** | **** | **** | **** |
| 2-5 years | **** | **** | **** | **** |
| 6-12 years | 96 | 17.4% | 66 | 16.6% |
| 13-17 years | 437 | 79.3% | 318 | 80.1% |
| Sex | | | | |
| Female | 261 | 49.2% | 191 | 50.0% |
| Male | 269 | 50.8% | 191 | 50.0% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | **** | **** | **** | **** |
| Asian | 0 | 0.0% | 0 | 0.0% |
| Black or African American | **** | **** | **** | **** |
| Native Hawaiian or Other Pacific Islander | 0 | 0.0% | 0 | 0.0% |
| Unknown | 441 | 83.2% | 320 | 83.8% |
| White | 74 | 14.0% | 50 | 13.1% |
| Hispanic origin | | | | |
| Yes | 12 | 2.3% | **** | **** |
| No | 64 | 12.1% | **** | **** |
| Unknown | 454 | 85.7% | 327 | 85.6% |
| Year | | | | |
| 2008 | **** | **** | 13 | 3.3% |
| 2009 | 43 | 7.8% | 30 | 7.6% |
| 2010 | 46 | 8.3% | 34 | 8.6% |
| 2011 | 35 | 6.4% | 24 | 6.0% |
| 2012 | 44 | 8.0% | 34 | 8.6% |
| 2013 | 47 | 8.5% | 28 | 7.1% |
| 2014 | 57 | 10.3% | 42 | 10.6% |
| 2015 | 39 | 7.1% | 31 | 7.8% |
| 2016 | 55 | 10.0% | 42 | 10.6% |
| 2017 | 77 | 14.0% | 62 | 15.6% |
| 2018 | 42 | 7.6% | 26 | 6.5% |
| 2019 | 24 | 4.4% | 18 | 4.5% |
| 2020 | 21 | 3.8% | 13 | 3.3% |



| | Beta | Blockers | - | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | **** | **** | 0 | 0.0% |
| 2022 | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.2 | 0.9 | 0.2 | 0.9 |
| Hypertension | 145 | 26.3% | 98 | 24.7% |
| lemangioma | 0 | 0.0% | 0 | 0.0% |
| Heart Failure | **** | **** | **** | **** |
| Congenital Heart Disease | **** | **** | **** | **** |
| Atrial Fibrillation | **** | * * * * | **** | **** |
| ong QT Syndrome | 0 | 0.0% | 0 | 0.0% |
| Other Cardiac Arrhythmias | 85 | 15.4% | 59 | 14.9% |
| Cardiac Arrhythmias (Composite) | 86 | 15.6% | 60 | 15.1% |
| Pulmonary Hypertension | 0 | 0.0% | 0 | 0.0% |
| Cardiomyopathy | 0 | 0.0% | 0 | 0.0% |
| Coronary Artery Disease | **** | **** | **** | **** |
| Portal Hypertension | 0 | 0.0% | 0 | 0.0% |
| Anxiety Disorder | 116 | 21.1% | 83 | 20.9% |
| Tremor | **** | **** | **** | **** |
| Vigraine | 108 | 19.6% | 80 | 20.2% |
| Fhyrotoxicosis | **** | **** | **** | **** |
| Burns | **** | **** | **** | **** |
| Glaucoma | **** | **** | **** | **** |
| Autism | 39 | 7.1% | 28 | 7.1% |
| Marfan's Syndrome | **** | **** | 0 | 0.0% |
| Pheochromocytoma/Paraganglioma | 0 | 0.0% | 0 | 0.0% |
| Diabetes | 16 | 2.9% | **** | **** |
| Any of the above health characteristics <i>(excluding combined comorbidity score)</i> None of the above health characteristics <i>(excluding</i> | 380 | 69.0% | 265 | 66.8% |
| combined comorbidity score) | 171 | 31.0% | 132 | 33.2% |
| Hypoglycemia (Day 0) | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) | **** | **** | **** | **** |
| Hypoglycemia (3-6 Months) | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Diabetes | **** | **** | 0 | 0.0% |
| Hypoglycemia (5-12 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |



| Patient Characteristics ^{1,2} Number/Mean Standard Deviation ³ Number/Mean Standard Deviation ³ Hypoglycemia (Day 0) and No Diabetes ****** | Percent/ |
|---|-----------------------------|
| Hypoglycemia (Day 0) and No Diabetes***************Hypoglycemia (0-3 Months) and No Diabetes***************Hypoglycemia (3-6 Months) and No Diabetes***************Hypoglycemia (6-12 Months) and No Diabetes***************Hypoglycemia (Day 0) and Any Metoprolol00.0%0Hypoglycemia (0-3 Months) and Any Metoprolol00.0%0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%0Hypoglycemia (6-12 Months) and Any Metoprolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol </th <th> 3</th> | 3 |
| Hypoglycemia (Day Of allo Polabetes)******************Hypoglycemia (Day Of allo No Diabetes)******************Hypoglycemia (G-12 Months) and No Diabetes)******************Hypoglycemia (Day O) and Any Metoprolol00.0%0Hypoglycemia (G-12 Months) and Any Metoprolol00.0%0Hypoglycemia (G-12 Months) and Any Metoprolol00.0%0Hypoglycemia (Day O) and Any Propranolol00.0%0Hypoglycemia (Day O) and Atenolol00.0%0Hypoglycemia (Day O) and Atenolol00.0%0Hypoglycemia (Day O) and Atenolol00.0%0Hypoglycemia (Day O) and Atenolol00.0%0Hypoglycemia (G-12 Months) and Atenolol00.0%0Hypoglycemia (G-12 Months) and Atenolol00.0%0Hypoglycemia (G-12 Months) and Atenolol00.0%0Hypoglycemia (G-12 Months) and Atenolol00.0%0Hypoglycemia (Day O) and Nadolol00.0%0Hypoglycemia (Day O) and Nado | dard Deviation ³ |
| Hypoglycemia (3-6 Months) and No Diabetes******************Hypoglycemia (6-12 Months) and No Diabetes******************Hypoglycemia (0-3 Months) and Any Metoprolol00.0%0Hypoglycemia (0-3 Months) and Any Metoprolol00.0%0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%0Hypoglycemia (6-12 Months) and Any Metoprolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol< | **** |
| Hypoglycemia (3-6 Monthis) and No Diabetes******************Hypoglycemia (0-12 Monthis) and Any Metoprolol00.0%0Hypoglycemia (0-3 Monthis) and Any Metoprolol00.0%0Hypoglycemia (3-6 Monthis) and Any Metoprolol00.0%0Hypoglycemia (3-6 Monthis) and Any Metoprolol00.0%0Hypoglycemia (3-6 Monthis) and Any Metoprolol00.0%0Hypoglycemia (6-12 Monthis) and Any Metoprolol00.0%0Hypoglycemia (0-3 Monthis) and Any Propranolol00.0%0Hypoglycemia (3-6 Monthis) and Any Propranolol00.0%0Hypoglycemia (3-6 Monthis) and Any Propranolol00.0%0Hypoglycemia (6-12 Monthis) and Any Propranolol00.0%0Hypoglycemia (6-12 Monthis) and Any Propranolol00.0%0Hypoglycemia (3-6 Monthis) and Any Propranolol00.0%0Hypoglycemia (0-3 Monthis) and Atenolol00.0%0Hypoglycemia (3-6 Monthis) and Atenolol00.0%0Hypoglycemia (3-6 Monthis) and Atenolol00.0%0Hypoglycemia (0-12 Monthis) and Atenolol00.0%0Hypoglycemia (0-3 Monthis) and Atenolol00.0%0Hypoglycemia (0-3 Monthis) and Atenolol00.0%0Hypoglycemia (0-3 Monthis) and Nadolol00.0%0Hypoglycemia (0-3 Monthis) and Nadolol00.0%0Hypoglycemia (0-3 Monthis) and Nadolol< | **** |
| Hypoglycemia (0+12 Months) and No DrabetesHypoglycemia (0+12 Months) and Any Metoprolol00.0%0Hypoglycemia (0-3 Months) and Any Metoprolol00.0%0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%0Hypoglycemia (6-12 Months) and Any Metoprolol00.0%0Hypoglycemia (0-3 Months) and Any Metoprolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (Day 0) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol< | **** |
| Hypoglycemia (0-3 Months) and Any Metoprolol00.0%0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%0Hypoglycemia (6-12 Months) and Any Metoprolol00.0%0Hypoglycemia (Day 0) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (Day 0) and Nadolol00.0%0 | **** |
| Hypoglycemia (3-6 Months) and Any Metoprolol00.0%0Hypoglycemia (6-12 Months) and Any Metoprolol00.0%0Hypoglycemia (Day 0) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (Day 0) and Nadolol00.0%0Hypoglycemia (Day 0) and Nadolol00.0%0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol00.0%0Hypoglycemia (Day 0) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (Day 0) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0 | 0.0% |
| Hypoglycemia (Day 0) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (Day 0) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (Day 0) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (Day 0) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (Day 0) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (Day 0) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (Day 0) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (Day 0) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0 | 0.0% |
| Hypoglycemia (Day 0) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (Day 0) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0 | 0.0% |
| Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (Day 0) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0 | 0.0% |
| Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (Day 0) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (Day 0) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0 | 0.0% |
| Hypoglycemia (Day 0) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol 0 0.0% 0 | 0.0% |
| | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol 0 0.0% 0 | 0.0% |
| | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol 0 0.0% 0 | 0.0% |
| Selective Beta Blockers 551 100.0% 397 | 100.0% |
| Non-Selective Beta Blockers 0 0.0% 0 | 0.0% |
| Any Metoprolol ***** ***** **** | **** |
| Metoprolol (Extended Release) 0 0.0% 0 | 0.0% |
| Metoprolol (Regular) ***** ***** **** | **** |
| Any Propranolol 0 0.0% 0 | 0.0% |
| Propranolol (Extended Release) 0 0.0% 0 | 0.0% |
| Propranolol (Regular) 0 0.0% 0 | 0.0% |
| Propranolol (Hemangeol) 0 0.0% 0 | 0.0% |
| Acebutolol 0 0.0% 0 | 0.0% |
| Atenolol ***** **** **** | **** |
| Betaxolol 0 0.0% 0 | 0.0% |
| Bisoprolol **** **** 0 | 0.0% |
| Carvedilol 0 0.0% 0 | 0.0% |
| Labetalol 0 0.0% 0 | 0.0% |
| Nadolol 0 0.0% 0 | |
| Nebivolol 551 100.0% 397 | 0.0% |



| | Beta | a Blockers | - | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | 0 | 0.0% | 0 | 0.0% |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | **** | **** | 0 | 0.0% |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 145 | 26.3% | 98 | 24.7% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | | ost-Index Enrollment irement) |
|---|---------------------------------|--|---------------------------------|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Long QT Syndrome and Propranolol (Regular) Long QT Syndrome and Acebutolol Long QT Syndrome and Acebutolol | 0 0 0 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% | 0 0 0 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | 0 0 | 0.0% 0.0% | 0 0 | 0.0% 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | | a Blockers | - | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 264 | N/A | 186 | N/A |
| Episodes | 275 | 100.0% | 193 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 15.2 | 2.6 | 15.2 | 2.6 |
| Age | | | | |
| 0-1 years | 0 | 0.0% | 0 | 0.0% |
| 2-5 years | **** | **** | **** | **** |
| 6-12 years | **** | **** | **** | **** |
| 13-17 years | 235 | 85.5% | 165 | 85.5% |
| Sex | | | | |
| Female | 171 | 64.8% | 127 | 68.3% |
| Male | 93 | 35.2% | 59 | 31.7% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | **** | **** | **** | **** |
| Asian | 0 | 0.0% | 0 | 0.0% |
| Black or African American | **** | **** | **** | **** |
| Native Hawaiian or Other Pacific Islander | 0 | 0.0% | 0 | 0.0% |
| Unknown | 177 | 67.0% | 133 | 71.5% |
| White | 73 | 27.7% | 44 | 23.7% |
| Hispanic origin | | | | |
| Yes | * * * * * | **** | **** | * * * * * |
| No | **** | **** | **** | **** |
| Unknown | 177 | 67.0% | 135 | 72.6% |
| Year | | | | |
| 2008 | **** | **** | **** | **** |
| 2009 | 13 | 4.7% | 11 | 5.7% |
| 2010 | 11 | 4.0% | **** | **** |
| 2011 | 12 | 4.4% | 11 | 5.7% |
| 2012 | 22 | 8.0% | 17 | 8.8% |
| 2013 | 16 | 5.8% | **** | **** |
| 2014 | 14 | 5.1% | 13 | 6.7% |
| 2015 | 39 | 14.2% | 30 | 15.5% |
| 2016 | 30 | 10.9% | 29 | 15.0% |
| 2017 | 28 | 10.2% | 23 | 11.9% |
| 2018 | 51 | 18.5% | 17 | 8.8% |
| 2019 | 17 | 6.2% | 15 | 7.8% |
| 2020 | * * * * * | **** | **** | * * * * |



| | Bet | a Blockers | Beta Blockers (Post-Index Enrollme Requirement) | |
|--|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | **** | **** | 0 | 0.0% |
| 2022 | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.8 | 0.9 | 0.8 | 0.9 |
| Hypertension | 13 | 4.7% | **** | **** |
| Hemangioma | 0 | 0.0% | 0 | 0.0% |
| Heart Failure | 0 | 0.0% | 0 | 0.0% |
| Congenital Heart Disease | **** | * * * * | **** | **** |
| Atrial Fibrillation | **** | * * * * | **** | **** |
| Long QT Syndrome | 0 | 0.0% | 0 | 0.0% |
| Other Cardiac Arrhythmias | 63 | 22.9% | 48 | 24.9% |
| Cardiac Arrhythmias (Composite) | 63 | 22.9% | 48 | 24.9% |
| Pulmonary Hypertension | 0 | 0.0% | 0 | 0.0% |
| Cardiomyopathy | 0 | 0.0% | 0 | 0.0% |
| Coronary Artery Disease | **** | **** | **** | **** |
| Portal Hypertension | 0 | 0.0% | 0 | 0.0% |
| Anxiety Disorder | 119 | 43.3% | 90 | 46.6% |
| Tremor | **** | **** | **** | **** |
| Migraine | 20 | 7.3% | 12 | 6.2% |
| Thyrotoxicosis | 0 | 0.0% | 0 | 0.0% |
| Burns | 0 | 0.0% | 0 | 0.0% |
| Glaucoma | **** | **** | **** | **** |
| Autism | 20 | 7.3% | **** | **** |
| Marfan's Syndrome | **** | **** | 0 | 0.0% |
| Pheochromocytoma/Paraganglioma | 0 | 0.0% | 0 | 0.0% |
| Diabetes | **** | **** | **** | **** |
| Any of the above health characteristics (excluding | 190 | 69.1% | 135 | 69.9% |
| combined comorbidity score) None of the above health characteristics (excluding | 190 | 05.176 | 155 | 09.976 |
| combined comorbidity score) | 85 | 30.9% | 58 | 30.1% |
| Hypoglycemia (Day 0) | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) | **** | **** | 0 | 0.0% |
| Hypoglycemia (3-6 Months) | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Diabetes | **** | **** | **** | **** |



| Patient Characteristics 1-2Number/MeanStandard Deviation 3Number/MeanStandardHypoglycemia (Day 0) and No Diabetes00.0%00.0%Hypoglycemia (0-3 Months) and No Diabetes************00.0%Hypoglycemia (3-6 Months) and No Diabetes************************Hypoglycemia (6-12 Months) and No Diabetes************************Hypoglycemia (0-3 Months) and Any Metoprolol00.0%00.0Hypoglycemia (0-3 Months) and Any Metoprolol00.0%00.0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%00.0Hypoglycemia (6-12 Months) and Any Metoprolol00.0%00.0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%00.0Hypoglycemia (3-6 Months) and Any Propranolol00.0%00.0Hypoglycemia (1-3 Months) and Any Propranolol00.0%00.0Hypoglycemia (3-6 Months) and Any Propranolol00.0%00.0Hypoglycemia (3-6 Months) and Any Propranolol00.0%00.0Hypoglycemia (3-6 Months) and Atenolol00.0%00.0Hypoglycemia (3-6 Months) and Atenolol00.0%00.0Hypoglycemia (3-6 Months) and Atenolol00.0%00.0Hypoglycemia (3-6 Months) and Atenolol00.0%00.0Hypoglycemia (3-6 Months) and Atenolol00.0%0 | cent/ Deviation ³ .0% .0% .*** .*** .0% .0% .0% .0% .0% .0% .0% |
|--|--|
| Hypoglycemia (Day 0) and No Diabetes 0 0.0% 0 0. Hypoglycemia (0-3 Months) and No Diabetes ****** ****** 0 0. Hypoglycemia (3-6 Months) and No Diabetes ****** ****** ****** ****** Hypoglycemia (6-12 Months) and No Diabetes ****** ****** ****** ****** Hypoglycemia (Day 0) and Any Metoprolol 0 0.0% 0 0. Hypoglycemia (3-6 Months) and Any Metoprolol 0 0.0% 0 0. Hypoglycemia (6-12 Months) and Any Metoprolol 0 0.0% 0 0. Hypoglycemia (3-6 Months) and Any Metoprolol 0 0.0% 0 0. Hypoglycemia (0-3 Months) and Any Propranolol 0 0.0% 0 0. Hypoglycemia (3-6 Months) and Any Propranolol 0 0.0% 0 0. Hypoglycemia (3-6 Months) and Any Propranolol 0 0.0% 0 0. Hypoglycemia (1-12 Months) and Atenolol 0 0.0% 0 0. Hypoglycemia (3-6 Months) and Atenolol 0 <td< th=""><th>.0% .0% **** .0% .0% .0% .0% .0% .0% .0%</th></td<> | .0% .0% **** .0% .0% .0% .0% .0% .0% .0% |
| Hypoglycemia (0-3 Months) and No Diabetes**********0Hypoglycemia (3-6 Months) and No Diabetes****************Hypoglycemia (6-12 Months) and No Diabetes**************Hypoglycemia (0-3 Months) and Any Metoprolol00.0%00Hypoglycemia (0-3 Months) and Any Metoprolol00.0%00Hypoglycemia (3-6 Months) and Any Metoprolol00.0%000Hypoglycemia (0-3 Months) and Any Metoprolol00.0%000Hypoglycemia (0-3 Months) and Any Propranolol00.0%000Hypoglycemia (0-3 Months) and Atenolol00.0%000Hypoglycemia (0-3 Months) and Atenolol00.0%000Hypoglycemia (0-3 Months) and Natolol00.0%000Hypoglycemia (0-3 Months) and Natolol00.0%000Hypoglycemia (0-3 Months) and Natolol00.0%000Hypoglycemia (0-3 Months) and Natolol00.0%000Hypoglycemia (0-3 Months) and Natolol00.0% | .0% **** .0% .0% .0% .0% .0% .0% |
| Hypoglycenia (3-6 Months) and No Diabetes***************Hypoglycemia (3-6 Months) and No Diabetes******************Hypoglycemia (6-12 Months) and Any Metoprolol00.0%0Mypoglycemia (0-3 Months) and Any Metoprolol00.0%0Mypoglycemia (3-6 Months) and Any Metoprolol00.0%0Mypoglycemia (3-6 Months) and Any Metoprolol00.0%0Mypoglycemia (3-6 Months) and Any Metoprolol00.0%0Mypoglycemia (6-12 Months) and Any Metoprolol00.0%0Mypoglycemia (3-6 Months) and Any Propranolol00.0%0Mypoglycemia (3-6 Months) and Atenolol00.0%0Mypoglycemia (3-6 Months) and Nadolol00.0%0Mypoglycemia (3-6 Months) and Nadolol00.0%0Mypoglycemia (3-6 Months) and Nadolol00.0%0Mypoglycemia (3-6 Months) and Nadolol00.0% <td>**** 0% 0% 0% 0% 0% 0% 0%</td> | **** 0% 0% 0% 0% 0% 0% 0% |
| Hypoglycemia (3-12 Months) and No Diabetes***************Hypoglycemia (0-12 Months) and Any Metoprolol00.0%0Hypoglycemia (0-3 Months) and Any Metoprolol00.0%0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%0Hypoglycemia (6-12 Months) and Any Metoprolol00.0%0Hypoglycemia (6-3 Months) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%0 <t< td=""><td>**** 0% 0% 0% 0% 0% 0%</td></t<> | **** 0% 0% 0% 0% 0% 0% |
| Hypoglycemia (Day 0) and Any Metoprolol00.0%00.Hypoglycemia (0-3 Months) and Any Metoprolol00.0%00.Hypoglycemia (3-6 Months) and Any Metoprolol00.0%00.Hypoglycemia (6-12 Months) and Any Metoprolol00.0%00.Hypoglycemia (6-12 Months) and Any Propranolol00.0%00.Hypoglycemia (0-3 Months) and Any Propranolol00.0%00.Hypoglycemia (3-6 Months) and Atenolol00.0%00.Hypoglycemia (3-6 Months) and Atenolol00.0%00.Hypoglycemia (3-6 Months) and Atenolol00.0%00.Hypoglycemia (3-6 Months) and Atenolol00.0%00.Hypoglycemia (3-6 Months) and Nadolol00.0%00.Hypoglycemia (3-6 Months) and Nadolol00.0%0.< | .0% .0% .0% .0% .0% .0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol00.0%0Hypoglycemia (3-6 Months) and Any Metoprolol00.0%0Hypoglycemia (6-12 Months) and Any Metoprolol00.0%0Hypoglycemia (Day 0) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%0Non-Selective Beta Bloc | .0% .0% .0% .0% .0% .0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol00.0%0Hypoglycemia (6-12 Months) and Any Metoprolol00.0%0Hypoglycemia (Day 0) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (10ay 0) and Atenolol00.0%00Hypoglycemia (0-3 Months) and Atenolol00.0%00Hypoglycemia (3-6 Months) and Atenolol00.0%00Hypoglycemia (6-12 Months) and Atenolol00.0%00Hypoglycemia (6-12 Months) and Atenolol00.0%00Hypoglycemia (3-6 Months) and Nadolol00.0%00Hypoglycemia (0-3 Months) and Nadolol00.0%00Hypoglycemia (3-6 Months) and Nadolol00.0%00Hypoglycemia (3-6 Months) and Nadolol00.0%00Hypoglycemia (6-12 Months) and Nadolol00.0%00Hypoglycemia (6-12 Months) and Nadolol00.0%00Hypoglycemia (6-12 Months) and Nadolol00.0%00Hypoglycemia (6-12 Months) and Nadolol00.0%00 <td>.0% .0% .0% .0% .0%</td> | .0% .0% .0% .0% .0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol00.0%0Hypoglycemia (Day 0) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (10 and Atenolol00.0%00Hypoglycemia (0-3 Months) and Atenolol00.0%00Hypoglycemia (3-6 Months) and Atenolol00.0%00Hypoglycemia (6-12 Months) and Atenolol00.0%00Hypoglycemia (6-12 Months) and Atenolol00.0%00Hypoglycemia (3-6 Months) and Atenolol00.0%00Hypoglycemia (3-6 Months) and Nadolol00.0%00Hypoglycemia (3-6 Months) and Nadolol00.0%00Non-Selective Beta Blockers00.0%00 <td< td=""><td>.0% .0% .0% .0%</td></td<> | .0% .0% .0% .0% |
| Hypoglycemia (Day 0) and Any Propranolol00.0%0Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (2-3 Months) and Any Propranolol00.0%0Hypoglycemia (2-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%0Hypoglycemia (6-12 Months) and Nadolol00.0%0Selective Beta Blockers00.0%0Non-Selective Beta Blockers275100.0%193Any Metoprolol00.0%00Metoprolol (Extended Release)00.0%00Metoprolol (Regular)00.0%00 | .0% .0% .0% |
| Hypoglycemia (0-3 Months) and Any Propranolol00.0%0Hypoglycemia (3-6 Months) and Any Propranolol00.0%00.0%Hypoglycemia (6-12 Months) and Any Propranolol00.0%00.0%Hypoglycemia (Day 0) and Atenolol00.0%00.0%Hypoglycemia (0-3 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (6-12 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (6-12 Months) and Nadolol00.0%00.0%Hypoglycemia (6-12 Months) and Nadolol00.0%00.0%Selective Beta Blockers00.0%00.0%0Non-Selective Beta Blockers275100.0%193100Any Metoprolol00.0%00.0%0Metoprolol (Extended Release)00.0%00.0%0Metoprolol (Regular)00.0%000 | .0% .0% .0% |
| Hypoglycemia (3-6 Months) and Any Propranolol00.0%0Hypoglycemia (6-12 Months) and Any Propranolol00.0%0Hypoglycemia (Day 0) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (Day 0) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%0Hypoglycemia (6-12 Months) and Nadolol00.0%0Hypoglycemia (6-12 Months) and Nadolol00.0%0Hypoglycemia (6-12 Months) and Nadolol00.0%0Hypoglycemia (6-12 Months) and Nadolol00.0%0Non-Selective Beta Blockers00.0%00Non-Selective Beta Blockers275100.0%00Any Metoprolol00.0%00Metoprolol (Extended Release)00.0%00Metoprolol (Regular)00.0%00 | .0% .0% |
| Hypoglycemia (6-12 Months) and Any Propranolol00.0%00.1Hypoglycemia (Day 0) and Atenolol00.0%00.0%Hypoglycemia (0-3 Months) and Atenolol00.0%00.0%Hypoglycemia (3-6 Months) and Atenolol00.0%00.0%Hypoglycemia (6-12 Months) and Atenolol00.0%00.0%Hypoglycemia (6-12 Months) and Atenolol00.0%00.0%Hypoglycemia (0-3 Months) and Atenolol00.0%00.0%Hypoglycemia (0-3 Months) and Nadolol00.0%00.0%Hypoglycemia (3-6 Months) and Nadolol00.0%00.0%Hypoglycemia (6-12 Months) and Nadolol00.0%00.0%Hypoglycemia (6-12 Months) and Nadolol00.0%00.0%Selective Beta Blockers00.0%00.0%Non-Selective Beta Blockers275100.0%00Any Metoprolol00.0%00.0%0Metoprolol (Extended Release)00.0%00Metoprolol (Regular)00.0%000 | .0% |
| Hypoglycemia (Day 0) and Atenolol00.0%0Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (Cay 0) and Nadolol00.0%0Hypoglycemia (Cay 0) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%0Hypoglycemia (6-12 Months) and Nadolol00.0%0Hypoglycemia (6-12 Months) and Nadolol00.0%0Non-Selective Beta Blockers00.0%0Non-Selective Beta Blockers275100.0%193Any Metoprolol00.0%00Metoprolol (Extended Release)00.0%00Metoprolol (Regular)00.0%00 | |
| Hypoglycemia (0-3 Months) and Atenolol00.0%0Hypoglycemia (3-6 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (6-12 Months) and Atenolol00.0%0Hypoglycemia (Day 0) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0Hypoglycemia (0-3 Months) and Nadolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%0Hypoglycemia (6-12 Months) and Nadolol00.0%0Selective Beta Blockers00.0%00.0%Non-Selective Beta Blockers275100.0%193100Any Metoprolol00.0%00.0%0Metoprolol (Extended Release)00.0%00.0%Metoprolol (Regular)00.0%00.0% | 00/ |
| Hypoglycemia (3-6 Months) and Atenolol00.0%00.0Hypoglycemia (6-12 Months) and Atenolol00.0%00.0Hypoglycemia (Day 0) and Nadolol00.0%00.0Hypoglycemia (0-3 Months) and Nadolol00.0%00.0Hypoglycemia (3-6 Months) and Nadolol00.0%00.0Hypoglycemia (3-6 Months) and Nadolol00.0%00.0Hypoglycemia (6-12 Months) and Nadolol00.0%00.0Selective Beta Blockers00.0%00.0Non-Selective Beta Blockers275100.0%193100Any Metoprolol00.0%00.00.0Metoprolol (Extended Release)00.0%00.0Metoprolol (Regular)00.0%00.00.0 | 0% |
| Hypoglycemia (6-12 Months) and Atenolol00.0%00.0Hypoglycemia (Day 0) and Nadolol00.0%00.0Hypoglycemia (0-3 Months) and Nadolol00.0%00.0Hypoglycemia (3-6 Months) and Nadolol00.0%00.0Hypoglycemia (3-6 Months) and Nadolol00.0%00.0Hypoglycemia (3-6 Months) and Nadolol00.0%00.0Hypoglycemia (6-12 Months) and Nadolol00.0%00.0Selective Beta Blockers00.0%00.0Non-Selective Beta Blockers275100.0%193100Any Metoprolol00.0%00.0Metoprolol (Extended Release)00.0%00.0Metoprolol (Regular)00.0%00.0 | .0% |
| Hypoglycemia (Day 0) and Nadolol00.0%00.Hypoglycemia (0-3 Months) and Nadolol00.0%00.Hypoglycemia (3-6 Months) and Nadolol00.0%00.Hypoglycemia (3-6 Months) and Nadolol00.0%00.Hypoglycemia (6-12 Months) and Nadolol00.0%00.Selective Beta Blockers00.0%00.Non-Selective Beta Blockers275100.0%193100Any Metoprolol00.0%00.Metoprolol (Extended Release)00.0%00.Metoprolol (Regular)00.0%00. | .0% |
| Hypoglycemia (0-3 Months) and Nadolol00.0%0Hypoglycemia (3-6 Months) and Nadolol00.0%00.Hypoglycemia (3-6 Months) and Nadolol00.0%00.Hypoglycemia (6-12 Months) and Nadolol00.0%00.Selective Beta Blockers00.0%00.Non-Selective Beta Blockers275100.0%193100Any Metoprolol00.0%00.Metoprolol (Extended Release)00.0%00.Metoprolol (Regular)00.0%00. | .0% |
| Hypoglycemia (3-6 Months) and Nadolol00.0%00.Hypoglycemia (6-12 Months) and Nadolol00.0%00.Selective Beta Blockers00.0%00.Non-Selective Beta Blockers275100.0%193100Any Metoprolol00.0%00.Metoprolol (Extended Release)00.0%00.Metoprolol (Regular)00.0%00. | .0% |
| Hypoglycemia (6-12 Months) and Nadolol00.0%00.Selective Beta Blockers00.0%00.Non-Selective Beta Blockers275100.0%193100Any Metoprolol00.0%00.Metoprolol (Extended Release)00.0%00.Metoprolol (Regular)00.0%00. | .0% |
| Selective Beta Blockers00.0%00.Non-Selective Beta Blockers275100.0%193100Any Metoprolol00.0%00.Metoprolol (Extended Release)00.0%00.Metoprolol (Regular)00.0%00. | .0% |
| Non-Selective Beta Blockers275100.0%193100Any Metoprolol00.0%00.0%Metoprolol (Extended Release)00.0%00.0%Metoprolol (Regular)00.0%00.0% | .0% |
| Any Metoprolol00.0%00.Metoprolol (Extended Release)00.0%00.Metoprolol (Regular)00.0%00. | .0% |
| Metoprolol (Extended Release)00.0%00.Metoprolol (Regular)00.0%00. | 0.0% |
| Metoprolol (Regular) 0 0.0% 0 0. | .0% |
| | .0% |
| | .0% |
| Any Propranolol ***** ***** ***** *** | *** |
| Propranolol (Extended Release) 0 0.0% 0 0. | .0% |
| Propranolol (Regular) ***** ***** ***** **** | *** |
| Propranolol (Hemangeol) 0 0.0% 0 0. | .0% |
| Acebutolol 0 0.0% 0 0. | .0% |
| Atenolol 0 0.0% 0 0. | .0% |
| Betaxolol 0 0.0% 0 0. | .0% |
| Bisoprolol 0 0.0% 0 0. | .0% |
| Carvedilol 0 0.0% 0 0. | .0% |
| Labetalol 0 0.0% 0 0. | .0% |
| Nadolol 0 0.0% 0 0. | .0% |
| Nebivolol 0 0.0% 0 0. | .0% |



| | Bet | a Blockers | Beta Blockers (Post-Index Enrollmen Requirement) | | |
|---|-------------|---------------------------------|---|--------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation | |
| Pindolol | 275 | 100.0% | 193 | 100.0% | |
| Sotalol | 0 | 0.0% | 0 | 0.0% | |
| Timolol | 0 | 0.0% | 0 | 0.0% | |
| Health Characteristics by Beta Blockers | | | | | |
| Hypertension and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| lypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Aypertension and Pindolol | 13 | 4.7% | **** | **** | |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Iemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| lemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Iemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Iemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% | |



| | Bet | a Blockers | • | ost-Index Enrollment irement) |
|---|--------------------------------------|--|---------------------------------|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Long QT Syndrome and Propranolol (Regular) Long QT Syndrome and Acebutolol Long QT Syndrome and Atenolol | 0 0 0 0 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% | 0 0 0 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol Long QT Syndrome and Carvedilol Long QT Syndrome and Labetalol | 0 0 0 | 0.0% 0.0% 0.0% | 0 0 0 | 0.0% 0.0% 0.0% |
| Long QT Syndrome and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | 0 0 | 0.0% 0.0% | 0 0 | 0.0% 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | Blockers | Beta Blockers (Post-Index Enrollmo Requirement) | |
|---|-------------|---------------------------------|--|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 1,021 | N/A | 611 | N/A |
| Episodes | 1,049 | 100.0% | 628 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 5.1 | 6.3 | 5.5 | 6.4 |
| Age | | | | |
| 0-1 years | 583 | 55.6% | 332 | 52.9% |
| 2-5 years | 111 | 10.6% | 69 | 11.0% |
| 6-12 years | 142 | 13.5% | 91 | 14.5% |
| 13-17 years | 213 | 20.3% | 136 | 21.7% |
| Sex | | | | |
| Female | 406 | 39.8% | 245 | 40.1% |
| Male | 615 | 60.2% | 366 | 59.9% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 16 | 1.6% | **** | **** |
| Asian | **** | **** | 12 | 2.0% |
| Black or African American | 84 | 8.2% | 49 | 8.0% |
| Native Hawaiian or Other Pacific Islander | **** | **** | **** | **** |
| Unknown | 682 | 66.8% | 392 | 64.2% |
| White | 219 | 21.4% | 146 | 23.9% |
| Hispanic origin | | | | |
| Yes | 137 | 13.4% | 85 | 13.9% |
| No | 317 | 31.0% | 202 | 33.1% |
| Unknown | 567 | 55.5% | 324 | 53.0% |
| Year | | | | |
| 2008 | 30 | 2.9% | 19 | 3.0% |
| 2009 | 26 | 2.5% | 20 | 3.2% |
| 2010 | 20 | 1.9% | **** | **** |
| 2011 | 36 | 3.4% | 29 | 4.6% |
| 2012 | **** | **** | 17 | 2.7% |
| 2013 | 26 | 2.5% | 19 | 3.0% |
| 2014 | 46 | 4.4% | 37 | 5.9% |
| 2015 | 117 | 11.2% | 91 | 14.5% |
| 2016 | 193 | 18.4% | 150 | 23.9% |
| 2017 | 210 | 20.0% | 157 | 25.0% |
| 2018 | 214 | 20.4% | 24 | 3.8% |
| 2019 | 28 | 2.7% | 26 | 4.1% |
| 2020 | 43 | 4.1% | 26 | 4.1% |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollmer Requirement) | | |
|---|-------------|---------------------------------|---|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| 2021 | 39 | 3.7% | **** | **** | |
| 2022 | **** | **** | 0 | 0.0% | |
| Health Characteristics | | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 2.0 | 1.7 | 2.0 | 1.7 | |
| Hypertension | 41 | 3.9% | 28 | 4.5% | |
| Hemangioma | **** | * * * * | **** | **** | |
| Heart Failure | 133 | 12.7% | 86 | 13.7% | |
| Congenital Heart Disease | 629 | 60.0% | 356 | 56.7% | |
| Atrial Fibrillation | 84 | 8.0% | 54 | 8.6% | |
| Long QT Syndrome | 62 | 5.9% | 32 | 5.1% | |
| Other Cardiac Arrhythmias | 860 | 82.0% | 516 | 82.2% | |
| Cardiac Arrhythmias (Composite) | 868 | 82.7% | 520 | 82.8% | |
| Pulmonary Hypertension | 69 | 6.6% | 39 | 6.2% | |
| Cardiomyopathy | 71 | 6.8% | 51 | 8.1% | |
| Coronary Artery Disease | 20 | 1.9% | 13 | 2.1% | |
| Portal Hypertension | **** | **** | **** | **** | |
| Anxiety Disorder | 28 | 2.7% | 18 | 2.9% | |
| Tremor | **** | **** | 0 | 0.0% | |
| Migraine | **** | **** | **** | **** | |
| Thyrotoxicosis | **** | **** | **** | **** | |
| Burns | 0 | 0.0% | 0 | 0.0% | |
| Glaucoma | **** | **** | **** | **** | |
| Autism | 13 | 1.2% | **** | **** | |
| Marfan's Syndrome | **** | **** | **** | **** | |
| Pheochromocytoma/Paraganglioma | 0 | 0.0% | 0 | 0.0% | |
| Diabetes | **** | * * * * | **** | **** | |
| Any of the above health characteristics (excluding combined comorbidity score) None of the above health characteristics (excluding | 929 | 88.6% | 547 | 87.1% | |
| combined comorbidity score) | 120 | 11.4% | 81 | 12.9% | |
| Hypoglycemia (Day 0) | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) | **** | **** | **** | **** | |
| Hypoglycemia (3-6 Months) | **** | **** | **** | **** | |
| Hypoglycemia (6-12 Months) | **** | **** | **** | **** | |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Diabetes | **** | **** | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Diabetes | **** | **** | 0 | 0.0% | |



| | Beta | Blockers | • | st-Index Enrollment irement) |
|--|-------------|---------------------------------|-------------|---------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and No Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and No Diabetes | **** | **** | **** | * * * * |
| Hypoglycemia (3-6 Months) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (6-12 Months) and No Diabetes | **** | **** | **** | * * * * |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| lypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| lypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers | **** | * * * * | **** | **** |
| Non-Selective Beta Blockers | 1,049 | 100.0% | 628 | 100.0% |
| Any Metoprolol | **** | * * * * | **** | **** |
| Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Metoprolol (Regular) | **** | * * * * | **** | **** |
| Any Propranolol | 25 | 2.4% | 17 | 2.7% |
| Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Regular) | 25 | 2.4% | 17 | 2.7% |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Atenolol | **** | **** | **** | **** |
| Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Carvedilol | **** | **** | **** | **** |
| abetalol | 0 | 0.0% | 0 | 0.0% |
| Nadolol | 0 | 0.0% | 0 | 0.0% |
| Nebivolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | • | st-Index Enrollment rement) |
|---|-------------|---------------------------------|-------------|--------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | 1,049 | 100.0% | 628 | 100.0% |
| Timolol | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| lypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 41 | 3.9% | 28 | 4.5% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| lemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| lemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | |
|--|----------------------|---|--|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | **** | **** | **** | **** |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol | 0 0 0 ***** | 0.0% 0.0% 0.0% ***** | 0 0 0 ***** | 0.0% 0.0% 0.0% ***** |
| Long QT Syndrome and Propranolol (Extended | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Propranolol (Regular) | **** | * * * * | **** | **** |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | 62 0 | 5.9% 0.0% | 32 0 | 5.1% 0.0% |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



| | Beta | a Blockers | | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 78 | N/A | 53 | N/A |
| Episodes | 81 | 100.0% | 56 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 16.0 | 2.4 | 16.3 | 1.5 |
| Age | | | | |
| 0-1 years | **** | **** | 0 | 0.0% |
| 2-5 years | 0 | 0.0% | 0 | 0.0% |
| 6-12 years | **** | **** | **** | **** |
| 13-17 years | **** | 90.1% | **** | **** |
| Sex | | | | |
| Female | 60 | 76.9% | 39 | 73.6% |
| Male | 18 | 23.1% | 14 | 26.4% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | **** | **** | **** | **** |
| Asian | 0 | 0.0% | 0 | 0.0% |
| Black or African American | 0 | 0.0% | 0 | 0.0% |
| Native Hawaiian or Other Pacific Islander | 0 | 0.0% | 0 | 0.0% |
| Unknown | 64 | 82.1% | 42 | 79.2% |
| White | **** | **** | **** | **** |
| Hispanic origin | | | | |
| Yes | **** | **** | 0 | 0.0% |
| No | **** | **** | **** | **** |
| Unknown | 65 | 83.3% | **** | **** |
| Year | | | | |
| 2008 | **** | **** | **** | **** |
| 2009 | **** | **** | **** | **** |
| 2010 | **** | **** | **** | **** |
| 2011 | **** | **** | **** | **** |
| 2012 | **** | **** | **** | **** |
| 2013 | **** | **** | **** | **** |
| 2014 | **** | **** | **** | **** |
| 2015 | **** | **** | **** | **** |
| 2016 | **** | **** | **** | **** |
| 2017 | **** | **** | **** | **** |
| 2018 | **** | **** | **** | **** |
| 2019 | **** | **** | 0 | 0.0% |
| 2020 | **** | **** | **** | **** |



| | Beta | a Blockers | • | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| 2021 | 0 | 0.0% | 0 | 0.0% |
| 2022 | 0 | 0.0% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.1 | 0.4 | 0.2 | 0.4 |
| Hypertension | 0 | 0.0% | 0 | 0.0% |
| Hemangioma | **** | **** | 0 | 0.0% |
| Heart Failure | 0 | 0.0% | 0 | 0.0% |
| Congenital Heart Disease | **** | **** | 0 | 0.0% |
| Atrial Fibrillation | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome | **** | **** | **** | **** |
| Other Cardiac Arrhythmias | **** | **** | **** | **** |
| Cardiac Arrhythmias (Composite) | **** | **** | **** | **** |
| Pulmonary Hypertension | 0 | 0.0% | 0 | 0.0% |
| Cardiomyopathy | 0 | 0.0% | 0 | 0.0% |
| Coronary Artery Disease | 0 | 0.0% | 0 | 0.0% |
| Portal Hypertension | 0 | 0.0% | 0 | 0.0% |
| Anxiety Disorder | 11 | 13.6% | **** | **** |
| Tremor | **** | **** | 0 | 0.0% |
| Migraine | 53 | 65.4% | 32 | 57.1% |
| Thyrotoxicosis | 0 | 0.0% | 0 | 0.0% |
| Burns | 0 | 0.0% | 0 | 0.0% |
| Glaucoma | 0 | 0.0% | 0 | 0.0% |
| Autism | **** | **** | **** | **** |
| Marfan's Syndrome | 0 | 0.0% | 0 | 0.0% |
| Pheochromocytoma/Paraganglioma | 0 | 0.0% | 0 | 0.0% |
| Diabetes | 0 | 0.0% | 0 | 0.0% |
| Any of the above health characteristics (excluding | | | | |
| combined comorbidity score) | 59 | 72.8% | 37 | 66.1% |
| None of the above health characteristics (excluding combined comorbidity score) | 22 | 27.2% | 19 | 33.9% |
| Hypoglycemia (Day 0) | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Diabetes | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | | ost-Index Enrollment irement) |
|--|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Hypoglycemia (Day 0) and No Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and No Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and No Diabetes | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and No Diabetes | **** | **** | **** | **** |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Selective Beta Blockers | 0 | 0.0% | 0 | 0.0% |
| Non-Selective Beta Blockers | 81 | 100.0% | 56 | 100.0% |
| Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Atenolol | 0 | 0.0% | 0 | 0.0% |
| Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Labetalol | 0 | 0.0% | 0 | 0.0% |
| Nadolol | 0 | 0.0% | 0 | 0.0% |
| Nebivolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | Blockers | • | ost-Index Enrollment irement) |
|---|-------------|---------------------------------|-------------|----------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Pindolol | 0 | 0.0% | 0 | 0.0% |
| Sotalol | 0 | 0.0% | 0 | 0.0% |
| Timolol | 81 | 100.0% | 56 | 100.0% |
| Health Characteristics by Beta Blockers | | | | |
| Hypertension and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% |



| | Beta | a Blockers | • | ost-Index Enrollment irement) |
|---|------------------|---|------------------|---|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% |
| Hemangioma and Timolol | **** | **** | 0 | 0.0% |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Long QT Syndrome and Metoprolol (Regular) Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol (Extended Release) | 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% | 0 0 0 0 | 0.0% 0.0% 0.0% 0.0% |
| Long QT Syndrome and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Atenolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Carvedilol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nadolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% |
| Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | 0 **** | 0.0% **** | 0 **** | 0.0% **** |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)



| | Beta | Blockers | | Post-Index Enrollment uirement) |
|---|-------------|---------------------------------|-------------|------------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ |
| Unique patients | 47,055 | N/A | 31,113 | N/A |
| Episodes | 50,195 | 100.0% | 32,999 | 100.0% |
| Demographic Characteristics | | | | |
| Age (years) | 13.7 | 4.1 | 13.7 | 4.1 |
| Age | | | | |
| 0-1 years | 1,307 | 2.6% | 864 | 2.6% |
| 2-5 years | 2,066 | 4.1% | 1,392 | 4.2% |
| 6-12 years | 11,925 | 23.8% | 7,820 | 23.7% |
| 13-17 years | 34,897 | 69.5% | 22,923 | 69.5% |
| Sex | | | | |
| Female | 26,180 | 55.6% | 17,168 | 55.2% |
| Male | 20,875 | 44.4% | 13,945 | 44.8% |
| Race ⁴ | | | | |
| American Indian or Alaska Native | 368 | 0.8% | 239 | 0.8% |
| Asian | 490 | 1.0% | 285 | 0.9% |
| Black or African American | 3,326 | 7.1% | 2,049 | 6.6% |
| Native Hawaiian or Other Pacific Islander | 76 | 0.2% | 42 | 0.1% |
| Unknown | 31,006 | 65.9% | 20,863 | 67.1% |
| White | 11,789 | 25.1% | 7,635 | 24.5% |
| Hispanic origin | | | | |
| Yes | 4,824 | 10.3% | 2,919 | 9.4% |
| No | 14,635 | 31.1% | 9,247 | 29.7% |
| Unknown | 27,596 | 58.6% | 18,947 | 60.9% |
| /ear | | | | |
| 2008 | 2,028 | 4.0% | 1,559 | 4.7% |
| 2009 | 2,559 | 5.1% | 1,920 | 5.8% |
| 2010 | 2,344 | 4.7% | 1,749 | 5.3% |
| 2011 | 2,105 | 4.2% | 1,595 | 4.8% |
| 2012 | 1,974 | 3.9% | 1,548 | 4.7% |
| 2013 | 2,068 | 4.1% | 1,566 | 4.7% |
| 2014 | 2,955 | 5.9% | 2,376 | 7.2% |
| 2015 | 4,908 | 9.8% | 3,722 | 11.3% |
| 2016 | 7,437 | 14.8% | 6,135 | 18.6% |
| 2017 | 8,619 | 17.2% | 6,496 | 19.7% |
| 2018 | 7,864 | 15.7% | 1,610 | 4.9% |
| 2019 | 1,968 | 3.9% | 1,542 | 4.7% |
| 2020 | 1,631 | 3.2% | 1,036 | 3.1% |



| | Beta | Blockers | • | Post-Index Enrollment uirement) |
|---|-------------|---------------------------------|-------------|------------------------------------|
| | | Percent/ | | Percent/ |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation |
| 2021 | 1,576 | 3.1% | 145 | 0.4% |
| 2022 | 159 | 0.3% | 0 | 0.0% |
| Health Characteristics | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.7 | 1.2 | 0.7 | 1.2 |
| Hypertension | 7,917 | 15.8% | 5,198 | 15.8% |
| Hemangioma | 254 | 0.5% | 172 | 0.5% |
| Heart Failure | 744 | 1.5% | 477 | 1.4% |
| Congenital Heart Disease | 5,605 | 11.2% | 3,764 | 11.4% |
| Atrial Fibrillation | 350 | 0.7% | 226 | 0.7% |
| _ong QT Syndrome | 469 | 0.9% | 301 | 0.9% |
| Other Cardiac Arrhythmias | 17,231 | 34.3% | 11,002 | 33.3% |
| Cardiac Arrhythmias (Composite) | 17,551 | 35.0% | 11,219 | 34.0% |
| Pulmonary Hypertension | 276 | 0.5% | 183 | 0.6% |
| Cardiomyopathy | 1,420 | 2.8% | 891 | 2.7% |
| Coronary Artery Disease | 446 | 0.9% | 296 | 0.9% |
| Portal Hypertension | 39 | 0.1% | 21 | 0.1% |
| Anxiety Disorder | 6,665 | 13.3% | 4,279 | 13.0% |
| Fremor | 372 | 0.7% | 254 | 0.8% |
| Vigraine | 6,137 | 12.2% | 4,157 | 12.6% |
| Fhyrotoxicosis | 3,198 | 6.4% | 2,054 | 6.2% |
| Burns | 82 | 0.2% | 56 | 0.2% |
| Glaucoma | 127 | 0.3% | 81 | 0.2% |
| Autism | 1,050 | 2.1% | 660 | 2.0% |
| Marfan's Syndrome | 846 | 1.7% | 571 | 1.7% |
| Pheochromocytoma/Paraganglioma | 25 | 0.0% | 15 | 0.0% |
| Diabetes | 911 | 1.8% | 597 | 1.8% |
| Any of the above health characteristics (excluding combined comorbidity score) | 37,085 | 73.9% | 24,252 | 73.5% |
| None of the above health characteristics (excluding combined comorbidity score) | 13,110 | 26.1% | 8,747 | 26.5% |
| Hypoglycemia (Day 0) | 29 | 0.1% | 23 | 0.1% |
| Hypoglycemia (0-3 Months) | 177 | 0.4% | 138 | 0.4% |
| Hypoglycemia (3-6 Months) | 145 | 0.3% | 107 | 0.3% |
| Hypoglycemia (6-12 Months) | 183 | 0.4% | 157 | 0.5% |
| Hypoglycemia (Day 0) and Diabetes | **** | **** | **** | **** |
| Hypoglycemia (0-3 Months) and Diabetes | 33 | 0.1% | 28 | 0.1% |
| Hypoglycemia (3-6 Months) and Diabetes | 28 | 0.1% | 17 | 0.1% |
| Hypoglycemia (6-12 Months) and Diabetes | 31 | 0.1% | 25 | 0.1% |



| | Beta | a Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|--|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Hypoglycemia (Day 0) and No Diabetes | 26 | 0.1% | 21 | 0.1% | |
| Hypoglycemia (0-3 Months) and No Diabetes | 144 | 0.3% | 110 | 0.3% | |
| Hypoglycemia (3-6 Months) and No Diabetes | 117 | 0.2% | 90 | 0.3% | |
| Hypoglycemia (6-12 Months) and No Diabetes | 152 | 0.3% | 132 | 0.4% | |
| Hypoglycemia (Day 0) and Any Metoprolol | 15 | 0.0% | 11 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 84 | 0.2% | 61 | 0.2% | |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 65 | 0.1% | 51 | 0.2% | |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 78 | 0.2% | 66 | 0.2% | |
| Hypoglycemia (Day 0) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (Day 0) and Atenolol | 12 | 0.0% | **** | **** | |
| Hypoglycemia (0-3 Months) and Atenolol | 85 | 0.2% | 69 | 0.2% | |
| Hypoglycemia (3-6 Months) and Atenolol | 76 | 0.2% | 53 | 0.2% | |
| Hypoglycemia (6-12 Months) and Atenolol | 103 | 0.2% | 89 | 0.3% | |
| Hypoglycemia (Day 0) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| Selective Beta Blockers | 50,195 | 100.0% | 32,999 | 100.0% | |
| Non-Selective Beta Blockers | 48 | 0.1% | 34 | 0.1% | |
| Any Metoprolol | 18,174 | 36.2% | 11,540 | 35.0% | |
| Metoprolol (Extended Release) | 10,259 | 20.4% | 6,383 | 19.3% | |
| Metoprolol (Regular) | 7,962 | 15.9% | 5,194 | 15.7% | |
| Any Propranolol | 31 | 0.1% | 24 | 0.1% | |
| Propranolol (Extended Release) | **** | **** | **** | **** | |
| Propranolol (Regular) | 28 | 0.1% | 22 | 0.1% | |
| Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% | |
| Acebutolol | 77 | 0.2% | 56 | 0.2% | |
| Atenolol | 30,660 | 61.1% | 20,520 | 62.2% | |
| Betaxolol | 173 | 0.3% | 118 | 0.4% | |
| Bisoprolol | 584 | 1.2% | 386 | 1.2% | |
| Carvedilol | **** | **** | **** | **** | |
| Labetalol | **** | **** | **** | **** | |
| Nadolol | **** | **** | **** | **** | |
| Nebivolol | 551 | 1.1% | 397 | 1.2% | |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollmer Requirement) | | |
|---|-------------|---------------------------------|---|--------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation | |
| Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Sotalol | **** | **** | **** | **** | |
| Timolol | 0 | 0.0% | 0 | 0.0% | |
| Health Characteristics by Beta Blockers | | | | | |
| Hypertension and Any Metoprolol | 3,638 | 7.2% | 2,290 | 6.9% | |
| Hypertension and Metoprolol (Extended Release) | 2,090 | 4.2% | 1,289 | 3.9% | |
| Hypertension and Metoprolol (Regular) | 1,568 | 3.1% | 1,018 | 3.1% | |
| Hypertension and Any Propranolol | **** | **** | **** | **** | |
| Hypertension and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Propranolol (Regular) | **** | **** | **** | **** | |
| Aypertension and Acebutolol | **** | **** | **** | **** | |
| Hypertension and Atenolol | 4,003 | 8.0% | 2,717 | 8.2% | |
| Hypertension and Betaxolol | **** | **** | **** | **** | |
| Hypertension and Bisoprolol | 126 | 0.3% | 90 | 0.3% | |
| lypertension and Carvedilol | 0 | 0.0% | 0 | 0.0% | |
| lypertension and Labetalol | **** | **** | **** | **** | |
| Aypertension and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| lypertension and Nebivolol | 145 | 0.3% | 98 | 0.3% | |
| Aypertension and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| lypertension and Sotalol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% | |
| lemangioma and Any Metoprolol | 14 | 0.0% | **** | **** | |
| lemangioma and Metoprolol (Extended Release) | **** | **** | **** | **** | |
| lemangioma and Metoprolol (Regular) | 11 | 0.0% | **** | **** | |
| Hemangioma and Any Propranolol | 0 | 0.0% | 0 | 0.0% | |
| lemangioma and Propranolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Propranolol (Hemangeol) | 0 | 0.0% | 0 | 0.0% | |
| Iemangioma and Acebutolol | **** | **** | * * * * | * * * * * | |
| lemangioma and Atenolol | 238 | 0.5% | 163 | 0.5% | |
| lemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Iemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| lemangioma and Carvedilol | 0 | 0.0% | 0 | 0.0% | |
| lemangioma and Labetalol | 0 | 0.0% | 0 | 0.0% | |
| Iemangioma and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| lemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% | |



| | Beta Blockers | | • | Beta Blockers (Post-Index Enrollment Requirement) | |
|---|---------------|---|-------------|--|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ | |
| Hemangioma and Sotalol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Timolol | 0 | 0.0% | 0 | 0.0% | |
| ong QT Syndrome and Any Metoprolol Ong QT Syndrome and Metoprolol (Extended | 142 | 0.3% | 86 | 0.3% | |
| Release) | 61 | 0.1% | 33 | 0.1% | |
| ong QT Syndrome and Metoprolol (Regular) | 81 | 0.2% | 53 | 0.2% | |
| ong QT Syndrome and Any Propranolol .ong QT Syndrome and Propranolol (Extended | 0 | 0.0% | 0 | 0.0% | |
| Release) | 0 | 0.0% | 0 | 0.0% | |
| ong QT Syndrome and Propranolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| ong QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| ong QT Syndrome and Atenolol | 313 | 0.6% | 208 | 0.6% | |
| ong QT Syndrome and Betaxolol | **** | **** | **** | **** | |
| ong QT Syndrome and Bisoprolol | 11 | 0.0% | **** | **** | |
| ong QT Syndrome and Carvedilol | **** | **** | **** | **** | |
| ong QT Syndrome and Labetalol | 0 | 0.0% | 0 | 0.0% | |
| ong QT Syndrome and Nadolol | 0 | 0.0% | 0 | 0.0% | |
| ong QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| ong QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| ong QT Syndrome and Sotalol | 0 | 0.0% | 0 | 0.0% | |
| ong QT Syndrome and Timolol | 0 | 0.0% | 0 | 0.0% | |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|---|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Unique patients | 155,040 | N/A | 97,561 | N/A | |
| Episodes | 164,084 | 100.0% | 103,005 | 100.0% | |
| Demographic Characteristics | | | | | |
| Age (years) | 12.1 | 6.0 | 12.2 | 5.9 | |
| Age | | | | | |
| 0-1 years | 27,315 | 16.6% | 16,206 | 15.7% | |
| 2-5 years | 4,303 | 2.6% | 2,671 | 2.6% | |
| 6-12 years | 29,463 | 18.0% | 19,197 | 18.6% | |
| 13-17 years | 103,003 | 62.8% | 64,931 | 63.0% | |
| Sex | | | | | |
| Female | 96,081 | 62.0% | 59,956 | 61.5% | |
| Male | 58,959 | 38.0% | 37,605 | 38.5% | |
| Race ⁴ | | | | | |
| American Indian or Alaska Native | 1,537 | 1.0% | 960 | 1.0% | |
| Asian | 1,292 | 0.8% | 751 | 0.8% | |
| Black or African American | 8,765 | 5.7% | 5,342 | 5.5% | |
| Native Hawaiian or Other Pacific Islander | 228 | 0.1% | 143 | 0.1% | |
| Unknown | 100,812 | 65.0% | 64,380 | 66.0% | |
| White | 42,406 | 27.4% | 25,985 | 26.6% | |
| Hispanic origin | | | | | |
| Yes | 15,256 | 9.8% | 9,081 | 9.3% | |
| No | 49,881 | 32.2% | 30,171 | 30.9% | |
| Unknown | 89,903 | 58.0% | 58,309 | 59.8% | |
| Year | | | | | |
| 2008 | 4,002 | 2.4% | 3,059 | 3.0% | |
| 2009 | 5,201 | 3.2% | 3,869 | 3.8% | |
| 2010 | 5,155 | 3.1% | 3,889 | 3.8% | |
| 2011 | 5,176 | 3.2% | 3,899 | 3.8% | |
| 2012 | 5,292 | 3.2% | 4,100 | 4.0% | |
| 2013 | 5,724 | 3.5% | 4,282 | 4.2% | |
| 2014 | 9,343 | 5.7% | 7,343 | 7.1% | |
| 2015 | 15,738 | 9.6% | 11,816 | 11.5% | |
| 2016 | 24,263 | 14.8% | 19,926 | 19.3% | |
| 2017 | 30,341 | 18.5% | 23,024 | 22.4% | |
| 2018 | 29,671 | 18.1% | 5,905 | 5.7% | |
| 2019 | 8,222 | 5.0% | 6,296 | 6.1% | |
| 2020 | 7,351 | 4.5% | 4,998 | 4.9% | |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|---|-------------|---------------------------------|--|--------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation | |
| 2021 | 8,045 | 4.9% | 599 | 0.6% | |
| 2022 | 560 | 0.3% | 0 | 0.0% | |
| Health Characteristics | | | | | |
| Charlson/Elixhauser combined comorbidity score ⁵ | 0.5 | 1.0 | 0.5 | 1.0 | |
| Hypertension | 6,776 | 4.1% | 4,272 | 4.1% | |
| Hemangioma | 15,428 | 9.4% | 9,203 | 8.9% | |
| Heart Failure | 2,491 | 1.5% | 1,499 | 1.5% | |
| Congenital Heart Disease | 12,548 | 7.6% | 7,523 | 7.3% | |
| Atrial Fibrillation | 263 | 0.2% | 169 | 0.2% | |
| Long QT Syndrome | 2,127 | 1.3% | 1,289 | 1.3% | |
| Other Cardiac Arrhythmias | 18,905 | 11.5% | 11,478 | 11.1% | |
| Cardiac Arrhythmias (Composite) | 20,209 | 12.3% | 12,264 | 11.9% | |
| Pulmonary Hypertension | 974 | 0.6% | 530 | 0.5% | |
| Cardiomyopathy | 2,199 | 1.3% | 1,280 | 1.2% | |
| Coronary Artery Disease | 456 | 0.3% | 293 | 0.3% | |
| Portal Hypertension | 278 | 0.2% | 177 | 0.2% | |
| Anxiety Disorder | 40,033 | 24.4% | 24,220 | 23.5% | |
| Fremor | 3,623 | 2.2% | 2,271 | 2.2% | |
| Migraine | 39,214 | 23.9% | 25,978 | 25.2% | |
| Thyrotoxicosis | 2,446 | 1.5% | 1,560 | 1.5% | |
| Burns | 405 | 0.2% | 257 | 0.2% | |
| Glaucoma | 348 | 0.2% | 209 | 0.2% | |
| Autism | 6,082 | 3.7% | 3,803 | 3.7% | |
| Marfan's Syndrome | 115 | 0.1% | 70 | 0.1% | |
| Pheochromocytoma/Paraganglioma | 104 | 0.1% | 69 | 0.1% | |
| Diabetes | 1,367 | 0.8% | 853 | 0.8% | |
| Any of the above health characteristics (excluding | | | | | |
| combined comorbidity score) | 117,603 | 71.7% | 73,561 | 71.4% | |
| None of the above health characteristics (excluding combined comorbidity score) | 46,481 | 28.3% | 29,444 | 28.6% | |
| Hypoglycemia (Day 0) | 101 | 0.1% | 57 | 0.1% | |
| Hypoglycemia (0-3 Months) | 561 | 0.3% | 354 | 0.3% | |
| Hypoglycemia (3-6 Months) | 387 | 0.2% | 275 | 0.3% | |
| Hypoglycemia (6-12 Months) | 512 | 0.3% | 444 | 0.4% | |
| Hypoglycemia (Day 0) and Diabetes | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and Diabetes | 61 | 0.0% | 37 | 0.0% | |
| Hypoglycemia (3-6 Months) and Diabetes | 51 | 0.0% | 40 | 0.0% | |
| Hypoglycemia (6-12 Months) and Diabetes | 59 | 0.0% | 55 | 0.1% | |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|--|-------------|---------------------------------|--|---------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Hypoglycemia (Day 0) and No Diabetes | 96 | 0.1% | 52 | 0.1% | |
| Hypoglycemia (0-3 Months) and No Diabetes | 500 | 0.3% | 317 | 0.3% | |
| Hypoglycemia (3-6 Months) and No Diabetes | 336 | 0.2% | 235 | 0.2% | |
| Hypoglycemia (6-12 Months) and No Diabetes | 453 | 0.3% | 389 | 0.4% | |
| Hypoglycemia (Day 0) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (3-6 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (Day 0) and Any Propranolol | 88 | 0.1% | 47 | 0.0% | |
| Hypoglycemia (0-3 Months) and Any Propranolol | 473 | 0.3% | 303 | 0.3% | |
| Hypoglycemia (3-6 Months) and Any Propranolol | 329 | 0.2% | 235 | 0.2% | |
| Hypoglycemia (6-12 Months) and Any Propranolol | 427 | 0.3% | 369 | 0.4% | |
| Hypoglycemia (Day 0) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (0-3 Months) and Atenolol | **** | **** | **** | **** | |
| Hypoglycemia (3-6 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (6-12 Months) and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hypoglycemia (Day 0) and Nadolol | **** | **** | **** | **** | |
| Hypoglycemia (0-3 Months) and Nadolol | 18 | 0.0% | 13 | 0.0% | |
| Hypoglycemia (3-6 Months) and Nadolol | 15 | 0.0% | 11 | 0.0% | |
| Hypoglycemia (6-12 Months) and Nadolol | 25 | 0.0% | 24 | 0.0% | |
| Selective Beta Blockers | 48 | 0.0% | 34 | 0.0% | |
| Non-Selective Beta Blockers | 164,084 | 100.0% | 103,005 | 100.0% | |
| Any Metoprolol | 26 | 0.0% | 19 | 0.0% | |
| Metoprolol (Extended Release) | **** | **** | **** | **** | |
| Metoprolol (Regular) | **** | **** | **** | **** | |
| Any Propranolol | 147,338 | 89.8% | 92,518 | 89.8% | |
| Propranolol (Extended Release) | 16,281 | 9.9% | 10,853 | 10.5% | |
| Propranolol (Regular) | 129,011 | 78.6% | 80,520 | 78.2% | |
| Propranolol (Hemangeol) | 2,463 | 1.5% | 1,409 | 1.4% | |
| Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Atenolol | 22 | 0.0% | 15 | 0.0% | |
| Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Carvedilol | 4,036 | 2.5% | 2,410 | 2.3% | |
| Labetalol | 4,991 | 3.0% | 2,952 | 2.9% | |
| Nadolol | 6,351 | 3.9% | 4,273 | 4.1% | |
| Nebivolol | 0 | 0.0% | 0 | 0.0% | |



| | Beta | Blockers | • | ost-Index Enrollment irement) | |
|---|-------------|---------------------------------|-------------|----------------------------------|--|
| | | Percent/ | | Percent/ | |
| Patient Characteristics ^{1,2} | Number/Mean | Standard Deviation ³ | Number/Mean | Standard Deviation ³ | |
| Pindolol | 275 | 0.2% | 193 | 0.2% | |
| Sotalol | 1,049 | 0.6% | 628 | 0.6% | |
| Timolol | 81 | 0.0% | 56 | 0.1% | |
| Health Characteristics by Beta Blockers | | | | | |
| Hypertension and Any Metoprolol | **** | **** | **** | **** | |
| Hypertension and Metoprolol (Extended Release) | **** | **** | **** | **** | |
| Hypertension and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Any Propranolol | 3,869 | 2.4% | 2,507 | 2.4% | |
| Hypertension and Propranolol (Extended Release) | 476 | 0.3% | 330 | 0.3% | |
| Hypertension and Propranolol (Regular) | 3,387 | 2.1% | 2,175 | 2.1% | |
| Hypertension and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Atenolol | **** | **** | **** | **** | |
| Hypertension and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Carvedilol | 733 | 0.4% | 429 | 0.4% | |
| Hypertension and Labetalol | 1,938 | 1.2% | 1,179 | 1.1% | |
| Hypertension and Nadolol | 184 | 0.1% | 119 | 0.1% | |
| Hypertension and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Hypertension and Pindolol | 13 | 0.0% | **** | **** | |
| Hypertension and Sotalol | 41 | 0.0% | 28 | 0.0% | |
| Hypertension and Timolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Any Metoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Metoprolol (Extended Release) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Metoprolol (Regular) | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Any Propranolol | 15,407 | 9.4% | 9,190 | 8.9% | |
| Hemangioma and Propranolol (Extended Release) | 24 | 0.0% | 16 | 0.0% | |
| Hemangioma and Propranolol (Regular) | 13,128 | 8.0% | 7,873 | 7.6% | |
| Hemangioma and Propranolol (Hemangeol) | 2,262 | 1.4% | 1,305 | 1.3% | |
| Hemangioma and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Carvedilol | **** | **** | **** | **** | |
| Hemangioma and Labetalol | **** | **** | **** | **** | |
| Hemangioma and Nadolol | **** | **** | **** | **** | |
| Hemangioma and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Hemangioma and Pindolol | 0 | 0.0% | 0 | 0.0% | |



| | Beta | Blockers | Beta Blockers (Post-Index Enrollment Requirement) | | |
|--|---------------------|---|--|---|--|
| Patient Characteristics ^{1,2} | Number/Mean | Percent/ Standard Deviation ³ | Number/Mean | Percent/ Standard Deviation ³ | |
| Hemangioma and Sotalol | **** | **** | **** | **** | |
| Hemangioma and Timolol | **** | **** | 0 | 0.0% | |
| Long QT Syndrome and Any Metoprolol Long QT Syndrome and Metoprolol (Extended Release) Long QT Syndrome and Metoprolol (Regular) | ***** 0 ***** | ***** 0.0% ***** | **** 0 **** | ***** 0.0% ***** | |
| Long QT Syndrome and Any Propranolol Long QT Syndrome and Propranolol Long QT Syndrome and Propranolol (Extended | 854 42 | 0.5% 0.0% | 501 29 | 0.5% 0.0% | |
| Long QT Syndrome and Propranolol (Regular) | 809 | 0.5% | 471 | 0.5% | |
| Long QT Syndrome and Acebutolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Atenolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Betaxolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Bisoprolol | 0 | 0.0% | 0 | 0.0% | |
| ong QT Syndrome and Carvedilol | 63 | 0.0% | 33 | 0.0% | |
| Long QT Syndrome and Labetalol | 18 | 0.0% | 12 | 0.0% | |
| Long QT Syndrome and Nadolol | 1,130 | 0.7% | 711 | 0.7% | |
| Long QT Syndrome and Nebivolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Pindolol | 0 | 0.0% | 0 | 0.0% | |
| Long QT Syndrome and Sotalol Long QT Syndrome and Timolol | 62 **** | 0.0% **** | 32 **** | 0.0% **** | |

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

²Characteristics in blue show a standardized difference greater than 0.1.

³Value represents standard deviation where no % follows the value.

⁴Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

⁵The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly nations better than existing scores. J Clin Epidemiol. 2011;64(7):749-759)



Table 2a. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, Overall

| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1,000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|--|-----------|-----------------|----------------------------------|---------------------------------------|--|---|
| Beta Blockers | 200,926 | 214,231 | 77,507,621 | 62,490,794,254 | 2.59 | 0.03 |
| Beta Blockers (Post- Index Enrollment Requirement) | 127,912 | 135,970 | 55,570,100 | 38,957,749,992 | 2.30 | 0.03 |



| | | | | | New Users per 1,000 | Incidence Rate per 10,000 |
|--------------------|--------------------------|--------------|-------------------------------|-----------------------------------|-------------------------------|------------------------------------|
| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| Beta Blockers | | | | | | |
| Female | 121,477 | 129,557 | 37,884,553 | 30,515,220,446 | 3.21 | 0.04 |
| Male | 79,449 | 84,674 | 39,623,068 | 31,975,573,808 | 2.01 | 0.02 |
| Beta Blockers (Pos | st-Index Enrollment Requ | uirement) | | | | |
| Female | 76,611 | 81,534 | 27,150,480 | 19,021,377,868 | 2.82 | 0.04 |
| Male | 51,301 | 54,436 | 28,419,620 | 19,936,372,124 | 1.81 | 0.03 |

Table 2b. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Sex



| | | | | | New Users per 1,000 | Incidence Rate per 10,000 |
|-----------------------|-----------------------|--------------|-------------------------------|-----------------------------------|-------------------------------|------------------------------------|
| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| Beta Blockers | | | | | | |
| 0-1 years | 28,248 | 28,621 | 16,419,503 | 5,234,414,478 | 1.72 | 0.05 |
| 2-5 years | 6,090 | 6,366 | 26,211,253 | 14,017,078,628 | 0.23 | 0.00 |
| 6-12 years | 39,081 | 41,380 | 38,206,540 | 25,670,876,485 | 1.02 | 0.02 |
| 13-17 years | 129,931 | 137,864 | 29,082,673 | 17,568,424,663 | 4.47 | 0.07 |
| Beta Blockers (Post-I | ndex Enrollment Requi | rement) | | | | |
| 0-1 years | 16,872 | 17,070 | 10,267,075 | 3,112,200,764 | 1.64 | 0.05 |
| 2-5 years | 3,934 | 4,062 | 17,898,292 | 8,658,071,850 | 0.22 | 0.00 |
| 6-12 years | 25,628 | 27,012 | 27,062,600 | 16,137,311,793 | 0.95 | 0.02 |
| 13-17 years | 82,935 | 87,826 | 19,907,759 | 11,050,165,585 | 4.17 | 0.08 |

Table 2c. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Age Group



| | · · | | · · | | New Users per 1,000 | Incidence Rate per 10,000 |
|----------------------|-----------------------|--------------|-------------------------------|-----------------------------------|-------------------------------|------------------------------------|
| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| Beta Blockers | | | | | | |
| 2008 | 6,000 | 6,027 | 9,172,729 | 1,947,042,843 | 0.65 | 0.03 |
| 2009 | 7,718 | 7,760 | 9,589,264 | 2,608,273,613 | 0.80 | 0.03 |
| 2010 | 7,447 | 7,496 | 8,897,831 | 2,444,888,271 | 0.84 | 0.03 |
| 2011 | 7,252 | 7,280 | 8,331,817 | 2,306,691,207 | 0.87 | 0.03 |
| 2012 | 7,208 | 7,264 | 7,899,190 | 2,190,488,597 | 0.91 | 0.03 |
| 2013 | 7,740 | 7,790 | 8,713,627 | 2,292,951,161 | 0.89 | 0.03 |
| 2014 | 12,239 | 12,292 | 15,944,273 | 3,580,926,674 | 0.77 | 0.03 |
| 2015 | 20,554 | 20,643 | 24,910,225 | 6,113,151,520 | 0.83 | 0.03 |
| 2016 | 31,533 | 31,696 | 37,526,130 | 9,201,874,997 | 0.84 | 0.03 |
| 2017 | 38,738 | 38,953 | 41,473,908 | 11,929,525,427 | 0.93 | 0.03 |
| 2018 | 37,312 | 37,527 | 36,516,368 | 10,914,194,562 | 1.02 | 0.03 |
| 2019 | 10,122 | 10,187 | 8,491,820 | 2,403,773,247 | 1.19 | 0.04 |
| 2020 | 8,915 | 8,978 | 8,276,992 | 2,373,046,594 | 1.08 | 0.04 |
| 2021 | 9,570 | 9,619 | 7,125,807 | 2,020,555,461 | 1.34 | 0.05 |
| 2022 | 719 | 719 | 2,625,678 | 163,410,080 | 0.27 | 0.04 |
| Beta Blockers (Post- | Index Enrollment Requ | uirement) | | | | |
| 2008 | 4,594 | 4,617 | 6,708,666 | 1,437,802,906 | 0.68 | 0.03 |
| 2009 | 5,756 | 5,789 | 6,680,854 | 1,873,716,059 | 0.86 | 0.03 |
| 2010 | 5,600 | 5,636 | 6,294,656 | 1,788,108,559 | 0.89 | 0.03 |
| 2011 | 5,473 | 5,493 | 5,946,983 | 1,694,430,885 | 0.92 | 0.03 |
| 2012 | 5,600 | 5,646 | 6,141,514 | 1,662,441,264 | 0.91 | 0.03 |
| 2013 | 5,804 | 5,846 | 6,330,425 | 1,700,165,017 | 0.92 | 0.03 |
| 2014 | 9,667 | 9,713 | 12,151,502 | 2,783,695,944 | 0.80 | 0.03 |
| 2015 | 15,470 | 15,536 | 17,540,804 | 4,365,668,472 | 0.88 | 0.04 |
| 2016 | 25,924 | 26,057 | 30,813,160 | 7,499,743,351 | 0.84 | 0.03 |
| 2017 | 29,336 | 29,513 | 29,789,339 | 8,659,946,585 | 0.98 | 0.03 |
| 2018 | 7,474 | 7,514 | 6,429,036 | 1,865,896,483 | 1.16 | 0.04 |
| 2019 | 7,789 | 7,835 | 6,343,703 | 1,854,443,355 | 1.23 | 0.04 |
| 2020 | 5,986 | 6,031 | 6,647,248 | 1,612,295,873 | 0.90 | 0.04 |
| 2021 | 744 | 744 | 2,807,558 | 159,395,239 | 0.26 | 0.05 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |

Table 2d. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | New Users per 1,000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|--|-----------|--------------|-------------------------------|-----------------------------------|--|--|
| Beta Blockers | | | | | | |
| Evidence of Any Metoprolol | 17,419 | 18,174 | N/A | N/A | N/A | N/A |
| No evidence of Any Metoprolol | 184,129 | 196,057 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement |) | | | | | |
| Evidence of Any Metoprolol | 11,084 | 11,540 | N/A | N/A | N/A | N/A |
| No evidence of Any Metoprolol | 117,193 | 124,430 | N/A | N/A | N/A | N/A |

Table 2e. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Any Metoprolol



| | | | 1 | Eligible Member- | New Users per 1,000 | Incidence Rate per 10,000 Eligible |
|---|-----------|--------------|-------------------------------|------------------|-------------------------------|---------------------------------------|
| | New Users | New Episodes | Eligible Members ¹ | Days | Eligible Members ¹ | Members Days ¹ |
| Beta Blockers | | | | | | |
| Evidence of Metoprolol (Extended Release) | 9,921 | 10,259 | N/A | N/A | N/A | N/A |
| No evidence of Metoprolol (Extended Release) | 191,412 | 203,972 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement) | | | | | | |
| Evidence of Metoprolol (Extended Release) | 6,192 | 6,383 | N/A | N/A | N/A | N/A |
| No evidence of Metoprolol (Extended Release) | 121,961 | 129,587 | N/A | N/A | N/A | N/A |

Table 2f. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Metoprolol (Extended Release)



| | | | | | | Incidence Rate per |
|--|-----------|--------------|-------------------------------|-----------------------------------|-------------------------------|---------------------------|
| | | | | | New Users per 1,000 | 10,000 Eligible |
| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | Eligible Members ¹ | Members Days ¹ |
| Beta Blockers | | | | | | |
| Evidence of Metoprolol (Regular) | 7,620 | 7,962 | N/A | N/A | N/A | N/A |
| No evidence of Metoprolol (Regular) | 193,679 | 206,269 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requireme | nt) | | | | | |
| Evidence of Metoprolol (Regular) | 4,975 | 5,194 | N/A | N/A | N/A | N/A |
| No evidence of Metoprolol (Regular) | 123,160 | 130,776 | N/A | N/A | N/A | N/A |

Table 2g. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Metoprolol (Regular)



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | New Users per 1,000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|--|-----------|--------------|-------------------------------|-----------------------------------|--|--|
| Beta Blockers | | | | | | |
| Evidence of Any Propranolol | 139,518 | 147,338 | N/A | N/A | N/A | N/A |
| No evidence of Any Propranolol | 62,513 | 66,893 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Require | ement) | | | | | |
| Evidence of Any Propranolol | 87,789 | 92,518 | N/A | N/A | N/A | N/A |
| No evidence of Any Propranolol | 40,850 | 43,452 | N/A | N/A | N/A | N/A |

Table 2h. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Any Propranolol



| | | | | Eligible Member- | New Users per 1,000 | Incidence Rate per 10,000 Eligible |
|---|-----------|--------------|-------------------------------|------------------|-------------------------------|---------------------------------------|
| | New Users | New Episodes | Eligible Members ¹ | Days | Eligible Members ¹ | Members Days ¹ |
| Beta Blockers | | | | | | |
| Evidence of Propranolol (Extended Release) | 15,680 | 16,281 | N/A | N/A | N/A | N/A |
| No evidence of Propranolol (Extended Release) | 185,912 | 197,950 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement) | | | | | | |
| Evidence of Propranolol (Extended Release) | 10,483 | 10,853 | N/A | N/A | N/A | N/A |
| No evidence of Propranolol (Extended Release) | 117,873 | 125,117 | N/A | N/A | N/A | N/A |

Table 2i. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Propranolol (Extended Release)



| | | | | | | Incidence Rate per |
|--|-----------|--------------|-------------------------------|-----------------------------------|-------------------------------|---------------------------|
| | | | | | New Users per 1,000 | 10,000 Eligible |
| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | Eligible Members ¹ | Members Days ¹ |
| Beta Blockers | | | | | | |
| Evidence of Propranolol (Regular) | 122,366 | 129,011 | N/A | N/A | N/A | N/A |
| No evidence of Propranolol (Regular) | 80,097 | 85,220 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requireme | nt) | | | | | |
| Evidence of Propranolol (Regular) | 76,527 | 80,520 | N/A | N/A | N/A | N/A |
| No evidence of Propranolol (Regular) | 52,390 | 55,450 | N/A | N/A | N/A | N/A |

Table 2j. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Propranolol (Regular)



| | | | | | New Users per 1,000 | Incidence Rate per 10,000 Eligible |
|--|-----------|--------------|-------------------------------|-----------------------------------|-------------------------------|---------------------------------------|
| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | Eligible Members ¹ | Members Days ¹ |
| Beta Blockers | | | | | | |
| Evidence of Propranolol (Hemangeol) | 2,437 | 2,463 | N/A | N/A | N/A | N/A |
| No evidence of Propranolol (Hemangeol) | 198,521 | 211,768 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement | nt) | | | | | |
| Evidence of Propranolol (Hemangeol) | 1,400 | 1,409 | N/A | N/A | N/A | N/A |
| No evidence of Propranolol (Hemangeol) | 126,529 | 134,561 | N/A | N/A | N/A | N/A |

Table 2k. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Propranolol (Hemangeol)



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | New Users per 1,000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|---|-----------|--------------|-------------------------------|-----------------------------------|--|--|
| Beta Blockers | | | 0 | 0 | | |
| Evidence of Acebutolol | 75 | 77 | N/A | N/A | N/A | N/A |
| No evidence of Acebutolol | 200,854 | 214,154 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement) | | | | | | |
| Evidence of Acebutolol | 54 | 56 | N/A | N/A | N/A | N/A |
| No evidence of Acebutolol | 127,860 | 135,914 | N/A | N/A | N/A | N/A |

Table 2I. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Acebutolol



| | | | | | | Incidence Rate per |
|--|-----------|--------------|-------------------------------|-----------------------------------|-------------------------------|---------------------------|
| | | | | | New Users per 1,000 | 10,000 Eligible |
| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | Eligible Members ¹ | Members Days ¹ |
| Beta Blockers | | | | | | |
| Evidence of Atenolol | 28,587 | 30,660 | N/A | N/A | N/A | N/A |
| No evidence of Atenolol | 173,290 | 183,571 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement) | | | | | | |
| Evidence of Atenolol | 19,259 | 20,520 | N/A | N/A | N/A | N/A |
| No evidence of Atenolol | 109,244 | 115,450 | N/A | N/A | N/A | N/A |

Table 2m. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Atenolol



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | New Users per 1,000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|---|-----------|--------------|-------------------------------|-----------------------------------|--|--|
| Beta Blockers | | | | | | |
| Evidence of Betaxolol | 168 | 173 | N/A | N/A | N/A | N/A |
| No evidence of Betaxolol | 200,776 | 214,058 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement) | | | | | | |
| Evidence of Betaxolol | 115 | 118 | N/A | N/A | N/A | N/A |
| No evidence of Betaxolol | 127,807 | 135,852 | N/A | N/A | N/A | N/A |

Table 2n. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Betaxolol



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | New Users per 1,000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|---|-----------|--------------|-------------------------------|-----------------------------------|--|--|
| Beta Blockers | | | | | | |
| Evidence of Bisoprolol | 568 | 584 | N/A | N/A | N/A | N/A |
| No evidence of Bisoprolol | 200,381 | 213,647 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement) | | | | | | |
| Evidence of Bisoprolol | 375 | 386 | N/A | N/A | N/A | N/A |
| No evidence of Bisoprolol | 127,548 | 135,584 | N/A | N/A | N/A | N/A |

Table 20. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Bisoprolol



| | | | | | New Users per 1,000 | Incidence Rate per 10,000 Eligible |
|---|-----------|--------------|-------------------------------|-----------------------------------|-------------------------------|---------------------------------------|
| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | Eligible Members ¹ | Members Days ¹ |
| Beta Blockers | | | | | | |
| Evidence of Carvedilol | 3,730 | 4,036 | N/A | N/A | N/A | N/A |
| No evidence of Carvedilol | 197,286 | 210,195 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement) | | | | | | |
| Evidence of Carvedilol | 2,246 | 2,410 | N/A | N/A | N/A | N/A |
| No evidence of Carvedilol | 125,720 | 133,560 | N/A | N/A | N/A | N/A |

Table 2p. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Carvedilol



| | New Leave | New Friendes | Eligible Members ¹ | Fligible Member Down ¹ | New Users per 1,000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|---|-----------|--------------|-------------------------------|-----------------------------------|--|--|
| Beta Blockers | New Users | New Episodes | | Eligible Member-Days ¹ | | wembers Days |
| Evidence of Labetalol | 4,852 | 4,991 | N/A | N/A | N/A | N/A |
| No evidence of Labetalol | 196,167 | 209,240 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement) | | | | | | |
| Evidence of Labetalol | 2,874 | 2,952 | N/A | N/A | N/A | N/A |
| No evidence of Labetalol | 125,100 | 133,018 | N/A | N/A | N/A | N/A |

Table 2q. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Labetalol



| | | | | | | Incidence Rate per |
|---|----------------|--------------|-------------------------------|-----------------------------------|-------------------------------|---------------------------|
| | | | | | New Users per 1,000 | 10,000 Eligible |
| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | Eligible Members ¹ | Members Days ¹ |
| Beta Blockers | | | | | | |
| Evidence of Nadolol | 5 <i>,</i> 865 | 6,351 | N/A | N/A | N/A | N/A |
| No evidence of Nadolol | 195,319 | 207,880 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement) | | | | | | |
| Evidence of Nadolol | 3,988 | 4,273 | N/A | N/A | N/A | N/A |
| No evidence of Nadolol | 124,085 | 131,697 | N/A | N/A | N/A | N/A |

Table 2r. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Nadolol



| | | | | | | Incidence Rate per |
|---|-----------|--------------|-------------------------------|-----------------------------------|-------------------------------|---------------------------|
| | | | 1 | 1 | New Users per 1,000 | 10,000 Eligible |
| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | Eligible Members ¹ | Members Days ¹ |
| Beta Blockers | | | | | | |
| Evidence of Nebivolol | 530 | 551 | N/A | N/A | N/A | N/A |
| No evidence of Nebivolol | 200,435 | 213,680 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requiremen | nt) | | | | | |
| Evidence of Nebivolol | 382 | 397 | N/A | N/A | N/A | N/A |
| No evidence of Nebivolol | 127,556 | 135,573 | N/A | N/A | N/A | N/A |

Table 2s. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Nebivolol



| | | | | | | Incidence Rate per |
|---|-----------|--------------|-------------------------------|-----------------------------------|-------------------------------|---------------------------|
| | | | | | New Users per 1,000 | 10,000 Eligible |
| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | Eligible Members ¹ | Members Days ¹ |
| Beta Blockers | | | | | | |
| Evidence of Pindolol | 264 | 275 | N/A | N/A | N/A | N/A |
| No evidence of Pindolol | 200,678 | 213,956 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement) | | | | | | |
| Evidence of Pindolol | 186 | 193 | N/A | N/A | N/A | N/A |
| No evidence of Pindolol | 127,739 | 135,777 | N/A | N/A | N/A | N/A |

Table 2t. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Pindolol



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | New Users per 1,000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|---|-----------|--------------|-------------------------------|-----------------------------------|--|--|
| Beta Blockers | New Osers | New Episodes | | Eligible Member-Days | | Wembers Days |
| Evidence of Sotalol | 1,021 | 1,049 | N/A | N/A | N/A | N/A |
| No evidence of Sotalol | 199,961 | 213,182 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement) | | | | | | |
| Evidence of Sotalol | 611 | 628 | N/A | N/A | N/A | N/A |
| No evidence of Sotalol | 127,332 | 135,342 | N/A | N/A | N/A | N/A |

Table 2u. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Sotalol



| | | | | | | Incidence Rate per |
|---|-----------|--------------|-------------------------------|-----------------------------------|-------------------------------|---------------------------|
| | | | | | New Users per 1,000 | 10,000 Eligible |
| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | Eligible Members ¹ | Members Days ¹ |
| Beta Blockers | | | | | | |
| Evidence of Timolol | 78 | 81 | N/A | N/A | N/A | N/A |
| No evidence of Timolol | 200,854 | 214,150 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement) | | | | | | |
| Evidence of Timolol | 53 | 56 | N/A | N/A | N/A | N/A |
| No evidence of Timolol | 127,863 | 135,914 | N/A | N/A | N/A | N/A |

Table 2v. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Timolol



| | | | | | New Users per 1,000 | Incidence Rate per 10,000 Eligible |
|--|-----------|--------------|-------------------------------|-----------------------------------|-------------------------------|---------------------------------------|
| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | Eligible Members ¹ | Members Days ¹ |
| Beta Blockers | | | | | | |
| Evidence of Selective Beta Blockers | 47,055 | 50,195 | N/A | N/A | N/A | N/A |
| No evidence of Selective Beta Blockers | 154,997 | 164,036 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requireme | nt) | | | | | |
| Evidence of Selective Beta Blockers | 31,113 | 32,999 | N/A | N/A | N/A | N/A |
| No evidence of Selective Beta Blockers | 97,530 | 102,971 | N/A | N/A | N/A | N/A |

Table 2w. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Selective Beta Blockers



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | New Users per 1,000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|--|-----------|--------------|-------------------------------|-----------------------------------|--|--|
| Beta Blockers | | | | | | |
| Evidence of Non-Selective Beta Blockers | 155,040 | 164,084 | N/A | N/A | N/A | N/A |
| No evidence of Non-Selective Beta Blockers | 47,013 | 50,147 | N/A | N/A | N/A | N/A |
| Beta Blockers (Post-Index Enrollment Requirement | t) | | | | | |
| Evidence of Non-Selective Beta Blockers | 97,561 | 103,005 | N/A | N/A | N/A | N/A |
| No evidence of Non-Selective Beta Blockers | 31,085 | 32,965 | N/A | N/A | N/A | N/A |

Table 2x. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Non-Selective Beta Blockers



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|-----------------------|---------------------------|--------------|-------------------------------|-----------------------------------|---|---|
| Beta Blockers | | · | | · · | | |
| 2008 | 6,000 | 6,027 | 9,172,729 | 1,947,042,843 | 0.65 | 0.03 |
| 2009 | 7,718 | 7,760 | 9,589,264 | 2,608,273,613 | 0.80 | 0.03 |
| 2010 | 7,447 | 7,496 | 8,897,831 | 2,444,888,271 | 0.84 | 0.03 |
| 2011 | 7,252 | 7,280 | 8,331,817 | 2,306,691,207 | 0.87 | 0.03 |
| 2012 | 7,208 | 7,264 | 7,899,190 | 2,190,488,597 | 0.91 | 0.03 |
| 2013 | 7,740 | 7,790 | 8,713,627 | 2,292,951,161 | 0.89 | 0.03 |
| 2014 | 12,239 | 12,292 | 15,944,273 | 3,580,926,674 | 0.77 | 0.03 |
| 2015 | 20,554 | 20,643 | 24,910,225 | 6,113,151,520 | 0.83 | 0.03 |
| 2016 | 31,533 | 31,696 | 37,526,130 | 9,201,874,997 | 0.84 | 0.03 |
| 2017 | 38,738 | 38,953 | 41,473,908 | 11,929,525,427 | 0.93 | 0.03 |
| 2018 | 37,312 | 37,527 | 36,516,368 | 10,914,194,562 | 1.02 | 0.03 |
| 2019 | 10,122 | 10,187 | 8,491,820 | 2,403,773,247 | 1.19 | 0.04 |
| 2020 | 8,915 | 8,978 | 8,276,992 | 2,373,046,594 | 1.08 | 0.04 |
| 2021 | 9,570 | 9,619 | 7,125,807 | 2,020,555,461 | 1.34 | 0.05 |
| 2022 | 719 | 719 | 2,625,678 | 163,410,080 | 0.27 | 0.04 |
| Beta Blockers (Post-I | ndex Enrollment Requireme | ent) | | | | |
| 2008 | 4,594 | 4,617 | 6,708,666 | 1,437,802,906 | 0.68 | 0.03 |
| 2009 | 5,756 | 5,789 | 6,680,854 | 1,873,716,059 | 0.86 | 0.03 |
| 2010 | 5,600 | 5,636 | 6,294,656 | 1,788,108,559 | 0.89 | 0.03 |
| 2011 | 5,473 | 5,493 | 5,946,983 | 1,694,430,885 | 0.92 | 0.03 |
| 2012 | 5,600 | 5,646 | 6,141,514 | 1,662,441,264 | 0.91 | 0.03 |
| 2013 | 5,804 | 5,846 | 6,330,425 | 1,700,165,017 | 0.92 | 0.03 |
| 2014 | 9,667 | 9,713 | 12,151,502 | 2,783,695,944 | 0.80 | 0.03 |
| 2015 | 15,470 | 15,536 | 17,540,804 | 4,365,668,472 | 0.88 | 0.04 |
| 2016 | 25,924 | 26,057 | 30,813,160 | 7,499,743,351 | 0.84 | 0.03 |
| 2017 | 29,336 | 29,513 | 29,789,339 | 8,659,946,585 | 0.98 | 0.03 |
| 2018 | 7,474 | 7,514 | 6,429,036 | 1,865,896,483 | 1.16 | 0.04 |

Table 3a. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|------|-----------|--------------|-------------------------------|-----------------------------------|---|---|
| 2019 | 7,789 | 7,835 | 6,343,703 | 1,854,443,355 | 1.23 | 0.04 |
| 2020 | 5,986 | 6,031 | 6,647,248 | 1,612,295,873 | 0.90 | 0.04 |
| 2021 | 744 | 744 | 2,807,558 | 159,395,239 | 0.26 | 0.05 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |

Table 3a. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|-----------------------|---------------------------|--------------|-------------------------------|-----------------------------------|---|---|
| Beta Blockers | | • | 5 | | 5 | |
| 2008 | 403 | 404 | 974,675 | 149,280,424 | 0.41 | 0.03 |
| 2009 | 500 | 500 | 1,076,321 | 195,778,763 | 0.46 | 0.03 |
| 2010 | 634 | 637 | 975,128 | 178,520,333 | 0.65 | 0.04 |
| 2011 | 669 | 670 | 897,490 | 164,244,322 | 0.75 | 0.04 |
| 2012 | 704 | 704 | 848,657 | 156,079,602 | 0.83 | 0.05 |
| 2013 | 830 | 830 | 915,175 | 162,381,025 | 0.91 | 0.05 |
| 2014 | 1,862 | 1,865 | 1,879,830 | 291,720,406 | 0.99 | 0.06 |
| 2015 | 3,345 | 3,352 | 3,270,747 | 552,220,079 | 1.02 | 0.06 |
| 2016 | 4,913 | 4,924 | 4,941,442 | 849,324,893 | 0.99 | 0.06 |
| 2017 | 5,516 | 5,528 | 5,670,300 | 1,086,137,122 | 0.97 | 0.05 |
| 2018 | 5,001 | 5,012 | 4,861,366 | 956,004,192 | 1.03 | 0.05 |
| 2019 | 1,320 | 1,322 | 922,881 | 173,541,613 | 1.43 | 0.08 |
| 2020 | 1,420 | 1,420 | 901,138 | 170,903,410 | 1.58 | 0.08 |
| 2021 | 1,346 | 1,349 | 743,301 | 137,174,592 | 1.81 | 0.10 |
| 2022 | 104 | 104 | 195,330 | 11,103,702 | 0.53 | 0.09 |
| Beta Blockers (Post-I | ndex Enrollment Requireme | ent) | | | | |
| 2008 | 278 | 279 | 684,096 | 106,575,860 | 0.41 | 0.03 |
| 2009 | 348 | 348 | 731,559 | 136,846,382 | 0.48 | 0.03 |
| 2010 | 441 | 444 | 670,490 | 126,219,407 | 0.66 | 0.03 |
| 2011 | 477 | 478 | 622,519 | 116,669,274 | 0.77 | 0.04 |
| 2012 | 495 | 495 | 624,234 | 113,337,710 | 0.79 | 0.04 |
| 2013 | 578 | 578 | 643,566 | 116,796,821 | 0.90 | 0.05 |
| 2014 | 1,418 | 1,421 | 1,402,545 | 221,358,653 | 1.01 | 0.06 |
| 2015 | 2,484 | 2,490 | 2,234,625 | 381,337,795 | 1.11 | 0.07 |
| 2016 | 3,841 | 3,850 | 3,883,768 | 670,576,924 | 0.99 | 0.06 |
| 2017 | 3,942 | 3,953 | 3,863,130 | 744,646,081 | 1.02 | 0.05 |
| 2018 | 818 | 818 | 682,568 | 129,930,774 | 1.20 | 0.06 |

Table 3b. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Age Group: 0-1 years)



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|------|-----------|--------------|-------------------------------|-----------------------------------|---|---|
| 2019 | 910 | 911 | 673,582 | 130,319,959 | 1.35 | 0.07 |
| 2020 | 900 | 900 | 655,198 | 106,977,798 | 1.37 | 0.08 |
| 2021 | 105 | 105 | 202,322 | 10,607,326 | 0.52 | 0.10 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |

Table 3b. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Age Group: 0-1 years)



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|--------------------|---------------------|--------------|-------------------------------|---------------------------------------|---|--|
| Beta Blockers | | | | | | |
| 2008 | 207 | 207 | 2,225,858 | 421,276,026 | 0.09 | 0.00 |
| 2009 | 231 | 231 | 2,400,776 | 565,498,093 | 0.10 | 0.00 |
| 2010 | 208 | 208 | 2,222,205 | 529,248,744 | 0.09 | 0.00 |
| 2011 | 205 | 206 | 2,070,767 | 495,852,133 | 0.10 | 0.00 |
| 2012 | 176 | 177 | 1,950,319 | 466,471,552 | 0.09 | 0.00 |
| 2013 | 200 | 200 | 2,096,642 | 477,661,988 | 0.10 | 0.00 |
| 2014 | 352 | 352 | 4,059,701 | 790,535,946 | 0.09 | 0.00 |
| 2015 | 675 | 677 | 6,559,866 | 1,401,023,631 | 0.10 | 0.00 |
| 2016 | 1,091 | 1,094 | 9,916,956 | 2,138,619,540 | 0.11 | 0.01 |
| 2017 | 1,293 | 1,299 | 11,145,265 | 2,775,522,891 | 0.12 | 0.00 |
| 2018 | 1,182 | 1,187 | 9,768,348 | 2,513,204,307 | 0.12 | 0.00 |
| 2019 | 195 | 195 | 2,064,000 | 501,067,774 | 0.09 | 0.00 |
| 2020 | 177 | 177 | 2,019,012 | 497,207,947 | 0.09 | 0.00 |
| 2021 | **** | **** | **** | **** | 0.09 | 0.00 |
| 2022 | **** | **** | **** | **** | 0.01 | 0.00 |
| Beta Blockers (Pos | st-Index Enrollment | Requirement) | | | | |
| 2008 | 162 | 162 | 1,602,956 | 307,532,604 | 0.10 | 0.01 |
| 2009 | 172 | 172 | 1,661,522 | 403,128,759 | 0.10 | 0.00 |
| 2010 | 154 | 154 | 1,559,144 | 382,903,568 | 0.10 | 0.00 |
| 2011 | 156 | 157 | 1,466,099 | 360,389,242 | 0.11 | 0.00 |
| 2012 | 130 | 131 | 1,486,692 | 348,562,569 | 0.09 | 0.00 |
| 2013 | 151 | 151 | 1,505,782 | 351,234,824 | 0.10 | 0.00 |
| 2014 | 281 | 281 | 3,103,297 | 613,827,782 | 0.09 | 0.00 |
| 2015 | 532 | 533 | 4,650,913 | 1,003,360,432 | 0.11 | 0.01 |
| 2016 | 915 | 918 | 8,178,580 | 1,756,066,873 | 0.11 | 0.01 |
| 2017 | 991 | 996 | 8,016,926 | 2,009,164,400 | 0.12 | 0.00 |
| 2018 | 147 | 147 | 1,536,709 | 383,140,173 | 0.10 | 0.00 |
| 2019 | 140 | 140 | 1,526,464 | 382,244,004 | 0.09 | 0.00 |
| 2020 | **** | **** | **** | **** | 0.07 | 0.00 |
| 2021 | **** | **** | **** | **** | 0.02 | 0.00 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |

Table 3c. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Age Group: 2-5 years)

¹Eligible Members and Member-Days are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.



Table 3d. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Age Group: 6-12 years)

| | ap. 0-12 yearsy | | Eligible | Eligible Member- | New Users per 1000 | Incidence Rate per 10,000 |
|-------------------|-------------------|-----------------|----------------------|-------------------|-------------------------------|------------------------------------|
| | New Users | New Episodes | Members ¹ | Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| Beta Blockers | | | | | | |
| 2008 | 1,354 | 1,363 | 3,853,669 | 780,153,955 | 0.35 | 0.02 |
| 2009 | 1,672 | 1,677 | 4,104,783 | 1,051,632,308 | 0.41 | 0.02 |
| 2010 | 1,542 | 1,553 | 3,834,998 | 992,107,909 | 0.40 | 0.02 |
| 2011 | 1,547 | 1,550 | 3,608,664 | 940,599,461 | 0.43 | 0.02 |
| 2012 | 1,431 | 1,441 | 3,433,558 | 895,980,686 | 0.42 | 0.02 |
| 2013 | 1,498 | 1,507 | 3,790,810 | 941,398,265 | 0.40 | 0.02 |
| 2014 | 2,435 | 2,443 | 6,856,409 | 1,469,107,635 | 0.36 | 0.02 |
| 2015 | 4,194 | 4,207 | 10,818,987 | 2,524,142,295 | 0.39 | 0.02 |
| 2016 | 6,247 | 6,277 | 16,310,398 | 3,808,998,820 | 0.38 | 0.02 |
| 2017 | 7,985 | 8,029 | 18,170,523 | 4,938,233,478 | 0.44 | 0.02 |
| 2018 | 7,287 | 7,317 | 16,058,178 | 4,518,157,665 | 0.45 | 0.02 |
| 2019 | 1,445 | 1,450 | 3,663,357 | 974,610,151 | 0.39 | 0.01 |
| 2020 | 1,215 | 1,224 | 3,565,407 | 956,923,336 | 0.34 | 0.01 |
| 2021 | 1,237 | 1,243 | 3,056,361 | 813,316,419 | 0.40 | 0.02 |
| 2022 | 99 | 99 | 1,066,838 | 65,514,102 | 0.09 | 0.02 |
| Beta Blockers (Po | st-Index Enrollme | nt Requirement) | | | | |
| 2008 | 1,052 | 1,061 | 2,833,059 | 578,180,684 | 0.37 | 0.02 |
| 2009 | 1,283 | 1,287 | 2,880,393 | 758,092,141 | 0.45 | 0.02 |
| 2010 | 1,155 | 1,163 | 2,731,792 | 728,354,890 | 0.42 | 0.02 |
| 2011 | 1,161 | 1,162 | 2,594,478 | 693,739,637 | 0.45 | 0.02 |
| 2012 | 1,137 | 1,144 | 2,680,032 | 683,426,075 | 0.42 | 0.02 |
| 2013 | 1,132 | 1,141 | 2,774,100 | 701,071,034 | 0.41 | 0.02 |
| 2014 | 1,962 | 1,970 | 5,279,821 | 1,149,845,600 | 0.37 | 0.02 |
| 2015 | 3,224 | 3,233 | 7,734,211 | 1,820,093,411 | 0.42 | 0.02 |
| 2016 | 5,358 | 5,384 | 13,584,746 | 3,150,269,082 | 0.39 | 0.02 |
| 2017 | 6,257 | 6,290 | 13,285,901 | 3,640,958,936 | 0.47 | 0.02 |
| 2018 | 1,135 | 1,139 | 2,796,571 | 762,317,550 | 0.41 | 0.01 |
| 2019 | 1,140 | 1,143 | 2,756,978 | 754,740,524 | 0.41 | 0.02 |
| 2020 | 795 | 801 | 2,846,079 | 652,072,892 | 0.28 | 0.01 |
| 2021 | 94 | 94 | 1,145,853 | 64,149,337 | 0.08 | 0.01 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |



Table 3e. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Age Group: 13-17 years)

| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | 10,000 Eligible Members Days ¹ |
|--------------------|--------------------|----------------|----------------------------------|---------------------------------------|---|--|
| Beta Blockers | | | | | | |
| 2008 | 4,037 | 4,053 | 3,006,158 | 596,332,438 | 1.34 | 0.07 |
| 2009 | 5,318 | 5,352 | 3,204,055 | 795,364,449 | 1.66 | 0.07 |
| 2010 | 5,064 | 5,098 | 2,979,464 | 745,011,285 | 1.70 | 0.07 |
| 2011 | 4,832 | 4,854 | 2,802,694 | 705,995,291 | 1.72 | 0.07 |
| 2012 | 4,898 | 4,942 | 2,658,143 | 671,956,757 | 1.84 | 0.07 |
| 2013 | 5,215 | 5,253 | 2,957,420 | 711,509,883 | 1.76 | 0.07 |
| 2014 | 7,592 | 7,632 | 4,825,006 | 1,029,562,687 | 1.57 | 0.07 |
| 2015 | 12,348 | 12,407 | 7,173,631 | 1,635,765,515 | 1.72 | 0.08 |
| 2016 | 19,285 | 19,401 | 10,741,405 | 2,404,931,744 | 1.80 | 0.08 |
| 2017 | 23,958 | 24,097 | 12,139,851 | 3,129,631,936 | 1.97 | 0.08 |
| 2018 | 23,850 | 24,011 | 10,985,500 | 2,926,828,398 | 2.17 | 0.08 |
| 2019 | 7,165 | 7,220 | 2,931,425 | 754,553,709 | 2.44 | 0.09 |
| 2020 | 6,105 | 6,157 | 2,875,926 | 748,011,901 | 2.12 | 0.08 |
| 2021 | 6,843 | 6,876 | 2,543,579 | 659,081,211 | 2.69 | 0.10 |
| 2022 | 511 | 511 | 890,858 | 53,887,459 | 0.57 | 0.09 |
| Beta Blockers (Pos | st-Index Enrollmen | t Requirement) | | | | |
| 2008 | 3,103 | 3,115 | 2,239,729 | 445,513,758 | 1.39 | 0.07 |
| 2009 | 3,956 | 3,982 | 2,262,931 | 575,648,777 | 1.75 | 0.07 |
| 2010 | 3,850 | 3,875 | 2,142,999 | 550,630,694 | 1.80 | 0.07 |
| 2011 | 3,680 | 3,696 | 2,030,274 | 523,632,732 | 1.81 | 0.07 |
| 2012 | 3,838 | 3,876 | 2,097,072 | 517,114,910 | 1.83 | 0.07 |
| 2013 | 3,945 | 3,976 | 2,179,689 | 531,062,338 | 1.81 | 0.07 |
| 2014 | 6,007 | 6,041 | 3,670,262 | 798,663,909 | 1.64 | 0.08 |
| 2015 | 9,235 | 9,280 | 4,998,800 | 1,160,876,834 | 1.85 | 0.08 |
| 2016 | 15,813 | 15,905 | 8,734,751 | 1,922,830,472 | 1.81 | 0.08 |
| 2017 | 18,157 | 18,274 | 8,709,521 | 2,265,177,168 | 2.08 | 0.08 |
| 2018 | 5,375 | 5,410 | 2,250,273 | 590,507,986 | 2.39 | 0.09 |
| 2019 | 5,601 | 5,641 | 2,222,382 | 587,138,868 | 2.52 | 0.10 |
| 2020 | 4,182 | 4,219 | 2,313,418 | 528,627,868 | 1.81 | 0.08 |
| 2021 | 536 | 536 | 953,461 | 52,739,271 | 0.56 | 0.10 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |



| | | | Eligible | Eligible Member- | New Users per 1000 | Incidence Rate per 10,000 |
|-------------------|-------------------|------------------|----------------------|-------------------|-------------------------------|------------------------------------|
| | New Users | New Episodes | Members ¹ | Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| Beta Blockers | | | | | | |
| 2008 | 2,544 | 2,553 | 4,692,686 | 996,269,986 | 0.54 | 0.03 |
| 2009 | 3,228 | 3,246 | 4,904,910 | 1,334,605,773 | 0.66 | 0.02 |
| 2010 | 3,145 | 3,161 | 4,549,675 | 1,250,216,988 | 0.69 | 0.03 |
| 2011 | 2,965 | 2,972 | 4,259,162 | 1,179,133,731 | 0.70 | 0.03 |
| 2012 | 3,003 | 3,019 | 4,038,509 | 1,119,653,389 | 0.74 | 0.03 |
| 2013 | 3,151 | 3,179 | 4,456,260 | 1,172,578,008 | 0.71 | 0.03 |
| 2014 | 4,877 | 4,897 | 8,146,410 | 1,830,566,509 | 0.60 | 0.03 |
| 2015 | 8,229 | 8,265 | 12,734,346 | 3,125,999,317 | 0.65 | 0.03 |
| 2016 | 12,580 | 12,644 | 19,198,466 | 4,711,376,793 | 0.66 | 0.03 |
| 2017 | 15,661 | 15,748 | 21,216,962 | 6,108,878,232 | 0.74 | 0.03 |
| 2018 | 14,745 | 14,807 | 18,684,586 | 5,589,438,794 | 0.79 | 0.03 |
| 2019 | 3,641 | 3,654 | 4,336,226 | 1,227,825,598 | 0.84 | 0.03 |
| 2020 | 3,139 | 3,155 | 4,229,392 | 1,212,718,447 | 0.74 | 0.03 |
| 2021 | 3,136 | 3,154 | 3,641,210 | 1,032,715,337 | 0.86 | 0.03 |
| 2022 | 220 | 220 | 1,343,754 | 83,596,906 | 0.16 | 0.03 |
| Beta Blockers (Po | ost-Index Enrollm | ent Requirement) | | | | |
| 2008 | 1,977 | 1,985 | 3,432,590 | 735,841,080 | 0.58 | 0.03 |
| 2009 | 2,419 | 2,433 | 3,417,306 | 958,457,679 | 0.71 | 0.03 |
| 2010 | 2,377 | 2,390 | 3,217,849 | 914,257,793 | 0.74 | 0.03 |
| 2011 | 2,232 | 2,238 | 3,038,927 | 865,758,910 | 0.73 | 0.03 |
| 2012 | 2,327 | 2,339 | 3,139,599 | 849,805,886 | 0.74 | 0.03 |
| 2013 | 2,355 | 2,380 | 3,236,619 | 869,343,547 | 0.73 | 0.03 |
| 2014 | 3,942 | 3,959 | 6,208,487 | 1,422,940,929 | 0.63 | 0.03 |
| 2015 | 6,250 | 6,276 | 8,976,126 | 2,234,713,018 | 0.70 | 0.03 |
| 2016 | 10,462 | 10,517 | 15,775,092 | 3,842,237,159 | 0.66 | 0.03 |
| 2017 | 11,958 | 12,026 | 15,249,877 | 4,437,085,951 | 0.78 | 0.03 |
| 2018 | 2,727 | 2,737 | 3,282,290 | 953,258,880 | 0.83 | 0.03 |
| 2019 | 2,827 | 2,835 | 3,240,187 | 947,439,317 | 0.87 | 0.03 |
| 2020 | 2,057 | 2,066 | 3,395,992 | 823,828,019 | 0.61 | 0.02 |
| 2021 | 255 | 255 | 1,433,971 | 81,403,956 | 0.18 | 0.03 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |

Table 3f. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Sex: Male)



Table 3g. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Sex: Female)

| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|-------------------|--------------------|-----------------|----------------------------------|---------------------------------------|---|--|
| Beta Blockers | | | | | | |
| 2008 | 3,456 | 3,474 | 4,480,043 | 950,772,857 | 0.77 | 0.04 |
| 2009 | 4,490 | 4,514 | 4,684,354 | 1,273,667,840 | 0.96 | 0.04 |
| 2010 | 4,302 | 4,335 | 4,348,156 | 1,194,671,283 | 0.99 | 0.04 |
| 2011 | 4,287 | 4,308 | 4,072,655 | 1,127,557,476 | 1.05 | 0.04 |
| 2012 | 4,205 | 4,245 | 3,860,681 | 1,070,835,208 | 1.09 | 0.04 |
| 2013 | 4,589 | 4,611 | 4,257,367 | 1,120,373,153 | 1.08 | 0.04 |
| 2014 | 7,362 | 7,395 | 7,797,863 | 1,750,360,165 | 0.94 | 0.04 |
| 2015 | 12,325 | 12,378 | 12,175,879 | 2,987,152,203 | 1.01 | 0.04 |
| 2016 | 18,953 | 19,052 | 18,327,664 | 4,490,498,204 | 1.03 | 0.04 |
| 2017 | 23,077 | 23,205 | 20,256,946 | 5,820,647,195 | 1.14 | 0.04 |
| 2018 | 22,567 | 22,720 | 17,831,782 | 5,324,755,768 | 1.27 | 0.04 |
| 2019 | 6,481 | 6,533 | 4,155,594 | 1,175,947,649 | 1.56 | 0.06 |
| 2020 | 5,776 | 5,823 | 4,047,600 | 1,160,328,147 | 1.43 | 0.05 |
| 2021 | 6,434 | 6,465 | 3,484,597 | 987,840,124 | 1.85 | 0.07 |
| 2022 | 499 | 499 | 1,281,924 | 79,813,174 | 0.39 | 0.06 |
| Beta Blockers (Po | st-Index Enrollmer | nt Requirement) | | | | |
| 2008 | 2,617 | 2,632 | 3,276,076 | 701,961,826 | 0.80 | 0.04 |
| 2009 | 3,337 | 3,356 | 3,263,548 | 915,258,380 | 1.02 | 0.04 |
| 2010 | 3,223 | 3,246 | 3,076,807 | 873,850,766 | 1.05 | 0.04 |
| 2011 | 3,241 | 3,255 | 2,908,056 | 828,671,975 | 1.11 | 0.04 |
| 2012 | 3,273 | 3,307 | 3,001,915 | 812,635,378 | 1.09 | 0.04 |
| 2013 | 3,449 | 3,466 | 3,093,806 | 830,821,470 | 1.11 | 0.04 |
| 2014 | 5,725 | 5,754 | 5,943,015 | 1,360,755,015 | 0.96 | 0.04 |
| 2015 | 9,220 | 9,260 | 8,564,678 | 2,130,955,454 | 1.08 | 0.04 |
| 2016 | 15,462 | 15,540 | 15,038,068 | 3,657,506,192 | 1.03 | 0.04 |
| 2017 | 17,378 | 17,487 | 14,539,462 | 4,222,860,634 | 1.20 | 0.04 |
| 2018 | 4,747 | 4,777 | 3,146,746 | 912,637,603 | 1.51 | 0.05 |
| 2019 | 4,962 | 5,000 | 3,103,516 | 907,004,038 | 1.60 | 0.05 |
| 2020 | 3,929 | 3,965 | 3,251,256 | 788,467,854 | 1.21 | 0.05 |
| 2021 | 489 | 489 | 1,373,587 | 77,991,283 | 0.36 | 0.06 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |



| | | | Eligible | Eligible Member- | | 10,000 Eligible Members |
|-------------------|-------------------|-------------------|----------------------|-------------------|-------------------------------|-------------------------|
| | New Users | New Episodes | Members ¹ | Days ¹ | Eligible Members ¹ | Days ¹ |
| Beta Blockers | | | | | | |
| 2008 | 220 | 220 | 499,660 | 76,580,640 | 0.44 | 0.03 |
| 2009 | 246 | 246 | 551,729 | 100,348,707 | 0.45 | 0.02 |
| 2010 | 281 | 282 | 500,321 | 91,629,856 | 0.56 | 0.03 |
| 2011 | 280 | 280 | 460,607 | 84,254,721 | 0.61 | 0.03 |
| 2012 | 315 | 315 | 436,199 | 80,202,944 | 0.72 | 0.04 |
| 2013 | 353 | 353 | 469,755 | 83,347,981 | 0.75 | 0.04 |
| 2014 | 798 | 799 | 961,612 | 149,374,530 | 0.83 | 0.05 |
| 2015 | 1,429 | 1,432 | 1,674,258 | 282,604,896 | 0.85 | 0.05 |
| 2016 | 2,072 | 2,079 | 2,526,621 | 434,345,400 | 0.82 | 0.05 |
| 2017 | 2,354 | 2,357 | 2,899,113 | 555,253,567 | 0.81 | 0.04 |
| 2018 | 2,114 | 2,119 | 2,485,652 | 488,797,448 | 0.85 | 0.04 |
| 2019 | 490 | 490 | 472,463 | 88,818,124 | 1.04 | 0.06 |
| 2020 | 508 | 508 | 461,323 | 87,451,405 | 1.10 | 0.06 |
| 2021 | 497 | 499 | 381,604 | 70,417,669 | 1.30 | 0.07 |
| 2022 | 27 | 27 | 100,704 | 5,721,503 | 0.27 | 0.05 |
| Beta Blockers (Po | ost-Index Enrollm | nent Requirement) | | | | |
| 2008 | 155 | 155 | 350,885 | 54,706,693 | 0.44 | 0.03 |
| 2009 | 168 | 168 | 375,045 | 70,094,081 | 0.45 | 0.02 |
| 2010 | 193 | 194 | 343,703 | 64,747,997 | 0.56 | 0.03 |
| 2011 | 186 | 186 | 319,250 | 59,823,844 | 0.58 | 0.03 |
| 2012 | 225 | 225 | 320,817 | 58,249,051 | 0.70 | 0.04 |
| 2013 | 244 | 244 | 330,147 | 59,873,480 | 0.74 | 0.04 |
| 2014 | 623 | 624 | 717,578 | 113,411,869 | 0.87 | 0.05 |
| 2015 | 1,045 | 1,047 | 1,144,585 | 195,269,006 | 0.91 | 0.05 |
| 2016 | 1,621 | 1,627 | 1,986,779 | 343,082,204 | 0.82 | 0.05 |
| 2017 | 1,691 | 1,693 | 1,976,146 | 380,835,792 | 0.86 | 0.04 |
| 2018 | 320 | 320 | 349,478 | 66,528,112 | 0.92 | 0.05 |
| 2019 | 339 | 339 | 344,364 | 66,627,225 | 0.98 | 0.05 |
| 2020 | 312 | 312 | 335,461 | 54,800,594 | 0.93 | 0.06 |
| 2021 | 33 | 33 | 103,715 | 5,432,452 | 0.32 | 0.06 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |

Table 3h. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Age Group: 0-1 years Sex: Male)



| | New Users | New Enisodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|-------------------|-------------------|------------------|-------------------------------|---------------------------------------|---|---|
| Beta Blockers | 1100 03013 | New Episodes | | Days | | |
| 2008 | 183 | 184 | 475,015 | 72,699,784 | 0.39 | 0.03 |
| 2009 | 254 | 254 | 524,592 | 95,430,056 | 0.48 | 0.03 |
| 2010 | 353 | 355 | 474,807 | 86,890,477 | 0.74 | 0.04 |
| 2011 | 389 | 390 | 436,883 | 79,989,601 | 0.89 | 0.05 |
| 2012 | 389 | 389 | 412,458 | 75,876,658 | 0.94 | 0.05 |
| 2013 | 477 | 477 | 445,420 | 79,033,044 | 1.07 | 0.06 |
| 2014 | 1,064 | 1,066 | 918,218 | 142,345,876 | 1.16 | 0.07 |
| 2015 | 1,916 | 1,920 | 1,596,489 | 269,615,183 | 1.20 | 0.07 |
| 2016 | 2,841 | 2,845 | 2,414,821 | 414,979,493 | 1.18 | 0.07 |
| 2017 | 3,162 | 3,171 | 2,771,187 | 530,883,555 | 1.14 | 0.06 |
| 2018 | 2,887 | 2,893 | 2,375,714 | 467,206,744 | 1.22 | 0.06 |
| 2019 | 830 | 832 | 450,418 | 84,723,489 | 1.84 | 0.10 |
| 2020 | 912 | 912 | 439,815 | 83,452,005 | 2.07 | 0.11 |
| 2021 | 849 | 850 | 361,697 | 66,756,923 | 2.35 | 0.13 |
| 2022 | 77 | 77 | 94,626 | 5,382,199 | 0.81 | 0.14 |
| Beta Blockers (Po | st-Index Enrollme | ent Requirement) | | | | |
| 2008 | 123 | 124 | 333,211 | 51,869,167 | 0.37 | 0.02 |
| 2009 | 180 | 180 | 356,514 | 66,752,301 | 0.50 | 0.03 |
| 2010 | 248 | 250 | 326,787 | 61,471,410 | 0.76 | 0.04 |
| 2011 | 291 | 292 | 303,269 | 56,845,430 | 0.96 | 0.05 |
| 2012 | 270 | 270 | 303,417 | 55,088,659 | 0.89 | 0.05 |
| 2013 | 334 | 334 | 313,419 | 56,923,341 | 1.07 | 0.06 |
| 2014 | 795 | 797 | 684,967 | 107,946,784 | 1.16 | 0.07 |
| 2015 | 1,439 | 1,443 | 1,090,040 | 186,068,789 | 1.32 | 0.08 |
| 2016 | 2,220 | 2,223 | 1,896,989 | 327,494,720 | 1.17 | 0.07 |
| 2017 | 2,251 | 2,260 | 1,886,984 | 363,810,289 | 1.19 | 0.06 |
| 2018 | 498 | 498 | 333,090 | 63,402,662 | 1.50 | 0.08 |
| 2019 | 571 | 572 | 329,218 | 63,692,734 | 1.73 | 0.09 |
| 2020 | 588 | 588 | 319,737 | 52,177,204 | 1.84 | 0.11 |
| 2021 | 72 | 72 | 98,607 | 5,174,874 | 0.73 | 0.14 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |

Table 3i. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Age Group: 0-1 years Sex: Female)



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|------------------|-------------------|-------------------|----------------------------------|---------------------------------------|--|---|
| Beta Blockers | | | | | | |
| 2008 | 90 | 90 | 1,139,439 | 215,695,292 | 0.08 | 0.00 |
| 2009 | 127 | 127 | 1,228,585 | 289,584,768 | 0.10 | 0.00 |
| 2010 | 123 | 123 | 1,137,313 | 270,813,963 | 0.11 | 0.00 |
| 2011 | 108 | 109 | 1,060,366 | 253,861,116 | 0.10 | 0.00 |
| 2012 | 98 | 98 | 999,149 | 238,774,649 | 0.10 | 0.00 |
| 2013 | 105 | 105 | 1,074,421 | 244,867,220 | 0.10 | 0.00 |
| 2014 | 176 | 176 | 2,077,587 | 404,865,699 | 0.08 | 0.00 |
| 2015 | 350 | 351 | 3,356,915 | 717,038,416 | 0.10 | 0.00 |
| 2016 | 564 | 566 | 5,075,107 | 1,095,179,800 | 0.11 | 0.01 |
| 2017 | 688 | 694 | 5,704,883 | 1,421,065,261 | 0.12 | 0.00 |
| 2018 | 638 | 640 | 5,000,918 | 1,286,714,021 | 0.13 | 0.00 |
| 2019 | 90 | 90 | 1,057,134 | 256,537,056 | 0.09 | 0.00 |
| 2020 | 95 | 95 | 1,033,544 | 254,513,329 | 0.09 | 0.00 |
| 2021 | **** | **** | **** | **** | 0.09 | 0.00 |
| 2022 | **** | **** | **** | **** | 0.01 | 0.00 |
| Beta Blockers (P | ost-Index Enrolln | nent Requirement) | | | | |
| 2008 | 80 | 80 | 820,378 | 157,426,422 | 0.10 | 0.01 |
| 2009 | 94 | 94 | 850,222 | 206,448,776 | 0.11 | 0.00 |
| 2010 | 87 | 87 | 798,161 | 195,927,952 | 0.11 | 0.00 |
| 2011 | 84 | 85 | 750,122 | 184,317,227 | 0.11 | 0.00 |
| 2012 | 73 | 73 | 761,796 | 178,472,848 | 0.10 | 0.00 |
| 2013 | 78 | 78 | 771,637 | 180,025,432 | 0.10 | 0.00 |
| 2014 | 139 | 139 | 1,588,241 | 314,287,405 | 0.09 | 0.00 |
| 2015 | 279 | 280 | 2,382,885 | 513,994,214 | 0.12 | 0.01 |
| 2016 | 477 | 479 | 4,189,199 | 899,970,386 | 0.11 | 0.01 |
| 2017 | 537 | 542 | 4,107,287 | 1,029,381,322 | 0.13 | 0.01 |
| 2018 | 79 | 79 | 786,565 | 196,150,002 | 0.10 | 0.00 |
| 2019 | 65 | 65 | 781,502 | 195,696,575 | 0.08 | 0.00 |
| 2020 | **** | **** | **** | **** | 0.07 | 0.00 |
| 2021 | **** | **** | **** | **** | 0.01 | 0.00 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |

 Table 3j. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022,

 by Year (Age Group: 2-5 years Sex: Male)

¹Eligible Members and Member-Days are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.



| Table 3k. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by |
|--|
| Year (Age Group: 2-5 years Sex: Female) |

| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|-------------------|--------------------|-----------------|----------------------------------|---------------------------------------|---|---|
| Beta Blockers | | | | | | |
| 2008 | 117 | 117 | 1,086,419 | 205,580,734 | 0.11 | 0.01 |
| 2009 | 104 | 104 | 1,172,191 | 275,913,325 | 0.09 | 0.00 |
| 2010 | 85 | 85 | 1,084,892 | 258,434,781 | 0.08 | 0.00 |
| 2011 | 97 | 97 | 1,010,401 | 241,991,017 | 0.10 | 0.00 |
| 2012 | 78 | 79 | 951,170 | 227,696,903 | 0.08 | 0.00 |
| 2013 | 95 | 95 | 1,022,221 | 232,794,768 | 0.09 | 0.00 |
| 2014 | 176 | 176 | 1,982,114 | 385,670,247 | 0.09 | 0.00 |
| 2015 | 325 | 326 | 3,202,951 | 683,985,215 | 0.10 | 0.00 |
| 2016 | 527 | 528 | 4,841,849 | 1,043,439,740 | 0.11 | 0.01 |
| 2017 | 605 | 605 | 5,440,382 | 1,354,457,630 | 0.11 | 0.00 |
| 2018 | 544 | 547 | 4,767,430 | 1,226,490,286 | 0.11 | 0.00 |
| 2019 | 105 | 105 | 1,006,866 | 244,530,718 | 0.10 | 0.00 |
| 2020 | 82 | 82 | 985,468 | 242,694,618 | 0.08 | 0.00 |
| 2021 | **** | **** | **** | **** | 0.09 | 0.00 |
| 2022 | **** | **** | **** | **** | 0.01 | 0.00 |
| Beta Blockers (Po | st-Index Enrollmer | nt Requirement) | | | | |
| 2008 | 82 | 82 | 782,578 | 150,106,182 | 0.10 | 0.01 |
| 2009 | 78 | 78 | 811,300 | 196,679,983 | 0.10 | 0.00 |
| 2010 | 67 | 67 | 760,983 | 186,975,616 | 0.09 | 0.00 |
| 2011 | 72 | 72 | 715,977 | 176,072,015 | 0.10 | 0.00 |
| 2012 | 57 | 58 | 724,896 | 170,089,721 | 0.08 | 0.00 |
| 2013 | 73 | 73 | 734,145 | 171,209,392 | 0.10 | 0.00 |
| 2014 | 142 | 142 | 1,515,056 | 299,540,377 | 0.09 | 0.00 |
| 2015 | 253 | 253 | 2,268,028 | 489,366,218 | 0.11 | 0.01 |
| 2016 | 438 | 439 | 3,989,381 | 856,096,487 | 0.11 | 0.01 |
| 2017 | 454 | 454 | 3,909,639 | 979,783,078 | 0.12 | 0.00 |
| 2018 | 68 | 68 | 750,144 | 186,990,171 | 0.09 | 0.00 |
| 2019 | 75 | 75 | 744,962 | 186,547,429 | 0.10 | 0.00 |
| 2020 | **** | **** | **** | **** | 0.07 | 0.00 |
| 2021 | **** | **** | **** | **** | 0.02 | 0.00 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |

¹Eligible Members and Member-Days are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|----------------------|------------------|--------------|-------------------------------|---------------------------------------|---|---|
| Beta Blockers | | | | | | |
| 2008 | 758 | 764 | 1,970,625 | 399,007,477 | 0.38 | 0.02 |
| 2009 | 881 | 884 | 2,099,295 | 537,861,468 | 0.42 | 0.02 |
| 2010 | 807 | 812 | 1,960,201 | 506,972,761 | 0.41 | 0.02 |
| 2011 | 807 | 808 | 1,842,899 | 480,438,922 | 0.44 | 0.02 |
| 2012 | 767 | 772 | 1,753,971 | 457,615,792 | 0.44 | 0.02 |
| 2013 | 779 | 786 | 1,936,731 | 480,891,621 | 0.40 | 0.02 |
| 2014 | 1,227 | 1,232 | 3,504,371 | 750,879,433 | 0.35 | 0.02 |
| 2015 | 2,096 | 2,102 | 5,535,925 | 1,291,618,413 | 0.38 | 0.02 |
| 2016 | 3,216 | 3,231 | 8,356,142 | 1,952,275,130 | 0.38 | 0.02 |
| 2017 | 4,162 | 4,189 | 9,310,518 | 2,532,369,898 | 0.45 | 0.02 |
| 2018 | 3,654 | 3,666 | 8,228,937 | 2,317,679,160 | 0.44 | 0.02 |
| 2019 | 722 | 725 | 1,870,783 | 497,784,557 | 0.39 | 0.01 |
| 2020 | 619 | 625 | 1,821,975 | 489,023,611 | 0.34 | 0.01 |
| 2021 | 593 | 596 | 1,562,043 | 415,597,277 | 0.38 | 0.01 |
| 2022 | 42 | 42 | 545,708 | 33,509,156 | 0.08 | 0.01 |
| Beta Blockers (Post- | Index Enrollment | Requirement) | | | | |
| 2008 | 596 | 602 | 1,449,128 | 295,808,589 | 0.41 | 0.02 |
| 2009 | 686 | 689 | 1,472,374 | 387,390,683 | 0.47 | 0.02 |
| 2010 | 605 | 609 | 1,395,666 | 372,142,945 | 0.43 | 0.02 |
| 2011 | 618 | 619 | 1,324,963 | 354,247,545 | 0.47 | 0.02 |
| 2012 | 614 | 618 | 1,368,686 | 349,048,758 | 0.45 | 0.02 |
| 2013 | 599 | 606 | 1,417,254 | 358,171,922 | 0.42 | 0.02 |
| 2014 | 1,001 | 1,006 | 2,700,091 | 587,945,523 | 0.37 | 0.02 |
| 2015 | 1,622 | 1,626 | 3,962,979 | 932,604,116 | 0.41 | 0.02 |
| 2016 | 2,773 | 2,786 | 6,968,255 | 1,616,767,160 | 0.40 | 0.02 |
| 2017 | 3,269 | 3,290 | 6,817,068 | 1,869,587,066 | 0.48 | 0.02 |
| 2018 | 592 | 593 | 1,427,918 | 389,463,247 | 0.41 | 0.02 |
| 2019 | 577 | 578 | 1,408,620 | 385,617,086 | 0.41 | 0.01 |
| 2020 | 396 | 399 | 1,454,264 | 333,123,742 | 0.27 | 0.01 |
| 2021 | 51 | 51 | 585,131 | 32,755,701 | 0.09 | 0.02 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |

Table 3I. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, byYear (Age Group: 6-12 years Sex: Male)



| | New Heren | No. Patrodos | Eligible | Eligible Member- | New Users per 1000 | Incidence Rate per 10,000 |
|-------------------|-------------------|------------------|----------------------|-------------------|-------------------------------|------------------------------------|
| | New Users | New Episodes | Members ¹ | Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| Beta Blockers | | | | | | |
| 2008 | 596 | 599 | 1,883,044 | 381,146,478 | 0.32 | 0.02 |
| 2009 | 791 | 793 | 2,005,488 | 513,770,840 | 0.39 | 0.02 |
| 2010 | 735 | 741 | 1,874,797 | 485,135,148 | 0.39 | 0.02 |
| 2011 | 740 | 742 | 1,765,765 | 460,160,539 | 0.42 | 0.02 |
| 2012 | 664 | 669 | 1,679,587 | 438,364,894 | 0.40 | 0.02 |
| 2013 | 719 | 721 | 1,854,079 | 460,506,644 | 0.39 | 0.02 |
| 2014 | 1,208 | 1,211 | 3,352,038 | 718,228,202 | 0.36 | 0.02 |
| 2015 | 2,098 | 2,105 | 5,283,062 | 1,232,523,882 | 0.40 | 0.02 |
| 2016 | 3,031 | 3,046 | 7,954,256 | 1,856,723,690 | 0.38 | 0.02 |
| 2017 | 3,823 | 3,840 | 8,860,005 | 2,405,863,580 | 0.43 | 0.02 |
| 2018 | 3,633 | 3,651 | 7,829,241 | 2,200,478,505 | 0.46 | 0.02 |
| 2019 | 723 | 725 | 1,792,574 | 476,825,594 | 0.40 | 0.02 |
| 2020 | 596 | 599 | 1,743,432 | 467,899,725 | 0.34 | 0.01 |
| 2021 | 644 | 647 | 1,494,318 | 397,719,142 | 0.43 | 0.02 |
| 2022 | 57 | 57 | 521,130 | 32,004,946 | 0.11 | 0.02 |
| Beta Blockers (Po | ost-Index Enrollm | ent Requirement) | | | | |
| 2008 | 456 | 459 | 1,383,931 | 282,372,095 | 0.33 | 0.02 |
| 2009 | 597 | 598 | 1,408,019 | 370,701,458 | 0.42 | 0.02 |
| 2010 | 550 | 554 | 1,336,126 | 356,211,945 | 0.41 | 0.02 |
| 2011 | 543 | 543 | 1,269,515 | 339,492,092 | 0.43 | 0.02 |
| 2012 | 523 | 526 | 1,311,346 | 334,377,317 | 0.40 | 0.02 |
| 2013 | 533 | 535 | 1,356,846 | 342,899,112 | 0.39 | 0.02 |
| 2014 | 961 | 964 | 2,579,730 | 561,900,077 | 0.37 | 0.02 |
| 2015 | 1,602 | 1,607 | 3,771,232 | 887,489,295 | 0.42 | 0.02 |
| 2016 | 2,585 | 2,598 | 6,616,491 | 1,533,501,922 | 0.39 | 0.02 |
| 2017 | 2,988 | 3,000 | 6,468,833 | 1,771,371,870 | 0.46 | 0.02 |
| 2018 | 543 | 546 | 1,368,653 | 372,854,303 | 0.40 | 0.01 |
| 2019 | 563 | 565 | 1,348,358 | 369,123,438 | 0.42 | 0.02 |
| 2020 | 399 | 402 | 1,391,815 | 318,949,150 | 0.29 | 0.01 |
| 2021 | 43 | 43 | 560,722 | 31,393,636 | 0.08 | 0.01 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |

Table 3m. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Age Group: 6-12 years Sex: Female)



| | | | Eligible | Eligible Member- | New Users per 1000 | Incidence Rate per 10,000 |
|------------------|-------------------|-------------------|----------------------|-------------------|-------------------------------|------------------------------------|
| | New Users | New Episodes | Members ¹ | Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| Beta Blockers | | | | | | |
| 2008 | 1,477 | 1,479 | 1,537,100 | 304,986,577 | 0.96 | 0.05 |
| 2009 | 1,975 | 1,989 | 1,636,976 | 406,810,830 | 1.21 | 0.05 |
| 2010 | 1,934 | 1,944 | 1,522,034 | 380,800,408 | 1.27 | 0.05 |
| 2011 | 1,770 | 1,775 | 1,430,962 | 360,578,972 | 1.24 | 0.05 |
| 2012 | 1,824 | 1,834 | 1,356,996 | 343,060,004 | 1.34 | 0.05 |
| 2013 | 1,916 | 1,935 | 1,510,422 | 363,471,186 | 1.27 | 0.05 |
| 2014 | 2,677 | 2,690 | 2,459,575 | 525,446,847 | 1.09 | 0.05 |
| 2015 | 4,357 | 4,380 | 3,657,778 | 834,737,592 | 1.19 | 0.05 |
| 2016 | 6,730 | 6,768 | 5,484,477 | 1,229,576,463 | 1.23 | 0.05 |
| 2017 | 8,462 | 8,508 | 6,199,096 | 1,600,189,506 | 1.37 | 0.05 |
| 2018 | 8,341 | 8,382 | 5,609,732 | 1,496,248,165 | 1.49 | 0.06 |
| 2019 | 2,340 | 2,349 | 1,493,569 | 384,685,861 | 1.57 | 0.06 |
| 2020 | 1,918 | 1,927 | 1,466,688 | 381,730,102 | 1.31 | 0.05 |
| 2021 | 1,974 | 1,982 | 1,296,750 | 336,393,247 | 1.52 | 0.06 |
| 2022 | 149 | 149 | 455,110 | 27,533,922 | 0.33 | 0.05 |
| Beta Blockers (F | ost-Index Enrolln | nent Requirement) | | | | |
| 2008 | 1,147 | 1,148 | 1,145,718 | 227,899,376 | 1.00 | 0.05 |
| 2009 | 1,472 | 1,482 | 1,156,480 | 294,524,139 | 1.27 | 0.05 |
| 2010 | 1,492 | 1,500 | 1,094,671 | 281,438,899 | 1.36 | 0.05 |
| 2011 | 1,344 | 1,348 | 1,036,623 | 267,370,294 | 1.30 | 0.05 |
| 2012 | 1,415 | 1,423 | 1,070,431 | 264,035,229 | 1.32 | 0.05 |
| 2013 | 1,436 | 1,452 | 1,112,534 | 271,272,713 | 1.29 | 0.05 |
| 2014 | 2,179 | 2,190 | 1,869,381 | 407,296,132 | 1.17 | 0.05 |
| 2015 | 3,306 | 3,323 | 2,550,278 | 592,845,682 | 1.30 | 0.06 |
| 2016 | 5,593 | 5,625 | 4,458,759 | 982,417,409 | 1.25 | 0.06 |
| 2017 | 6,464 | 6,501 | 4,445,406 | 1,157,281,771 | 1.45 | 0.06 |
| 2018 | 1,736 | 1,745 | 1,145,988 | 301,117,519 | 1.51 | 0.06 |
| 2019 | 1,846 | 1,853 | 1,132,960 | 299,498,431 | 1.63 | 0.06 |
| 2020 | 1,294 | 1,299 | 1,179,750 | 269,813,353 | 1.10 | 0.05 |
| 2021 | 167 | 167 | 486,376 | 26,910,083 | 0.34 | 0.06 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |

Table 3n. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Age Group: 13-17 years Sex: Male)



| | | | Eligible | Eligible Member- | New Users per 1000 | Incidence Rate per 10,000 |
|------------------|-------------------|-------------------|----------------------|-------------------|-------------------------------|------------------------------------|
| _ | New Users | New Episodes | Members ¹ | Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| Beta Blockers | | | | | | |
| 2008 | 2,560 | 2,574 | 1,469,058 | 291,345,861 | 1.74 | 0.09 |
| 2009 | 3,343 | 3,363 | 1,567,079 | 388,553,619 | 2.13 | 0.09 |
| 2010 | 3,130 | 3,154 | 1,457,430 | 364,210,877 | 2.15 | 0.09 |
| 2011 | 3,062 | 3,079 | 1,371,732 | 345,416,319 | 2.23 | 0.09 |
| 2012 | 3,074 | 3,108 | 1,301,147 | 328,896,753 | 2.36 | 0.09 |
| 2013 | 3,299 | 3,318 | 1,446,998 | 348,038,697 | 2.28 | 0.09 |
| 2014 | 4,915 | 4,942 | 2,365,431 | 504,115,840 | 2.08 | 0.10 |
| 2015 | 7,991 | 8,027 | 3,515,853 | 801,027,923 | 2.27 | 0.10 |
| 2016 | 12,555 | 12,633 | 5,256,928 | 1,175,355,281 | 2.39 | 0.11 |
| 2017 | 15,496 | 15,589 | 5,940,755 | 1,529,442,430 | 2.61 | 0.10 |
| 2018 | 15,509 | 15,629 | 5,375,768 | 1,430,580,233 | 2.88 | 0.11 |
| 2019 | 4,825 | 4,871 | 1,437,856 | 369,867,848 | 3.36 | 0.13 |
| 2020 | 4,187 | 4,230 | 1,409,238 | 366,281,799 | 2.97 | 0.11 |
| 2021 | 4,869 | 4,894 | 1,246,829 | 322,687,964 | 3.91 | 0.15 |
| 2022 | 362 | 362 | 435,748 | 26,353,537 | 0.83 | 0.14 |
| Beta Blockers (P | ost-Index Enrollr | ment Requirement) | | | | |
| 2008 | 1,956 | 1,967 | 1,094,011 | 217,614,382 | 1.79 | 0.09 |
| 2009 | 2,484 | 2,500 | 1,106,451 | 281,124,638 | 2.25 | 0.09 |
| 2010 | 2,358 | 2,375 | 1,048,328 | 269,191,795 | 2.25 | 0.09 |
| 2011 | 2,336 | 2,348 | 993,651 | 256,262,438 | 2.35 | 0.09 |
| 2012 | 2,423 | 2,453 | 1,026,641 | 253,079,681 | 2.36 | 0.10 |
| 2013 | 2,509 | 2,524 | 1,067,155 | 259,789,625 | 2.35 | 0.10 |
| 2014 | 3,828 | 3,851 | 1,800,881 | 391,367,777 | 2.13 | 0.10 |
| 2015 | 5,929 | 5,957 | 2,448,522 | 568,031,152 | 2.42 | 0.10 |
| 2016 | 10,220 | 10,280 | 4,275,992 | 940,413,063 | 2.39 | 0.11 |
| 2017 | 11,693 | 11,773 | 4,264,115 | 1,107,895,397 | 2.74 | 0.11 |
| 2018 | 3,639 | 3,665 | 1,104,285 | 289,390,467 | 3.30 | 0.13 |
| 2019 | 3,755 | 3,788 | 1,089,422 | 287,640,437 | 3.45 | 0.13 |
| 2020 | 2,888 | 2,920 | 1,133,668 | 258,814,515 | 2.55 | 0.11 |
| 2021 | 369 | 369 | 467,085 | 25,829,188 | 0.79 | 0.14 |
| 2022 | 0 | 0 | 0 | 0 | NaN | NaN |

Table 3o. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Age Group: 13-17 years Sex: Female)



Table 3p. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Any Metoprolol)

| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|-------------------|--------------------|-----------------|----------------------------------|---------------------------------------|---|---|
| Beta Blockers | | | | | | |
| 2008 | 703 | 706 | N/A | N/A | N/A | N/A |
| 2009 | 764 | 767 | N/A | N/A | N/A | N/A |
| 2010 | 749 | 753 | N/A | N/A | N/A | N/A |
| 2011 | 679 | 683 | N/A | N/A | N/A | N/A |
| 2012 | 648 | 650 | N/A | N/A | N/A | N/A |
| 2013 | 653 | 660 | N/A | N/A | N/A | N/A |
| 2014 | 977 | 979 | N/A | N/A | N/A | N/A |
| 2015 | 1,631 | 1,640 | N/A | N/A | N/A | N/A |
| 2016 | 2,451 | 2,460 | N/A | N/A | N/A | N/A |
| 2017 | 3,435 | 3,443 | N/A | N/A | N/A | N/A |
| 2018 | 3,258 | 3,270 | N/A | N/A | N/A | N/A |
| 2019 | 794 | 796 | N/A | N/A | N/A | N/A |
| 2020 | 663 | 666 | N/A | N/A | N/A | N/A |
| 2021 | 637 | 638 | N/A | N/A | N/A | N/A |
| 2022 | 63 | 63 | N/A | N/A | N/A | N/A |
| Beta Blockers (Po | ost-Index Enrollme | nt Requirement) | | | | |
| 2008 | 536 | 539 | N/A | N/A | N/A | N/A |
| 2009 | 578 | 580 | N/A | N/A | N/A | N/A |
| 2010 | 566 | 568 | N/A | N/A | N/A | N/A |
| 2011 | 520 | 524 | N/A | N/A | N/A | N/A |
| 2012 | 494 | 496 | N/A | N/A | N/A | N/A |
| 2013 | 486 | 491 | N/A | N/A | N/A | N/A |
| 2014 | 767 | 768 | N/A | N/A | N/A | N/A |
| 2015 | 1,220 | 1,227 | N/A | N/A | N/A | N/A |
| 2016 | 1,978 | 1,984 | N/A | N/A | N/A | N/A |
| 2017 | 2,614 | 2,618 | N/A | N/A | N/A | N/A |
| 2018 | 649 | 653 | N/A | N/A | N/A | N/A |
| 2019 | 608 | 609 | N/A | N/A | N/A | N/A |
| 2020 | 418 | 419 | N/A | N/A | N/A | N/A |
| 2021 | 64 | 64 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|-------------------|--------------------|------------------|-------------------------------|---------------------------------------|---|--|
| Beta Blockers | | | | | | |
| 2008 | 442 | 442 | N/A | N/A | N/A | N/A |
| 2009 | 386 | 387 | N/A | N/A | N/A | N/A |
| 2010 | 391 | 392 | N/A | N/A | N/A | N/A |
| 2011 | 355 | 356 | N/A | N/A | N/A | N/A |
| 2012 | 357 | 357 | N/A | N/A | N/A | N/A |
| 2013 | 372 | 377 | N/A | N/A | N/A | N/A |
| 2014 | 544 | 545 | N/A | N/A | N/A | N/A |
| 2015 | 887 | 891 | N/A | N/A | N/A | N/A |
| 2016 | 1,295 | 1,297 | N/A | N/A | N/A | N/A |
| 2017 | 1,941 | 1,945 | N/A | N/A | N/A | N/A |
| 2018 | 1,891 | 1,894 | N/A | N/A | N/A | N/A |
| 2019 | 477 | 478 | N/A | N/A | N/A | N/A |
| 2020 | 413 | 414 | N/A | N/A | N/A | N/A |
| 2021 | 441 | 442 | N/A | N/A | N/A | N/A |
| 2022 | 42 | 42 | N/A | N/A | N/A | N/A |
| Beta Blockers (Po | ost-Index Enrollme | ent Requirement) | | | | |
| 2008 | 334 | 334 | N/A | N/A | N/A | N/A |
| 2009 | 296 | 297 | N/A | N/A | N/A | N/A |
| 2010 | 290 | 290 | N/A | N/A | N/A | N/A |
| 2011 | 253 | 254 | N/A | N/A | N/A | N/A |
| 2012 | 264 | 264 | N/A | N/A | N/A | N/A |
| 2013 | 267 | 270 | N/A | N/A | N/A | N/A |
| 2014 | 416 | 416 | N/A | N/A | N/A | N/A |
| 2015 | 671 | 674 | N/A | N/A | N/A | N/A |
| 2016 | 1,053 | 1,054 | N/A | N/A | N/A | N/A |
| 2017 | 1,468 | 1,471 | N/A | N/A | N/A | N/A |
| 2018 | 371 | 371 | N/A | N/A | N/A | N/A |
| 2019 | 354 | 355 | N/A | N/A | N/A | N/A |
| 2020 | 292 | 293 | N/A | N/A | N/A | N/A |
| 2021 | 40 | 40 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

Table 3q. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Metoprolol (Extended Release))



Table 3r. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Metoprolol (Regular))

| | | | Eligible | Eligible Member- | New Users per 1000 | Incidence Rate per 10,000 |
|-------------------|-------------------|-------------------|----------------------|-------------------|-------------------------------|------------------------------------|
| _ | New Users | New Episodes | Members ¹ | Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| Beta Blockers | | | | | | |
| 2008 | 272 | 275 | N/A | N/A | N/A | N/A |
| 2009 | 383 | 383 | N/A | N/A | N/A | N/A |
| 2010 | 359 | 362 | N/A | N/A | N/A | N/A |
| 2011 | 324 | 327 | N/A | N/A | N/A | N/A |
| 2012 | 291 | 293 | N/A | N/A | N/A | N/A |
| 2013 | 285 | 286 | N/A | N/A | N/A | N/A |
| 2014 | 434 | 435 | N/A | N/A | N/A | N/A |
| 2015 | 751 | 755 | N/A | N/A | N/A | N/A |
| 2016 | 1,164 | 1,170 | N/A | N/A | N/A | N/A |
| 2017 | 1,502 | 1,506 | N/A | N/A | N/A | N/A |
| 2018 | 1,371 | 1,379 | N/A | N/A | N/A | N/A |
| 2019 | 317 | 318 | N/A | N/A | N/A | N/A |
| 2020 | 252 | 254 | N/A | N/A | N/A | N/A |
| 2021 | 198 | 198 | N/A | N/A | N/A | N/A |
| 2022 | 21 | 21 | N/A | N/A | N/A | N/A |
| Beta Blockers (Po | ost-Index Enrollm | nent Requirement) | | | | |
| 2008 | 210 | 213 | N/A | N/A | N/A | N/A |
| 2009 | 286 | 286 | N/A | N/A | N/A | N/A |
| 2010 | 277 | 279 | N/A | N/A | N/A | N/A |
| 2011 | 267 | 270 | N/A | N/A | N/A | N/A |
| 2012 | 230 | 232 | N/A | N/A | N/A | N/A |
| 2013 | 223 | 224 | N/A | N/A | N/A | N/A |
| 2014 | 351 | 352 | N/A | N/A | N/A | N/A |
| 2015 | 556 | 559 | N/A | N/A | N/A | N/A |
| 2016 | 933 | 937 | N/A | N/A | N/A | N/A |
| 2017 | 1,153 | 1,154 | N/A | N/A | N/A | N/A |
| 2018 | 279 | 283 | N/A | N/A | N/A | N/A |
| 2019 | 254 | 254 | N/A | N/A | N/A | N/A |
| 2020 | 127 | 127 | N/A | N/A | N/A | N/A |
| 2021 | 24 | 24 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|-------------------|------------------|------------------|----------------------------------|---------------------------------------|---|---|
| Beta Blockers | New 03er3 | New Lpisodes | Weinbers | Days | Ligible Members | |
| 2008 | 3,417 | 3,434 | N/A | N/A | N/A | N/A |
| 2009 | 4,422 | 4,441 | N/A | N/A | N/A | N/A |
| 2010 | 4,415 | 4,444 | N/A | N/A | N/A | N/A |
| 2011 | 4,492 | 4,506 | N/A | N/A | N/A | N/A |
| 2012 | 4,588 | 4,620 | N/A | N/A | N/A | N/A |
| 2013 | 4,995 | 5,023 | N/A | N/A | N/A | N/A |
| 2014 | 8,337 | 8,376 | N/A | N/A | N/A | N/A |
| 2015 | 14,000 | 14,060 | N/A | N/A | N/A | N/A |
| 2016 | 21,639 | 21,739 | N/A | N/A | N/A | N/A |
| 2017 | 27,021 | 27,173 | N/A | N/A | N/A | N/A |
| 2018 | 26,666 | 26,815 | N/A | N/A | N/A | N/A |
| 2019 | 7,632 | 7,688 | N/A | N/A | N/A | N/A |
| 2020 | 6,793 | 6,840 | N/A | N/A | N/A | N/A |
| 2021 | 7,600 | 7,639 | N/A | N/A | N/A | N/A |
| 2022 | 540 | 540 | N/A | N/A | N/A | N/A |
| Beta Blockers (Po | st-Index Enrollm | ent Requirement) | | | | |
| 2008 | 2,620 | 2,635 | N/A | N/A | N/A | N/A |
| 2009 | 3,273 | 3,290 | N/A | N/A | N/A | N/A |
| 2010 | 3,357 | 3,381 | N/A | N/A | N/A | N/A |
| 2011 | 3,384 | 3,392 | N/A | N/A | N/A | N/A |
| 2012 | 3,564 | 3,590 | N/A | N/A | N/A | N/A |
| 2013 | 3,742 | 3,766 | N/A | N/A | N/A | N/A |
| 2014 | 6,543 | 6,577 | N/A | N/A | N/A | N/A |
| 2015 | 10,548 | 10,592 | N/A | N/A | N/A | N/A |
| 2016 | 17,804 | 17,888 | N/A | N/A | N/A | N/A |
| 2017 | 20,645 | 20,776 | N/A | N/A | N/A | N/A |
| 2018 | 5,457 | 5,481 | N/A | N/A | N/A | N/A |
| 2019 | 5,839 | 5,877 | N/A | N/A | N/A | N/A |
| 2020 | 4,666 | 4,699 | N/A | N/A | N/A | N/A |
| 2021 | 574 | 574 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

Table 3s. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Any Propranolol)



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|------------------|-------------------|------------------|----------------------------------|---------------------------------------|---------------------------------------|---|
| Beta Blockers | | | | | | |
| 2008 | 649 | 651 | N/A | N/A | N/A | N/A |
| 2009 | 882 | 882 | N/A | N/A | N/A | N/A |
| 2010 | 850 | 851 | N/A | N/A | N/A | N/A |
| 2011 | 825 | 826 | N/A | N/A | N/A | N/A |
| 2012 | 776 | 777 | N/A | N/A | N/A | N/A |
| 2013 | 809 | 812 | N/A | N/A | N/A | N/A |
| 2014 | 1,078 | 1,085 | N/A | N/A | N/A | N/A |
| 2015 | 1,517 | 1,521 | N/A | N/A | N/A | N/A |
| 2016 | 2,282 | 2,290 | N/A | N/A | N/A | N/A |
| 2017 | 2,612 | 2,626 | N/A | N/A | N/A | N/A |
| 2018 | 2,284 | 2,289 | N/A | N/A | N/A | N/A |
| 2019 | 616 | 619 | N/A | N/A | N/A | N/A |
| 2020 | 488 | 489 | N/A | N/A | N/A | N/A |
| 2021 | 503 | 506 | N/A | N/A | N/A | N/A |
| 2022 | 57 | 57 | N/A | N/A | N/A | N/A |
| eta Blockers (Po | st-Index Enrollme | ent Requirement) | | | | |
| 2008 | 490 | 492 | N/A | N/A | N/A | N/A |
| 2009 | 639 | 639 | N/A | N/A | N/A | N/A |
| 2010 | 647 | 647 | N/A | N/A | N/A | N/A |
| 2011 | 622 | 623 | N/A | N/A | N/A | N/A |
| 2012 | 603 | 604 | N/A | N/A | N/A | N/A |
| 2013 | 613 | 616 | N/A | N/A | N/A | N/A |
| 2014 | 814 | 819 | N/A | N/A | N/A | N/A |
| 2015 | 1,214 | 1,217 | N/A | N/A | N/A | N/A |
| 2016 | 1,916 | 1,923 | N/A | N/A | N/A | N/A |
| 2017 | 1,919 | 1,930 | N/A | N/A | N/A | N/A |
| 2018 | 502 | 502 | N/A | N/A | N/A | N/A |
| 2019 | 461 | 463 | N/A | N/A | N/A | N/A |
| 2020 | 344 | 345 | N/A | N/A | N/A | N/A |
| 2021 | 33 | 33 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

Table 3t. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Propranolol (Extended Release))



Table 3u. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Propranolol (Regular))

| | New | New Esterate | Eligible Members ¹ | Eligible Member- | New Users per 1000 | Incidence Rate per 10,000 |
|------------------|------------------|------------------|----------------------------------|-------------------|-------------------------------|------------------------------------|
| Beta Blockers | New Users | New Episodes | Members | Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| 2008 | 2,780 | 2,792 | N/A | N/A | N/A | N/A |
| 2008 | 3,552 | | N/A | N/A N/A | N/A | N/A N/A |
| | | 3,569 | | | | |
| 2010 | 3,578 | 3,605 | N/A | N/A | N/A | N/A |
| 2011 | 3,677 | 3,690 | N/A | N/A | N/A | N/A |
| 2012 | 3,829 | 3,859 | N/A | N/A | N/A | N/A |
| 2013 | 4,200 | 4,225 | N/A | N/A | N/A | N/A |
| 2014 | 7,237 | 7,269 | N/A | N/A | N/A | N/A |
| 2015 | 12,301 | 12,355 | N/A | N/A | N/A | N/A |
| 2016 | 18,965 | 19,052 | N/A | N/A | N/A | N/A |
| 2017 | 23,942 | 24,078 | N/A | N/A | N/A | N/A |
| 2018 | 23,963 | 24,102 | N/A | N/A | N/A | N/A |
| 2019 | 6,867 | 6,917 | N/A | N/A | N/A | N/A |
| 2020 | 6,084 | 6,128 | N/A | N/A | N/A | N/A |
| 2021 | 6,868 | 6,902 | N/A | N/A | N/A | N/A |
| 2022 | 468 | 468 | N/A | N/A | N/A | N/A |
| Beta Blockers (P | ost-Index Enroll | ment Requirement | t) | | | |
| 2008 | 2,141 | 2,151 | N/A | N/A | N/A | N/A |
| 2009 | 2,644 | 2,660 | N/A | N/A | N/A | N/A |
| 2010 | 2,721 | 2,744 | N/A | N/A | N/A | N/A |
| 2011 | 2,771 | 2,778 | N/A | N/A | N/A | N/A |
| 2012 | 2,973 | 2,997 | N/A | N/A | N/A | N/A |
| 2013 | 3,141 | 3,162 | N/A | N/A | N/A | N/A |
| 2014 | 5,709 | 5,738 | N/A | N/A | N/A | N/A |
| 2015 | 9,200 | 9,239 | N/A | N/A | N/A | N/A |
| 2016 | 15,572 | 15,645 | N/A | N/A | N/A | N/A |
| 2017 | 18,405 | 18,524 | N/A | N/A | N/A | N/A |
| 2018 | 4,846 | 4,870 | N/A | N/A | N/A | N/A |
| 2019 | 5,274 | 5,307 | N/A | N/A | N/A | N/A |
| 2020 | 4,148 | 4,180 | , N/A | , N/A | , N/A | , N/A |
| 2021 | 525 | 525 | , N/A | , N/A | , N/A | , N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|----------------|-------------------|-----------------|----------------------------------|---------------------------------------|---|---|
| Beta Blockers | | | | | | |
| 2008 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2009 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2010 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2011 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2012 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2013 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2014 | 52 | 52 | N/A | N/A | N/A | N/A |
| 2015 | 235 | 235 | N/A | N/A | N/A | N/A |
| 2016 | 458 | 459 | N/A | N/A | N/A | N/A |
| 2017 | 535 | 535 | N/A | N/A | N/A | N/A |
| 2018 | 492 | 493 | N/A | N/A | N/A | N/A |
| 2019 | 174 | 174 | N/A | N/A | N/A | N/A |
| 2020 | 241 | 241 | N/A | N/A | N/A | N/A |
| 2021 | 256 | 256 | N/A | N/A | N/A | N/A |
| 2022 | 18 | 18 | N/A | N/A | N/A | N/A |
| eta Blockers (| Post-Index Enroll | ment Requirer | nent) | | | |
| 2008 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2009 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2010 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2011 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2012 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2013 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2014 | 44 | 44 | N/A | N/A | N/A | N/A |
| 2015 | 174 | 174 | N/A | N/A | N/A | N/A |
| 2016 | 364 | 365 | N/A | N/A | N/A | N/A |
| 2017 | 365 | 365 | N/A | N/A | N/A | N/A |
| 2018 | 134 | 134 | N/A | N/A | N/A | N/A |
| 2019 | 123 | 123 | N/A | N/A | N/A | N/A |
| 2020 | 185 | 185 | N/A | N/A | N/A | N/A |
| 2021 | 19 | 19 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

Table 3v. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Propranolol (Hemangeol))



Table 3w. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Acebutolol)

| | New Users | New Episodes | Eligible Members ¹ | Eligible Member-Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|-----------------|------------------|------------------|----------------------------------|--------------------------------------|---|---|
| Beta Blockers | | | | • | | |
| 2008 | **** | **** | N/A | N/A | N/A | N/A |
| 2009 | 15 | 15 | N/A | N/A | N/A | N/A |
| 2010 | **** | **** | N/A | N/A | N/A | N/A |
| 2011 | **** | **** | N/A | N/A | N/A | N/A |
| 2012 | **** | **** | N/A | N/A | N/A | N/A |
| 2013 | **** | **** | N/A | N/A | N/A | N/A |
| 2014 | 11 | 11 | N/A | N/A | N/A | N/A |
| 2015 | **** | **** | N/A | N/A | N/A | N/A |
| 2016 | * * * * * | **** | N/A | N/A | N/A | N/A |
| 2017 | * * * * * | **** | N/A | N/A | N/A | N/A |
| 2018 | **** | **** | N/A | N/A | N/A | N/A |
| 2019 | **** | **** | N/A | N/A | N/A | N/A |
| 2020 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2021 | **** | **** | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |
| Beta Blockers (| Post-Index Enrol | Iment Requiremen | it) | | | |
| 2008 | **** | **** | N/A | N/A | N/A | N/A |
| 2009 | **** | **** | N/A | N/A | N/A | N/A |
| 2010 | **** | **** | N/A | N/A | N/A | N/A |
| 2011 | **** | **** | N/A | N/A | N/A | N/A |
| 2012 | **** | **** | N/A | N/A | N/A | N/A |
| 2013 | **** | **** | N/A | N/A | N/A | N/A |
| 2014 | **** | **** | N/A | N/A | N/A | N/A |
| 2015 | **** | **** | N/A | N/A | N/A | N/A |
| 2016 | **** | **** | N/A | N/A | N/A | N/A |
| 2017 | **** | **** | N/A | N/A | N/A | N/A |
| 2018 | **** | **** | N/A | N/A | N/A | N/A |
| 2019 | **** | **** | N/A | N/A | N/A | N/A |
| 2020 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2021 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

¹Eligible Members and Member-Days are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.



| | | | Eligible | Eligible | New Users per 1000 | Incidence Rate per 10,000 |
|-------------------|-------------------|------------------|----------------------|--------------------------|-------------------------------|------------------------------------|
| | New Users | New Episodes | Members ¹ | Member-Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| Beta Blockers | | | | | | |
| 2008 | 1,261 | 1,266 | N/A | N/A | N/A | N/A |
| 2009 | 1,665 | 1,680 | N/A | N/A | N/A | N/A |
| 2010 | 1,481 | 1,488 | N/A | N/A | N/A | N/A |
| 2011 | 1,346 | 1,349 | N/A | N/A | N/A | N/A |
| 2012 | 1,225 | 1,236 | N/A | N/A | N/A | N/A |
| 2013 | 1,328 | 1,330 | N/A | N/A | N/A | N/A |
| 2014 | 1,855 | 1,863 | N/A | N/A | N/A | N/A |
| 2015 | 3,142 | 3,151 | N/A | N/A | N/A | N/A |
| 2016 | 4,815 | 4,841 | N/A | N/A | N/A | N/A |
| 2017 | 4,960 | 4,989 | N/A | N/A | N/A | N/A |
| 2018 | 4,418 | 4,443 | N/A | N/A | N/A | N/A |
| 2019 | 1,117 | 1,120 | N/A | N/A | N/A | N/A |
| 2020 | 920 | 924 | N/A | N/A | N/A | N/A |
| 2021 | 885 | 889 | N/A | N/A | N/A | N/A |
| 2022 | 91 | 91 | N/A | N/A | N/A | N/A |
| Beta Blockers (Po | ost-Index Enrollm | ent Requirement) | | | | |
| 2008 | 970 | 973 | N/A | N/A | N/A | N/A |
| 2009 | 1,252 | 1,263 | N/A | N/A | N/A | N/A |
| 2010 | 1,096 | 1,100 | N/A | N/A | N/A | N/A |
| 2011 | 1,016 | 1,018 | N/A | N/A | N/A | N/A |
| 2012 | 974 | 985 | N/A | N/A | N/A | N/A |
| 2013 | 1,021 | 1,022 | N/A | N/A | N/A | N/A |
| 2014 | 1,509 | 1,516 | N/A | N/A | N/A | N/A |
| 2015 | 2,404 | 2,410 | N/A | N/A | N/A | N/A |
| 2016 | 4,028 | 4,049 | N/A | N/A | N/A | N/A |
| 2017 | 3,704 | 3,724 | N/A | N/A | N/A | N/A |
| 2018 | 893 | 898 | N/A | N/A | N/A | N/A |
| 2019 | 891 | 894 | N/A | N/A | N/A | N/A |
| 2020 | 587 | 590 | N/A | N/A | N/A | N/A |
| 2021 | 78 | 78 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

Table 3x. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Atenolol)



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|--------------------|-------------------|-----------------|----------------------------------|---------------------------------------|---|---|
| Beta Blockers | | | | | | |
| 2008 | **** | **** | N/A | N/A | N/A | N/A |
| 2009 | **** | **** | N/A | N/A | N/A | N/A |
| 2010 | 17 | 17 | N/A | N/A | N/A | N/A |
| 2011 | **** | **** | N/A | N/A | N/A | N/A |
| 2012 | 12 | 12 | N/A | N/A | N/A | N/A |
| 2013 | **** | **** | N/A | N/A | N/A | N/A |
| 2014 | 20 | 20 | N/A | N/A | N/A | N/A |
| 2015 | 17 | 17 | N/A | N/A | N/A | N/A |
| 2016 | 19 | 19 | N/A | N/A | N/A | N/A |
| 2017 | 20 | 20 | N/A | N/A | N/A | N/A |
| 2018 | 18 | 18 | N/A | N/A | N/A | N/A |
| 2019 | **** | **** | N/A | N/A | N/A | N/A |
| 2020 | **** | **** | N/A | N/A | N/A | N/A |
| 2021 | **** | **** | N/A | N/A | N/A | N/A |
| 2022 | **** | **** | N/A | N/A | N/A | N/A |
| Beta Blockers (Pos | st-Index Enrollme | nt Requirement) | | | | |
| 2008 | **** | **** | N/A | N/A | N/A | N/A |
| 2009 | **** | **** | N/A | N/A | N/A | N/A |
| 2010 | 13 | 13 | N/A | N/A | N/A | N/A |
| 2011 | **** | **** | N/A | N/A | N/A | N/A |
| 2012 | **** | **** | N/A | N/A | N/A | N/A |
| 2013 | **** | **** | N/A | N/A | N/A | N/A |
| 2014 | 18 | 18 | N/A | N/A | N/A | N/A |
| 2015 | **** | **** | N/A | N/A | N/A | N/A |
| 2016 | 14 | 14 | N/A | N/A | N/A | N/A |
| 2017 | 18 | 18 | N/A | N/A | N/A | N/A |
| 2018 | **** | **** | N/A | N/A | N/A | N/A |
| 2019 | **** | **** | N/A | N/A | N/A | N/A |
| 2020 | **** | **** | N/A | N/A | N/A | N/A |
| 2021 | **** | **** | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

Table 3y. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Betaxolol)

¹Eligible Members and Member-Days are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.



| | | | Eligible | Eligible | New Users per 1000 | Incidence Rate per 10,000 |
|------------------|------------------|-------------------|----------------------|--------------------------|-------------------------------|------------------------------------|
| _ | New Users | New Episodes | Members ¹ | Member-Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| Beta Blockers | | | | | | |
| 2008 | 30 | 30 | N/A | N/A | N/A | N/A |
| 2009 | 46 | 46 | N/A | N/A | N/A | N/A |
| 2010 | 34 | 34 | N/A | N/A | N/A | N/A |
| 2011 | 28 | 28 | N/A | N/A | N/A | N/A |
| 2012 | 29 | 29 | N/A | N/A | N/A | N/A |
| 2013 | 21 | 21 | N/A | N/A | N/A | N/A |
| 2014 | 25 | 25 | N/A | N/A | N/A | N/A |
| 2015 | 55 | 55 | N/A | N/A | N/A | N/A |
| 2016 | 63 | 64 | N/A | N/A | N/A | N/A |
| 2017 | 90 | 90 | N/A | N/A | N/A | N/A |
| 2018 | 87 | 87 | N/A | N/A | N/A | N/A |
| 2019 | 19 | 19 | N/A | N/A | N/A | N/A |
| 2020 | **** | **** | N/A | N/A | N/A | N/A |
| 2021 | 35 | 35 | N/A | N/A | N/A | N/A |
| 2022 | **** | **** | N/A | N/A | N/A | N/A |
| Beta Blockers (P | ost-Index Enroll | ment Requirement) | | | | |
| 2008 | 25 | 25 | N/A | N/A | N/A | N/A |
| 2009 | 33 | 33 | N/A | N/A | N/A | N/A |
| 2010 | 30 | 30 | N/A | N/A | N/A | N/A |
| 2011 | 20 | 20 | N/A | N/A | N/A | N/A |
| 2012 | 23 | 23 | N/A | N/A | N/A | N/A |
| 2013 | 17 | 17 | N/A | N/A | N/A | N/A |
| 2014 | 23 | 23 | N/A | N/A | N/A | N/A |
| 2015 | 41 | 41 | N/A | N/A | N/A | N/A |
| 2016 | 48 | 49 | N/A | N/A | N/A | N/A |
| 2017 | 75 | 75 | N/A | N/A | N/A | N/A |
| 2018 | 21 | 21 | N/A | N/A | N/A | N/A |
| 2019 | 16 | 16 | N/A | N/A | N/A | N/A |
| 2020 | **** | **** | N/A | N/A | N/A | N/A |
| 2021 | **** | **** | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

Table 3z. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Bisoprolol)

¹Eligible Members and Member-Days are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.



| | | | Eligible | Eligible Member- | New Users per 1000 | Incidence Rate per 10,000 |
|-------------------|-------------------|------------------|----------------------|-------------------|-------------------------------|------------------------------------|
| | New Users | New Episodes | Members ¹ | Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| Beta Blockers | | | | | | |
| 2008 | 102 | 102 | N/A | N/A | N/A | N/A |
| 2009 | 122 | 122 | N/A | N/A | N/A | N/A |
| 2010 | 114 | 115 | N/A | N/A | N/A | N/A |
| 2011 | 112 | 112 | N/A | N/A | N/A | N/A |
| 2012 | 128 | 129 | N/A | N/A | N/A | N/A |
| 2013 | 132 | 133 | N/A | N/A | N/A | N/A |
| 2014 | 199 | 199 | N/A | N/A | N/A | N/A |
| 2015 | 388 | 389 | N/A | N/A | N/A | N/A |
| 2016 | 673 | 680 | N/A | N/A | N/A | N/A |
| 2017 | 922 | 927 | N/A | N/A | N/A | N/A |
| 2018 | 801 | 802 | N/A | N/A | N/A | N/A |
| 2019 | 124 | 124 | N/A | N/A | N/A | N/A |
| 2020 | 108 | 110 | N/A | N/A | N/A | N/A |
| 2021 | **** | **** | N/A | N/A | N/A | N/A |
| 2022 | **** | **** | N/A | N/A | N/A | N/A |
| Beta Blockers (Po | ost-Index Enrollm | ent Requirement) | | | | |
| 2008 | 78 | 78 | N/A | N/A | N/A | N/A |
| 2009 | 84 | 84 | N/A | N/A | N/A | N/A |
| 2010 | 81 | 82 | N/A | N/A | N/A | N/A |
| 2011 | 92 | 92 | N/A | N/A | N/A | N/A |
| 2012 | 95 | 95 | N/A | N/A | N/A | N/A |
| 2013 | 90 | 91 | N/A | N/A | N/A | N/A |
| 2014 | 164 | 164 | N/A | N/A | N/A | N/A |
| 2015 | 271 | 271 | N/A | N/A | N/A | N/A |
| 2016 | 547 | 552 | N/A | N/A | N/A | N/A |
| 2017 | 650 | 655 | N/A | N/A | N/A | N/A |
| 2018 | 88 | 88 | N/A | N/A | N/A | N/A |
| 2019 | 100 | 100 | N/A | N/A | N/A | N/A |
| 2020 | **** | **** | N/A | N/A | N/A | N/A |
| 2021 | **** | **** | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

Table 3aa. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Carvedilol)

¹Eligible Members and Member-Days are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|------------------|------------------|-------------------|----------------------------------|---------------------------------------|---|---|
| Beta Blockers | | | | 2010 | | |
| 2008 | 149 | 149 | N/A | N/A | N/A | N/A |
| 2009 | 196 | 196 | N/A | N/A | N/A | N/A |
| 2010 | 192 | 192 | N/A | N/A | N/A | N/A |
| 2011 | 157 | 157 | N/A | N/A | N/A | N/A |
| 2012 | 145 | 145 | N/A | N/A | N/A | N/A |
| 2013 | 126 | 126 | N/A | N/A | N/A | N/A |
| 2014 | 278 | 278 | N/A | N/A | N/A | N/A |
| 2015 | 578 | 580 | N/A | N/A | N/A | N/A |
| 2016 | 859 | 862 | N/A | N/A | N/A | N/A |
| 2017 | 1,072 | 1,075 | N/A | N/A | N/A | N/A |
| 2018 | 904 | 909 | N/A | N/A | N/A | N/A |
| 2019 | 108 | 108 | N/A | N/A | N/A | N/A |
| 2020 | 139 | 141 | N/A | N/A | N/A | N/A |
| 2021 | **** | **** | N/A | N/A | N/A | N/A |
| 2022 | **** | **** | N/A | N/A | N/A | N/A |
| Beta Blockers (P | ost-Index Enroll | ment Requirement) | | | | |
| 2008 | 108 | 108 | N/A | N/A | N/A | N/A |
| 2009 | 146 | 146 | N/A | N/A | N/A | N/A |
| 2010 | 132 | 132 | N/A | N/A | N/A | N/A |
| 2011 | 116 | 116 | N/A | N/A | N/A | N/A |
| 2012 | 106 | 106 | N/A | N/A | N/A | N/A |
| 2013 | 94 | 94 | N/A | N/A | N/A | N/A |
| 2014 | 210 | 210 | N/A | N/A | N/A | N/A |
| 2015 | 393 | 395 | N/A | N/A | N/A | N/A |
| 2016 | 671 | 674 | N/A | N/A | N/A | N/A |
| 2017 | 731 | 734 | N/A | N/A | N/A | N/A |
| 2018 | 75 | 75 | N/A | N/A | N/A | N/A |
| 2019 | 89 | 89 | N/A | N/A | N/A | N/A |
| 2020 | **** | **** | N/A | N/A | N/A | N/A |
| 2021 | **** | **** | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

Table 3ab. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Labetalol)

¹Eligible Members and Member-Days are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|-----------------|-----------------|-------------------|----------------------------------|---------------------------------------|---|---|
| eta Blockers | | | | | | |
| 2008 | 270 | 270 | N/A | N/A | N/A | N/A |
| 2009 | 398 | 398 | N/A | N/A | N/A | N/A |
| 2010 | 364 | 365 | N/A | N/A | N/A | N/A |
| 2011 | 348 | 350 | N/A | N/A | N/A | N/A |
| 2012 | 346 | 349 | N/A | N/A | N/A | N/A |
| 2013 | 391 | 396 | N/A | N/A | N/A | N/A |
| 2014 | 423 | 424 | N/A | N/A | N/A | N/A |
| 2015 | 551 | 551 | N/A | N/A | N/A | N/A |
| 2016 | 750 | 757 | N/A | N/A | N/A | N/A |
| 2017 | 926 | 932 | N/A | N/A | N/A | N/A |
| 2018 | 868 | 876 | N/A | N/A | N/A | N/A |
| 2019 | 254 | 256 | N/A | N/A | N/A | N/A |
| 2020 | 210 | 212 | N/A | N/A | N/A | N/A |
| 2021 | **** | **** | N/A | N/A | N/A | N/A |
| 2022 | **** | **** | N/A | N/A | N/A | N/A |
| eta Blockers (I | Post-Index Enro | ollment Requireme | nt) | | | |
| 2008 | 208 | 208 | N/A | N/A | N/A | N/A |
| 2009 | 314 | 314 | N/A | N/A | N/A | N/A |
| 2010 | 268 | 268 | N/A | N/A | N/A | N/A |
| 2011 | 256 | 258 | N/A | N/A | N/A | N/A |
| 2012 | 269 | 272 | N/A | N/A | N/A | N/A |
| 2013 | 299 | 304 | N/A | N/A | N/A | N/A |
| 2014 | 337 | 338 | N/A | N/A | N/A | N/A |
| 2015 | 435 | 435 | N/A | N/A | N/A | N/A |
| 2016 | 623 | 627 | N/A | N/A | N/A | N/A |
| 2017 | 678 | 682 | N/A | N/A | N/A | N/A |
| 2018 | 213 | 216 | N/A | N/A | N/A | N/A |
| 2019 | 187 | 189 | N/A | N/A | N/A | N/A |
| 2020 | 148 | 150 | N/A | N/A | N/A | N/A |
| 2021 | 12 | 12 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

Table 3ac. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Nadolol)

¹Eligible Members and Member-Days are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|------------------|-----------------|-----------------|----------------------------------|---------------------------------------|---|---|
| Beta Blockers | | | | | | |
| 2008 | **** | **** | N/A | N/A | N/A | N/A |
| 2009 | 43 | 43 | N/A | N/A | N/A | N/A |
| 2010 | 46 | 46 | N/A | N/A | N/A | N/A |
| 2011 | 35 | 35 | N/A | N/A | N/A | N/A |
| 2012 | 44 | 44 | N/A | N/A | N/A | N/A |
| 2013 | 47 | 47 | N/A | N/A | N/A | N/A |
| 2014 | 57 | 57 | N/A | N/A | N/A | N/A |
| 2015 | 38 | 39 | N/A | N/A | N/A | N/A |
| 2016 | 54 | 55 | N/A | N/A | N/A | N/A |
| 2017 | 77 | 77 | N/A | N/A | N/A | N/A |
| 2018 | 42 | 42 | N/A | N/A | N/A | N/A |
| 2019 | 24 | 24 | N/A | N/A | N/A | N/A |
| 2020 | 20 | 21 | N/A | N/A | N/A | N/A |
| 2021 | **** | **** | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |
| Beta Blockers (P | ost-Index Enrol | lment Requireme | nt) | | | |
| 2008 | 13 | 13 | N/A | N/A | N/A | N/A |
| 2009 | 30 | 30 | N/A | N/A | N/A | N/A |
| 2010 | 34 | 34 | N/A | N/A | N/A | N/A |
| 2011 | 24 | 24 | N/A | N/A | N/A | N/A |
| 2012 | 34 | 34 | N/A | N/A | N/A | N/A |
| 2013 | 28 | 28 | N/A | N/A | N/A | N/A |
| 2014 | 42 | 42 | N/A | N/A | N/A | N/A |
| 2015 | 30 | 31 | N/A | N/A | N/A | N/A |
| 2016 | 41 | 42 | N/A | N/A | N/A | N/A |
| 2017 | 62 | 62 | N/A | N/A | N/A | N/A |
| 2018 | 26 | 26 | N/A | N/A | N/A | N/A |
| 2019 | 18 | 18 | N/A | N/A | N/A | N/A |
| 2020 | 13 | 13 | N/A | N/A | N/A | N/A |
| 2021 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

Table 3ad. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Nebivolol)

¹Eligible Members and Member-Days are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|-----------------|----------------|-------------------|----------------------------------|---------------------------------------|---|---|
| Beta Blockers | | | | • | 0 | , |
| 2008 | **** | **** | N/A | N/A | N/A | N/A |
| 2009 | 13 | 13 | N/A | N/A | N/A | N/A |
| 2010 | 11 | 11 | N/A | N/A | N/A | N/A |
| 2011 | 12 | 12 | N/A | N/A | N/A | N/A |
| 2012 | 22 | 22 | N/A | N/A | N/A | N/A |
| 2013 | 16 | 16 | N/A | N/A | N/A | N/A |
| 2014 | 14 | 14 | N/A | N/A | N/A | N/A |
| 2015 | 39 | 39 | N/A | N/A | N/A | N/A |
| 2016 | 30 | 30 | N/A | N/A | N/A | N/A |
| 2017 | 28 | 28 | N/A | N/A | N/A | N/A |
| 2018 | 51 | 51 | N/A | N/A | N/A | N/A |
| 2019 | 17 | 17 | N/A | N/A | N/A | N/A |
| 2020 | **** | **** | N/A | N/A | N/A | N/A |
| 2021 | **** | **** | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |
| eta Blockers (P | ost-Index Enro | llment Requiremer | nt) | | | |
| 2008 | **** | **** | N/A | N/A | N/A | N/A |
| 2009 | 11 | 11 | N/A | N/A | N/A | N/A |
| 2010 | **** | **** | N/A | N/A | N/A | N/A |
| 2011 | 11 | 11 | N/A | N/A | N/A | N/A |
| 2012 | 17 | 17 | N/A | N/A | N/A | N/A |
| 2013 | **** | **** | N/A | N/A | N/A | N/A |
| 2014 | 13 | 13 | N/A | N/A | N/A | N/A |
| 2015 | 30 | 30 | N/A | N/A | N/A | N/A |
| 2016 | 29 | 29 | N/A | N/A | N/A | N/A |
| 2017 | 23 | 23 | N/A | N/A | N/A | N/A |
| 2018 | 17 | 17 | N/A | N/A | N/A | N/A |
| 2019 | 15 | 15 | N/A | N/A | N/A | N/A |
| 2020 | **** | **** | N/A | N/A | N/A | N/A |
| 2021 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

Table 3ae. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Pindolol)

¹Eligible Members and Member-Days are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.



Table 3af. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Sotalol)

| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|-----------------|------------------|--------------------|----------------------------------|---------------------------------------|---|---|
| Beta Blockers | | • | | | | |
| 2008 | 29 | 30 | N/A | N/A | N/A | N/A |
| 2009 | 26 | 26 | N/A | N/A | N/A | N/A |
| 2010 | **** | **** | N/A | N/A | N/A | N/A |
| 2011 | 36 | 36 | N/A | N/A | N/A | N/A |
| 2012 | 20 | 20 | N/A | N/A | N/A | N/A |
| 2013 | 26 | 26 | N/A | N/A | N/A | N/A |
| 2014 | 46 | 46 | N/A | N/A | N/A | N/A |
| 2015 | 117 | 117 | N/A | N/A | N/A | N/A |
| 2016 | 193 | 193 | N/A | N/A | N/A | N/A |
| 2017 | 210 | 210 | N/A | N/A | N/A | N/A |
| 2018 | 213 | 214 | N/A | N/A | N/A | N/A |
| 2019 | 27 | 28 | N/A | N/A | N/A | N/A |
| 2020 | 43 | 43 | N/A | N/A | N/A | N/A |
| 2021 | 39 | 39 | N/A | N/A | N/A | N/A |
| 2022 | **** | **** | N/A | N/A | N/A | N/A |
| Beta Blockers (| Post-Index Enrol | llment Requirement | :) | | | |
| 2008 | 18 | 19 | N/A | N/A | N/A | N/A |
| 2009 | 20 | 20 | N/A | N/A | N/A | N/A |
| 2010 | 12 | 12 | N/A | N/A | N/A | N/A |
| 2011 | 29 | 29 | N/A | N/A | N/A | N/A |
| 2012 | 17 | 17 | N/A | N/A | N/A | N/A |
| 2013 | 19 | 19 | N/A | N/A | N/A | N/A |
| 2014 | 37 | 37 | N/A | N/A | N/A | N/A |
| 2015 | 91 | 91 | N/A | N/A | N/A | N/A |
| 2016 | 150 | 150 | N/A | N/A | N/A | N/A |
| 2017 | 157 | 157 | N/A | N/A | N/A | N/A |
| 2018 | 24 | 24 | N/A | N/A | N/A | N/A |
| 2019 | 25 | 26 | N/A | N/A | N/A | N/A |
| 2020 | 26 | 26 | N/A | N/A | N/A | N/A |
| 2021 | **** | **** | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

¹Eligible Members and Member-Days are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.



Table 3ag. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Timolol)

| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|---------------|-----------------|-------------------|----------------------------------|---------------------------------------|---|---|
| Beta Blockers | | | | .,. | 0.00 | |
| 2008 | **** | **** | N/A | N/A | N/A | N/A |
| 2009 | **** | **** | N/A | N/A | N/A | N/A |
| 2010 | **** | **** | N/A | N/A | N/A | N/A |
| 2011 | **** | **** | N/A | N/A | N/A | N/A |
| 2012 | **** | **** | N/A | N/A | N/A | N/A |
| 2013 | **** | **** | N/A | N/A | N/A | N/A |
| 2014 | **** | **** | N/A | N/A | N/A | N/A |
| 2015 | **** | **** | N/A | N/A | N/A | N/A |
| 2016 | **** | **** | N/A | N/A | N/A | N/A |
| 2017 | **** | **** | N/A | N/A | N/A | N/A |
| 2018 | **** | **** | N/A | N/A | N/A | N/A |
| 2019 | **** | **** | N/A | N/A | N/A | N/A |
| 2020 | **** | **** | N/A | N/A | N/A | N/A |
| 2021 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |
| Beta Blockers | (Post-Index Enr | ollment Requireme | ent) | | | |
| 2008 | **** | **** | N/A | N/A | N/A | N/A |
| 2009 | **** | **** | N/A | N/A | N/A | N/A |
| 2010 | **** | **** | N/A | N/A | N/A | N/A |
| 2011 | **** | **** | N/A | N/A | N/A | N/A |
| 2012 | **** | **** | N/A | N/A | N/A | N/A |
| 2013 | **** | **** | N/A | N/A | N/A | N/A |
| 2014 | **** | **** | N/A | N/A | N/A | N/A |
| 2015 | **** | **** | N/A | N/A | N/A | N/A |
| 2016 | **** | **** | N/A | N/A | N/A | N/A |
| 2017 | **** | **** | N/A | N/A | N/A | N/A |
| 2018 | **** | **** | N/A | N/A | N/A | N/A |
| 2019 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2020 | **** | **** | N/A | N/A | N/A | N/A |
| 2021 | 0 | 0 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

¹Eligible Members and Member-Days are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.



| | New Users | New Episodes | Eligible Members ¹ | Eligible Member- Days ¹ | New Users per 1000 Eligible Members ¹ | Incidence Rate per 10,000 Eligible Members Days ¹ |
|------------------|-------------------|------------------|----------------------------------|---------------------------------------|---|---|
| Beta Blockers | | | | 2473 | | |
| 2008 | 2,020 | 2,028 | N/A | N/A | N/A | N/A |
| 2009 | 2,539 | 2,559 | N/A | N/A | N/A | N/A |
| 2010 | 2,330 | 2,344 | N/A | N/A | N/A | N/A |
| 2011 | 2,097 | 2,105 | N/A | N/A | N/A | N/A |
| 2012 | 1,961 | 1,974 | N/A | N/A | N/A | N/A |
| 2013 | 2,059 | 2,068 | N/A | N/A | N/A | N/A |
| 2014 | 2,945 | 2,955 | N/A | N/A | N/A | N/A |
| 2015 | 4,889 | 4,908 | N/A | N/A | N/A | N/A |
| 2016 | 7,398 | 7,437 | N/A | N/A | N/A | N/A |
| 2017 | 8,580 | 8,619 | N/A | N/A | N/A | N/A |
| 2018 | 7,826 | 7,864 | N/A | N/A | N/A | N/A |
| 2019 | 1,963 | 1,968 | N/A | N/A | N/A | N/A |
| 2020 | 1,623 | 1,631 | N/A | N/A | N/A | N/A |
| 2021 | 1,570 | 1,576 | N/A | N/A | N/A | N/A |
| 2022 | 159 | 159 | N/A | N/A | N/A | N/A |
| eta Blockers (Po | ost-Index Enrollr | ment Requirement | :) | | | |
| 2008 | 1,553 | 1,559 | N/A | N/A | N/A | N/A |
| 2009 | 1,906 | 1,920 | N/A | N/A | N/A | N/A |
| 2010 | 1,741 | 1,749 | N/A | N/A | N/A | N/A |
| 2011 | 1,589 | 1,595 | N/A | N/A | N/A | N/A |
| 2012 | 1,535 | 1,548 | N/A | N/A | N/A | N/A |
| 2013 | 1,560 | 1,566 | N/A | N/A | N/A | N/A |
| 2014 | 2,368 | 2,376 | N/A | N/A | N/A | N/A |
| 2015 | 3,708 | 3,722 | N/A | N/A | N/A | N/A |
| 2016 | 6,104 | 6,135 | N/A | N/A | N/A | N/A |
| 2017 | 6,471 | 6,496 | N/A | N/A | N/A | N/A |
| 2018 | 1,601 | 1,610 | N/A | N/A | N/A | N/A |
| 2019 | 1,538 | 1,542 | N/A | N/A | N/A | N/A |
| 2020 | 1,032 | 1,036 | N/A | N/A | N/A | N/A |
| 2021 | 145 | 145 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |

Table 3ah. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022,by Year (Selective Beta Blockers)



Table 3ai. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Year (Non-Selective Beta Blockers)

| | | | Eligible | Eligible Member- | New Users per 1000 | Incidence Rate per 10,000 |
|------------------|-----------------|-------------------|----------------------|-------------------|-------------------------------|------------------------------------|
| _ | New Users | New Episodes | Members ¹ | Days ¹ | Eligible Members ¹ | Eligible Members Days ¹ |
| Beta Blockers | | | | | | |
| 2008 | 3,983 | 4,002 | N/A | N/A | N/A | N/A |
| 2009 | 5,181 | 5,201 | N/A | N/A | N/A | N/A |
| 2010 | 5,122 | 5,155 | N/A | N/A | N/A | N/A |
| 2011 | 5,160 | 5,176 | N/A | N/A | N/A | N/A |
| 2012 | 5,253 | 5,292 | N/A | N/A | N/A | N/A |
| 2013 | 5,690 | 5,724 | N/A | N/A | N/A | N/A |
| 2014 | 9,302 | 9,343 | N/A | N/A | N/A | N/A |
| 2015 | 15,673 | 15,738 | N/A | N/A | N/A | N/A |
| 2016 | 24,145 | 24,263 | N/A | N/A | N/A | N/A |
| 2017 | 30,175 | 30,341 | N/A | N/A | N/A | N/A |
| 2018 | 29,506 | 29,671 | N/A | N/A | N/A | N/A |
| 2019 | 8,163 | 8,222 | N/A | N/A | N/A | N/A |
| 2020 | 7,298 | 7,351 | N/A | N/A | N/A | N/A |
| 2021 | 8,004 | 8,045 | N/A | N/A | N/A | N/A |
| 2022 | 560 | 560 | N/A | N/A | N/A | N/A |
| Beta Blockers (F | Post-Index Enro | llment Requiremen | it) | | | |
| 2008 | 3,042 | 3,059 | N/A | N/A | N/A | N/A |
| 2009 | 3,851 | 3,869 | N/A | N/A | N/A | N/A |
| 2010 | 3,863 | 3,889 | N/A | N/A | N/A | N/A |
| 2011 | 3,889 | 3,899 | N/A | N/A | N/A | N/A |
| 2012 | 4,069 | 4,100 | N/A | N/A | N/A | N/A |
| 2013 | 4,252 | 4,282 | N/A | N/A | N/A | N/A |
| 2014 | 7,307 | 7,343 | N/A | N/A | N/A | N/A |
| 2015 | 11,768 | 11,816 | N/A | N/A | N/A | N/A |
| 2016 | 19,829 | 19,926 | N/A | N/A | N/A | N/A |
| 2017 | 22,881 | 23,024 | N/A | N/A | N/A | N/A |
| 2018 | 5,878 | 5,905 | N/A | N/A | N/A | N/A |
| 2019 | 6,255 | 6,296 | N/A | N/A | N/A | N/A |
| 2020 | 4,959 | 4,998 | N/A | N/A | N/A | N/A |
| 2021 | 599 | 599 | N/A | N/A | N/A | N/A |
| 2022 | 0 | 0 | N/A | N/A | N/A | N/A |



| | | | Number of Episodes by Episode Length | | | | | | | | | | |
|---|-----------------------------|--|--------------------------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|--|
| | | | 0-90 | days | 91-183 | days | 184-27 | 5 days | 276-36 | 5 days | 366+ | days | |
| | Total Number of Episodes | Episodes Where Patient Switched to Another Beta Blocker | Number of Episodes | Percent of Episodes | Number of Episodes | Percent of Episodes | Number of Episodes | Percent of Episodes | Number of Episodes | Percent of Episodes | Number of Episodes | Percent of Episodes | |
| Beta Blockers | 214,231 | 4,895 | 213,751 | 99.8% | 369 | 0.2% | 52 | 0.0% | **** | **** | **** | **** | |
| Beta Blockers (Post-Index Enrollment Requirement) | 135,970 | 3,638 | 135,688 | 99.8% | 234 | 0.2% | **** | **** | 36 | 0.0% | **** | **** | |
| Beta Blockers (25% Overlap) | 214,231 | 7,928 | 166,926 | 77.9% | 23,982 | 11.2% | 9,372 | 4.4% | 5,086 | 2.4% | 8,865 | 4.1% | |
| Beta Blockers (25% Overlap and Post-Index Enrollment Requirement) Beta Blockers (50% | 135,970 | 5,832 | 102,852 | 75.6% | 14,782 | 10.9% | 6,047 | 4.4% | 3,424 | 2.5% | 8,865 | 6.5% | |
| Overlap) | 214,231 | 8,435 | 155,840 | 72.7% | 27,991 | 13.1% | 11,729 | 5.5% | 6,658 | 3.1% | 12,013 | 5.6% | |
| Beta Blockers (50% Overlap and Post-Index Enrollment Requirement) | 135,970 | 6,224 | 94,988 | 69.9% | 17,025 | 12.5% | 7,503 | 5.5% | 4,441 | 3.3% | 12,013 | 8.8% | |
| Beta Blockers (100% Overlap) | 214,231 | 9,130 | 143,864 | 67.2% | 30,537 | 14.3% | 14,575 | 6.8% | 8,619 | 4.0% | 16,636 | 7.8% | |
| Beta Blockers (100% Overlap and Post-Index Enrollment Requirement) | 135,970 | 6,798 | 86,417 | 63.6% | 18,063 | 13.3% | 9,189 | 6.8% | 5,665 | 4.2% | 16,636 | 12.2% | |

Table 4a. Summary of Time to End of At-Risk Period for Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022



| | | | Distribution | of At-Risk Time ir | n Days, by Episode | | |
|---|---------|----|--------------|--------------------|--------------------|-------|-----------------------|
| | | | | | | | |
| | Minimum | Q1 | Median | Q3 | Maximum | Mean | Standard Deviation |
| Beta Blockers | 1 | 30 | 30 | 30 | 441 | 29.8 | 13.7 |
| Beta Blockers (Post-Index Enrollment Requirement) | 1 | 30 | 30 | 30 | 441 | 30.1 | 13.2 |
| Beta Blockers (25% Overlap) | 1 | 30 | 30 | 90 | 4,524 | 87.6 | 155.5 |
| Beta Blockers (25% Overlap and Post-Index Enrollment Requirement) | 1 | 30 | 30 | 90 | 4,524 | 103.0 | 187.5 |
| Beta Blockers (50% Overlap) | 1 | 30 | 30 | 99 | 4,788 | 104.0 | 182.2 |
| Beta Blockers (50% Overlap and Post-Index Enrollment Requirement) | 1 | 30 | 30 | 120 | 4,788 | 124.9 | 219.9 |
| Beta Blockers (100% Overlap) | 1 | 30 | 51 | 131 | 4,788 | 126.7 | 217.7 |
| Beta Blockers (100% Overlap and Post-Index Enrollment Requirement) | 1 | 30 | 60 | 167 | 4,788 | 155.9 | 262.7 |

Table 4a. Summary of Time to End of At-Risk Period for Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022



Table 4b. Summary of Time to End of At-Risk Period for Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Age Group

| | | | Number of Episodes by Episode Length | | | | | | | | | |
|-------------------|-----------------------------|--|--------------------------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|
| | | | 0-90 | days | 91-18 | 3 days | 184-27 | '5 days | 276-36 | 5 days | 366+ | days |
| | Total Number of Episodes | Episodes Where Patient Switched to Another Beta Blocker | Number of Episodes | Percent of Episodes | Number of Episodes | Percent of Episodes | Number of Episodes | Percent of Episodes | Number of Episodes | Percent of Episodes | Number of Episodes | Percent of Episodes |
| Beta Blockers | | | | | | | | | | | | |
| 0-1 years | 28,621 | 260 | 28,545 | 99.7% | 61 | 0.2% | **** | **** | **** | **** | 0 | 0.0% |
| 2-5 years | 6,366 | 373 | 6,339 | 99.6% | **** | **** | **** | **** | **** | **** | 0 | 0.0% |
| 6-12 years | 41,380 | 1,158 | 41,268 | 99.7% | 86 | 0.2% | 12 | 0.0% | 14 | 0.0% | 0 | 0.0% |
| 13-17 years | 137,864 | 3,104 | 137,599 | 99.8% | 204 | 0.1% | **** | **** | 34 | 0.0% | **** | **** |
| Beta Blockers (Po | st-Index Enrollme | ent Requirement) | | | | | | | | | | |
| 0-1 years | 17,070 | 204 | 17,020 | 99.7% | **** | **** | **** | **** | **** | **** | 0 | 0.0% |
| 2-5 years | 4,062 | 264 | 4,047 | 99.6% | **** | **** | **** | **** | **** | **** | 0 | 0.0% |
| 6-12 years | 27,012 | 876 | 26,949 | 99.8% | 52 | 0.2% | **** | **** | **** | **** | 0 | 0.0% |
| 13-17 years | 87,826 | 2,294 | 87,672 | 99.8% | 127 | 0.1% | **** | **** | **** | **** | **** | **** |
| Beta Blockers (25 | % Overlap) | | | | | | | | | | | |
| 0-1 years | 28,621 | 561 | 17,214 | 60.1% | 5,174 | 18.1% | 2,723 | 9.5% | 1,667 | 5.8% | 1,843 | 6.4% |
| 2-5 years | 6,366 | 522 | 4,486 | 70.5% | 838 | 13.2% | 359 | 5.6% | 202 | 3.2% | 481 | 7.6% |
| 6-12 years | 41,380 | 1,721 | 31,955 | 77.2% | 4,672 | 11.3% | 1,731 | 4.2% | 952 | 2.3% | 2,070 | 5.0% |
| 13-17 years | 137,864 | 5,124 | 113,271 | 82.2% | 13,298 | 9.6% | 4,559 | 3.3% | 2,265 | 1.6% | 4,471 | 3.2% |
| Beta Blockers (25 | % Overlap and Po | ost-Index Enrollmei | nt Requiremer | nt) | | | | | | | | |
| 0-1 years | 17,070 | 410 | 9,323 | 54.6% | 2,958 | 17.3% | 1,737 | 10.2% | 1,209 | 7.1% | 1,843 | 10.8% |
| 2-5 years | 4,062 | 376 | 2,731 | 67.2% | 496 | 12.2% | 228 | 5.6% | 126 | 3.1% | 481 | 11.8% |
| 6-12 years | 27,012 | 1,295 | 20,280 | 75.1% | 2,916 | 10.8% | 1,142 | 4.2% | 604 | 2.2% | 2,070 | 7.7% |
| 13-17 years | 87,826 | 3,751 | 70,518 | 80.3% | 8,412 | 9.6% | 2,940 | 3.3% | 1,485 | 1.7% | 4,471 | 5.1% |
| Beta Blockers (50 | % Overlap) | | | | | | | | | | | |
| 0-1 years | 28,621 | 602 | 14,951 | 52.2% | 5,831 | 20.4% | 3,384 | 11.8% | 2,130 | 7.4% | 2,325 | 8.1% |
| 2-5 years | 6,366 | 551 | 4,115 | 64.6% | 925 | 14.5% | 397 | 6.2% | 268 | 4.2% | 661 | 10.4% |
| 6-12 years | 41,380 | 1,821 | 29,698 | 71.8% | 5,426 | 13.1% | 2,220 | 5.4% | 1,199 | 2.9% | 2,837 | 6.9% |



Table 4b. Summary of Time to End of At-Risk Period for Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Age Group

| | | | | | | Num | per of Episode | s by Episode L | ength | | | |
|------------------|-----------------------------|--|-----------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|
| | | | 0-90 | days | 91-183 | 3 days | 184-27 | '5 days | 276-36 | 5 days | 366+ | days |
| | Total Number of Episodes | Episodes Where Patient Switched to Another Beta Blocker | Number of Episodes | Percent of Episodes |
| 13-17 years | 137,864 | 5,461 | 107,076 | 77.7% | 15,809 | 11.5% | 5,728 | 4.2% | 3,061 | 2.2% | 6,190 | 4.5% |
| Beta Blockers (5 | 0% Overlap and Po | ost-Index Enrollme | nt Requiremer | nt) | | | | | | | | |
| 0-1 years | 17,070 | 443 | 7,786 | 45.6% | 3,263 | 19.1% | 2,146 | 12.6% | 1,550 | 9.1% | 2,325 | 13.6% |
| 2-5 years | 4,062 | 400 | 2,468 | 60.8% | 533 | 13.1% | 241 | 5.9% | 159 | 3.9% | 661 | 16.3% |
| 6-12 years | 27,012 | 1,376 | 18,635 | 69.0% | 3,358 | 12.4% | 1,432 | 5.3% | 750 | 2.8% | 2,837 | 10.5% |
| 13-17 years | 87,826 | 4,005 | 66,099 | 75.3% | 9,871 | 11.2% | 3,684 | 4.2% | 1,982 | 2.3% | 6,190 | 7.0% |
| Beta Blockers (1 | 00% Overlap) | | | | | | | | | | | |
| 0-1 years | 28,621 | 666 | 12,516 | 43.7% | 6,134 | 21.4% | 4,115 | 14.4% | 2,798 | 9.8% | 3,058 | 10.7% |
| 2-5 years | 6,366 | 582 | 3,698 | 58.1% | 985 | 15.5% | 472 | 7.4% | 337 | 5.3% | 874 | 13.7% |
| 6-12 years | 41,380 | 1,963 | 27,333 | 66.1% | 5,881 | 14.2% | 2,701 | 6.5% | 1,506 | 3.6% | 3,959 | 9.6% |
| 13-17 years | 137,864 | 5,919 | 100,317 | 72.8% | 17,537 | 12.7% | 7,287 | 5.3% | 3,978 | 2.9% | 8,745 | 6.3% |
| Beta Blockers (1 | 00% Overlap and F | Post-Index Enrollmo | ent Requireme | ent) | | | | | | | | |
| 0-1 years | 17,070 | 497 | 6,153 | 36.0% | 3,267 | 19.1% | 2,565 | 15.0% | 2,027 | 11.9% | 3,058 | 17.9% |
| 2-5 years | 4,062 | 426 | 2,172 | 53.5% | 543 | 13.4% | 277 | 6.8% | 196 | 4.8% | 874 | 21.5% |
| 6-12 years | 27,012 | 1,490 | 16,909 | 62.6% | 3,527 | 13.1% | 1,705 | 6.3% | 912 | 3.4% | 3,959 | 14.7% |
| 13-17 years | 87,826 | 4,385 | 61,183 | 69.7% | 10,726 | 12.2% | 4,642 | 5.3% | 2,530 | 2.9% | 8,745 | 10.0% |



| | | | | | | Num | per of Episodes | s by Episode L | ength | | | |
|---------------|-----------------------------|--|-----------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|
| | | | 0-90 | days | 91-18 | 3 days | 184-27 | 5 days | 276-36 | 5 days | 366+ days | |
| | Total Number of Episodes | Episodes Where Patient Switched to Another Beta Blocker | Number of Episodes | Percent of Episodes |
| Beta Blockers | S | | | | | | | | | | | |
| Female | 129,557 | 3,103 | 129,264 | 99.8% | 219 | 0.2% | **** | **** | 41 | 0.0% | **** | **** |
| Male | 84,674 | 1,792 | 84,487 | 99.8% | 150 | 0.2% | 21 | 0.0% | 16 | 0.0% | 0 | 0.0% |
| Beta Blockers | s (Post-Index Enrolli | ment Requirement) | | | | | | | | | | |
| Female | 81,534 | 2,322 | 81,366 | 99.8% | **** | **** | **** | **** | 25 | 0.0% | **** | **** |
| Male | 54,436 | 1,316 | 54,322 | 99.8% | 99 | 0.2% | **** | **** | **** | **** | 0 | 0.0% |
| Beta Blockers | s (25% Overlap) | | | | | | | | | | | |
| Female | 129,557 | 4,842 | 102,785 | 79.3% | 14,071 | 10.9% | 5,312 | 4.1% | 2,849 | 2.2% | 4,540 | 3.5% |
| Male | 84,674 | 3,086 | 64,141 | 75.8% | 9,911 | 11.7% | 4,060 | 4.8% | 2,237 | 2.6% | 4,325 | 5.1% |
| Beta Blockers | s (25% Overlap and | Post-Index Enrollme | nt Requireme | nt) | | | | | | | | |
| Female | 81,534 | 3,559 | 62,920 | 77.2% | 8,673 | 10.6% | 3,451 | 4.2% | 1,950 | 2.4% | 4,540 | 5.6% |
| Male | 54,436 | 2,273 | 39,932 | 73.4% | 6,109 | 11.2% | 2,596 | 4.8% | 1,474 | 2.7% | 4,325 | 7.9% |
| Beta Blockers | s (50% Overlap) | | | | | | | | | | | |
| Female | 129,557 | 5,138 | 96,414 | 74.4% | 16,522 | 12.8% | 6,682 | 5.2% | 3,778 | 2.9% | 6,161 | 4.8% |
| Male | 84,674 | 3,297 | 59,426 | 70.2% | 11,469 | 13.5% | 5,047 | 6.0% | 2,880 | 3.4% | 5,852 | 6.9% |
| Beta Blockers | s (50% Overlap and | Post-Index Enrollme | nt Requireme | nt) | | | | | | | | |
| Female | 81,534 | 3,776 | 58,427 | 71.7% | 10,093 | 12.4% | 4,296 | 5.3% | 2,557 | 3.1% | 6,161 | 7.6% |
| Male | 54,436 | 2,448 | 36,561 | 67.2% | 6,932 | 12.7% | 3,207 | 5.9% | 1,884 | 3.5% | 5,852 | 10.8% |
| Beta Blockers | s (100% Overlap) | | | | | | | | | | | |
| Female | 129,557 | 5,568 | 89,250 | 68.9% | 18,202 | 14.0% | 8,469 | 6.5% | 4,900 | 3.8% | 8,736 | 6.7% |
| Male | 84,674 | 3,562 | 54,614 | 64.5% | 12,335 | 14.6% | 6,106 | 7.2% | 3,719 | 4.4% | 7,900 | 9.3% |
| Beta Blockers | s (100% Overlap and | d Post-Index Enrollm | ent Requireme | ent) | | | | | | | | |
| Female | 81,534 | 4,126 | 53 <i>,</i> 334 | 65.4% | 10,827 | 13.3% | 5,380 | 6.6% | 3,257 | 4.0% | 8,736 | 10.7% |
| Male | 54,436 | 2,672 | 33,083 | 60.8% | 7,236 | 13.3% | 3,809 | 7.0% | 2,408 | 4.4% | 7,900 | 14.5% |

Table 4c. Summary of Time to End of At-Risk Period for Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022, by Sex



| | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | | Beta Blockers (25% Overlap) | | Beta Blockers (25% Overlap and Post- Index Enrollment Requirement) | |
|---|----------------------------|--------------------------|--|--------------------------|-----------------------------|--------------------------|---|--------------------------|
| | Remaining | Excluded | Remaining | Excluded | Remaining | Excluded | Remaining | Excluded |
| Members meeting enrollment and dem requirements | nographic | | | | | | | |
| Enrolled at any point during the query period | 369,188,000 | N/A | 369,188,000 | N/A | 369,188,000 | N/A | 369,188,000 | N/A |
| Had required coverage type (medical and/or drug coverage) | 293,274,605 273,556,345 | 75,913,395 19,718,260 | 293,274,605 273,556,345 | 75,913,395 19,718,260 | 293,274,605 273,556,345 | 75,913,395 19,718,260 | 293,274,605 273,556,345 | 75,913,395 19,718,260 |
| | 273,214,646 | 341,699 | 273,214,646 | 341,699 | 273,214,646 | 341,699 | 273,214,646 | 341,699 |
| Enrolled during specified age range | 119,159,837 | 154,054,809 | 119,159,837 | 154,054,809 | 119,159,837 | 154,054,809 | 119,159,837 | 154,054,809 |
| Had requestable medical charts | 119,159,837 | 0 | 119,159,837 | 0 | 119,159,837 | 0 | 119,159,837 | 0 |
| Met demographic requirements (sex, race, and Hispanic origin) | 119,104,523 | 55,314 | 119,104,523 | 55,314 | 119,104,523 | 55,314 | 119,104,523 | 55,314 |
| Members with a valid index event | | | | | | | | |
| Had any cohort-defining claim during the query period | 994,369 | 118,110,154 | 994,369 | 118,110,154 | 994,369 | 118,110,154 | 994,369 | 118,110,154 |
| Cohort episodes with a valid index date | 2 | | | | | | | |
| Total number of claims with cohort- identifying codes during the query period | 5,149,302 | N/A | 5,149,302 | N/A | 5,149,302 | N/A | 5,149,302 | N/A |
| Claim recorded during specified age range | 1,598,641 | 3,550,661 | 1,598,641 | 3,550,661 | 1,598,641 | 3,550,661 | 1,598,641 | 3,550,661 |
| Episode defining index claim recorded during the query period | 299,409 | 1,299,232 | 299,409 | 1,299,232 | 299,409 | 1,299,232 | 299,409 | 1,299,232 |

Table 5. Summary of Episode Level Cohort Attrition in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022



| Table 5. Summary of Episode Level | Beta Blockers | | Beta Blockers (Post-Index Enrollment Requirement) | | Beta Blockers (25% Overlag | | Beta Blockers (25% Overlap and Index Enrollment Requiremen | |
|---|---------------|----------|--|----------|----------------------------|----------|---|----------|
| Ī | Remaining | Excluded | Remaining | Excluded | Remaining | Excluded | Remaining | Excluded |
| Members meeting enrollment and dem requirements | ographic | | | | | | | |
| Met exposure incidence criteria | 299,409 | 0 | 299,409 | 0 | 299,409 | 0 | 299,409 | 0 |
| Cohort episodes with required pre-inde | x history | | | | | | | |
| Had sufficient pre-index continuous enrollment | 214,231 | 85,178 | 214,231 | 85,178 | 214,231 | 85,178 | 214,231 | 85,178 |
| Met inclusion and exclusion criteria | 214,231 | 0 | 214,231 | 0 | 214,231 | 0 | 214,231 | 0 |
| Met event incidence criteria | 214,231 | 0 | 214,231 | 0 | 214,231 | 0 | 214,231 | 0 |
| Cohort episodes with required post-ind | ex follow-up | | | | | | | |
| Had sufficient post-index continuous enrollment | 214,231 | 0 | 135,970 | 78,261 | 214,231 | 0 | 135,970 | 78,261 |
| Met minimum days' supply criteria | 214,231 | 0 | 135,970 | 0 | 214,231 | 0 | 135,970 | 0 |
| Met minimum episode duration criteria | 214,231 | 0 | 135,970 | 0 | 214,231 | 0 | 135,970 | 0 |
| Episode duration was longer than blackout period | 214,231 | 0 | 135,970 | 0 | 214,231 | 0 | 135,970 | 0 |
| Did not have an event during blackout period | 214,231 | 0 | 135,970 | 0 | 214,231 | 0 | 135,970 | 0 |
| Final cohort | | | | | | | | |
| Number of members | 200,926 | N/A | 127,912 | N/A | 200,926 | N/A | 127,912 | N/A |
| Number of episodes | 214,231 | N/A | 135,970 | N/A | 214,231 | N/A | 135,970 | N/A |

Table 5. Summary of Episode Level Cohort Attrition in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022



| | Beta Blockers | (50% Overlap) | | 6 Overlap and Post- nt Requirement) | Beta Blockers (1 | L00% Overlap) | | % Overlap and Post- nt Requirement) |
|--|----------------------------|--------------------------|----------------------------|--|----------------------------|--------------------------|----------------------------|--|
| | Remaining | Excluded | Remaining | Excluded | Remaining | Excluded | Remaining | Excluded |
| Members meeting enrollment and requirements | l demographic | | | | | | | |
| Enrolled at any point during the query period | 369,188,000 | N/A | 369,188,000 | N/A | 369,188,000 | N/A | 369,188,000 | N/A |
| Had required coverage type (medical and/or drug coverage) | 293,274,605 273,556,345 | 75,913,395 19,718,260 | 293,274,605 273,556,345 | 75,913,395 19,718,260 | 293,274,605 273,556,345 | 75,913,395 19,718,260 | 293,274,605 273,556,345 | 75,913,395 19,718,260 |
| | 273,214,646 | 341,699 | 273,214,646 | 341,699 | 273,214,646 | 341,699 | 273,214,646 | 341,699 |
| Enrolled during specified age range | 119,159,837 | 154,054,809 | 119,159,837 | 154,054,809 | 119,159,837 | 154,054,809 | 119,159,837 | 154,054,809 |
| Had requestable medical charts | 119,159,837 | 0 | 119,159,837 | 0 | 119,159,837 | 0 | 119,159,837 | 0 |
| Met demographic requirements (sex, race, and Hispanic origin) | 119,104,523 | 55,314 | 119,104,523 | 55,314 | 119,104,523 | 55,314 | 119,104,523 | 55,314 |
| Had any cohort-defining claim during the query period | 994,369 | 118,110,154 | 994,369 | 118,110,154 | 994,369 | 118,110,154 | 994,369 | 118,110,154 |
| | | | | | | | | |
| Total number of claims with cohort-identifying codes during the query period Claim recorded during specified age range | 5,149,302 1,598,641 | N/A 3,550,661 | 5,149,302 1,598,641 | N/A 3,550,661 | 5,149,302 1,598,641 | N/A 3,550,661 | 5,149,302 1,598,641 | N/A 3,550,661 |
| Episode defining index claim recorded during the query period | 299,409 | 1,299,232 | 299,409 | 1,299,232 | 299,409 | 1,299,232 | 299,409 | 1,299,232 |

Table 5. Summary of Episode Level Cohort Attrition in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022



| | Beta Blockers (| 50% Overlap) | Beta Blockers (50% Index Enrollmer | • | Beta Blockers (1 | 00% Overlap) | Beta Blockers (100% Overlap and Index Enrollment Requirement | |
|---|-----------------|--------------|---------------------------------------|----------|------------------|--------------|---|----------|
| | Remaining | Excluded | Remaining | Excluded | Remaining | Excluded | Remaining | Excluded |
| Members meeting enrollment and requirements | demographic | | • | | | | | |
| Met exposure incidence criteria | 299,409 | 0 | 299,409 | 0 | 299,409 | 0 | 299,409 | 0 |
| | 214 221 | 05 170 | 24.4.224 | 05 170 | 214 221 | 05 170 | 214 224 | 05 170 |
| Had sufficient pre-index continuous enrollment | 214,231 | 85,178 | 214,231 | 85,178 | 214,231 | 85,178 | 214,231 | 85,178 |
| Met inclusion and exclusion criteria | 214,231 | 0 | 214,231 | 0 | 214,231 | 0 | 214,231 | 0 |
| Met event incidence criteria | 214,231 | 0 | 214,231 | 0 | 214,231 | 0 | 214,231 | 0 |
| | | | | | | | | |
| Had sufficient post-index continuous enrollment | 214,231 | 0 | 135,970 | 78,261 | 214,231 | 0 | 135,970 | 78,261 |
| Met minimum days' supply criteria | 214,231 | 0 | 135,970 | 0 | 214,231 | 0 | 135,970 | 0 |
| Met minimum episode duration criteria | 214,231 | 0 | 135,970 | 0 | 214,231 | 0 | 135,970 | 0 |
| Episode duration was longer than plackout period | 214,231 | 0 | 135,970 | 0 | 214,231 | 0 | 135,970 | 0 |
| Did not have an event during blackout period | 214,231 | 0 | 135,970 | 0 | 214,231 | 0 | 135,970 | 0 |
| Number of members | 200,926 | N/A | 127,912 | N/A | 200,926 | N/A | 127,912 | N/A |
| Number of episodes | 214,231 | N/A | 135,970 | N/A | 214,231 | N/A | 135,970 | N/A |

Table 5. Summary of Episode Level Cohort Attrition in the Sentinel Distributed Database (SDD) from January 1, 2008 to May 31, 2022



| Masked DP ID | DP Start Date | DP End Date ¹ |
|--------------|---------------|--------------------------|
| DP01 | 01/01/2008 | 12/31/2021 |
| DP02 | 01/01/2000 | 12/31/2020 |
| DP03 | 01/01/2014 | 12/31/2018 |
| DP04 | 01/01/2000 | 06/30/2020 |
| DP05 | 01/01/2000 | 05/31/2022 |
| DP06 | 01/01/2006 | 02/28/2022 |
| DP07 | 01/01/2008 | 12/31/2021 |
| DP08 | 01/01/2007 | 01/31/2022 |

Appendix A. Dates of Available Data for Each Data Partner (DP) as of Request Distribution Date (September 27, 2022)

¹End Date represents the earliest of: (1) query end date, or (2) last day of the most recent month for which all of a Data Partner's data tables (enrollment, dispensing, etc.) have at least 80% of the record count relative to the prior month.



Appendix B. List of Generic and Brand Names of Medical Products Used to Define Exposures in this Request

| Generic Name | Brand Name |
|--|--------------------------------|
| | Metoprolol |
| metoprolol succinate | Kapspargo Sprinkle |
| netoprolol succinate | Toprol XL |
| netoprolol succinate | metoprolol succinate |
| netoprolol succinate/hydrochlorothiazide | Dutoprol |
| netoprolol succinate/hydrochlorothiazide | metoprolol su-hydrochlorothiaz |
| netoprolol tartrate | Lopressor |
| netoprolol tartrate | metoprolol tartrate |
| netoprolol tartrate/dietary supplement,comb.10 | Hypertensolol |
| netoprolol tartrate/hydrochlorothiazide | Lopressor HCT |
| netoprolol tartrate/hydrochlorothiazide | metoprolol ta-hydrochlorothiaz |
| | toprolol (Extended Release) |
| netoprolol succinate | Kapspargo Sprinkle |
| netoprolol succinate | Toprol XL |
| netoprolol succinate | metoprolol succinate |
| netoprolol succinate/hydrochlorothiazide | Dutoprol |
| netoprolol succinate/hydrochlorothiazide | metoprolol su-hydrochlorothiaz |
| | Metoprolol (Regular) |
| netoprolol tartrate | Lopressor |
| netoprolol tartrate | metoprolol tartrate |
| netoprolol tartrate/dietary supplement,comb.10 | Hypertensolol |
| netoprolol tartrate/hydrochlorothiazide | Lopressor HCT |
| netoprolol tartrate/hydrochlorothiazide | metoprolol ta-hydrochlorothiaz |
| | Propranolol |
| ropranolol HCl | Hemangeol |
| propranolol HCl | Inderal |
| propranolol HCl | Inderal LA |
| propranolol HCl | Inderal XL |
| propranolol HCl | InnoPran XL |
| propranolol HCl | propranolol |
| propranolol HCl | propranolol (bulk) |
| propranolol HCl/hydrochlorothiazide | Inderide |
| propranolol HCl/hydrochlorothiazide | propranolol-hydrochlorothiazid |
| | pranolol (Extended Release) |
| propranolol HCl | Inderal LA |
| propranolol HCl | Inderal XL |
| propranolol HCl | InnoPran XL |
| propranolol HCl | propranolol |
| | Propranolol (Regular) |
| propranolol HCl | Hemangeol |
| propranolol HCl | Inderal |
| propranolol HCl | propranolol |
| propranolol HCl | propranolol (bulk) |
| propranolol HCl/hydrochlorothiazide | Inderide |
| propranolol HCl/hydrochlorothiazide | propranolol-hydrochlorothiazid |
| | Propranolol (Hemangeol) |
| propranolol HCl | Hemangeol |
| | Acebutolol |
| cebutolol HCl | Sectral |
| icebutolol HCl | acebutolol |
| | Atenolol |
| tenolol | Tenormin |
| itenolol | atenolol |
| | |
| atenolol/chlorthalidone | Tenoretic 100 |
| atenolol/chlorthalidone | Tenoretic 50 |
| atenolol/chlorthalidone | atenolol-chlorthalidone |



Appendix B. List of Generic and Brand Names of Medical Products Used to Define Exposures in this Request

| Generic Name | Brand Name |
|---|-------------------------------|
| | Betaxolol |
| betaxolol HCl | Kerlone |
| betaxolol HCl | betaxolol |
| | Carvedilol |
| carvedilol | Coreg |
| carvedilol | carvedilol |
| carvedilol phosphate | Coreg CR |
| carvedilol phosphate | carvedilol phosphate |
| | Labetalol |
| labetalol HCl | Normodyne |
| labetalol HCl | Trandate |
| labetalol HCl | labetalol |
| labetalol HCl in dextrose, iso-osmotic | labetalol in dextrose,iso-osm |
| labetalol HCl in sodium chloride, iso-osmotic | labetalol in NaCl (iso-osmot) |
| labetalol in dextrose 5 % in water | labetalol in dextrose 5 % |
| | Nadolol |
| nadolol | Corgard |
| nadolol | nadolol |
| nadolol/bendroflumethiazide | Corzide |
| nadolol/bendroflumethiazide | nadolol-bendroflumethiazide |
| | Nebivolol |
| nebivolol HCl | Bystolic |
| nebivolol HCl | nebivolol |
| nebivolol HCl/valsartan | Byvalson |
| | Pindolol |
| pindolol | pindolol |
| | Sotalol |
| sotalol HCl | Betapace |
| sotalol HCl | Betapace AF |
| sotalol HCI | Sorine |
| sotalol HCl | Sotalol AF |
| sotalol HCI | Sotylize |
| sotalol HCl | sotalol |
| | Timolol |
| timolol maleate | timolol maleate |



Appendix C. List of Generic and Brand Names of Medical Products Used to Define Covariates in this Request

| Generic Name | Brand Name |
|--|---|
| | Metoprolol |
| metoprolol succinate | Kapspargo Sprinkle |
| netoprolol succinate | Toprol XL |
| netoprolol succinate | metoprolol succinate |
| netoprolol succinate/hydrochlorothiazide | Dutoprol |
| netoprolol succinate/hydrochlorothiazide | metoprolol su-hydrochlorothiaz |
| netoprolol tartrate | Lopressor |
| netoprolol tartrate | metoprolol tartrate |
| netoprolol tartrate/dietary supplement,comb.10 | Hypertensolol |
| netoprolol tartrate/hydrochlorothiazide | Lopressor HCT |
| netoprolol tartrate/hydrochlorothiazide | metoprolol ta-hydrochlorothiaz |
| | oprolol (Extended Release) |
| netoprolol succinate | Kapspargo Sprinkle |
| netoprolol succinate | Toprol XL |
| netoprolol succinate | metoprolol succinate |
| netoprolol succinate/hydrochlorothiazide | Dutoprol |
| netoprolol succinate/hydrochlorothiazide | metoprolol su-hydrochlorothiaz |
| | Metoprolol (Regular) |
| netoprolol tartrate | Lopressor |
| netoprolol tartrate | metoprolol tartrate |
| netoprolol tartrate/dietary supplement,comb.10 | Hypertensolol |
| netoprolol tartrate/hydrochlorothiazide | Lopressor HCT |
| netoprolol tartrate/hydrochlorothiazide | |
| netoproior tartrate/hydrochlorothlazide | metoprolol ta-hydrochlorothiaz Propranolol |
| prograpolol HCI | • |
| propranolol HCl | Hemangeol |
| propranolol HCl | Inderal Inderal I |
| propranolol HCl | Inderal LA |
| propranolol HCl | Inderal XL |
| propranolol HCl | InnoPran XL |
| propranolol HCI | propranolol |
| propranolol HCl | propranolol (bulk) |
| propranolol HCl/hydrochlorothiazide | Inderide |
| propranolol HCl/hydrochlorothiazide | propranolol-hydrochlorothiazid |
| | ranolol (Extended Release) |
| propranolol HCI | Inderal LA |
| propranolol HCl | Inderal XL |
| propranolol HCI | InnoPran XL |
| propranolol HCI | propranolol |
| | Propranolol (Regular) |
| propranolol HCl | Hemangeol |
| propranolol HCl | Inderal |
| propranolol HCl | propranolol |
| propranolol HCl | propranolol (bulk) |
| propranolol HCl/hydrochlorothiazide | Inderide |
| propranolol HCl/hydrochlorothiazide | propranolol-hydrochlorothiazid |
| | opranolol (Hemangeol) |
| propranolol HCI | Hemangeol |
| | Acebutolol |
| acebutolol HCl | Sectral |
| acebutolol HCl | acebutolol |
| | Atenolol |
| atenolol | Tenormin |
| atenolol | atenolol |
| atenolol/chlorthalidone | Tenoretic 100 |
| | |
| atenolol/chlorthalidone | Tenoretic 50 |



Appendix C. List of Generic and Brand Names of Medical Products Used to Define Covariates in this Request

| Generic Name | Brand Name |
|---|--------------------------------|
| | Betaxolol |
| betaxolol HCl | Kerlone |
| betaxolol HCl | betaxolol |
| | Carvedilol |
| carvedilol | Coreg |
| carvedilol | carvedilol |
| carvedilol phosphate | Coreg CR |
| carvedilol phosphate | carvedilol phosphate |
| | Labetalol |
| labetalol HCl | Normodyne |
| labetalol HCl | Trandate |
| labetalol HCl | labetalol |
| labetalol HCl in dextrose, iso-osmotic | labetalol in dextrose, iso-osm |
| labetalol HCl in sodium chloride, iso-osmotic | labetalol in NaCl (iso-osmot) |
| labetalol in dextrose 5 % in water | labetalol in dextrose 5 % |
| | Nadolol |
| nadolol | Corgard |
| nadolol | nadolol |
| nadolol/bendroflumethiazide | Corzide |
| nadolol/bendroflumethiazide | nadolol-bendroflumethiazide |
| | Nebivolol |
| nebivolol HCl | Bystolic |
| nebivolol HCl | nebivolol |
| nebivolol HCI/valsartan | Byvalson |
| | Pindolol |
| pindolol | pindolol |
| | Sotalol |
| sotalol HCl | Betapace |
| sotalol HCl | Betapace AF |
| sotalol HCl | Sorine |
| sotalol HCl | Sotalol AF |
| sotalol HCl | Sotylize |
| sotalol HCl | sotalol |
| | Timolol |
| timolol maleate | timolol maleate |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|------------|
| 262.44 | Hypertension | | |
| 362.11 | Hypertensive retinopathy | Diagnosis | ICD-9-CM |
| 401.0 | Essential hypertension, malignant | Diagnosis | ICD-9-CM |
| 401.1 | Essential hypertension, benign | Diagnosis | ICD-9-CM |
| 401.9 | Unspecified essential hypertension | Diagnosis | ICD-9-CM |
| 402.00 | Malignant hypertensive heart disease without heart failure | Diagnosis | ICD-9-CM |
| 402.01 | Malignant hypertensive heart disease with heart failure | Diagnosis | ICD-9-CM |
| 402.10 | Benign hypertensive heart disease without heart failure | Diagnosis | ICD-9-CM |
| 402.11 | Benign hypertensive heart disease with heart failure | Diagnosis | ICD-9-CM |
| 402.90 | Unspecified hypertensive heart disease without heart failure | Diagnosis | ICD-9-CM |
| 402.91 | Hypertensive heart disease, unspecified, with heart failure | Diagnosis | ICD-9-CM |
| 403.00 | Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage I through stage IV, or unspecified | - | |
| | | Diagnosis | ICD-9-CM |
| 403.01 | Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease | | |
| | | Diagnosis | ICD-9-CM |
| 403.10 | Hypertensive chronic kidney disease, benign, with chronic kidney disease stage I through stage IV, or unspecified | | |
| 102.11 | | Diagnosis | ICD-9-CM |
| 403.11 | Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease | | |
| 403.90 | Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage I through stage IV, or unspecified | Diagnosis | ICD-9-CM |
| 403.90 | Hypertensive enrolle kulley disease, dispectified, with enrolle kulley disease stage i through stage iv, or dispectified | Diagnosis | ICD-9-CM |
| 403.91 | Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease | Diagnosis | ICD-9-CIVI |
| | | Diagnosis | ICD-9-CM |
| 404.00 | Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or | 2108.0000 | |
| | unspecified | Diagnosis | ICD-9-CM |
| 404.01 | Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified | Diagnosis | |
| | | Diagnosis | |
| | | Diagnosis | ICD-9-CM |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| 404.02 | Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease | | |
| 404.03 | Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease | Diagnosis | ICD-9-CM |
| 404.10 | Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified | Diagnosis | ICD-9-CM |
| 404.11 | Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified | Diagnosis | ICD-9-CM |
| 404.12 | Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease | Diagnosis | ICD-9-CM |
| 404.13 | Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease | Diagnosis | ICD-9-CM |
| 404.90 | Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or | Diagnosis | ICD-9-CM |
| 404.91 | unspecified Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified | Diagnosis | ICD-9-CM |
| 404.92 | Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease | Diagnosis | ICD-9-CM |
| 404.93 | Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease | Diagnosis | ICD-9-CM |
| | | Diagnosis | ICD-9-CM |
| 405.01 | Secondary renovascular hypertension, malignant | Diagnosis | ICD-9-CM |
| 405.09 | Other secondary hypertension, malignant | Diagnosis | ICD-9-CM |
| 405.11 | Secondary renovascular hypertension, benign | Diagnosis | ICD-9-CM |
| 405.19 | Other secondary hypertension, benign | Diagnosis | ICD-9-CM |
| 405.91 | Secondary renovascular hypertension, unspecified | Diagnosis | ICD-9-CM |
| 405.99 | Other secondary hypertension, unspecified | Diagnosis | ICD-9-CM |
| 437.2 | Hypertensive encephalopathy | Diagnosis | ICD-9-CM |



| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| H35.031 | Hypertensive retinopathy, right eye | Diagnosis | ICD-10-CM |
| H35.032 | Hypertensive retinopathy, left eye | Diagnosis | ICD-10-CM |
| H35.033 | Hypertensive retinopathy, bilateral | Diagnosis | ICD-10-CM |
| H35.039 | Hypertensive retinopathy, unspecified eye | Diagnosis | ICD-10-CM |
| 110 | Essential (primary) hypertension | Diagnosis | ICD-10-CM |
| 111.0 | Hypertensive heart disease with heart failure | Diagnosis | ICD-10-CM |
| 111.9 | Hypertensive heart disease without heart failure | Diagnosis | ICD-10-CM |
| 112.0 | Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease | | |
| | | Diagnosis | ICD-10-CM |
| 112.9 | Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease | | |
| | | Diagnosis | ICD-10-CM |
| 113.0 | Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney | | |
| | disease | Diagnosis | ICD-10-CM |
| 113.10 | Hypertensive heart and chronic kidney disease without heart failure, with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney | 4 | |
| | disease | Diagnosis | ICD-10-CM |
| 113.11 | Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease | | |
| | | Diagnosis | ICD-10-CM |
| 113.2 | Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease | | |
| | | Diagnosis | ICD-10-CM |
| 115.0 | Renovascular hypertension | Diagnosis | ICD-10-CM |
| 115.1 | Hypertension secondary to other renal disorders | Diagnosis | ICD-10-CM |
| 115.2 | Hypertension secondary to endocrine disorders | Diagnosis | ICD-10-CM |
| 115.8 | Other secondary hypertension | Diagnosis | ICD-10-CM |
| 115.9 | Secondary hypertension, unspecified | Diagnosis | ICD-10-CM |
| 167.4 | Hypertensive encephalopathy | Diagnosis | ICD-10-CM |
| N26.2 | Page kidney | Diagnosis | ICD-10-CM |
| | | 5 | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| | Hemangioma | | |
| 228 | Hemangioma and lymphangioma, any site | Diagnosis | ICD-9-CM |
| 228.0 | Hemangioma, any site | Diagnosis | ICD-9-CM |
| 228.00 | Hemangioma of unspecified site | Diagnosis | ICD-9-CM |
| 228.01 | Hemangioma of skin and subcutaneous tissue | Diagnosis | ICD-9-CM |
| 228.02 | Hemangioma of intracranial structures | Diagnosis | ICD-9-CM |
| 228.03 | Hemangioma of retina | Diagnosis | ICD-9-CM |
| 228.04 | Hemangioma of intra-abdominal structures | Diagnosis | ICD-9-CM |
| 228.09 | Hemangioma of other sites | Diagnosis | ICD-9-CM |
| D18 | Hemangioma and lymphangioma, any site | Diagnosis | ICD-10-CM |
| D18.0 | Hemangioma | Diagnosis | ICD-10-CM |
| D18.00 | Hemangioma unspecified site | Diagnosis | ICD-10-CM |
| D18.01 | Hemangioma of skin and subcutaneous tissue | Diagnosis | ICD-10-CM |
| D18.02 | Hemangioma of intracranial structures | Diagnosis | ICD-10-CM |
| D18.03 | Hemangioma of intra-abdominal structures | Diagnosis | ICD-10-CM |
| D18.09 | Hemangioma of other sites | Diagnosis | ICD-10-CM |
| | Heart Failure | | |
| 398.91 | Rheumatic heart failure (congestive) | Diagnosis | ICD-9-CM |
| 402.01 | Malignant hypertensive heart disease with heart failure | Diagnosis | ICD-9-CM |
| 402.11 | Benign hypertensive heart disease with heart failure | Diagnosis | ICD-9-CM |
| 402.91 | Hypertensive heart disease, unspecified, with heart failure | C C | |
| | | Diagnosis | ICD-9-CM |
| 404.01 | Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified | 0 | |
| | | Diagnosis | ICD-9-CM |
| 404.03 | Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease | | |
| | | Diagnosis | ICD-9-CM |
| | | BigBigBig | |



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|-----------------|---|------------------------|----------------------|
| Code 404.11 | Description Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified | Code Category | Code Type |
| 404.11 | Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease | Diagnosis | ICD-9-CM |
| 404.91 | Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified | Diagnosis | ICD-9-CM |
| 404.93 415.0 | Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease Acute cor pulmonale | Diagnosis Diagnosis | ICD-9-CM ICD-9-CM |
| 428.0 | Congestive heart failure, unspecified | Diagnosis Diagnosis | ICD-9-CM ICD-9-CM |
| 428.20 | Unspecified systolic heart failure | Diagnosis | ICD-9-CM |
| 428.21 | Acute systolic heart failure | Diagnosis | ICD-9-CM |
| 428.22 | Chronic systolic heart failure | Diagnosis | ICD-9-CM |
| 428.23 | Acute on chronic systolic heart failure | Diagnosis | ICD-9-CM |
| 428.30 | Unspecified diastolic heart failure | Diagnosis | ICD-9-CM |
| 428.31 | Acute diastolic heart failure | Diagnosis | ICD-9-CM |
| 428.32 | Chronic diastolic heart failure | Diagnosis | ICD-9-CM |
| 428.33 | Acute on chronic diastolic heart failure | Diagnosis | ICD-9-CM |
| 428.40 | Unspecified combined systolic and diastolic heart failure | Diagnosis | ICD-9-CM |
| 428.41 | Acute combined systolic and diastolic heart failure | Diagnosis | ICD-9-CM |
| 428.42 | Chronic combined systolic and diastolic heart failure | Diagnosis | ICD-9-CM |
| 428.43 | Acute on chronic combined systolic and diastolic heart failure | Diagnosis | ICD-9-CM |
| 428.9 | Unspecified heart failure | Diagnosis | ICD-9-CM |
| G8451 | Beta-blocker therapy for lvef < 40% not prescribed for reasons documented by the clinician (e.g., low blood pressure, fluid overload, asthma, patients | Procedure | HCPCS |
| G8694 | Left ventricular ejection fraction (lvef) < 40% | Procedure | HCPCS |
| G8738 | Left ventricular ejection fraction (lvef) < 40% or documentation of severely or moderately depressed left ventricular systolic function | Procedure | HCPCS |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| G8923 | Left ventricular ejection fraction (lvef) < 40% or documentation of moderately or severely depressed left ventricular systolic function | | |
| | | Procedure | HCPCS |
| G8934 | Left ventricular ejection fraction (lvef) <40% or documentation of moderately or severely depressed left ventricular systolic function | Procedure | HCPCS |
| 109.81 | Rheumatic heart failure | Diagnosis | ICD-10-CM |
| 111.0 | Hypertensive heart disease with heart failure | | |
| | | Diagnosis | ICD-10-CM |
| 113.0 | Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney | | |
| | disease | Diagnosis | ICD-10-CM |
| 113.2 | Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease | Diagnosis | ICD-10-CM |
| 126.01 | Septic pulmonary embolism with acute cor pulmonale | Diagnosis | ICD-10-CM |
| 126.02 | Saddle embolus of pulmonary artery with acute cor pulmonale | Diagnosis | ICD-10-CM |
| 126.09 | Other pulmonary embolism with acute cor pulmonale | Diagnosis | ICD-10-CM |
| 127.81 | Cor pulmonale (chronic) | Diagnosis | ICD-10-CM |
| 127.83 | Eisenmenger's syndrome | Diagnosis | ICD-10-CM |
| 150.2 | Systolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| 150.20 | Unspecified systolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| 150.21 | Acute systolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| 150.22 | Chronic systolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| 150.23 | Acute on chronic systolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| 150.3 | Diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| 150.30 | Unspecified diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| 150.31 | Acute diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| 150.32 | Chronic diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| 150.33 | Acute on chronic diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| 150.4 | Combined systolic (congestive) and diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| 150.40 | Unspecified combined systolic (congestive) and diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| 150.41 | Acute combined systolic (congestive) and diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code 150.42 | Description Chronic combined systolic (congestive) and diastolic (congestive) heart failure | Code Category | Code Type |
|----------------|--|---------------|-----------|
| 130.42 | Chronic combined systolic (congestive) and diastolic (congestive) field (fallule | Diagnosis | ICD-10-CM |
| 150.43 | Acute on chronic combined systolic (congestive) and diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| 150.81 | Right heart failure | Diagnosis | ICD-10-CM |
| 150.810 | Right heart failure, unspecified | Diagnosis | ICD-10-CM |
| 150.811 | Acute right heart failure | Diagnosis | ICD-10-CM |
| 150.812 | Chronic right heart failure | Diagnosis | ICD-10-CM |
| 150.813 | Acute on chronic right heart failure | Diagnosis | ICD-10-CM |
| 150.814 | Right heart failure due to left heart failure | Diagnosis | ICD-10-CM |
| 150.82 | Biventricular heart failure | Diagnosis | ICD-10-CM |
| 150.83 | High output heart failure | Diagnosis | ICD-10-CM |
| 150.84 | End stage heart failure | Diagnosis | ICD-10-CM |
| 150.89 | Other heart failure | Diagnosis | ICD-10-CM |
| 150.9 | Heart failure, unspecified | Diagnosis | ICD-10-CM |
| | Congenital Heart Disease | | |
| 745 | Bulbus cordis anomalies and anomalies of cardiac septal closure | Diagnosis | ICD-9-CM |
| 745.0 | Bulbus cordis anomalies and anomalies of cardiac septal closure, common truncus | Diagnosis | ICD-9-CM |
| 745.1 | Transposition of great vessels | Diagnosis | ICD-9-CM |
| 745.10 | Complete transposition of great vessels | Diagnosis | ICD-9-CM |
| 745.11 | Transposition of great vessels, double outlet right ventricle | Diagnosis | ICD-9-CM |
| 745.12 | Corrected transposition of great vessels | Diagnosis | ICD-9-CM |
| 745.19 | Other transposition of great vessels | Diagnosis | ICD-9-CM |
| 745.2 | Tetralogy of Fallot | Diagnosis | ICD-9-CM |
| 745.3 | Bulbus cordis anomalies and anomalies of cardiac septal closure, common ventricle | Diagnosis | ICD-9-CM |
| 745.4 | Ventricular septal defect | Diagnosis | ICD-9-CM |
| 745.5 | Ostium secundum type atrial septal defect | Diagnosis | ICD-9-CM |
| 745.6 | Endocardial cushion defects | Diagnosis | ICD-9-CM |
| | | - | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 745.60 | Unspecified type congenital endocardial cushion defect | Diagnosis | ICD-9-CM |
| 745.61 | Ostium primum defect | Diagnosis | ICD-9-CM |
| 745.69 | Other congenital endocardial cushion defect | Diagnosis | ICD-9-CM |
| 745.7 | Cor biloculare | Diagnosis | ICD-9-CM |
| 745.8 | Other bulbus cordis anomalies and anomalies of cardiac septal closure | Diagnosis | ICD-9-CM |
| 745.9 | Unspecified congenital defect of septal closure | Diagnosis | ICD-9-CM |
| 746 | Other congenital anomalies of heart | Diagnosis | ICD-9-CM |
| 746.0 | Congenital anomalies of pulmonary valve | Diagnosis | ICD-9-CM |
| 746.00 | Unspecified congenital pulmonary valve anomaly | Diagnosis | ICD-9-CM |
| 746.01 | Congenital atresia of pulmonary valve | Diagnosis | ICD-9-CM |
| 746.02 | Congenital stenosis of pulmonary valve | Diagnosis | ICD-9-CM |
| 746.09 | Other congenital anomalies of pulmonary valve | Diagnosis | ICD-9-CM |
| 746.1 | Congenital tricuspid atresia and stenosis | Diagnosis | ICD-9-CM |
| 746.2 | Ebstein's anomaly | Diagnosis | ICD-9-CM |
| 746.3 | Congenital stenosis of aortic valve | Diagnosis | ICD-9-CM |
| 746.4 | Congenital insufficiency of aortic valve | Diagnosis | ICD-9-CM |
| 746.5 | Congenital mitral stenosis | Diagnosis | ICD-9-CM |
| 746.6 | Congenital mitral insufficiency | Diagnosis | ICD-9-CM |
| 746.7 | Hypoplastic left heart syndrome | Diagnosis | ICD-9-CM |
| 746.8 | Other specified congenital anomaly of heart | Diagnosis | ICD-9-CM |
| 746.81 | Congenital subaortic stenosis | Diagnosis | ICD-9-CM |
| 746.82 | Cor triatriatum | Diagnosis | ICD-9-CM |
| 746.83 | Congenital infundibular pulmonic stenosis | Diagnosis | ICD-9-CM |
| 746.84 | Congenital obstructive anomalies of heart, not elsewhere classified | Diagnosis | ICD-9-CM |
| 746.85 | Congenital coronary artery anomaly | Diagnosis | ICD-9-CM |
| 746.86 | Congenital heart block | Diagnosis | ICD-9-CM |
| | - | Diagnosis | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 746.87 | Congenital malposition of heart and cardiac apex | Diagnosis | ICD-9-CM |
| 746.89 | Other specified congenital anomaly of heart | Diagnosis | ICD-9-CM |
| 746.9 | Unspecified congenital anomaly of heart | Diagnosis | ICD-9-CM |
| 747 | Other congenital anomalies of circulatory system | Diagnosis | ICD-9-CM |
| 747.0 | Patent ductus arteriosus | Diagnosis | ICD-9-CM |
| 747.1 | Coarctation of aorta | Diagnosis | ICD-9-CM |
| 747.10 | Coarctation of aorta (preductal) (postductal) | Diagnosis | ICD-9-CM |
| 747.11 | Congenital interruption of aortic arch | Diagnosis | ICD-9-CM |
| 747.2 | Other congenital anomaly of aorta | Diagnosis | ICD-9-CM |
| 747.20 | Unspecified congenital anomaly of aorta | Diagnosis | ICD-9-CM |
| 747.21 | Congenital anomaly of aortic arch | Diagnosis | ICD-9-CM |
| 747.22 | Congenital atresia and stenosis of aorta | Diagnosis | ICD-9-CM |
| 747.29 | Other congenital anomaly of aorta | Diagnosis | ICD-9-CM |
| 747.3 | Anomalies of pulmonary artery | Diagnosis | ICD-9-CM |
| 747.31 | Pulmonary artery coarctation and atresia | Diagnosis | ICD-9-CM |
| 747.32 | Pulmonary arteriovenous malformation | Diagnosis | ICD-9-CM |
| 747.39 | Other anomalies of pulmonary artery and pulmonary circulation | Diagnosis | ICD-9-CM |
| 747.4 | Congenital anomalies of great veins | Diagnosis | ICD-9-CM |
| 747.40 | Congenital anomaly of great veins unspecified | Diagnosis | ICD-9-CM |
| 747.41 | Total congenital anomalous pulmonary venous connection | Diagnosis | ICD-9-CM |
| 747.42 | Partial congenital anomalous pulmonary venous connection | Diagnosis | ICD-9-CM |
| 747.49 | Other congenital anomalies of great veins | Diagnosis | ICD-9-CM |
| 747.89 | Other specified congenital anomaly of circulatory system | Diagnosis | ICD-9-CM |
| 747.9 | Unspecified congenital anomaly of circulatory system | Diagnosis | ICD-9-CM |
| 127.83 | Eisenmenger's syndrome | Diagnosis | ICD-10-CM |
| P09.5 | Abnormal findings on neonatal screening for critical congenital heart disease | Diagnosis | ICD-10-CM |
| | | 0 | |



| Code | Description | Code Category | Code Type |
|-------|--|---------------|-----------|
| Q20 | Congenital malformations of cardiac chambers and connections | Diagnosis | ICD-10-CM |
| Q20.0 | Common arterial trunk | Diagnosis | ICD-10-CM |
| Q20.1 | Double outlet right ventricle | Diagnosis | ICD-10-CM |
| Q20.2 | Double outlet left ventricle | Diagnosis | ICD-10-CM |
| Q20.3 | Discordant ventriculoarterial connection | Diagnosis | ICD-10-CM |
| Q20.4 | Double inlet ventricle | Diagnosis | ICD-10-CM |
| Q20.5 | Discordant atrioventricular connection | Diagnosis | ICD-10-CM |
| Q20.6 | Isomerism of atrial appendages | Diagnosis | ICD-10-CM |
| Q20.8 | Other congenital malformations of cardiac chambers and connections | Diagnosis | ICD-10-CM |
| Q20.9 | Congenital malformation of cardiac chambers and connections, unspecified | Diagnosis | ICD-10-CM |
| Q21 | Congenital malformations of cardiac septa | Diagnosis | ICD-10-CM |
| Q21.0 | Ventricular septal defect | Diagnosis | ICD-10-CM |
| Q21.1 | Atrial septal defect | Diagnosis | ICD-10-CM |
| Q21.2 | Atrioventricular septal defect | Diagnosis | ICD-10-CM |
| Q21.3 | Tetralogy of Fallot | Diagnosis | ICD-10-CM |
| Q21.4 | Aortopulmonary septal defect | Diagnosis | ICD-10-CM |
| Q21.8 | Other congenital malformations of cardiac septa | Diagnosis | ICD-10-CM |
| Q21.9 | Congenital malformation of cardiac septum, unspecified | Diagnosis | ICD-10-CM |
| Q22 | Congenital malformations of pulmonary and tricuspid valves | Diagnosis | ICD-10-CM |
| Q22.0 | Pulmonary valve atresia | Diagnosis | ICD-10-CM |
| Q22.1 | Congenital pulmonary valve stenosis | Diagnosis | ICD-10-CM |
| Q22.2 | Congenital pulmonary valve insufficiency | Diagnosis | ICD-10-CM |
| Q22.3 | Other congenital malformations of pulmonary valve | Diagnosis | ICD-10-CM |
| Q22.4 | Congenital tricuspid stenosis | Diagnosis | ICD-10-CM |
| Q22.5 | Ebstein's anomaly | Diagnosis | ICD-10-CM |
| Q22.6 | Hypoplastic right heart syndrome | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| Q22.8 | Other congenital malformations of tricuspid valve | Diagnosis | ICD-10-CM |
| Q22.9 | Congenital malformation of tricuspid valve, unspecified | Diagnosis | ICD-10-CM |
| Q23 | Congenital malformations of aortic and mitral valves | Diagnosis | ICD-10-CM |
| Q23.0 | Congenital stenosis of aortic valve | Diagnosis | ICD-10-CM |
| Q23.1 | Congenital insufficiency of aortic valve | Diagnosis | ICD-10-CM |
| Q23.2 | Congenital mitral stenosis | Diagnosis | ICD-10-CM |
| Q23.3 | Congenital mitral insufficiency | Diagnosis | ICD-10-CM |
| Q23.4 | Hypoplastic left heart syndrome | Diagnosis | ICD-10-CM |
| Q23.8 | Other congenital malformations of aortic and mitral valves | Diagnosis | ICD-10-CM |
| Q23.9 | Congenital malformation of aortic and mitral valves, unspecified | Diagnosis | ICD-10-CM |
| Q24 | Other congenital malformations of heart | Diagnosis | ICD-10-CM |
| Q24.0 | Dextrocardia | Diagnosis | ICD-10-CM |
| Q24.1 | Levocardia | Diagnosis | ICD-10-CM |
| Q24.2 | Cor triatriatum | Diagnosis | ICD-10-CM |
| Q24.3 | Pulmonary infundibular stenosis | Diagnosis | ICD-10-CM |
| Q24.4 | Congenital subaortic stenosis | Diagnosis | ICD-10-CM |
| Q24.5 | Malformation of coronary vessels | Diagnosis | ICD-10-CM |
| Q24.6 | Congenital heart block | Diagnosis | ICD-10-CM |
| Q24.8 | Other specified congenital malformations of heart | Diagnosis | ICD-10-CM |
| Q24.9 | Congenital malformation of heart, unspecified | Diagnosis | ICD-10-CM |
| Q25 | Congenital malformations of great arteries | Diagnosis | ICD-10-CM |
| Q25.0 | Patent ductus arteriosus | Diagnosis | ICD-10-CM |
| Q25.1 | Coarctation of aorta | Diagnosis | ICD-10-CM |
| Q25.2 | Atresia of aorta | Diagnosis | ICD-10-CM |
| Q25.21 | Interruption of aortic arch | Diagnosis | ICD-10-CM |
| Q25.29 | Other atresia of aorta | Diagnosis | ICD-10-CM |
| | | 5/06/105/5 | |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| Q25.3 | Supravalvular aortic stenosis | Diagnosis | ICD-10-CM |
| Q25.4 | Other congenital malformations of aorta | Diagnosis | ICD-10-CM |
| Q25.40 | Congenital malformation of aorta unspecified | Diagnosis | ICD-10-CM |
| Q25.41 | Absence and aplasia of aorta | Diagnosis | ICD-10-CM |
| Q25.42 | Hypoplasia of aorta | Diagnosis | ICD-10-CM |
| Q25.43 | Congenital aneurysm of aorta | Diagnosis | ICD-10-CM |
| Q25.44 | Congenital dilation of aorta | Diagnosis | ICD-10-CM |
| Q25.45 | Double aortic arch | Diagnosis | ICD-10-CM |
| Q25.46 | Tortuous aortic arch | Diagnosis | ICD-10-CM |
| Q25.47 | Right aortic arch | Diagnosis | ICD-10-CM |
| Q25.48 | Anomalous origin of subclavian artery | Diagnosis | ICD-10-CM |
| Q25.49 | Other congenital malformations of aorta | Diagnosis | ICD-10-CM |
| Q25.5 | Atresia of pulmonary artery | Diagnosis | ICD-10-CM |
| Q25.6 | Stenosis of pulmonary artery | Diagnosis | ICD-10-CM |
| Q25.7 | Other congenital malformations of pulmonary artery | Diagnosis | ICD-10-CM |
| Q25.71 | Coarctation of pulmonary artery | Diagnosis | ICD-10-CM |
| Q25.72 | Congenital pulmonary arteriovenous malformation | Diagnosis | ICD-10-CM |
| Q25.79 | Other congenital malformations of pulmonary artery | Diagnosis | ICD-10-CM |
| Q25.8 | Other congenital malformations of other great arteries | Diagnosis | ICD-10-CM |
| Q25.9 | Congenital malformation of great arteries, unspecified | Diagnosis | ICD-10-CM |
| Q26 | Congenital malformations of great veins | Diagnosis | ICD-10-CM |
| Q26.0 | Congenital stenosis of vena cava | Diagnosis | ICD-10-CM |
| Q26.1 | Persistent left superior vena cava | Diagnosis | ICD-10-CM |
| Q26.2 | Total anomalous pulmonary venous connection | Diagnosis | ICD-10-CM |
| Q26.3 | Partial anomalous pulmonary venous connection | Diagnosis | ICD-10-CM |
| Q26.4 | Anomalous pulmonary venous connection, unspecified | Diagnosis | ICD-10-CM |
| | | 2.0010 | |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| Q26.8 | Other congenital malformations of great veins | Diagnosis | ICD-10-CM |
| Q26.9 | Congenital malformation of great vein, unspecified | Diagnosis | ICD-10-CM |
| | Atrial Fibrillation | | |
| 427.3 | Atrial fibrillation and flutter | Diagnosis | ICD-9-CM |
| 427.31 | Atrial fibrillation | Diagnosis | ICD-9-CM |
| 148.0 | Paroxysmal atrial fibrillation | Diagnosis | ICD-10-CM |
| 148.1 | Persistent atrial fibrillation | Diagnosis | ICD-10-CM |
| 148.11 | Longstanding persistent atrial fibrillation | Diagnosis | ICD-10-CM |
| 148.19 | Other persistent atrial fibrillation | Diagnosis | ICD-10-CM |
| 148.2 | Chronic atrial fibrillation | Diagnosis | ICD-10-CM |
| 148.20 | Chronic atrial fibrillation, unspecified | Diagnosis | ICD-10-CM |
| 148.21 | Permanent atrial fibrillation | Diagnosis | ICD-10-CM |
| 148.91 | Unspecified atrial fibrillation | Diagnosis | ICD-10-CM |
| | Long QT Syndrome | | |
| 426.82 | Long QT syndrome | Diagnosis | ICD-9-CM |
| 145.81 | Long QT syndrome | Diagnosis | ICD-10-CM |
| | Other Cardiac Arrhythmias | | |
| 426 | Conduction disorders | Diagnosis | ICD-9-CM |
| 426.0 | Atrioventricular block, complete | Diagnosis | ICD-9-CM |
| 426.1 | Atrioventricular block, other and unspecified | Diagnosis | ICD-9-CM |
| 426.10 | Unspecified atrioventricular block | Diagnosis | ICD-9-CM |
| 426.11 | First degree atrioventricular block | Diagnosis | ICD-9-CM |
| 426.12 | Mobitz (type) II atrioventricular block | Diagnosis | ICD-9-CM |
| 426.13 | Other second degree atrioventricular block | Diagnosis | ICD-9-CM |
| 426.2 | Left bundle branch hemiblock | Diagnosis | ICD-9-CM |
| 426.3 | Other left bundle branch block | Diagnosis | ICD-9-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 426.4 | Right bundle branch block | Diagnosis | ICD-9-CM |
| 426.5 | Bundle branch block, other and unspecified | Diagnosis | ICD-9-CM |
| 426.50 | Unspecified bundle branch block | Diagnosis | ICD-9-CM |
| 426.51 | Right bundle branch block and left posterior fascicular block | Diagnosis | ICD-9-CM |
| 426.52 | Right bundle branch block and left anterior fascicular block | Diagnosis | ICD-9-CM |
| 426.53 | Other bilateral bundle branch block | Diagnosis | ICD-9-CM |
| 426.54 | Trifascicular block | Diagnosis | ICD-9-CM |
| 426.6 | Other heart block | Diagnosis | ICD-9-CM |
| 426.7 | Anomalous atrioventricular excitation | Diagnosis | ICD-9-CM |
| 426.8 | Other specified conduction disorders | Diagnosis | ICD-9-CM |
| 426.81 | Lown-Ganong-Levine syndrome | Diagnosis | ICD-9-CM |
| 426.89 | Other specified conduction disorder | Diagnosis | ICD-9-CM |
| 426.9 | Unspecified conduction disorder | Diagnosis | ICD-9-CM |
| 427.0 | Paroxysmal supraventricular tachycardia | Diagnosis | ICD-9-CM |
| 427.1 | Paroxysmal ventricular tachycardia | Diagnosis | ICD-9-CM |
| 427.2 | Unspecified paroxysmal tachycardia | Diagnosis | ICD-9-CM |
| 427.32 | Atrial flutter | Diagnosis | ICD-9-CM |
| 427.4 | Ventricular fibrillation and flutter | Diagnosis | ICD-9-CM |
| 427.41 | Ventricular fibrillation | Diagnosis | ICD-9-CM |
| 427.42 | Ventricular flutter | Diagnosis | ICD-9-CM |
| 427.5 | Cardiac arrest | Diagnosis | ICD-9-CM |
| 427.6 | Premature beats | Diagnosis | ICD-9-CM |
| 427.60 | Unspecified premature beats | Diagnosis | ICD-9-CM |
| 427.61 | Supraventricular premature beats | Diagnosis | ICD-9-CM |
| 427.69 | Other premature beats | 0 | ICD-9-CM |
| 427.8 | Other specified cardiac dysrhythmias | Diagnosis | |
| ,.0 | | Diagnosis | ICD-9-CM |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 427.81 | Sinoatrial node dysfunction | Diagnosis | ICD-9-CM |
| 427.89 | Other specified cardiac dysrhythmias | Diagnosis | ICD-9-CM |
| 427.9 | Unspecified cardiac dysrhythmia | Diagnosis | ICD-9-CM |
| 144 | Atrioventricular and left bundle-branch block | Diagnosis | ICD-10-CM |
| 144.0 | Atrioventricular block, first degree | Diagnosis | ICD-10-CM |
| 144.1 | Atrioventricular block, second degree | Diagnosis | ICD-10-CM |
| 144.2 | Atrioventricular block, complete | Diagnosis | ICD-10-CM |
| 144.3 | Other and unspecified atrioventricular block | Diagnosis | ICD-10-CM |
| 144.30 | Unspecified atrioventricular block | Diagnosis | ICD-10-CM |
| 144.39 | Other atrioventricular block | Diagnosis | ICD-10-CM |
| 144.4 | Left anterior fascicular block | Diagnosis | ICD-10-CM |
| 144.5 | Left posterior fascicular block | Diagnosis | ICD-10-CM |
| 144.6 | Other and unspecified fasicular block | Diagnosis | ICD-10-CM |
| 144.60 | Unspecified fascicular block | Diagnosis | ICD-10-CM |
| 144.69 | Other fascicular block | Diagnosis | ICD-10-CM |
| 144.7 | Left bundle-branch block, unspecified | Diagnosis | ICD-10-CM |
| 145 | Other conduction disorders | Diagnosis | ICD-10-CM |
| 145.0 | Right fascicular block | Diagnosis | ICD-10-CM |
| 145.1 | Other and unspecified right bundle-branch block | Diagnosis | ICD-10-CM |
| 145.10 | Unspecified right bundle-branch block | Diagnosis | ICD-10-CM |
| 145.19 | Other right bundle-branch block | Diagnosis | ICD-10-CM |
| 145.2 | Bifascicular block | Diagnosis | ICD-10-CM |
| 145.3 | Trifascicular block | Diagnosis | ICD-10-CM |
| 145.4 | Nonspecific intraventricular block | Diagnosis | ICD-10-CM |
| 145.5 | Other specified heart block | Diagnosis | ICD-10-CM |
| 145.6 | Pre-excitation syndrome | Diagnosis | ICD-10-CM |
| | | DiagilOSIS | |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| 145.8 | Other specified conduction disorders | Diagnosis | ICD-10-CM |
| 145.89 | Other specified conduction disorders | Diagnosis | ICD-10-CM |
| 145.9 | Conduction disorder, unspecified | Diagnosis | ICD-10-CM |
| 146 | Cardiac arrest | Diagnosis | ICD-10-CM |
| 146.2 | Cardiac arrest due to underlying cardiac condition | Diagnosis | ICD-10-CM |
| 146.8 | Cardiac arrest due to other underlying condition | Diagnosis | ICD-10-CM |
| 146.9 | Cardiac arrest, cause unspecified | Diagnosis | ICD-10-CM |
| 147 | Paroxysmal tachycardia | Diagnosis | ICD-10-CM |
| 147.0 | Re-entry ventricular arrhythmia | Diagnosis | ICD-10-CM |
| 147.1 | Supraventricular tachycardia | Diagnosis | ICD-10-CM |
| 147.2 | Ventricular tachycardia | Diagnosis | ICD-10-CM |
| 147.9 | Paroxysmal tachycardia, unspecified | Diagnosis | ICD-10-CM |
| 148 | Atrial fibrillation and flutter | Diagnosis | ICD-10-CM |
| 148.3 | Typical atrial flutter | Diagnosis | ICD-10-CM |
| 148.4 | Atypical atrial flutter | Diagnosis | ICD-10-CM |
| 148.9 | Unspecified atrial fibrillation and atrial flutter | Diagnosis | ICD-10-CM |
| 148.92 | Unspecified atrial flutter | Diagnosis | ICD-10-CM |
| 149 | Other cardiac arrhythmias | Diagnosis | ICD-10-CM |
| 149.0 | Ventricular fibrillation and flutter | Diagnosis | ICD-10-CM |
| 149.01 | Ventricular fibrillation | Diagnosis | ICD-10-CM |
| 149.02 | Ventricular flutter | Diagnosis | ICD-10-CM |
| 149.1 | Atrial premature depolarization | Diagnosis | ICD-10-CM |
| 149.2 | Junctional premature depolarization | Diagnosis | ICD-10-CM |
| 149.3 | Ventricular premature depolarization | Diagnosis | ICD-10-CM |
| 149.4 | Other and unspecified premature depolarization | Diagnosis | ICD-10-CM |
| 149.40 | Unspecified premature depolarization | 6 | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 149.49 | Other premature depolarization | Diagnosis | ICD-10-CM |
| 149.5 | Sick sinus syndrome | Diagnosis | ICD-10-CM |
| 149.8 | Other specified cardiac arrhythmias | Diagnosis | ICD-10-CM |
| 149.9 | Cardiac arrhythmia, unspecified | Diagnosis | ICD-10-CM |
| R00 | Abnormalities of heart beat | Diagnosis | ICD-10-CM |
| R00.0 | Tachycardia, unspecified | Diagnosis | ICD-10-CM |
| R00.1 | Bradycardia, unspecified | Diagnosis | ICD-10-CM |
| R00.2 | Palpitations | Diagnosis | ICD-10-CM |
| R00.8 | Other abnormalities of heart beat | Diagnosis | ICD-10-CM |
| R00.9 | Unspecified abnormalities of heart beat | Diagnosis | ICD-10-CM |
| | Composite Cardiac Arrhythmias | | |
| 426 | Conduction disorders | Diagnosis | ICD-9-CM |
| 426.0 | Atrioventricular block, complete | Diagnosis | ICD-9-CM |
| 426.1 | Atrioventricular block, other and unspecified | Diagnosis | ICD-9-CM |
| 426.10 | Unspecified atrioventricular block | Diagnosis | ICD-9-CM |
| 426.11 | First degree atrioventricular block | Diagnosis | ICD-9-CM |
| 426.12 | Mobitz (type) II atrioventricular block | Diagnosis | ICD-9-CM |
| 426.13 | Other second degree atrioventricular block | Diagnosis | ICD-9-CM |
| 426.2 | Left bundle branch hemiblock | Diagnosis | ICD-9-CM |
| 426.3 | Other left bundle branch block | Diagnosis | ICD-9-CM |
| 426.4 | Right bundle branch block | Diagnosis | ICD-9-CM |
| 426.5 | Bundle branch block, other and unspecified | Diagnosis | ICD-9-CM |
| 426.50 | Unspecified bundle branch block | Diagnosis | ICD-9-CM |
| 426.51 | Right bundle branch block and left posterior fascicular block | Diagnosis | ICD-9-CM |
| 426.52 | Right bundle branch block and left anterior fascicular block | Diagnosis | ICD-9-CM |
| 426.53 | Other bilateral bundle branch block | Diagnosis | ICD-9-CM |
| 426.54 | Trifascicular block | Diagnosis | ICD-9-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 426.6 | Other heart block | Diagnosis | ICD-9-CM |
| 426.7 | Anomalous atrioventricular excitation | Diagnosis | ICD-9-CM |
| 426.8 | Other specified conduction disorders | Diagnosis | ICD-9-CM |
| 426.81 | Lown-Ganong-Levine syndrome | Diagnosis | ICD-9-CM |
| 426.82 | Long QT syndrome | Diagnosis | ICD-9-CM |
| 426.89 | Other specified conduction disorder | Diagnosis | ICD-9-CM |
| 426.9 | Unspecified conduction disorder | Diagnosis | ICD-9-CM |
| 427.0 | Paroxysmal supraventricular tachycardia | Diagnosis | ICD-9-CM |
| 427.1 | Paroxysmal ventricular tachycardia | Diagnosis | ICD-9-CM |
| 427.2 | Unspecified paroxysmal tachycardia | Diagnosis | ICD-9-CM |
| 427.3 | Atrial fibrillation and flutter | Diagnosis | ICD-9-CM |
| 427.31 | Atrial fibrillation | Diagnosis | ICD-9-CM |
| 427.32 | Atrial flutter | Diagnosis | ICD-9-CM |
| 427.4 | Ventricular fibrillation and flutter | Diagnosis | ICD-9-CM |
| 427.41 | Ventricular fibrillation | Diagnosis | ICD-9-CM |
| 427.42 | Ventricular flutter | Diagnosis | ICD-9-CM |
| 427.5 | Cardiac arrest | Diagnosis | ICD-9-CM |
| 427.6 | Premature beats | Diagnosis | ICD-9-CM |
| 427.60 | Unspecified premature beats | Diagnosis | ICD-9-CM |
| 427.61 | Supraventricular premature beats | Diagnosis | ICD-9-CM |
| 427.69 | Other premature beats | Diagnosis | ICD-9-CM |
| 427.8 | Other specified cardiac dysrhythmias | Diagnosis | ICD-9-CM |
| 427.81 | Sinoatrial node dysfunction | Diagnosis | ICD-9-CM |
| 427.89 | Other specified cardiac dysrhythmias | Diagnosis | ICD-9-CM |
| 427.9 | Unspecified cardiac dysrhythmia | Diagnosis | ICD-9-CM |
| 144 | Atrioventricular and left bundle-branch block | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|--------|---|---------------|-------------|
| 144.0 | Atrioventricular block, first degree | Diagnosis | ICD-10-CM |
| 144.1 | Atrioventricular block, second degree | Diagnosis | ICD-10-CM |
| 144.2 | Atrioventricular block, complete | Diagnosis | ICD-10-CM |
| 144.3 | Other and unspecified atrioventricular block | Diagnosis | ICD-10-CM |
| 144.30 | Unspecified atrioventricular block | Diagnosis | ICD-10-CM |
| 144.39 | Other atrioventricular block | Diagnosis | ICD-10-CM |
| 144.4 | Left anterior fascicular block | Diagnosis | ICD-10-CM |
| 144.5 | Left posterior fascicular block | Diagnosis | ICD-10-CM |
| 144.6 | Other and unspecified fasicular block | Diagnosis | ICD-10-CM |
| 144.60 | Unspecified fascicular block | Diagnosis | ICD-10-CM |
| 144.69 | Other fascicular block | Diagnosis | ICD-10-CM |
| 144.7 | Left bundle-branch block, unspecified | Diagnosis | ICD-10-CM |
| 145 | Other conduction disorders | Diagnosis | ICD-10-CM |
| 145.0 | Right fascicular block | Diagnosis | ICD-10-CM |
| 145.1 | Other and unspecified right bundle-branch block | Diagnosis | ICD-10-CM |
| 145.10 | Unspecified right bundle-branch block | Diagnosis | ICD-10-CM |
| 145.19 | Other right bundle-branch block | Diagnosis | ICD-10-CM |
| 145.2 | Bifascicular block | Diagnosis | ICD-10-CM |
| 145.3 | Trifascicular block | Diagnosis | ICD-10-CM |
| 145.4 | Nonspecific intraventricular block | Diagnosis | ICD-10-CM |
| 145.5 | Other specified heart block | Diagnosis | ICD-10-CM |
| 145.6 | Pre-excitation syndrome | Diagnosis | ICD-10-CM |
| 145.8 | Other specified conduction disorders | Diagnosis | ICD-10-CM |
| 145.81 | Long QT syndrome | Diagnosis | ICD-10-CM |
| 145.89 | Other specified conduction disorders | Diagnosis | ICD-10-CM |
| 145.9 | Conduction disorder, unspecified | Diagnosis | ICD-10-CIVI |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| 146 | Cardiac arrest | Diagnosis | ICD-10-CM |
| 146.2 | Cardiac arrest due to underlying cardiac condition | Diagnosis | ICD-10-CM |
| 146.8 | Cardiac arrest due to other underlying condition | Diagnosis | ICD-10-CM |
| 146.9 | Cardiac arrest, cause unspecified | Diagnosis | ICD-10-CM |
| 147 | Paroxysmal tachycardia | Diagnosis | ICD-10-CM |
| 147.0 | Re-entry ventricular arrhythmia | Diagnosis | ICD-10-CM |
| 147.1 | Supraventricular tachycardia | Diagnosis | ICD-10-CM |
| 147.2 | Ventricular tachycardia | Diagnosis | ICD-10-CM |
| 147.9 | Paroxysmal tachycardia, unspecified | Diagnosis | ICD-10-CM |
| 148 | Atrial fibrillation and flutter | Diagnosis | ICD-10-CM |
| 148.0 | Paroxysmal atrial fibrillation | Diagnosis | ICD-10-CM |
| 148.1 | Persistent atrial fibrillation | Diagnosis | ICD-10-CM |
| 148.11 | Longstanding persistent atrial fibrillation | Diagnosis | ICD-10-CM |
| 148.19 | Other persistent atrial fibrillation | Diagnosis | ICD-10-CM |
| 148.2 | Chronic atrial fibrillation | Diagnosis | ICD-10-CM |
| 148.20 | Chronic atrial fibrillation, unspecified | Diagnosis | ICD-10-CM |
| 148.21 | Permanent atrial fibrillation | Diagnosis | ICD-10-CM |
| 148.3 | Typical atrial flutter | Diagnosis | ICD-10-CM |
| 148.4 | Atypical atrial flutter | Diagnosis | ICD-10-CM |
| 148.9 | Unspecified atrial fibrillation and atrial flutter | Diagnosis | ICD-10-CM |
| 148.91 | Unspecified atrial fibrillation | Diagnosis | ICD-10-CM |
| 148.92 | Unspecified atrial flutter | Diagnosis | ICD-10-CM |
| 149 | Other cardiac arrhythmias | Diagnosis | ICD-10-CM |
| 149.0 | Ventricular fibrillation and flutter | Diagnosis | ICD-10-CM |
| 149.01 | Ventricular fibrillation | Diagnosis | ICD-10-CM |
| 149.02 | Ventricular flutter | | ICD-10-CM |
| - | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|-----------|---|---------------|-----------|
| 149.1 | Atrial premature depolarization | Diagnosis | ICD-10-CM |
| 149.2 | Junctional premature depolarization | Diagnosis | ICD-10-CM |
| 149.3 | Ventricular premature depolarization | Diagnosis | ICD-10-CM |
| 149.4 | Other and unspecified premature depolarization | Diagnosis | ICD-10-CM |
| 149.40 | Unspecified premature depolarization | Diagnosis | ICD-10-CM |
| 149.49 | Other premature depolarization | Diagnosis | ICD-10-CM |
| 149.5 | Sick sinus syndrome | Diagnosis | ICD-10-CM |
| 149.8 | Other specified cardiac arrhythmias | Diagnosis | ICD-10-CM |
| 149.9 | Cardiac arrhythmia, unspecified | Diagnosis | ICD-10-CM |
| R00 | Abnormalities of heart beat | Diagnosis | ICD-10-CM |
| R00.0 | Tachycardia, unspecified | Diagnosis | ICD-10-CM |
| R00.1 | Bradycardia, unspecified | Diagnosis | ICD-10-CM |
| R00.2 | Palpitations | Diagnosis | ICD-10-CM |
| R00.8 | Other abnormalities of heart beat | Diagnosis | ICD-10-CM |
| R00.9 | Unspecified abnormalities of heart beat | Diagnosis | ICD-10-CM |
| Pulmonary | y Hypertension | | |
| 416.0 | Primary pulmonary hypertension | Diagnosis | ICD-9-CM |
| 416.8 | Other chronic pulmonary heart diseases | Diagnosis | ICD-9-CM |
| 416.9 | Unspecified chronic pulmonary heart disease | Diagnosis | ICD-9-CM |
| 127.0 | Primary pulmonary hypertension | Diagnosis | ICD-10-CM |
| 127.2 | Other secondary pulmonary hypertension | Diagnosis | ICD-10-CM |
| 127.20 | Pulmonary hypertension, unspecified | Diagnosis | ICD-10-CM |
| 127.21 | Secondary pulmonary arterial hypertension | Diagnosis | ICD-10-CM |
| 127.22 | Pulmonary hypertension due to left heart disease | Diagnosis | ICD-10-CM |
| 127.23 | Pulmonary hypertension due to lung diseases and hypoxia | Diagnosis | ICD-10-CM |
| 127.24 | Chronic thromboembolic pulmonary hypertension | Diagnosis | ICD-10-CM |
| | | 0 | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 127.29 | Other secondary pulmonary hypertension | Diagnosis | ICD-10-CM |
| 127.81 | Cor pulmonale (chronic) | Diagnosis | ICD-10-CM |
| 127.89 | Other specified pulmonary heart diseases | Diagnosis | ICD-10-CM |
| 127.9 | Pulmonary heart disease, unspecified | Diagnosis | ICD-10-CM |
| P29.30 | Pulmonary hypertension of newborn | Diagnosis | ICD-10-CM |
| | Cardiomyopathy | | |
| 425 | Cardiomyopathy | Diagnosis | ICD-9-CM |
| 425.1 | Hypertrophic cardiomyopathy | Diagnosis | ICD-9-CM |
| 425.11 | Hypertrophic obstructive cardiomyopathy | Diagnosis | ICD-9-CM |
| 425.18 | Other hypertrophic cardiomyopathy | Diagnosis | ICD-9-CM |
| 425.2 | Obscure cardiomyopathy of Africa | Diagnosis | ICD-9-CM |
| 425.5 | Alcoholic cardiomyopathy | Diagnosis | ICD-9-CM |
| 425.7 | Nutritional and metabolic cardiomyopathy | Diagnosis | ICD-9-CM |
| 425.8 | Cardiomyopathy in other diseases classified elsewhere | Diagnosis | ICD-9-CM |
| 425.9 | Unspecified secondary cardiomyopathy | Diagnosis | ICD-9-CM |
| 674.5 | Peripartum cardiomyopathy | Diagnosis | ICD-9-CM |
| 674.50 | Peripartum cardiomyopathy, unspecified as to episode of care or not applicable | - | |
| | | Diagnosis | ICD-9-CM |
| 674.51 | Peripartum cardiomyopathy, delivered, with or without mention of antepartum condition | Diagnosis | ICD-9-CM |
| 674.52 | Peripartum cardiomyopathy, delivered, with mention of postpartum condition | Diagnosis | ICD-9-CM |
| 674.53 | Peripartum cardiomyopathy, antepartum condition or complication | Diagnosis | ICD-9-CM |
| 674.54 | Peripartum cardiomyopathy, postpartum condition or complication | Diagnosis | ICD-9-CM |
| A36.81 | Diphtheritic cardiomyopathy | Diagnosis | ICD-10-CM |
| B33.24 | Viral cardiomyopathy | Diagnosis | ICD-10-CM |
| 125.5 | Ischemic cardiomyopathy | Diagnosis | ICD-10-CM |
| 142 | Cardiomyopathy | Diagnosis | ICD-10-CM |
| 142.0 | Dilated cardiomyopathy | Diagnosis | ICD-10-CM |
| | | 2.2810010 | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 142.1 | Obstructive hypertrophic cardiomyopathy | Diagnosis | ICD-10-CM |
| 142.2 | Other hypertrophic cardiomyopathy | Diagnosis | ICD-10-CM |
| 142.3 | Endomyocardial (eosinophilic) disease | Diagnosis | ICD-10-CM |
| 142.4 | Endocardial fibroelastosis | Diagnosis | ICD-10-CM |
| 142.5 | Other restrictive cardiomyopathy | Diagnosis | ICD-10-CM |
| 142.6 | Alcoholic cardiomyopathy | Diagnosis | ICD-10-CM |
| 142.7 | Cardiomyopathy due to drug and external agent | Diagnosis | ICD-10-CM |
| 142.8 | Other cardiomyopathies | Diagnosis | ICD-10-CM |
| 142.9 | Cardiomyopathy, unspecified | Diagnosis | ICD-10-CM |
| 143 | Cardiomyopathy in diseases classified elsewhere | Diagnosis | ICD-10-CM |
| 090.3 | Peripartum cardiomyopathy | Diagnosis | ICD-10-CM |
| | Coronary Artery Disease | | |
| 410 | Acute myocardial infarction | Diagnosis | ICD-9-CM |
| 410.0 | Acute myocardial infarction of anterolateral wall | Diagnosis | ICD-9-CM |
| 410.00 | Acute myocardial infarction of anterolateral wall, episode of care unspecified | Diagnosis | ICD-9-CM |
| 410.01 | Acute myocardial infarction of anterolateral wall, initial episode of care | Diagnosis | ICD-9-CM |
| 410.02 | Acute myocardial infarction of anterolateral wall, subsequent episode of care | Diagnosis | ICD-9-CM |
| 410.1 | Acute myocardial infarction of other anterior wall | Diagnosis | ICD-9-CM |
| 410.10 | Acute myocardial infarction of other anterior wall, episode of care unspecified | Diagnosis | ICD-9-CM |
| 410.11 | Acute myocardial infarction of other anterior wall, initial episode of care | Diagnosis | ICD-9-CM |
| 410.12 | Acute myocardial infarction of other anterior wall, subsequent episode of care | Diagnosis | ICD-9-CM |
| 410.2 | Acute myocardial infarction of inferolateral wall | Diagnosis | ICD-9-CM |
| 410.20 | Acute myocardial infarction of inferolateral wall, episode of care unspecified | Diagnosis | ICD-9-CM |
| 410.21 | Acute myocardial infarction of inferolateral wall, initial episode of care | Diagnosis | ICD-9-CM |
| 410.22 | Acute myocardial infarction of inferolateral wall, subsequent episode of care | Diagnosis | ICD-9-CM |
| 410.3 | Acute myocardial infarction of inferoposterior wall | Diagnosis | ICD-9-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| 410.30 | Acute myocardial infarction of inferoposterior wall, episode of care unspecified | Diagnosis | ICD-9-CM |
| 410.31 | Acute myocardial infarction of inferoposterior wall, initial episode of care | Diagnosis | ICD-9-CM |
| 410.32 | Acute myocardial infarction of inferoposterior wall, subsequent episode of care | Diagnosis | ICD-9-CM |
| 410.4 | Acute myocardial infarction of other inferior wall | Diagnosis | ICD-9-CM |
| 410.40 | Acute myocardial infarction of other inferior wall, episode of care unspecified | Diagnosis | ICD-9-CM |
| 410.41 | Acute myocardial infarction of other inferior wall, initial episode of care | Diagnosis | ICD-9-CM |
| 410.42 | Acute myocardial infarction of other inferior wall, subsequent episode of care | Diagnosis | ICD-9-CM |
| 410.5 | Acute myocardial infarction of other lateral wall | Diagnosis | ICD-9-CM |
| 410.50 | Acute myocardial infarction of other lateral wall, episode of care unspecified | Diagnosis | ICD-9-CM |
| 410.51 | Acute myocardial infarction of other lateral wall, initial episode of care | Diagnosis | ICD-9-CM |
| 410.52 | Acute myocardial infarction of other lateral wall, subsequent episode of care | Diagnosis | ICD-9-CM |
| 410.6 | Acute myocardial infarction, true posterior wall infarction | - | |
| | | Diagnosis | ICD-9-CM |
| 410.60 | Acute myocardial infarction, true posterior wall infarction, episode of care unspecified | Diagnosis | ICD-9-CM |
| 410.61 | Acute myocardial infarction, true posterior wall infarction, initial episode of care | | |
| | | Diagnosis | ICD-9-CM |
| 410.62 | Acute myocardial infarction, true posterior wall infarction, subsequent episode of care | Diagnosis | ICD-9-CM |
| 410.7 | Acute myocardial infarction, subendocardial infarction | Diagnosis | ICD-9-CM |
| 410.70 | Acute myocardial infarction, subendocardial infarction, episode of care unspecified | Diagnosis | ICD-9-CM |
| 410.71 | Acute myocardial infarction, subendocardial infarction, initial episode of care | Diagnosis | ICD-9-CM |
| 410.72 | Acute myocardial infarction, subendocardial infarction, subsequent episode of care | Diagnosis | ICD-9-CM |
| 410.8 | Acute myocardial infarction of other specified sites | Diagnosis | ICD-9-CM |
| 410.80 | Acute myocardial infarction of other specified sites, episode of care unspecified | Diagnosis | ICD-9-CM |
| 410.81 | Acute myocardial infarction of other specified sites, initial episode of care | Diagnosis | ICD-9-CM |
| 410.82 | Acute myocardial infarction of other specified sites, subsequent episode of care | Diagnosis | ICD-9-CM |
| 410.9 | Acute myocardial infarction, unspecified site | Diagnosis | ICD-9-CM |
| 410.90 | Acute myocardial infarction, unspecified site, episode of care unspecified | Diagnosis | ICD-9-CM |
| | | 0 | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 410.91 | Acute myocardial infarction, unspecified site, initial episode of care | Diagnosis | ICD-9-CM |
| 410.92 | Acute myocardial infarction, unspecified site, subsequent episode of care | Diagnosis | ICD-9-CM |
| 411 | Other acute and subacute forms of ischemic heart disease | Diagnosis | ICD-9-CM |
| 411.0 | Postmyocardial infarction syndrome | Diagnosis | ICD-9-CM |
| 411.1 | Intermediate coronary syndrome | Diagnosis | ICD-9-CM |
| 411.8 | Other acute and subacute forms of ischemic heart disease | Diagnosis | ICD-9-CM |
| 411.81 | Acute coronary occlusion without myocardial infarction | Diagnosis | ICD-9-CM |
| 411.89 | Other acute and subacute form of ischemic heart disease | Diagnosis | ICD-9-CM |
| 412 | Old myocardial infarction | Diagnosis | ICD-9-CM |
| 413 | Angina pectoris | Diagnosis | ICD-9-CM |
| 413.0 | Angina decubitus | Diagnosis | ICD-9-CM |
| 413.1 | Prinzmetal angina | Diagnosis | ICD-9-CM |
| 413.9 | Other and unspecified angina pectoris | Diagnosis | ICD-9-CM |
| 414 | Other forms of chronic ischemic heart disease | Diagnosis | ICD-9-CM |
| 414.0 | Coronary atherosclerosis | Diagnosis | ICD-9-CM |
| 414.00 | Coronary atherosclerosis of unspecified type of vessel, native or graft | Diagnosis | ICD-9-CM |
| 414.01 | Coronary atherosclerosis of native coronary artery | Diagnosis | ICD-9-CM |
| 414.02 | Coronary atherosclerosis of autologous vein bypass graft | Diagnosis | ICD-9-CM |
| 414.03 | Coronary atherosclerosis of nonautologous biological bypass graft | Diagnosis | ICD-9-CM |
| 414.04 | Coronary atherosclerosis of artery bypass graft | Diagnosis | ICD-9-CM |
| 414.05 | Coronary atherosclerosis of unspecified type of bypass graft | Diagnosis | ICD-9-CM |
| 414.06 | Coronary atherosclerosis, of native coronary artery of transplanted heart | Diagnosis | ICD-9-CM |
| 414.07 | Coronary atherosclerosis, of bypass graft (artery) (vein) of transplanted heart | Diagnosis | ICD-9-CM |
| 414.1 | Aneurysm and dissection of heart | Diagnosis | ICD-9-CM |
| 414.10 | Aneurysm of heart | Diagnosis | ICD-9-CM |
| 414.11 | Aneurysm of coronary vessels | Diagnosis | ICD-9-CM |
| | | 2.00.0010 | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 414.12 | Dissection of coronary artery | Diagnosis | ICD-9-CM |
| 414.19 | Other aneurysm of heart | Diagnosis | ICD-9-CM |
| 414.2 | Chronic total occlusion of coronary artery | Diagnosis | ICD-9-CM |
| 414.3 | Coronary atherosclerosis due to lipid rich plaque | Diagnosis | ICD-9-CM |
| 414.4 | Coronary atherosclerosis due to calcified coronary lesion | Diagnosis | ICD-9-CM |
| 414.8 | Other specified forms of chronic ischemic heart disease | Diagnosis | ICD-9-CM |
| 414.9 | Unspecified chronic ischemic heart disease | Diagnosis | ICD-9-CM |
| 120 | Angina pectoris | Diagnosis | ICD-10-CM |
| 120.0 | Unstable angina | Diagnosis | ICD-10-CM |
| 120.1 | Angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| 120.8 | Other forms of angina pectoris | Diagnosis | ICD-10-CM |
| 120.9 | Angina pectoris, unspecified | Diagnosis | ICD-10-CM |
| 121 | Acute myocardial infarction | Diagnosis | ICD-10-CM |
| 121.0 | ST elevation (STEMI) myocardial infarction of anterior wall | Diagnosis | ICD-10-CM |
| 121.01 | ST elevation (STEMI) myocardial infarction involving left main coronary artery | C C | |
| | | Diagnosis | ICD-10-CM |
| 121.02 | ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery | Diagnosis | ICD-10-CM |
| 121.09 | ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall | 5 | |
| 121.1 | ST elevation (STEMI) myocardial infarction of inferior wall | Diagnosis | ICD-10-CM |
| 121.11 | ST elevation (STEMI) myocardial infarction involving right coronary artery | Diagnosis | ICD-10-CM |
| | | Diagnosis | ICD-10-CM |
| 121.19 | ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall | Diagnosis | ICD-10-CM |
| 121.2 | ST elevation (STEMI) myocardial infarction of other sites | Diagnosis | ICD-10-CM |
| 121.21 | ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery | Diagnosis | ICD-10-CM |
| 121.29 | ST elevation (STEMI) myocardial infarction involving other sites | Diagnosis | ICD-10-CM |
| 121.3 | ST elevation (STEMI) myocardial infarction of unspecified site | Diagnosis | ICD-10-CM |
| 121.4 | Non-ST elevation (NSTEMI) myocardial infarction | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 121.9 | Acute myocardial infarction, unspecified | Diagnosis | ICD-10-CM |
| I21.A | Other type of myocardial infarction | Diagnosis | ICD-10-CM |
| I21.A1 | Myocardial infarction type 2 | Diagnosis | ICD-10-CM |
| I21.A9 | Other myocardial infarction type | | |
| | | Diagnosis | ICD-10-CM |
| 122 | Subsequent ST elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction | Diagnosis | ICD-10-CM |
| 122.0 | Subsequent ST elevation (STEMI) myocardial infarction of anterior wall | Diagnosis | ICD-10-CM |
| 122.1 | Subsequent ST elevation (STEMI) myocardial infarction of inferior wall | Diagnosis | ICD-10-CM |
| 122.2 | Subsequent non-ST elevation (NSTEMI) myocardial infarction | Diagnosis | ICD-10-CM |
| 122.8 | Subsequent ST elevation (STEMI) myocardial infarction of other sites | Diagnosis | ICD-10-CM |
| 122.9 | Subsequent ST elevation (STEMI) myocardial infarction of unspecified site | Diagnosis | ICD-10-CM |
| 123 | Certain current complications following ST elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction (within the 28 day period) | Diagnosis | ICD-10-CM |
| 123.0 | Hemopericardium as current complication following acute myocardial infarction | Diagnosis | ICD-10-CM |
| 123.1 | Atrial septal defect as current complication following acute myocardial infarction | Diagnosis | ICD-10-CM |
| 123.2 | Ventricular septal defect as current complication following acute myocardial infarction | Diagnosis | ICD-10-CM |
| 123.3 | Rupture of cardiac wall without hemopericardium as current complication following acute myocardial infarction | Diagnosis | ICD-10-CM |
| 123.4 | Rupture of chordae tendineae as current complication following acute myocardial infarction | Diagnosis | ICD-10-CM |
| 123.5 | Rupture of papillary muscle as current complication following acute myocardial infarction | Diagnosis | ICD-10-CM |
| 123.6 | Thrombosis of atrium, auricular appendage, and ventricle as current complications following acute myocardial infarction | Diagnosis | ICD-10-CM |
| 123.7 | Postinfarction angina | Diagnosis | ICD-10-CM |
| 123.8 | Other current complications following acute myocardial infarction | Diagnosis | ICD-10-CM |
| 124 | Other acute ischemic heart diseases | Diagnosis | ICD-10-CM |
| 124.0 | Acute coronary thrombosis not resulting in myocardial infarction | Diagnosis | ICD-10-CM |
| 124.1 | Dressler's syndrome | Diagnosis | ICD-10-CM |
| 124.8 | Other forms of acute ischemic heart disease | Diagnosis | ICD-10-CM |
| 124.9 | Acute ischemic heart disease, unspecified | C | |
| | | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|---------|---|------------------------|------------------------|
| 125 | Chronic ischemic heart disease | Diagnosis | ICD-10-CM |
| 125.1 | Atherosclerotic heart disease of native coronary artery | Diagnosis | ICD-10-CM |
| 125.10 | Atherosclerotic heart disease of native coronary artery without angina pectoris | Diagnosis | ICD-10-CM |
| 125.11 | Atherosclerotic heart disease of native coronary artery with angina pectoris | Diagnosis | ICD-10-CM |
| 125.110 | Atherosclerotic heart disease of native coronary artery with unstable angina pectoris | Diagnosis | ICD-10-CIVI |
| 125.111 | Atherosclerotic heart disease of native coronary artery with angina pectoris with documented spasm | Diagnosis | ICD-10-CIVI |
| 125.118 | Atherosclerotic heart disease of native coronary artery with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| 125.119 | Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| 125.2 | Old myocardial infarction | Diagnosis | ICD-10-CM |
| 125.3 | Aneurysm of heart | Diagnosis | ICD-10-CM |
| 125.4 | Coronary artery aneurysm and dissection | Diagnosis | ICD-10-CM |
| 125.41 | Coronary artery aneurysm | C C | ICD-10-CIVI |
| 125.42 | Coronary artery dissection | Diagnosis | |
| 125.5 | Ischemic cardiomyopathy | Diagnosis | ICD-10-CM |
| 125.6 | Silent myocardial ischemia | Diagnosis | ICD-10-CM |
| 125.7 | Atherosclerosis of coronary artery bypass graft(s) and coronary artery of transplanted heart with angina pectoris | Diagnosis | ICD-10-CM |
| 125.70 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina pectoris | Diagnosis | ICD-10-CM ICD-10-CM |
| 125.700 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with unstable angina pectoris | Diagnosis Diagnosis | ICD-10-CM |
| 125.701 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina pectoris with documented spasm | Diagnosis | ICD-10-CIVI |
| 125.708 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| 125.709 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| 125.71 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with angina pectoris | Diagnosis | ICD-10-CM |
| 125.710 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with unstable angina pectoris | Diagnosis | ICD-10-CM |
| 125.711 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| 125.718 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| 125.719 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| 125.72 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with angina pectoris | U | |
| | | Diagnosis | |

Diagnosis ICD-10-CM



| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| 125.720 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with unstable angina pectoris | Diagnosis | ICD-10-CM |
| 125.721 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| 125.728 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| 125.729 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| 125.73 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with angina pectoris | Diagnosis | ICD-10-CM |
| 125.730 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unstable angina pectoris | Diagnosis | ICD-10-CM |
| 125.731 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| 125.738 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| 125.739 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| 125.75 | Atherosclerosis of native coronary artery of transplanted heart with angina pectoris | Diagnosis | ICD-10-CM |
| 125.750 | Atherosclerosis of native coronary artery of transplanted heart with unstable angina | Diagnosis | ICD-10-CM |
| 125.751 | Atherosclerosis of native coronary artery of transplanted heart with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| 125.758 | Atherosclerosis of native coronary artery of transplanted heart with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| 125.759 | Atherosclerosis of native coronary artery of transplanted heart with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| 125.76 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris | Diagnosis | ICD-10-CM |
| 125.760 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with unstable angina | Diagnosis | ICD-10-CM |
| I25.761 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| 125.768 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| 125.769 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| 125.79 | Atherosclerosis of other coronary artery bypass graft(s) with angina pectoris | Diagnosis | ICD-10-CM |
| 125.790 | Atherosclerosis of other coronary artery bypass graft(s) with unstable angina pectoris | Diagnosis | ICD-10-CM |
| 125.791 | Atherosclerosis of other coronary artery bypass graft(s) with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| 125.798 | Atherosclerosis of other coronary artery bypass graft(s) with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| 125.799 | Atherosclerosis of other coronary artery bypass graft(s) with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| 125.8 | Other forms of chronic ischemic heart disease | Diagnosis | ICD-10-CM |
| 125.81 | Atherosclerosis of other coronary vessels without angina pectoris | Diagnosis | ICD-10-CM |
| 125.810 | Atherosclerosis of coronary artery bypass graft(s) without angina pectoris | Diagnosis | ICD-10-CM |
| 125.811 | Atherosclerosis of native coronary artery of transplanted heart without angina pectoris | Diagnosis | ICD-10-CM |
| 125.812 | Atherosclerosis of bypass graft of coronary artery of transplanted heart without angina pectoris | Diagnosis | ICD-10-CM |
| 125.82 | Chronic total occlusion of coronary artery | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type | | | |
|--------|--|---------------|-----------|--|--|--|
| 125.83 | Coronary atherosclerosis due to lipid rich plaque | Diagnosis | ICD-10-CM | | | |
| 125.84 | Coronary atherosclerosis due to calcified coronary lesion | Diagnosis | ICD-10-CM | | | |
| 125.89 | Other forms of chronic ischemic heart disease | Diagnosis | ICD-10-CM | | | |
| 125.9 | Chronic ischemic heart disease, unspecified | Diagnosis | ICD-10-CM | | | |
| | Portal Hypertension | | | | | |
| 572.3 | Portal hypertension | Diagnosis | ICD-9-CM | | | |
| K76.6 | Portal hypertension | Diagnosis | ICD-10-CM | | | |
| | Anxiety Disorder | | | | | |
| 293.84 | Anxiety disorder in conditions classified elsewhere | | | | | |
| 300.00 | | Diagnosis | ICD-9-CM | | | |
| | Anxiety state, unspecified | Diagnosis | ICD-9-CM | | | |
| 300.01 | Panic disorder without agoraphobia | Diagnosis | ICD-9-CM | | | |
| 300.02 | Generalized anxiety disorder | Diagnosis | ICD-9-CM | | | |
| 300.09 | Other anxiety states | Diagnosis | ICD-9-CM | | | |
| 300.10 | Hysteria, unspecified | Diagnosis | ICD-9-CM | | | |
| 300.20 | Phobia, unspecified | Diagnosis | ICD-9-CM | | | |
| 300.21 | Agoraphobia with panic disorder | Diagnosis | ICD-9-CM | | | |
| 300.22 | Agoraphobia without mention of panic attacks | Diagnosis | ICD-9-CM | | | |
| 300.23 | Social phobia | Diagnosis | ICD-9-CM | | | |
| 300.29 | Other isolated or specific phobias | Diagnosis | ICD-9-CM | | | |
| 300.3 | Obsessive-compulsive disorders | Diagnosis | ICD-9-CM | | | |
| 308.0 | Predominant disturbance of emotions | Diagnosis | ICD-9-CM | | | |
| 308.1 | Predominant disturbance of consciousness as reaction to stress | Diagnosis | ICD-9-CM | | | |
| 308.2 | Predominant psychomotor disturbance as reaction to stress | Diagnosis | ICD-9-CM | | | |
| 308.3 | Other acute reactions to stress | Diagnosis | ICD-9-CM | | | |
| 308.4 | Mixed disorders as reaction to stress | Diagnosis | ICD-9-CM | | | |
| 308.9 | Unspecified acute reaction to stress | - | ICD-9-CM | | | |
| 308.9 | Unspecified acute reaction to stress | Diagnosis | ICD-9 | | | |



| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| 309.21 | Separation Anxiety Disorder | Diagnosis | ICD-9-CM |
| 309.81 | Posttraumatic stress disorder | Diagnosis | ICD-9-CM |
| 313.0 | Overanxious disorder specific to childhood and adolescence | Diagnosis | ICD-9-CM |
| 313.21 | Shyness disorder of childhood | Diagnosis | ICD-9-CM |
| 313.22 | Introverted disorder of childhood | Diagnosis | ICD-9-CM |
| F06.4 | Anxiety disorder due to known physiological condition | Diagnosis | ICD-10-CM |
| F40.00 | Agoraphobia, unspecified | Diagnosis | ICD-10-CM |
| F40.01 | Agoraphobia with panic disorder | Diagnosis | ICD-10-CM |
| F40.02 | Agoraphobia without panic disorder | Diagnosis | ICD-10-CM |
| F40.10 | Social phobia, unspecified | Diagnosis | ICD-10-CM |
| F40.11 | Social phobia, generalized | Diagnosis | ICD-10-CM |
| F40.210 | Arachnophobia | Diagnosis | ICD-10-CM |
| F40.218 | Other animal type phobia | Diagnosis | ICD-10-CM |
| F40.220 | Fear of thunderstorms | Diagnosis | ICD-10-CM |
| F40.228 | Other natural environment type phobia | Diagnosis | ICD-10-CM |
| F40.230 | Fear of blood | Diagnosis | ICD-10-CM |
| F40.231 | Fear of injections and transfusions | Diagnosis | ICD-10-CM |
| F40.232 | Fear of other medical care | Diagnosis | ICD-10-CM |
| F40.233 | Fear of injury | Diagnosis | ICD-10-CM |
| F40.240 | Claustrophobia | Diagnosis | ICD-10-CM |
| F40.241 | Acrophobia | Diagnosis | ICD-10-CM |
| F40.242 | Fear of bridges | Diagnosis | ICD-10-CM |
| F40.243 | Fear of flying | Diagnosis | ICD-10-CM |
| F40.248 | Other situational type phobia | Diagnosis | ICD-10-CM |
| F40.290 | Androphobia | Diagnosis | ICD-10-CM |
| F40.291 | Gynephobia | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| F40.298 | Other specified phobia | Diagnosis | ICD-10-CM |
| F40.8 | Other phobic anxiety disorders | Diagnosis | ICD-10-CM |
| F40.9 | Phobic anxiety disorder, unspecified | Diagnosis | ICD-10-CM |
| F41.0 | Panic disorder [episodic paroxysmal anxiety] | Diagnosis | ICD-10-CM |
| F41.1 | Generalized anxiety disorder | Diagnosis | ICD-10-CM |
| F41.3 | Other mixed anxiety disorders | Diagnosis | ICD-10-CM |
| F41.8 | Other specified anxiety disorders | Diagnosis | ICD-10-CM |
| F41.9 | Anxiety disorder, unspecified | Diagnosis | ICD-10-CM |
| F42 | Obsessive-compulsive disorder | Diagnosis | ICD-10-CM |
| F42.2 | Mixed obsessional thoughts and acts | Diagnosis | ICD-10-CM |
| F42.3 | Hoarding disorder | Diagnosis | ICD-10-CM |
| F42.4 | Excoriation (skin-picking) disorder | Diagnosis | ICD-10-CM |
| F42.8 | Other obsessive-compulsive disorder | Diagnosis | ICD-10-CM |
| F42.9 | Obsessive-compulsive disorder, unspecified | Diagnosis | ICD-10-CM |
| F43.0 | Acute stress reaction | Diagnosis | ICD-10-CM |
| F43.10 | Post-traumatic stress disorder, unspecified | Diagnosis | ICD-10-CM |
| F43.11 | Post-traumatic stress disorder, acute | Diagnosis | ICD-10-CM |
| F43.12 | Post-traumatic stress disorder, chronic | Diagnosis | ICD-10-CM |
| F44.9 | Dissociative and conversion disorder, unspecified | Diagnosis | ICD-10-CM |
| F93.0 | Separation anxiety disorder of childhood | Diagnosis | ICD-10-CM |
| | Tremor | | |
| 333.1 | Essential and other specified forms of tremor | Diagnosis | ICD-9-CM |
| G25.0 | Essential tremor | Diagnosis | ICD-10-CM |
| G25.1 | Drug-induced tremor | Diagnosis | ICD-10-CM |
| G25.2 | Other specified forms of tremor | Diagnosis | ICD-10-CM |
| R25.1 | Tremor, unspecified | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Codo Cotorer | Codo Turo |
|--------|--|---------------|-----------|
| Code | Description Migraine | Code Category | Code Type |
| 339 | Other headache syndromes | Diagnosis | ICD-9-CM |
| 339.0 | Cluster headaches and other trigeminal autonomic cephalgias | Diagnosis | ICD-9-CM |
| 339.00 | Cluster headache syndrome, unspecified | Diagnosis | ICD-9-CM |
| 339.01 | Episodic cluster headache | Diagnosis | ICD-9-CM |
| 339.02 | Chronic cluster headache | Diagnosis | ICD-9-CM |
| 339.03 | Episodic paroxysmal hemicrania | Diagnosis | ICD-9-CM |
| 339.04 | Chronic paroxysmal hemicrania | Diagnosis | ICD-9-CM |
| 339.05 | Short lasting unilateral neuralgiform headache with conjunctival injection and tearing | Diagnosis | ICD-9-CM |
| 339.09 | Other trigeminal autonomic cephalgias | Diagnosis | ICD-9-CM |
| 339.1 | Tension type headache | Diagnosis | ICD-9-CM |
| 339.10 | Tension type headache, unspecified | Diagnosis | ICD-9-CM |
| 339.11 | Episodic tension type headache | Diagnosis | ICD-9-CM |
| 339.12 | Chronic tension type headache | Diagnosis | ICD-9-CM |
| 339.2 | Post-traumatic headache | Diagnosis | ICD-9-CM |
| 339.20 | Post-traumatic headache, unspecified | Diagnosis | ICD-9-CM |
| 339.21 | Acute post-traumatic headache | Diagnosis | ICD-9-CM |
| 339.22 | Chronic post-traumatic headache | Diagnosis | ICD-9-CM |
| 339.3 | Drug induced headache, not elsewhere classified | Diagnosis | ICD-9-CM |
| 339.4 | Complicated headache syndromes | Diagnosis | ICD-9-CM |
| 339.41 | Hemicrania continua | Diagnosis | ICD-9-CM |
| 339.42 | New daily persistent headache | Diagnosis | ICD-9-CM |
| 339.43 | Primary thunderclap headache | Diagnosis | ICD-9-CM |
| 339.44 | Other complicated headache syndrome | Diagnosis | ICD-9-CM |
| 339.8 | Other specified headache syndromes | Diagnosis | ICD-9-CM |
| 339.81 | Hypnic headache | Diagnosis | ICD-9-CM |
| | | - | |



| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| 339.82 | Headache associated with sexual activity | Diagnosis | ICD-9-CM |
| 339.83 | Primary cough headache | Diagnosis | ICD-9-CM |
| 339.84 | Primary exertional headache | Diagnosis | ICD-9-CM |
| 339.85 | Primary stabbing headache | Diagnosis | ICD-9-CM |
| 339.89 | Other specified headache syndromes | Diagnosis | ICD-9-CM |
| 346 | Migraine | Diagnosis | ICD-9-CM |
| 346.0 | Migraine with aura | - | |
| | | Diagnosis | ICD-9-CM |
| 346.00 | Migraine with aura, without mention of intractable migraine without mention of status migrainosus | | |
| | | Diagnosis | ICD-9-CM |
| 346.01 | Migraine with aura, with intractable migraine, so stated, without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.02 | Migraine with aura, without mention of intractable migraine with status migrainosus | Diagnosis | ICD-9-CM |
| 346.03 | Migraine with aura, with intractable migraine, so stated, with status migrainosus | Diagnosis | ICD-9-CM |
| 346.1 | Migraine without aura | Diagnosis | ICD-9-CM |
| 346.10 | Migraine without aura, without mention of intractable migraine without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.11 | Migraine without aura, with intractable migraine, so stated, without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.12 | Migraine without aura, without mention of intractable migraine with status migrainosus | Diagnosis | ICD-9-CM |
| 346.13 | Migraine without aura, with intractable migraine, so stated, with status migrainosus | Diagnosis | ICD-9-CM |
| 346.2 | Variants of migraine, not elsewhere classified | Diagnosis | ICD-9-CM |
| 346.20 | Variants of migraine, not elsewhere classified, without mention of intractable migraine without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.21 | Variants of migraine, not elsewhere classified, with intractable migraine, so stated, without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.22 | Variants of migraine, not elsewhere classified, without mention of intractable migraine with status migrainosus | | |
| | | Diagnosis | ICD-9-CM |
| 346.23 | Variants of migraine, not elsewhere classified, with intractable migraine, so stated, with status migrainosus | Diagnosis | ICD-9-CM |
| 346.3 | Hemiplegic migraine | | |
| | | Diagnosis | ICD-9-CM |
| 346.30 | Hemiplegic migraine, without mention of intractable migraine without mention of status migrainosus | | |
| | | Diagnosis | ICD-9-CM |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|------------|
| 346.31 | Hemiplegic migraine, with intractable migraine, so stated, without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.32 | Hemiplegic migraine, without mention of intractable migraine with status migrainosus | Diagnosis | ICD-9-CM |
| 346.33 | Hemiplegic migraine, with intractable migraine, so stated, with status migrainosus | Diagnosis | ICD-9-CM |
| 346.4 | Menstrual migraine | Diagnosis | ICD-9-CM |
| 346.40 | Menstrual migraine, without mention of intractable migraine without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.41 | Menstrual migraine, with intractable migraine, so stated, without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.42 | Menstrual migraine, without mention of intractable migraine with status migrainosus | Diagnosis | ICD-9-CM |
| 346.43 | Menstrual migraine, with intractable migraine, so stated, with status migrainosus | Diagnosis | ICD-9-CM |
| 346.5 | Persistent migraine aura without cerebral infarction | Diagnosis | ICD-9-CM |
| 346.50 | Persistent migraine aura without cerebral infarction, without mention of intractable migraine without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.51 | Persistent migraine aura without cerebral infarction, with intractable migraine, so stated, without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.52 | Persistent migraine aura without cerebral infarction, without mention of intractable migraine with status migrainosus | Diagnosis | ICD-9-CM |
| 346.53 | Persistent migraine aura without cerebral infarction, with intractable migraine, so stated, with status migrainosus | Diagnosis | ICD-9-CM |
| 346.6 | Persistent migraine aura with cerebral infarction | Diagnosis | ICD-9-CM |
| 346.60 | Persistent migraine aura with cerebral infarction, without mention of intractable migraine without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.61 | Persistent migraine aura with cerebral infarction, with intractable migraine, so stated, without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.62 | Persistent migraine aura with cerebral infarction, without mention of intractable migraine with status migrainosus | Diagnosis | ICD-9-CM |
| 346.63 | Persistent migraine aura with cerebral infarction, with intractable migraine, so stated, with status migrainosus | Diagnosis | ICD-9-CM |
| 346.7 | Chronic migraine without aura | - | |
| | | Diagnosis | ICD-9-CM |
| 346.70 | Chronic migraine without aura, without mention of intractable migraine without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.71 | Chronic migraine without aura, with intractable migraine, so stated, without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.72 | Chronic migraine without aura, without mention of intractable migraine with status migrainosus | Diagnosis | ICD-9-CM |
| 346.73 | Chronic migraine without aura, with intractable migraine, so stated, with status migrainosus | Diagnosis | ICD-9-CM |
| 346.8 | Other forms of migraine | Diagnosis | ICD-9-CM |
| 346.80 | Other forms of migraine, without mention of intractable migraine without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.81 | Other forms of migraine, with intractable migraine, so stated, without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.82 | Other forms of migraine, without mention of intractable migraine with status migrainosus | Diagnosis | ICD-9-CM |
| | | Diagnosis | 100-3-0101 |



| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| 346.83 | Other forms of migraine, with intractable migraine, so stated, with status migrainosus | Diagnosis | ICD-9-CM |
| 346.9 | Migraine, unspecified | Diagnosis | ICD-9-CM |
| 346.90 | Migraine, unspecified without mention of intractable migraine without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.91 | Migraine, unspecified, with intractable migraine, so stated, without mention of status migrainosus | Diagnosis | ICD-9-CM |
| 346.92 | Migraine, unspecified, without mention of intractable migraine with status migrainosus | Diagnosis | ICD-9-CM |
| 346.93 | Migraine, unspecified, with intractable migraine, so stated, with status migrainosus | Diagnosis | ICD-9-CM |
| G43.001 | Migraine without aura, not intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.009 | Migraine without aura, not intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.011 | Migraine without aura, intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.019 | Migraine without aura, intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.101 | Migraine with aura, not intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.109 | Migraine with aura, not intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.111 | Migraine with aura, intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.119 | Migraine with aura, intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.401 | Hemiplegic migraine, not intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.409 | Hemiplegic migraine, not intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.411 | Hemiplegic migraine, intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.419 | Hemiplegic migraine, intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.501 | Persistent migraine aura without cerebral infarction, not intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.509 | Persistent migraine aura without cerebral infarction, not intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.511 | Persistent migraine aura without cerebral infarction, intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.519 | Persistent migraine aura without cerebral infarction, intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.601 | Persistent migraine aura with cerebral infarction, not intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.609 | Persistent migraine aura with cerebral infarction, not intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.611 | Persistent migraine aura with cerebral infarction, intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.619 | Persistent migraine aura with cerebral infarction, intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| | | 2.00.0000 | |



| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| G43.701 | Chronic migraine without aura, not intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.709 | Chronic migraine without aura, not intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.711 | Chronic migraine without aura, intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.719 | Chronic migraine without aura, intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.801 | Other migraine, not intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.809 | Other migraine, not intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.811 | Other migraine, intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.819 | Other migraine, intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.821 | Menstrual migraine, not intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.829 | Menstrual migraine, not intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.831 | Menstrual migraine, intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.839 | Menstrual migraine, intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.901 | Migraine, unspecified, not intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.909 | Migraine, unspecified, not intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.911 | Migraine, unspecified, intractable, with status migrainosus | Diagnosis | ICD-10-CM |
| G43.919 | Migraine, unspecified, intractable, without status migrainosus | Diagnosis | ICD-10-CM |
| G43.A0 | Cyclical vomiting, in migraine, not intractable | Diagnosis | ICD-10-CM |
| G43.A1 | Cyclical vomiting, in migraine, intractable | Diagnosis | ICD-10-CM |
| G43.B0 | Ophthalmoplegic migraine, not intractable | Diagnosis | ICD-10-CM |
| G43.B1 | Ophthalmoplegic migraine, intractable | Diagnosis | ICD-10-CM |
| G43.C0 | Periodic headache syndromes in child or adult, not intractable | Diagnosis | ICD-10-CM |
| G43.C1 | Periodic headache syndromes in child or adult, intractable | Diagnosis | ICD-10-CM |
| G43.D0 | Abdominal migraine, not intractable | Diagnosis | ICD-10-CM |
| G43.D1 | Abdominal migraine, intractable | Diagnosis | ICD-10-CM |
| G44.001 | Cluster headache syndrome, unspecified, intractable | Diagnosis | ICD-10-CM |
| G44.009 | Cluster headache syndrome, unspecified, not intractable | Diagnosis | ICD-10-CM |
| | | - | |



| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| G44.011 | Episodic cluster headache, intractable | Diagnosis | ICD-10-CM |
| G44.019 | Episodic cluster headache, not intractable | Diagnosis | ICD-10-CM |
| G44.021 | Chronic cluster headache, intractable | Diagnosis | ICD-10-CM |
| G44.029 | Chronic cluster headache, not intractable | Diagnosis | ICD-10-CM |
| G44.031 | Episodic paroxysmal hemicrania, intractable | Diagnosis | ICD-10-CM |
| G44.039 | Episodic paroxysmal hemicrania, not intractable | Diagnosis | ICD-10-CM |
| G44.041 | Chronic paroxysmal hemicrania, intractable | Diagnosis | ICD-10-CM |
| G44.049 | Chronic paroxysmal hemicrania, not intractable | Diagnosis | ICD-10-CM |
| G44.051 | Short lasting unilateral neuralgiform headache with conjunctival injection and tearing (SUNCT), intractable | Diagnosis | ICD-10-CM |
| G44.059 | Short lasting unilateral neuralgiform headache with conjunctival injection and tearing (SUNCT), not intractable | Diagnosis | ICD-10-CM |
| G44.091 | Other trigeminal autonomic cephalgias (TAC), intractable | Diagnosis | ICD-10-CM |
| G44.099 | Other trigeminal autonomic cephalgias (TAC), not intractable | Diagnosis | ICD-10-CM |
| G44.1 | Vascular headache, not elsewhere classified | Diagnosis | ICD-10-CM |
| G44.201 | Tension-type headache, unspecified, intractable | Diagnosis | ICD-10-CM |
| G44.209 | Tension-type headache, unspecified, not intractable | Diagnosis | ICD-10-CM |
| G44.211 | Episodic tension-type headache, intractable | Diagnosis | ICD-10-CM |
| G44.219 | Episodic tension-type headache, not intractable | Diagnosis | ICD-10-CM |
| G44.221 | Chronic tension-type headache, intractable | Diagnosis | ICD-10-CM |
| G44.229 | Chronic tension-type headache, not intractable | Diagnosis | ICD-10-CM |
| G44.301 | Post-traumatic headache, unspecified, intractable | Diagnosis | ICD-10-CM |
| G44.309 | Post-traumatic headache, unspecified, not intractable | Diagnosis | ICD-10-CM |
| G44.311 | Acute post-traumatic headache, intractable | Diagnosis | ICD-10-CM |
| G44.319 | Acute post-traumatic headache, not intractable | Diagnosis | ICD-10-CM |
| G44.321 | Chronic post-traumatic headache, intractable | Diagnosis | ICD-10-CM |
| G44.329 | Chronic post-traumatic headache, not intractable | Diagnosis | ICD-10-CM |
| G44.40 | Drug-induced headache, not elsewhere classified, not intractable | Diagnosis | ICD-10-CM |
| | | 2.0010 | |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| G44.41 | Drug-induced headache, not elsewhere classified, intractable | Diagnosis | ICD-10-CM |
| G44.51 | Hemicrania continua | Diagnosis | ICD-10-CM |
| G44.52 | New daily persistent headache (NDPH) | Diagnosis | ICD-10-CM |
| G44.53 | Primary thunderclap headache | Diagnosis | ICD-10-CM |
| G44.59 | Other complicated headache syndrome | Diagnosis | ICD-10-CM |
| G44.81 | Hypnic headache | Diagnosis | ICD-10-CM |
| G44.82 | Headache associated with sexual activity | Diagnosis | ICD-10-CM |
| G44.83 | Primary cough headache | Diagnosis | ICD-10-CM |
| G44.84 | Primary exertional headache | Diagnosis | ICD-10-CM |
| G44.85 | Primary stabbing headache | Diagnosis | ICD-10-CM |
| G44.89 | Other headache syndrome | Diagnosis | ICD-10-CM |
| | Thyrotoxicosis | | |
| 242 | Thyrotoxicosis with or without goiter | Diagnosis | ICD-9-CM |
| 242.4 | Thyrotoxicosis from ectopic thyroid nodule | Diagnosis | ICD-9-CM |
| 242.40 | Thyrotoxicosis from ectopic thyroid nodule without mention of thyrotoxic crisis or storm | Diagnosis | ICD-9-CM |
| 242.41 | Thyrotoxicosis from ectopic thyroid nodule with mention of thyrotoxic crisis or storm | Diagnosis | ICD-9-CM |
| 242.8 | Thyrotoxicosis of other specified origin | Diagnosis | ICD-9-CM |
| 242.80 | Thyrotoxicosis of other specified origin without mention of thyrotoxic crisis or storm | Diagnosis | ICD-9-CM |
| 242.81 | Thyrotoxicosis of other specified origin with mention of thyrotoxic crisis or storm | Diagnosis | ICD-9-CM |
| 242.9 | Thyrotoxicosis without mention of goiter or other cause | Diagnosis | ICD-9-CM |
| 242.90 | Thyrotoxicosis without mention of goiter or other cause, without mention of thyrotoxic crisis or storm | Diagnosis | ICD-9-CM |
| 242.91 | Thyrotoxicosis without mention of goiter or other cause, with mention of thyrotoxic crisis or storm | Diagnosis | ICD-9-CM |
| 775.3 | Neonatal thyrotoxicosis | Diagnosis | ICD-9-CM |
| E05 | Thyrotoxicosis [hyperthyroidism] | Diagnosis | ICD-10-CM |
| E05.0 | Thyrotoxicosis with diffuse goiter | Diagnosis | ICD-10-CM |
| E05.00 | Thyrotoxicosis with diffuse goiter without thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| | | 213210313 | |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| E05.01 | Thyrotoxicosis with diffuse goiter with thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.1 | Thyrotoxicosis with toxic single thyroid nodule | Diagnosis | ICD-10-CM |
| E05.10 | Thyrotoxicosis with toxic single thyroid nodule without thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.11 | Thyrotoxicosis with toxic single thyroid nodule with thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.2 | Thyrotoxicosis with toxic multinodular goiter | Diagnosis | ICD-10-CM |
| E05.20 | Thyrotoxicosis with toxic multinodular goiter without thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.21 | Thyrotoxicosis with toxic multinodular goiter with thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.3 | Thyrotoxicosis from ectopic thyroid tissue | Diagnosis | ICD-10-CM |
| E05.30 | Thyrotoxicosis from ectopic thyroid tissue without thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.31 | Thyrotoxicosis from ectopic thyroid tissue with thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.4 | Thyrotoxicosis factitia | Diagnosis | ICD-10-CM |
| E05.40 | Thyrotoxicosis factitia without thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.41 | Thyrotoxicosis factitia with thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.8 | Other thyrotoxicosis | Diagnosis | ICD-10-CM |
| E05.80 | Other thyrotoxicosis without thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.81 | Other thyrotoxicosis with thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.9 | Thyrotoxicosis, unspecified | Diagnosis | ICD-10-CM |
| E05.90 | Thyrotoxicosis, unspecified without thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.91 | Thyrotoxicosis, unspecified with thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E06.2 | Chronic thyroiditis with transient thyrotoxicosis | Diagnosis | ICD-10-CM |
| P72.1 | Transitory neonatal hyperthyroidism | Diagnosis | ICD-10-CM |
| | Burns | | |

| 906.5 | Late effect of burn of eye, face, head, and neck | Diagnosis | ICD-9-CM |
|-------|--|-----------|----------|
| 906.6 | Late effect of burn of wrist and hand | Diagnosis | ICD-9-CM |
| 906.7 | Late effect of burn of other extremities | Diagnosis | ICD-9-CM |
| 906.8 | Late effect of burns of other specified sites | Diagnosis | ICD-9-CM |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| 906.9 | Late effect of burn of unspecified site | Diagnosis | ICD-9-CM |
| 940 | Burn confined to eye and adnexa | Diagnosis | ICD-9-CM |
| 940.1 | Other burns of eyelids and periocular area | Diagnosis | ICD-9-CM |
| 940.4 | Other burn of cornea and conjunctival sac | Diagnosis | ICD-9-CM |
| 940.5 | Burn with resulting rupture and destruction of eyeball | Diagnosis | ICD-9-CM |
| 940.9 | Unspecified burn of eye and adnexa | Diagnosis | ICD-9-CM |
| 941 | Burn of face, head, and neck | Diagnosis | ICD-9-CM |
| 941.0 | Burn of face, head, and neck, unspecified degree | Diagnosis | ICD-9-CM |
| 941.00 | Burn of unspecified degree of unspecified site of face and head | Diagnosis | ICD-9-CM |
| 941.01 | Burn of unspecified degree of ear (any part) | Diagnosis | ICD-9-CM |
| 941.02 | Burn of unspecified degree of eye (with other parts of face, head, and neck) | Diagnosis | ICD-9-CM |
| 941.03 | Burn of unspecified degree of lip(s) | Diagnosis | ICD-9-CM |
| 941.04 | Burn of unspecified degree of chin | Diagnosis | ICD-9-CM |
| 941.05 | Burn of unspecified degree of nose (septum) | Diagnosis | ICD-9-CM |
| 941.06 | Burn of unspecified degree of scalp (any part) | Diagnosis | ICD-9-CM |
| 941.07 | Burn of unspecified degree of forehead and cheek | Diagnosis | ICD-9-CM |
| 941.08 | Burn of unspecified degree of neck | Diagnosis | ICD-9-CM |
| 941.09 | Burn of unspecified degree of multiple sites (except with eye) of face, head, and neck | Diagnosis | ICD-9-CM |
| 941.1 | Erythema due to burn (first degree) of face, head, and neck | Diagnosis | ICD-9-CM |
| 941.10 | Erythema due to burn (first degree) of unspecified site of face and head | Diagnosis | ICD-9-CM |
| 941.11 | Erythema due to burn (first degree) of ear (any part) | Diagnosis | ICD-9-CM |
| 941.12 | Erythema due to burn (first degree) of eye (with other parts face, head, and neck) | Diagnosis | ICD-9-CM |
| 941.13 | Erythema due to burn (first degree) of lip(s) | Diagnosis | ICD-9-CM |
| 941.14 | Erythema due to burn (first degree) of chin | Diagnosis | ICD-9-CM |
| 941.15 | Erythema due to burn (first degree) of nose (septum) | Diagnosis | ICD-9-CM |
| 941.16 | Erythema due to burn (first degree) of scalp (any part) | Diagnosis | ICD-9-CM |
| | | 2.381000 | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 941.17 | Erythema due to burn (first degree) of forehead and cheek | Diagnosis | ICD-9-CM |
| 941.18 | Erythema due to burn (first degree) of neck | Diagnosis | ICD-9-CM |
| 941.19 | Erythema due to burn (first degree) of multiple sites (except with eye) of face, head, and neck | Diagnosis | ICD-9-CM |
| 941.2 | Blisters with epidermal loss due to burn (second degree) of face, head, and neck | Diagnosis | ICD-9-CM |
| 941.20 | Blisters, with epidermal loss due to burn (second degree) of face and head, unspecified site | Diagnosis | ICD-9-CM |
| 941.21 | Blisters, with epidermal loss due to burn (second degree) of ear (any part) | Diagnosis | ICD-9-CM |
| 941.22 | Blisters, with epidermal loss due to burn (second degree) of eye (with other parts of face, head, and neck) | Diagnosis | ICD-9-CM |
| 941.23 | Blisters, with epidermal loss due to burn (second degree) of lip(s) | Diagnosis | ICD-9-CM |
| 941.24 | Blisters, with epidermal loss due to burn (second degree) of chin | Diagnosis | ICD-9-CM |
| 941.25 | Blisters, with epidermal loss due to burn (second degree) of nose (septum) | Diagnosis | ICD-9-CM |
| 941.26 | Blisters, with epidermal loss due to burn (second degree) of scalp (any part) | Diagnosis | ICD-9-CM |
| 941.27 | Blisters, with epidermal loss due to burn (second degree) of forehead and cheek | Diagnosis | ICD-9-CM |
| 941.28 | Blisters, with epidermal loss due to burn (second degree) of neck | - | |
| 941.29 | Blisters, with epidermal loss due to burn (second degree) of multiple sites (except with eye) of face, head, and neck | Diagnosis | ICD-9-CM |
| | | Diagnosis | ICD-9-CM |
| 941.3 | Full-thickness skin loss due to burn (third degree NOS) of face, head, and neck | Diagnosis | ICD-9-CM |
| 941.30 | Full-thickness skin loss due to burn (third degree NOS) of unspecified site of face and head | Diagnosis | ICD-9-CM |
| 941.31 | Full-thickness skin loss due to burn (third degree NOS) of ear (any part) | Diagnosis | ICD-9-CM |
| 941.32 | Full-thickness skin loss due to burn (third degree NOS) of eye (with other parts of face, head, and neck) | Diagnosis | ICD-9-CM |
| 941.33 | Full-thickness skin loss due to burn (third degree NOS) of lip(s) | Diagnosis | ICD-9-CM |
| 941.34 | Full-thickness skin loss due to burn (third degree NOS) of chin | Diagnosis | ICD-9-CM |
| 941.35 | Full-thickness skin loss due to burn (third degree NOS) of nose (septum) | Diagnosis | ICD-9-CM |
| 941.36 | Full-thickness skin loss due to burn (third degree NOS) of scalp (any part) | Diagnosis | ICD-9-CM |
| 941.37 | Full-thickness skin loss due to burn (third degree NOS) of forehead and cheek | Diagnosis | ICD-9-CM |
| 941.38 | Full-thickness skin loss due to burn (third degree NOS) of neck | | |
| | | Diagnosis | ICD-9-CM |
| 941.39 | Full-thickness skin loss due to burn (third degree NOS) of multiple sites (except with eye) of face, head, and neck | Diagnosis | ICD-9-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|--------|---|----------------|------------|
| 941.4 | Deep necrosis of underlying tissues due to burn (deep third degree) of face, head, and neck without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 941.40 | Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of face and head, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 941.41 | Deep necrosis of underlying tissues due to burn (deep third degree) of ear (any part), without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 941.42 | Deep necrosis of underlying tissues due to burn (deep third degree) of eye (with other parts of face, head, and neck), without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 941.43 | Deep necrosis of underlying tissues due to burn (deep third degree) of lip(s), without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 941.44 | Deep necrosis of underlying tissues due to burn (deep third degree) of chin, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 941.45 | Deep necrosis of underlying tissues due to burn (deep third degree) of nose (septum), without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 941.46 | Deep necrosis of underlying tissues due to burn (deep third degree) of scalp (any part), without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 941.47 | Deep necrosis of underlying tissues due to burn (deep third degree) of forehead and cheek, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 941.48 | Deep necrosis of underlying tissues due to burn (deep third degree) of neck, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 941.49 | Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites (except with eye) of face, head, and neck, without mention of loss of a body part | s Diagnosis | ICD-9-CM |
| 941.5 | Deep necrosis of underlying tissues due to burn (deep third degree) of face, head, and neck with loss of a body part | Diagnosis | ICD-9-CM |
| 941.50 | Deep necrosis of underlying tissues due to burn (deep third degree) of face and head, unspecified site, with loss of a body part | 0 | ICD-9-CM |
| 941.51 | Deep necrosis of underlying tissues due to burn (deep third degree) of ear (any part), with loss of a body part | Diagnosis | ICD-9-CIVI |
| 044 50 | | Diagnosis | ICD-9-CM |
| 941.52 | Deep necrosis of underlying tissues due to burn (deep third degree) of eye (with other parts of face, head, and neck), with loss of a body part | Diagnosis | ICD-9-CM |
| 941.53 | Deep necrosis of underlying tissues due to burn (deep third degree) of lip(s), with loss of a body part | Diagnosis | ICD-9-CM |
| 941.54 | Deep necrosis of underlying tissues due to burn (deep third degree) of chin, with loss of a body part | Diagnosis | ICD-9-CM |
| 941.55 | Deep necrosis of underlying tissues due to burn (deep third degree) of nose (septum), with loss of a body part | | |
| 941.56 | Deep necrosis of underlying tissues due to burn (deep third degree) of scalp (any part), with loss of a body part | Diagnosis | ICD-9-CM |
| 511.50 | | Diagnosis | ICD-9-CM |
| 941.57 | Deep necrosis of underlying tissues due to burn (deep third degree) of forehead and cheek, with loss of a body part | Diagnosis | ICD-9-CM |
| 941.58 | Deep necrosis of underlying tissues due to burn (deep third degree) of neck, with loss of a body part | - | |
| 044 50 | | Diagnosis | ICD-9-CM |
| 941.59 | Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites (except eye) of face, head, and neck, with loss of a body part | Diagnosis | ICD-9-CM |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 942 | Burn of trunk | Diagnosis | ICD-9-CM |
| 942.0 | Burn of trunk, unspecified degree | Diagnosis | ICD-9-CM |
| 942.00 | Burn of unspecified degree of trunk, unspecified site | Diagnosis | ICD-9-CM |
| 942.01 | Burn of trunk, unspecified degree of breast | Diagnosis | ICD-9-CM |
| 942.02 | Burn of trunk, unspecified degree of chest wall, excluding breast and nipple | Diagnosis | ICD-9-CM |
| 942.03 | Burn of trunk, unspecified degree of abdominal wall | Diagnosis | ICD-9-CM |
| 942.04 | Burn of trunk, unspecified degree of back (any part) | Diagnosis | ICD-9-CM |
| 942.05 | Burn of trunk, unspecified degree of genitalia | Diagnosis | ICD-9-CM |
| 942.09 | Burn of trunk, unspecified degree of other and multiple sites | Diagnosis | ICD-9-CM |
| 942.1 | Erythema due to burn (first degree) of trunk | Diagnosis | ICD-9-CM |
| 942.10 | Erythema due to burn (first degree) of unspecified site of trunk | Diagnosis | ICD-9-CM |
| 942.11 | Erythema due to burn (first degree) of breast | Diagnosis | ICD-9-CM |
| 942.12 | Erythema due to burn (first degree) of chest wall, excluding breast and nipple | Diagnosis | ICD-9-CM |
| 942.13 | Erythema due to burn (first degree) of abdominal wall | Diagnosis | ICD-9-CM |
| 942.14 | Erythema due to burn (first degree) of back (any part) | Diagnosis | ICD-9-CM |
| 942.15 | Erythema due to burn (first degree) of genitalia | Diagnosis | ICD-9-CM |
| 942.19 | Erythema due to burn (first degree) of other and multiple sites of trunk | Diagnosis | ICD-9-CM |
| 942.2 | Blisters with epidermal loss due to burn (second degree) of trunk | Diagnosis | ICD-9-CM |
| 942.20 | Blisters with epidermal loss due to burn (second degree) of unspecified site of trunk | Diagnosis | ICD-9-CM |
| 942.21 | Blisters with epidermal loss due to burn (second degree) of breast | Diagnosis | ICD-9-CM |
| 942.22 | Blisters with epidermal loss due to burn (second degree) of chest wall, excluding breast and nipple | Diagnosis | ICD-9-CM |
| 942.23 | Blisters with epidermal loss due to burn (second degree) of abdominal wall | Diagnosis | ICD-9-CM |
| 942.24 | Blisters with epidermal loss due to burn (second degree) of back (any part) | Diagnosis | ICD-9-CM |
| 942.25 | Blisters with epidermal loss due to burn (second degree) of genitalia | Diagnosis | ICD-9-CM |
| 942.29 | Blisters with epidermal loss due to burn (second degree) of other and multiple sites of trunk | Diagnosis | ICD-9-CM |
| 942.3 | Full-thickness skin loss due to burn (third degree NOS) of trunk | Diagnosis | ICD-9-CM |
| | | 516510515 | |



| Codo | Description | Codo Cotogory | Codo Turos |
|----------------|--|---------------|------------|
| Code 942.30 | Full-thickness skin loss due to burn (third degree NOS) of unspecified site of trunk | Code Category | Code Type |
| 942.31 | Full-thickness skin loss due to burn (third degree NOS) of breast | Diagnosis | ICD-9-CM |
| 942.31 | Full-thickness skin loss due to burn (third degree NOS) of chest wall, excluding breast and nipple | Diagnosis | ICD-9-CM |
| | | Diagnosis | ICD-9-CM |
| 942.33 | Full-thickness skin loss due to burn (third degree NOS) of abdominal wall | Diagnosis | ICD-9-CM |
| 942.34 | Full-thickness skin loss due to burn (third degree NOS) of back (any part) | Diagnosis | ICD-9-CM |
| 942.35 | Full-thickness skin loss due to burn (third degree NOS) of genitalia | Diagnosis | ICD-9-CM |
| 942.39 | Full-thickness skin loss due to burn (third degree NOS) of other and multiple sites of trunk | Diagnosis | ICD-9-CM |
| 942.4 | Deep necrosis of underlying tissues due to burn (deep third degree) of trunk without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 942.40 | Deep necrosis of underlying tissues due to burn (deep third degree) of trunk, unspecified site, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 942.41 | Deep necrosis of underlying tissues due to burn (deep third degree) of breast, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 942.42 | Deep necrosis of underlying tissues due to burn (deep third degree) of chest wall, excluding breast and nipple, without mention of loss of a body part | | |
| | | Diagnosis | ICD-9-CM |
| 942.43 | Deep necrosis of underlying tissues due to burn (deep third degree) of abdominal wall, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 942.44 | Deep necrosis of underlying tissues due to burn (deep third degree) of back (any part), without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 942.45 | Deep necrosis of underlying tissues due to burn (deep third degree) of genitalia, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 942.49 | Deep necrosis of underlying tissues due to burn (deep third degree) of other and multiple sites of trunk, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 942.5 | Deep necrosis of underlying tissues due to burn (deep third degree) of trunk with loss of a body part | Diagnosis | ICD-9-CM |
| 942.50 | Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of trunk, with loss of a body part | Diagnosis | ICD-9-CM |
| 942.51 | Deep necrosis of underlying tissues due to burn (deep third degree) of breast, with loss of a body part | Diagnosis | ICD-9-CM |
| 942.52 | Deep necrosis of underlying tissues due to burn (deep third degree) of chest wall, excluding breast and nipple, with loss of a body part | Diagnosis | ICD-9-CM |
| 942.53 | Deep necrosis of underlying tissues due to burn (deep third degree) of abdominal wall with loss of a body part | Diagnosis | ICD-9-CM |
| 942.54 | Deep necrosis of underlying tissues due to burn (deep third degree) of back (any part), with loss of a body part | Diagnosis | ICD-9-CM |
| 942.55 | Deep necrosis of underlying tissues due to burn (deep third degree) of genitalia, with loss of a body part | | |
| | | Diagnosis | ICD-9-CM |
| 942.59 | Deep necrosis of underlying tissues due to burn (deep third degree) of other and multiple sites of trunk, with loss of a body part | Diagnosis | ICD-9-CM |
| 943 | Burn of upper limb, except wrist and hand | Diagnosis | ICD-9-CM |
| 943.0 | Burn of upper limb, except wrist and hand, unspecified degree | Diagnosis | ICD-9-CM |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 943.00 | Burn of unspecified degree of unspecified site of upper limb | Diagnosis | ICD-9-CM |
| 943.01 | Burn of unspecified degree of forearm | Diagnosis | ICD-9-CM |
| 943.02 | Burn of unspecified degree of elbow | Diagnosis | ICD-9-CM |
| 943.03 | Burn of unspecified degree of upper arm | Diagnosis | ICD-9-CM |
| 943.04 | Burn of unspecified degree of axilla | Diagnosis | ICD-9-CM |
| 943.05 | Burn of unspecified degree of shoulder | Diagnosis | ICD-9-CM |
| 943.06 | Burn of unspecified degree of scapular region | Diagnosis | ICD-9-CM |
| 943.09 | Burn of unspecified degree multiple sites of upper limb, except wrist and hand | Diagnosis | ICD-9-CM |
| 943.1 | Erythema due to burn (first degree) of upper limb, except wrist and hand | Diagnosis | ICD-9-CM |
| 943.10 | Erythema due to burn (first degree) of unspecified site of upper limb | Diagnosis | ICD-9-CM |
| 943.11 | Erythema due to burn (first degree) of forearm | Diagnosis | ICD-9-CM |
| 943.12 | Erythema due to burn (first degree) of elbow | Diagnosis | ICD-9-CM |
| 943.13 | Erythema due to burn (first degree) of upper arm | Diagnosis | ICD-9-CM |
| 943.14 | Erythema due to burn (first degree) of axilla | Diagnosis | ICD-9-CM |
| 943.15 | Erythema due to burn (first degree) of shoulder | Diagnosis | ICD-9-CM |
| 943.16 | Erythema due to burn (first degree) of scapular region | Diagnosis | ICD-9-CM |
| 943.19 | Erythema due to burn (first degree) of multiple sites of upper limb, except wrist and hand | Diagnosis | ICD-9-CM |
| 943.2 | Blisters with epidermal loss due to burn (second degree) of upper limb, except wrist and hand | Diagnosis | ICD-9-CM |
| 943.20 | Blisters with epidermal loss due to burn (second degree) of unspecified site of upper limb | Diagnosis | ICD-9-CM |
| 943.21 | Blisters with epidermal loss due to burn (second degree) of forearm | Diagnosis | ICD-9-CM |
| 943.22 | Blisters with epidermal loss due to burn (second degree) of elbow | Diagnosis | ICD-9-CM |
| 943.23 | Blisters with epidermal loss due to burn (second degree) of upper arm | Diagnosis | ICD-9-CM |
| 943.24 | Blisters with epidermal loss due to burn (second degree) of axilla | Diagnosis | ICD-9-CM |
| 943.25 | Blisters with epidermal loss due to burn (second degree) of shoulder | Diagnosis | ICD-9-CM |
| 943.26 | Blisters with epidermal loss due to burn (second degree) of scapular region | 2.6510313 | |
| | | Diagnosis | ICD-9-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| 943.29 | Blisters with epidermal loss due to burn (second degree) of multiple sites of upper limb, except wrist and hand | Diagnosis | ICD-9-CM |
| 943.3 | Full-thickness skin loss due to burn (third degree NOS) of upper limb, except wrist and hand | Diagnosis | ICD-9-CM |
| 943.30 | Full-thickness skin loss due to burn (third degree NOS) of unspecified site of upper limb | Diagnosis | ICD-9-CM |
| 943.31 | Full-thickness skin loss due to burn (third degree NOS) of forearm | Diagnosis | ICD-9-CM |
| 943.32 | Full-thickness skin loss due to burn (third degree NOS) of elbow | Diagnosis | ICD-9-CM |
| 943.33 | Full-thickness skin loss due to burn (third degree NOS) of upper arm | Diagnosis | ICD-9-CM |
| 943.34 | Full-thickness skin loss due to burn (third degree NOS) of axilla | Diagnosis | ICD-9-CM |
| 943.35 | Full-thickness skin loss due to burn (third degree NOS) of shoulder | Diagnosis | ICD-9-CM |
| 943.36 | Full-thickness skin loss due to burn (third degree NOS) of scapular region | Diagnosis | ICD-9-CM |
| 943.39 | Full-thickness skin loss due to burn (third degree NOS) of multiple sites of upper limb, except wrist and hand | | |
| | | Diagnosis | ICD-9-CM |
| 943.4 | Deep necrosis of underlying tissues due to burn (deep third degree) of upper limb, except wrist and hand, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 943.40 | Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of upper limb, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 943.41 | Deep necrosis of underlying tissues due to burn (deep third degree) of forearm, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 943.42 | Deep necrosis of underlying tissues due to burn (deep third degree) of elbow, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 943.43 | Deep necrosis of underlying tissues due to burn (deep third degree) of upper arm, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 943.44 | Deep necrosis of underlying tissues due to burn (deep third degree) of axilla, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 943.45 | Deep necrosis of underlying tissues due to burn (deep third degree) of shoulder, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 943.46 | Deep necrosis of underlying tissues due to burn (deep third degree) of scapular region, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 943.49 | Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites of upper limb, except wrist and hand, without mention of loss of a | | |
| | body part | Diagnosis | ICD-9-CM |
| 943.5 | Deep necrosis of underlying tissues due to burn (deep third degree) of upper limb, except wrist and hand, with loss of a body part | | |
| | | Diagnosis | ICD-9-CM |
| 943.50 | Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of upper limb, with loss of a body part | Diagnosis | ICD-9-CM |
| 943.51 | Deep necrosis of underlying tissues due to burn (deep third degree) of forearm, with loss of a body part | Diagnosis | ICD-9-CM |
| 943.52 | Deep necrosis of underlying tissues due to burn (deep third degree) of elbow, with loss of a body part | C | |
| | | Diagnosis | ICD-9-CM |
| 943.53 | Deep necrosis of underlying tissues due to burn (deep third degree) of upper arm, with loss of upper a body part | Diagnosis | ICD-9-CM |
| | | | |



| Code 943.54 | Description Deep necrosis of underlying tissues due to burn (deep third degree) of axilla, with loss of a body part | Code Category | Code Type |
|----------------|--|---------------|-----------|
| | | Diagnosis | ICD-9-CM |
| 943.55 | Deep necrosis of underlying tissues due to burn (deep third degree) of shoulder, with loss of a body part | Diagnosis | ICD-9-CM |
| 943.56 | Deep necrosis of underlying tissues due to burn (deep third degree) of scapular region, with loss of a body part | C | |
| | | Diagnosis | ICD-9-CM |
| 943.59 | Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites of upper limb, except wrist and hand, with loss of a body part | Diagnosis | ICD-9-CM |
| 944 | Burn of wrist(s) and hand(s) | Diagnosis | ICD-9-CM |
| 944.0 | Burn of wrist(s) and hand(s), unspecified degree | Diagnosis | ICD-9-CM |
| 944.00 | Burn of unspecified degree of unspecified site of hand | Diagnosis | ICD-9-CM |
| 944.01 | Burn of unspecified degree of single digit [finger (nail)] other than thumb | Diagnosis | ICD-9-CM |
| 944.02 | Burn of unspecified degree of thumb (nail) | Diagnosis | ICD-9-CM |
| 944.03 | Burn of unspecified degree of two or more digits of hand, not including thumb | Diagnosis | ICD-9-CM |
| 944.04 | Burn of unspecified degree of two or more digits of hand, including thumb | Diagnosis | ICD-9-CM |
| 944.05 | Burn of unspecified degree of palm of hand | Diagnosis | ICD-9-CM |
| 944.06 | Burn of unspecified degree of back of hand | Diagnosis | ICD-9-CM |
| 944.07 | Burn of unspecified degree of wrist | Diagnosis | ICD-9-CM |
| 944.08 | Burn of unspecified degree of multiple sites of wrist(s) and hand(s) | Diagnosis | ICD-9-CM |
| 944.1 | Erythema due to burn (first degree) of wrist(s) and hand(s) | Diagnosis | ICD-9-CM |
| 944.10 | Erythema due to burn (first degree) of unspecified site of hand | Diagnosis | ICD-9-CM |
| 944.11 | Erythema due to burn (first degree) of single digit [finger (nail)] other than thumb | Diagnosis | ICD-9-CM |
| 944.12 | Erythema due to burn (first degree) of thumb (nail) | Diagnosis | ICD-9-CM |
| 944.13 | Erythema due to burn (first degree) of two or more digits of hand, not including thumb | Diagnosis | ICD-9-CM |
| 944.14 | Erythema due to burn (first degree) of two or more digits of hand including thumb | Diagnosis | ICD-9-CM |
| 944.15 | Erythema due to burn (first degree) of palm of hand | Diagnosis | ICD-9-CM |
| 944.16 | Erythema due to burn (first degree) of back of hand | Diagnosis | ICD-9-CM |
| 944.17 | Erythema due to burn (first degree) of wrist | Diagnosis | ICD-9-CM |
| 944.18 | Erythema due to burn (first degree) of multiple sites of wrist(s) and hand(s) | Diagnosis | ICD-9-CM |
| | | 5 | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 944.2 | Blisters with epidermal loss due to burn (second degree) of wrist(s) and hand(s) | Diagnosis | ICD-9-CM |
| 944.20 | Blisters with epidermal loss due to burn (second degree) of unspecified site of hand | Diagnosis | ICD-9-CM |
| 944.21 | Blisters with epidermal loss due to burn (second degree) of single digit [finger (nail)] other than thumb | Diagnosis | ICD-9-CM |
| 944.22 | Blisters with epidermal loss due to burn of (second degree) of thumb (nail) | Diagnosis | ICD-9-CM |
| 944.23 | Blisters with epidermal loss due to burn (second degree) of two or more digits of hand, not including thumb | Diagnosis | ICD-9-CM |
| 944.24 | Blisters with epidermal loss due to burn (second degree) of two or more digits of hand including thumb | Diagnosis | ICD-9-CM |
| 944.25 | Blisters with epidermal loss due to burn (second degree) of palm of hand | Diagnosis | ICD-9-CM |
| 944.26 | Blisters with epidermal loss due to burn (second degree) of back of hand | Diagnosis | ICD-9-CM |
| 944.27 | Blisters with epidermal loss due to burn (second degree) of wrist | Diagnosis | ICD-9-CM |
| 944.28 | Blisters with epidermal loss due to burn (second degree) of multiple sites of wrist(s) and hand(s) | Diagnosis | ICD-9-CM |
| 944.3 | Full-thickness skin loss due to burn (third degree NOS) of wrist(s) and hand(s) | Diagnosis | ICD-9-CM |
| 944.30 | Full-thickness skin loss due to burn (third degree NOS) of unspecified site of hand | Diagnosis | ICD-9-CM |
| 944.31 | Full-thickness skin loss due to burn (third degree NOS) of single digit [finger (nail)] other than thumb | Diagnosis | ICD-9-CM |
| 944.32 | Full-thickness skin loss due to burn (third degree NOS) of thumb (nail) | Diagnosis | ICD-9-CM |
| 944.33 | Full-thickness skin loss due to burn (third degree NOS) of two or more digits of hand, not including thumb | Diagnosis | ICD-9-CM |
| 944.34 | Full-thickness skin loss due to burn (third degree NOS) of two or more digits of hand including thumb | Diagnosis | ICD-9-CM |
| 944.35 | Full-thickness skin loss due to burn (third degree NOS) of palm of hand | Diagnosis | ICD-9-CM |
| 944.36 | Full-thickness skin loss due to burn (third degree NOS) of back of hand | Diagnosis | ICD-9-CM |
| 944.37 | Full-thickness skin loss due to burn (third degree NOS) of wrist | Diagnosis | ICD-9-CM |
| 944.38 | Full-thickness skin loss due to burn (third degree NOS) of multiple sites of wrist(s) and hand(s) | | |
| | | Diagnosis | ICD-9-CM |
| 944.4 | Deep necrosis of underlying tissues due to burn (deep third degree) of wrist(s) and hand(s), without mention of loss of a body part | | |
| | | Diagnosis | ICD-9-CM |
| 944.40 | Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of hand, without mention of loss of a body part | | |
| | | Diagnosis | ICD-9-CM |
| 944.41 | Deep necrosis of underlying tissues due to burn (deep third degree) of single digit [finger (nail)] other than thumb, without mention of loss of a body | 2.00.0000 | |
| | part | Diagnosis | ICD-9-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 944.42 | Deep necrosis of underlying tissues due to burn (deep third degree) of thumb (nail), without mention of loss of a body part | | |
| | | Diagnosis | ICD-9-CM |
| 944.43 | Deep necrosis of underlying tissues due to burn (deep third degree) of two or more digits of hand, not including thumb, without mention of loss of a | | |
| | body part | Diagnosis | ICD-9-CM |
| 944.44 | Deep necrosis of underlying tissues due to burn (deep third degree) of two or more digits of hand including thumb, without mention of loss of a body | | |
| | part | Diagnosis | ICD-9-CM |
| 944.45 | Deep necrosis of underlying tissues due to burn (deep third degree) of palm of hand, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 944.46 | Deep necrosis of underlying tissues due to burn (deep third degree) of back of hand, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 944.47 | Deep necrosis of underlying tissues due to burn (deep third degree) of wrist, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 944.48 | Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites of wrist(s) and hand(s), without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 944.5 | Deep necrosis of underlying tissues due to burn (deep third degree) of wrist(s) and hand(s), with loss of a body part | Diagnosis | ICD-9-CM |
| 944.50 | Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of hand, with loss of a body part | Diagnosis | ICD-9-CM |
| 944.51 | Deep necrosis of underlying tissues due to burn (deep third degree) of single digit (finger (nail)) other than thumb, with loss of a body part | Diagnosis | ICD-9-CM |
| 944.52 | Deep necrosis of underlying tissues due to burn (deep third degree) of thumb (nail), with loss of a body part | Diagnosis | ICD-9-CM |
| 944.53 | Deep necrosis of underlying tissues due to burn (deep third degree) of two or more digits of hand, not including thumb, with loss of a body part | | |
| | | Diagnosis | ICD-9-CM |
| 944.54 | Deep necrosis of underlying tissues due to burn (deep third degree) of two or more digits of hand including thumb, with loss of a body part | Diagnosis | ICD-9-CM |
| 944.55 | Deep necrosis of underlying tissues due to burn (deep third degree) of palm of hand, with loss of a body part | Diagnosis | ICD-9-CM |
| 944.56 | Deep necrosis of underlying tissues due to burn (deep third degree) of back of hand, with loss of a body part | Diagnosis | ICD-9-CM |
| 944.57 | Deep necrosis of underlying tissues due to burn (deep third degree) of wrist, with loss of a body part | C | |
| | | Diagnosis | ICD-9-CM |
| 944.58 | Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites of wrist(s) and hand(s), with loss of a body part | Diagnosis | ICD-9-CM |
| 945 | Burn of lower limb(s) | Diagnosis | ICD-9-CM |
| 945.0 | Burn of lower limb(s), unspecified degree | Diagnosis | ICD-9-CM |
| 945.00 | Burn of unspecified degree of unspecified site of lower limb (leg) | 0 | ICD-9-CM |
| 945.01 | Burn of unspecified degree of toe(s) (nail) | Diagnosis | |
| 945.02 | Burn of unspecified degree of foot | Diagnosis | ICD-9-CM |
| 545.02 | | Diagnosis | ICD-9-CM |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| 945.03 | Burn of unspecified degree of ankle | Diagnosis | ICD-9-CM |
| 945.04 | Burn of unspecified degree of lower leg | Diagnosis | ICD-9-CM |
| 945.05 | Burn of unspecified degree of knee | Diagnosis | ICD-9-CM |
| 945.06 | Burn of unspecified degree of thigh (any part) | Diagnosis | ICD-9-CM |
| 945.09 | Burn of unspecified degree of multiple sites of lower limb(s) | Diagnosis | ICD-9-CM |
| 945.1 | Erythema due to burn (first degree) of lower limb(s) | Diagnosis | ICD-9-CM |
| 945.10 | Erythema due to burn (first degree) of unspecified site of lower limb (leg) | Diagnosis | ICD-9-CM |
| 945.11 | Erythema due to burn (first degree) of toe(s) (nail) | Diagnosis | ICD-9-CM |
| 945.12 | Erythema due to burn (first degree) of foot | Diagnosis | ICD-9-CM |
| 945.13 | Erythema due to burn (first degree) of ankle | Diagnosis | ICD-9-CM |
| 945.14 | Erythema due to burn (first degree) of lower leg | Diagnosis | ICD-9-CM |
| 945.15 | Erythema due to burn (first degree) of knee | Diagnosis | ICD-9-CM |
| 945.16 | Erythema due to burn (first degree) of thigh (any part) | Diagnosis | ICD-9-CM |
| 945.19 | Erythema due to burn (first degree) of multiple sites of lower limb(s) | Diagnosis | ICD-9-CM |
| 945.2 | Blisters with epidermal loss due to burn (second degree) of lower limb(s) | Diagnosis | ICD-9-CM |
| 945.20 | Blisters with epidermal loss due to burn (second degree) of unspecified site of lower limb (leg) | Diagnosis | ICD-9-CM |
| 945.21 | Blisters with epidermal loss due to burn (second degree) of toe(s) (nail) | Diagnosis | ICD-9-CM |
| 945.22 | Blisters with epidermal loss due to burn (second degree) of foot | Diagnosis | ICD-9-CM |
| 945.23 | Blisters with epidermal loss due to burn (second degree) of ankle | Diagnosis | ICD-9-CM |
| 945.24 | Blisters with epidermal loss due to burn (second degree) of lower leg | Diagnosis | ICD-9-CM |
| 945.25 | Blisters with epidermal loss due to burn (second degree) of knee | Diagnosis | ICD-9-CM |
| 945.26 | Blisters with epidermal loss due to burn (second degree) of thigh (any part) | Diagnosis | ICD-9-CM |
| 945.29 | Blisters with epidermal loss due to burn (second degree) of multiple sites of lower limb(s) | Diagnosis | ICD-9-CM |
| 945.3 | Full-thickness skin loss due to burn (third degree NOS) of lower limb(s) | Diagnosis | ICD-9-CM |
| 945.30 | Full-thickness skin loss due to burn (third degree NOS) of unspecified site of lower limb | Diagnosis | ICD-9-CM |
| 945.31 | Full-thickness skin loss due to burn (third degree NOS) of toe(s) (nail) | Diagnosis | ICD-9-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 945.32 | Full-thickness skin loss due to burn (third degree NOS) of foot | Diagnosis | ICD-9-CM |
| 945.33 | Full-thickness skin loss due to burn (third degree NOS) of ankle | Diagnosis | ICD-9-CM |
| 945.34 | Full-thickness skin loss due to burn (third degree NOS) of lower leg | Diagnosis | ICD-9-CM |
| 945.35 | Full-thickness skin loss due to burn (third degree NOS) of knee | Diagnosis | ICD-9-CM |
| 945.36 | Full-thickness skin loss due to burn (third degree NOS) of thigh (any part) | Diagnosis | ICD-9-CM |
| 945.39 | Full-thickness skin loss due to burn (third degree NOS) of multiple sites of lower limb(s) | - | |
| | | Diagnosis | ICD-9-CM |
| 945.4 | Deep necrosis of underlying tissues due to burn (deep third degree) of lower limb(s) without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 945.40 | Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of lower limb (leg), without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 945.41 | Deep necrosis of underlying tissues due to burn (deep third degree) of toe(s) (nail), without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 945.42 | Deep necrosis of underlying tissues due to burn (deep third degree) of foot, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 945.43 | Deep necrosis of underlying tissues due to burn (deep third degree) of ankle, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 945.44 | Deep necrosis of underlying tissues due to burn (deep third degree) of lower leg, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 945.45 | Deep necrosis of underlying tissues due to burn (deep third degree) of knee, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 945.46 | Deep necrosis of underlying tissues due to burn (deep third degree) of thigh (any part), without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 945.49 | Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites of lower limb(s), without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 945.5 | Deep necrosis of underlying tissues due to burn (deep third degree) of lower limb(s) with loss of a body part | Diagnosis | ICD-9-CM |
| 945.50 | Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site lower limb (leg), with loss of a body part | Diagnosis | ICD-9-CM |
| 945.51 | Deep necrosis of underlying tissues due to burn (deep third degree) of toe(s) (nail), with loss of a body part | Diagnosis | ICD-9-CM |
| 945.52 | Deep necrosis of underlying tissues due to burn (deep third degree) of foot, with loss of a body part | Diagnosis | ICD-9-CM |
| 945.53 | Deep necrosis of underlying tissues due to burn (deep third degree) of ankle, with loss of a body part | Diagnosis | ICD-9-CM |
| 945.54 | Deep necrosis of underlying tissues due to burn (deep third degree) of lower leg, with loss of a body part | Diagnosis | ICD-9-CM |
| 945.55 | Deep necrosis of underlying tissues due to burn (deep third degree) of knee, with loss of a body part | Ū | |
| | | Diagnosis | ICD-9-CM |
| 945.56 | Deep necrosis of underlying tissues due to burn (deep third degree) of thigh (any part), with loss of a body part | <u> </u> | |
| | | Diagnosis | ICD-9-CM |
| 945.59 | Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites of lower limb(s), with loss of a body part | Diagnosis | ICD-9-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 946 | Burns of multiple specified sites | Diagnosis | ICD-9-CM |
| 946.0 | Burns of multiple specified sites, unspecified degree | Diagnosis | ICD-9-CM |
| 946.1 | Erythema due to burn (first degree) of multiple specified sites | Diagnosis | ICD-9-CM |
| 946.2 | Blisters with epidermal loss due to burn (second degree) of multiple specified sites | Diagnosis | ICD-9-CM |
| 946.3 | Full-thickness skin loss due to burn (third degree NOS) of multiple specified sites | | |
| | | Diagnosis | ICD-9-CM |
| 946.4 | Deep necrosis of underlying tissues due to burn (deep third degree) of multiple specified sites, without mention of loss of a body part | Diagnosis | ICD-9-CM |
| 946.5 | Deep necrosis of underlying tissues due to burn (deep third degree) of multiple specified sites, with loss of a body part | Diagnosis | ICD-9-CM |
| 948 | Burns classified according to extent of body surface involved | Diagnosis | ICD-9-CM |
| 948.0 | Burn (any degree) involving less than 10% of body surface | Diagnosis | ICD-9-CM |
| 948.00 | Burn (any degree) involving less than 10% of body surface with third degree burn of less than 10% or unspecified amount | Diagnosis | ICD-9-CM |
| 948.1 | Burn (any degree) involving 10-19% of body surface | Diagnosis | ICD-9-CM |
| 948.10 | Burn (any degree) involving 10-19% of body surface with third degree burn of less than 10% or unspecified amount | Diagnosis | ICD-9-CM |
| 948.11 | Burn (any degree) involving 10-19% of body surface with third degree burn of 10-19% | Diagnosis | ICD-9-CM |
| 948.2 | Burn (any degree) involving 20-29% of body surface | Diagnosis | ICD-9-CM |
| 948.20 | Burn (any degree) involving 20-29% of body surface with third degree burn of less than 10% or unspecified amount | Diagnosis | ICD-9-CM |
| 948.21 | Burn (any degree) involving 20-29% of body surface with third degree burn of 10-19% | Diagnosis | ICD-9-CM |
| 948.22 | Burn (any degree) involving 20-29% of body surface with third degree burn of 20-29% | Diagnosis | ICD-9-CM |
| 948.3 | Burn (any degree) involving 30-39% of body surface | Diagnosis | ICD-9-CM |
| 948.30 | Burn (any degree) involving 30-39% of body surface with third degree burn of less than 10% or unspecified amount | Diagnosis | ICD-9-CM |
| 948.31 | Burn (any degree) involving 30-39% of body surface with third degree burn of 10-19% | Diagnosis | ICD-9-CM |
| 948.32 | Burn (any degree) involving 30-39% of body surface with third degree burn of 20-29% | Diagnosis | ICD-9-CM |
| 948.33 | Burn (any degree) involving 30-39% of body surface with third degree burn of 30-39% | Diagnosis | ICD-9-CM |
| 948.4 | Burn (any degree) involving 40-49% of body surface | Diagnosis | |
| | | Diagnosis | ICD-9-CM |
| 948.40 | Burn (any degree) involving 40-49% of body surface with third degree burn of less than 10% or unspecified amount | Diagnosis | ICD-9-CM |
| 948.41 | Burn (any degree) involving 40-49% of body surface with third degree burn of 10-19% | Diagnosis | ICD-9-CM |
| 948.42 | Burn (any degree) involving 40-49% of body surface with third degree burn of 20-29% | Diagnosis | ICD-9-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| 948.43 | Burn (any degree) involving 40-49% of body surface with third degree burn of 30-39% | Diagnosis | ICD-9-CM |
| 948.44 | Burn (any degree) involving 40-49% of body surface with third degree burn of 40-49% | Diagnosis | ICD-9-CM |
| 948.5 | Burn (any degree) involving 50-59% of body surface | Diagnosis | ICD-9-CM |
| 948.50 | Burn (any degree) involving 50-59% of body surface with third degree burn of less than 10% or unspecified amount | Diagnosis | ICD-9-CM |
| 948.51 | Burn (any degree) involving 50-59% of body surface with third degree burn of 10-19% | Diagnosis | ICD-9-CM |
| 948.52 | Burn (any degree) involving 50-59% of body surface with third degree burn of 20-29% | Diagnosis | ICD-9-CM |
| 948.53 | Burn (any degree) involving 50-59% of body surface with third degree burn of 30-39% | Diagnosis | ICD-9-CM |
| 948.54 | Burn (any degree) involving 50-59% of body surface with third degree burn of 40-49% | Diagnosis | ICD-9-CM |
| 948.55 | Burn (any degree) involving 50-59% of body surface with third degree burn of 50-59% | Diagnosis | ICD-9-CM |
| 948.6 | Burn (any degree) involving 60-69% of body surface | Diagnosis | ICD-9-CM |
| 948.60 | Burn (any degree) involving 60-69% of body surface with third degree burn of less than 10% or unspecified amount | Diagnosis | ICD-9-CM |
| 948.61 | Burn (any degree) involving 60-69% of body surface with third degree burn of 10-19% | Diagnosis | ICD-9-CM |
| 948.62 | Burn (any degree) involving 60-69% of body surface with third degree burn of 20-29% | Diagnosis | ICD-9-CM |
| 948.63 | Burn (any degree) involving 60-69% of body surface with third degree burn of 30-39% | Diagnosis | ICD-9-CM |
| 948.64 | Burn (any degree) involving 60-69% of body surface with third degree burn of 40-49% | Diagnosis | ICD-9-CM |
| 948.65 | Burn (any degree) involving 60-69% of body surface with third degree burn of 50-59% | Diagnosis | ICD-9-CM |
| 948.66 | Burn (any degree) involving 60-69% of body surface with third degree burn of 60-69% | Diagnosis | ICD-9-CM |
| 948.7 | Burn (any degree) involving 70-79% of body surface | Diagnosis | ICD-9-CM |
| 948.70 | Burn (any degree) involving 70-79% of body surface with third degree burn of less than 10% or unspecified amount | Diagnosis | ICD-9-CM |
| 948.71 | Burn (any degree) involving 70-79% of body surface with third degree burn of 10-19% | Diagnosis | ICD-9-CM |
| 948.72 | Burn (any degree) involving 70-79% of body surface with third degree burn of 20-29% | Diagnosis | ICD-9-CM |
| 948.73 | Burn (any degree) involving 70-79% of body surface with third degree burn of 30-39% | Diagnosis | ICD-9-CM |
| 948.74 | Burn (any degree) involving 70-79% of body surface with third degree burn of 40-49% | Diagnosis | ICD-9-CM |
| 948.75 | Burn (any degree) involving 70-79% of body surface with third degree burn of 50-59% | Diagnosis | ICD-9-CM |
| 948.76 | Burn (any degree) involving 70-79% of body surface with third degree burn of 60-69% | Diagnosis | ICD-9-CM |
| 948.77 | Burn (any degree) involving 70-79% of body surface with third degree burn of 70-79% | Diagnosis | ICD-9-CM |
| | | | |



| Code 948.8 | Description Burn (any degree) involving 80-89% of body surface | Code Category | Code Type |
|----------------------|---|---------------|-----------|
| | | Diagnosis | ICD-9-CM |
| 948.80 | Burn (any degree) involving 80-89% of body surface with third degree burn of less than 10% or unspecified amount | Diagnosis | ICD-9-CM |
| 948.81 | Burn (any degree) involving 80-89% of body surface with third degree burn of 10-19% | Diagnosis | ICD-9-CM |
| 948.82 | Burn (any degree) involving 80-89% of body surface with third degree burn of 20-29% | Diagnosis | ICD-9-CM |
| 948.83 | Burn (any degree) involving 80-89% of body surface with third degree burn of 30-39% | Diagnosis | ICD-9-CM |
| 948.84 | Burn (any degree) involving 80-89% of body surface with third degree burn of 40-49% | Diagnosis | ICD-9-CM |
| 948.85 | Burn (any degree) involving 80-89% of body surface with third degree burn of 50-59% | Diagnosis | ICD-9-CM |
| 948.86 | Burn (any degree) involving 80-89% of body surface with third degree burn of 60-69% | Diagnosis | ICD-9-CM |
| 948.87 | Burn (any degree) involving 80-89% of body surface with third degree burn of 70-79% | Diagnosis | ICD-9-CM |
| 948.88 | Burn (any degree) involving 80-89% of body surface with third degree burn of 80-89% | Diagnosis | ICD-9-CM |
| 948.9 | Burn (any degree) involving 90% or more of body surface | | |
| | | Diagnosis | ICD-9-CM |
| 948.90 | Burn (any degree) involving 90% or more of body surface with third degree burn of less than 10% or unspecified amount | Diagnosis | ICD-9-CM |
| 948.91 | Burn (any degree) involving 90% or more of body surface with third degree burn of 10-19% | Diagnosis | ICD-9-CM |
| 948.92 | Burn (any degree) involving 90% or more of body surface with third degree burn of 20-29% | Diagnosis | ICD-9-CM |
| 948.93 | Burn (any degree) involving 90% or more of body surface with third degree burn of 30-39% | Diagnosis | ICD-9-CM |
| 948.94 | Burn (any degree) involving 90% or more of body surface with third degree burn of 40-49% | Diagnosis | ICD-9-CM |
| 948.95 | Burn (any degree) involving 90% or more of body surface with third degree burn of 50-59% | Diagnosis | ICD-9-CM |
| 948.96 | Burn (any degree) involving 90% or more of body surface with third degree burn of 60-69% | Diagnosis | ICD-9-CM |
| 948.97 | Burn (any degree) involving 90% or more of body surface with third degree burn of 70-79% | Diagnosis | ICD-9-CM |
| 948.98 | Burn (any degree) involving 90% or more of body surface with third degree burn of 80-89% | Diagnosis | ICD-9-CM |
| 948.99 | Burn (any degree) involving 90% or more of body surface with third degree burn of 90% or more of body surface | Diagnosis | ICD-9-CM |
| 949 | Burn, unspecified site | Diagnosis | ICD-9-CM |
| 949.0 | Burn of unspecified site, unspecified degree | Diagnosis | ICD-9-CM |
| 949.1 | Erythema due to burn (first degree), unspecified site | Diagnosis | ICD-9-CM |
| 949.2 | Blisters with epidermal loss due to burn (second degree), unspecified site | Diagnosis | ICD-9-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 949.3 | Full-thickness skin loss due to burn (third degree NOS), unspecified site | | |
| | | Diagnosis | ICD-9-CM |
| 949.4 | Deep necrosis of underlying tissue due to burn (deep third degree), unspecified site without mention of loss of body part | Diagnosis | ICD-9-CM |
| 949.5 | Deep necrosis of underlying tissues due to burn (deep third degree, unspecified site with loss of body part | Diagnosis | ICD-9-CM |
| E803 | Railway accident involving explosion, fire, or burning | Diagnosis | ICD-9-CM |
| E803.0 | Railway accident involving explosion, fire, or burning, injuring railway employee | Diagnosis | ICD-9-CM |
| E803.1 | Railway accident involving explosion, fire, or burning, injuring passenger on railway | Diagnosis | ICD-9-CM |
| E803.2 | Railway accident involving explosion, fire, or burning, injuring pedestrian | Diagnosis | ICD-9-CM |
| E803.3 | Railway accident involving explosion, fire, or burning, injuring pedal cyclist | Diagnosis | ICD-9-CM |
| E803.8 | Railway accident involving explosion, fire, or burning, injuring other specified person | Diagnosis | ICD-9-CM |
| E803.9 | Railway accident involving explosion, fire, or burning, injuring unspecified person | Diagnosis | ICD-9-CM |
| E837 | Explosion, fire, or burning in watercraft | Diagnosis | ICD-9-CM |
| E837.0 | Explosion, fire, or burning in watercraft injuring occupant of small unpowered boat | Diagnosis | ICD-9-CM |
| E837.1 | Explosion, fire, or burning in watercraft injuring occupant of small powered boat | Diagnosis | ICD-9-CM |
| E837.2 | Explosion, fire, or burning in watercraft injuring occupant of other watercraft, crew | Diagnosis | ICD-9-CM |
| E837.3 | Explosion, fire, or burning in watercraft injuring occupant of other watercraft, other than crew | Diagnosis | ICD-9-CM |
| E837.4 | Explosion, fire, or burning in watercraft injuring water skier | Diagnosis | ICD-9-CM |
| E837.5 | Explosion, fire, or burning in watercraft injuring swimmer | Diagnosis | ICD-9-CM |
| E837.6 | Explosion, fire, or burning in watercraft injuring dockers, stevedores | Diagnosis | ICD-9-CM |
| E837.7 | Explosion, fire, or burning in watercraft, occupant of military watercraft, any type | Diagnosis | ICD-9-CM |
| E837.8 | Explosion, fire, or burning in watercraft injuring other specified person | Diagnosis | ICD-9-CM |
| E837.9 | Explosion, fire, or burning in watercraft injuring unspecified person | Diagnosis | ICD-9-CM |
| E890.3 | Burning caused by conflagration in private dwelling | Diagnosis | ICD-9-CM |
| E891.3 | Burning caused by conflagration in other and unspecified building or structure | Diagnosis | ICD-9-CM |
| E898.0 | Accident caused by burning bedclothes | Diagnosis | ICD-9-CM |
| E898.1 | Accident caused by other burning materials | Diagnosis | ICD-9-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| E958.1 | Suicide and self-inflicted injury by burns, fire | Diagnosis | ICD-9-CM |
| E988.1 | Injury by burns or fire, undetermined whether accidentally or purposely inflicted | Diagnosis | ICD-9-CM |
| M61.3 | Calcification and ossification of muscles associated with burns | Diagnosis | ICD-10-CM |
| M61.30 | Calcification and ossification of muscles associated with burns, unspecified site | Diagnosis | ICD-10-CM |
| M61.31 | Calcification and ossification of muscles associated with burns, shoulder | Diagnosis | ICD-10-CM |
| M61.311 | Calcification and ossification of muscles associated with burns, right shoulder | Diagnosis | ICD-10-CM |
| M61.312 | Calcification and ossification of muscles associated with burns, left shoulder | Diagnosis | ICD-10-CM |
| M61.319 | Calcification and ossification of muscles associated with burns, unspecified shoulder | Diagnosis | ICD-10-CM |
| M61.32 | Calcification and ossification of muscles associated with burns, upper arm | Diagnosis | ICD-10-CM |
| M61.321 | Calcification and ossification of muscles associated with burns, right upper arm | Diagnosis | ICD-10-CM |
| M61.322 | Calcification and ossification of muscles associated with burns, left upper arm | Diagnosis | ICD-10-CM |
| M61.329 | Calcification and ossification of muscles associated with burns, unspecified upper arm | Diagnosis | ICD-10-CM |
| M61.33 | Calcification and ossification of muscles associated with burns, forearm | Diagnosis | ICD-10-CM |
| M61.331 | Calcification and ossification of muscles associated with burns, right forearm | Diagnosis | ICD-10-CM |
| M61.332 | Calcification and ossification of muscles associated with burns, left forearm | Diagnosis | ICD-10-CM |
| M61.339 | Calcification and ossification of muscles associated with burns, unspecified forearm | Diagnosis | ICD-10-CM |
| M61.34 | Calcification and ossification of muscles associated with burns, hand | Diagnosis | ICD-10-CM |
| M61.341 | Calcification and ossification of muscles associated with burns, right hand | Diagnosis | ICD-10-CM |
| M61.342 | Calcification and ossification of muscles associated with burns, left hand | Diagnosis | ICD-10-CM |
| M61.349 | Calcification and ossification of muscles associated with burns, unspecified hand | Diagnosis | ICD-10-CM |
| M61.35 | Calcification and ossification of muscles associated with burns, thigh | Diagnosis | ICD-10-CM |
| M61.351 | Calcification and ossification of muscles associated with burns, right thigh | Diagnosis | ICD-10-CM |
| M61.352 | Calcification and ossification of muscles associated with burns, left thigh | Diagnosis | ICD-10-CM |
| M61.359 | Calcification and ossification of muscles associated with burns, unspecified thigh | Diagnosis | ICD-10-CM |
| M61.36 | Calcification and ossification of muscles associated with burns, lower leg | Diagnosis | ICD-10-CM |
| M61.361 | Calcification and ossification of muscles associated with burns, right lower leg | C | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| M61.362 | Calcification and ossification of muscles associated with burns, left lower leg | Diagnosis | ICD-10-CM |
| M61.369 | Calcification and ossification of muscles associated with burns, unspecified lower leg | Diagnosis | ICD-10-CM |
| M61.37 | Calcification and ossification of muscles associated with burns, ankle and foot | Diagnosis | ICD-10-CM |
| M61.371 | Calcification and ossification of muscles associated with burns, right ankle and foot | Diagnosis | ICD-10-CM |
| M61.372 | Calcification and ossification of muscles associated with burns, left ankle and foot | Diagnosis | ICD-10-CM |
| M61.379 | Calcification and ossification of muscles associated with burns, unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M61.38 | Calcification and ossification of muscles associated with burns, other site | Diagnosis | ICD-10-CM |
| M61.39 | Calcification and ossification of muscles associated with burns, multiple sites | Diagnosis | ICD-10-CM |
| T20 | Burn and corrosion of head, face, and neck | Diagnosis | ICD-10-CM |
| T20.0 | Burn of unspecified degree of head, face, and neck | Diagnosis | ICD-10-CM |
| T20.00 | Burn of unspecified degree of head, face, and neck, unspecified site | Diagnosis | ICD-10-CM |
| T20.00XA | Burn of unspecified degree of head, face, and neck, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T20.00XD | Burn of unspecified degree of head, face, and neck, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.00XS | Burn of unspecified degree of head, face, and neck, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T20.01 | Burn of unspecified degree of ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.011 | Burn of unspecified degree of right ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.011A | Burn of unspecified degree of right ear [any part, except ear drum], initial encounter | Diagnosis | ICD-10-CM |
| T20.011D | Burn of unspecified degree of right ear [any part, except ear drum], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.011S | Burn of unspecified degree of right ear [any part, except ear drum], sequela | Diagnosis | ICD-10-CM |
| T20.012 | Burn of unspecified degree of left ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.012A | Burn of unspecified degree of left ear [any part, except ear drum], initial encounter | Diagnosis | ICD-10-CM |
| T20.012D | Burn of unspecified degree of left ear [any part, except ear drum], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.012S | Burn of unspecified degree of left ear [any part, except ear drum], sequela | Diagnosis | ICD-10-CM |
| T20.019 | Burn of unspecified degree of unspecified ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.019A | Burn of unspecified degree of unspecified ear [any part, except ear drum], initial encounter | Diagnosis | ICD-10-CM |
| T20.019D | Burn of unspecified degree of unspecified ear [any part, except ear drum], subsequent encounter | Diagnosis | ICD-10-CM |
| | | - | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T20.019S | Burn of unspecified degree of unspecified ear [any part, except ear drum], sequela | Diagnosis | ICD-10-CM |
| T20.02 | Burn of unspecified degree of lip(s) | Diagnosis | ICD-10-CM |
| T20.02XA | Burn of unspecified degree of lip(s), initial encounter | Diagnosis | ICD-10-CM |
| T20.02XD | Burn of unspecified degree of lip(s), subsequent encounter | Diagnosis | ICD-10-CM |
| T20.02XS | Burn of unspecified degree of lip(s), sequela | Diagnosis | ICD-10-CM |
| T20.03 | Burn of unspecified degree of chin | Diagnosis | ICD-10-CM |
| T20.03XA | Burn of unspecified degree of chin, initial encounter | Diagnosis | ICD-10-CM |
| T20.03XD | Burn of unspecified degree of chin, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.03XS | Burn of unspecified degree of chin, sequela | Diagnosis | ICD-10-CM |
| T20.04 | Burn of unspecified degree of nose (septum) | Diagnosis | ICD-10-CM |
| T20.04XA | Burn of unspecified degree of nose (septum), initial encounter | Diagnosis | ICD-10-CM |
| T20.04XD | Burn of unspecified degree of nose (septum), subsequent encounter | Diagnosis | ICD-10-CM |
| T20.04XS | Burn of unspecified degree of nose (septum), sequela | Diagnosis | ICD-10-CM |
| T20.05 | Burn of unspecified degree of scalp [any part] | Diagnosis | ICD-10-CM |
| T20.05XA | Burn of unspecified degree of scalp [any part], initial encounter | Diagnosis | ICD-10-CM |
| T20.05XD | Burn of unspecified degree of scalp [any part], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.05XS | Burn of unspecified degree of scalp [any part], sequela | Diagnosis | ICD-10-CM |
| T20.06 | Burn of unspecified degree of forehead and cheek | Diagnosis | ICD-10-CM |
| T20.06XA | Burn of unspecified degree of forehead and cheek, initial encounter | Diagnosis | ICD-10-CM |
| T20.06XD | Burn of unspecified degree of forehead and cheek, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.06XS | Burn of unspecified degree of forehead and cheek, sequela | Diagnosis | ICD-10-CM |
| T20.07 | Burn of unspecified degree of neck | Diagnosis | ICD-10-CM |
| T20.07XA | Burn of unspecified degree of neck, initial encounter | Diagnosis | ICD-10-CM |
| T20.07XD | Burn of unspecified degree of neck, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.07XS | Burn of unspecified degree of neck, sequela | Diagnosis | ICD-10-CM |
| T20.09 | Burn of unspecified degree of multiple sites of head, face, and neck | Diagnosis | ICD-10-CM |
| | | 2102110313 | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T20.09XA | Burn of unspecified degree of multiple sites of head, face, and neck, initial encounter | Diagnosis | ICD-10-CM |
| T20.09XD | Burn of unspecified degree of multiple sites of head, face, and neck, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.09XS | Burn of unspecified degree of multiple sites of head, face, and neck, sequela | Diagnosis | ICD-10-CM |
| T20.1 | Burn of first degree of head, face, and neck | Diagnosis | ICD-10-CM |
| T20.10 | Burn of first degree of head, face, and neck, unspecified site | Diagnosis | ICD-10-CM |
| T20.10XA | Burn of first degree of head, face, and neck, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T20.10XD | Burn of first degree of head, face, and neck, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.10XS | Burn of first degree of head, face, and neck, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T20.11 | Burn of first degree of ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.111 | Burn of first degree of right ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.111A | Burn of first degree of right ear [any part, except ear drum], initial encounter | Diagnosis | ICD-10-CM |
| T20.111D | Burn of first degree of right ear [any part, except ear drum], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.111S | Burn of first degree of right ear [any part, except ear drum], sequela | Diagnosis | ICD-10-CM |
| T20.112 | Burn of first degree of left ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.112A | Burn of first degree of left ear [any part, except ear drum], initial encounter | Diagnosis | ICD-10-CM |
| T20.112D | Burn of first degree of left ear [any part, except ear drum], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.112S | Burn of first degree of left ear [any part, except ear drum], sequela | Diagnosis | ICD-10-CM |
| T20.119 | Burn of first degree of unspecified ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.119A | Burn of first degree of unspecified ear [any part, except ear drum], initial encounter | Diagnosis | ICD-10-CM |
| T20.119D | Burn of first degree of unspecified ear [any part, except ear drum], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.119S | Burn of first degree of unspecified ear [any part, except ear drum], sequela | Diagnosis | ICD-10-CM |
| T20.12 | Burn of first degree of lip(s) | Diagnosis | ICD-10-CM |
| T20.12XA | Burn of first degree of lip(s), initial encounter | Diagnosis | ICD-10-CM |
| T20.12XD | Burn of first degree of lip(s), subsequent encounter | Diagnosis | ICD-10-CM |
| T20.12XS | Burn of first degree of lip(s), sequela | Diagnosis | ICD-10-CM |
| T20.13 | Burn of first degree of chin | Diagnosis | ICD-10-CM |
| | | 0 | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T20.13XA | Burn of first degree of chin, initial encounter | Diagnosis | ICD-10-CM |
| T20.13XD | Burn of first degree of chin, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.13XS | Burn of first degree of chin, sequela | Diagnosis | ICD-10-CM |
| T20.14 | Burn of first degree of nose (septum) | Diagnosis | ICD-10-CM |
| T20.14XA | Burn of first degree of nose (septum), initial encounter | Diagnosis | ICD-10-CM |
| T20.14XD | Burn of first degree of nose (septum), subsequent encounter | Diagnosis | ICD-10-CM |
| T20.14XS | Burn of first degree of nose (septum), sequela | Diagnosis | ICD-10-CM |
| T20.15 | Burn of first degree of scalp [any part] | Diagnosis | ICD-10-CM |
| T20.15XA | Burn of first degree of scalp [any part], initial encounter | Diagnosis | ICD-10-CM |
| T20.15XD | Burn of first degree of scalp [any part], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.15XS | Burn of first degree of scalp [any part], sequela | Diagnosis | ICD-10-CM |
| T20.16 | Burn of first degree of forehead and cheek | Diagnosis | ICD-10-CM |
| T20.16XA | Burn of first degree of forehead and cheek, initial encounter | Diagnosis | ICD-10-CM |
| T20.16XD | Burn of first degree of forehead and cheek, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.16XS | Burn of first degree of forehead and cheek, sequela | Diagnosis | ICD-10-CM |
| T20.17 | Burn of first degree of neck | Diagnosis | ICD-10-CM |
| T20.17XA | Burn of first degree of neck, initial encounter | Diagnosis | ICD-10-CM |
| T20.17XD | Burn of first degree of neck, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.17XS | Burn of first degree of neck, sequela | Diagnosis | ICD-10-CM |
| T20.19 | Burn of first degree of multiple sites of head, face, and neck | Diagnosis | ICD-10-CM |
| T20.19XA | Burn of first degree of multiple sites of head, face, and neck, initial encounter | Diagnosis | ICD-10-CM |
| T20.19XD | Burn of first degree of multiple sites of head, face, and neck, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.19XS | Burn of first degree of multiple sites of head, face, and neck, sequela | Diagnosis | ICD-10-CM |
| T20.2 | Burn of second degree of head, face, and neck | Diagnosis | ICD-10-CM |
| T20.20 | Burn of second degree of head, face, and neck, unspecified site | Diagnosis | ICD-10-CM |
| T20.20XA | Burn of second degree of head, face, and neck, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| | | - | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T20.20XD | Burn of second degree of head, face, and neck, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.20XS | Burn of second degree of head, face, and neck, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T20.21 | Burn of second degree of ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.211 | Burn of second degree of right ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.211A | Burn of second degree of right ear [any part, except ear drum], initial encounter | Diagnosis | ICD-10-CM |
| T20.211D | Burn of second degree of right ear [any part, except ear drum], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.211S | Burn of second degree of right ear [any part, except ear drum], sequela | Diagnosis | ICD-10-CM |
| T20.212 | Burn of second degree of left ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.212A | Burn of second degree of left ear [any part, except ear drum], initial encounter | Diagnosis | ICD-10-CM |
| T20.212D | Burn of second degree of left ear [any part, except ear drum], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.212S | Burn of second degree of left ear [any part, except ear drum], sequela | Diagnosis | ICD-10-CM |
| T20.219 | Burn of second degree of unspecified ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.219A | Burn of second degree of unspecified ear [any part, except ear drum], initial encounter | Diagnosis | ICD-10-CM |
| T20.219D | Burn of second degree of unspecified ear [any part, except ear drum], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.219S | Burn of second degree of unspecified ear [any part, except ear drum], sequela | Diagnosis | ICD-10-CM |
| T20.22 | Burn of second degree of lip(s) | Diagnosis | ICD-10-CM |
| T20.22XA | Burn of second degree of lip(s), initial encounter | Diagnosis | ICD-10-CM |
| T20.22XD | Burn of second degree of lip(s), subsequent encounter | Diagnosis | ICD-10-CM |
| T20.22XS | Burn of second degree of lip(s), sequela | Diagnosis | ICD-10-CM |
| T20.23 | Burn of second degree of chin | Diagnosis | ICD-10-CM |
| T20.23XA | Burn of second degree of chin, initial encounter | Diagnosis | ICD-10-CM |
| T20.23XD | Burn of second degree of chin, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.23XS | Burn of second degree of chin, sequela | Diagnosis | ICD-10-CM |
| T20.24 | Burn of second degree of nose (septum) | Diagnosis | ICD-10-CM |
| T20.24XA | Burn of second degree of nose (septum), initial encounter | Diagnosis | ICD-10-CM |
| T20.24XD | Burn of second degree of nose (septum), subsequent encounter | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T20.24XS | Burn of second degree of nose (septum), sequela | Diagnosis | ICD-10-CM |
| T20.25 | Burn of second degree of scalp [any part] | Diagnosis | ICD-10-CM |
| T20.25XA | Burn of second degree of scalp [any part], initial encounter | Diagnosis | ICD-10-CM |
| T20.25XD | Burn of second degree of scalp [any part], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.25XS | Burn of second degree of scalp [any part], sequela | Diagnosis | ICD-10-CM |
| T20.26 | Burn of second degree of forehead and cheek | Diagnosis | ICD-10-CM |
| T20.26XA | Burn of second degree of forehead and cheek, initial encounter | Diagnosis | ICD-10-CM |
| T20.26XD | Burn of second degree of forehead and cheek, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.26XS | Burn of second degree of forehead and cheek, sequela | Diagnosis | ICD-10-CM |
| T20.27 | Burn of second degree of neck | Diagnosis | ICD-10-CM |
| T20.27XA | Burn of second degree of neck, initial encounter | Diagnosis | ICD-10-CM |
| T20.27XD | Burn of second degree of neck, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.27XS | Burn of second degree of neck, sequela | Diagnosis | ICD-10-CM |
| T20.29 | Burn of second degree of multiple sites of head, face, and neck | Diagnosis | ICD-10-CM |
| T20.29XA | Burn of second degree of multiple sites of head, face, and neck, initial encounter | Diagnosis | ICD-10-CM |
| T20.29XD | Burn of second degree of multiple sites of head, face, and neck, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.29XS | Burn of second degree of multiple sites of head, face, and neck, sequela | Diagnosis | ICD-10-CM |
| T20.3 | Burn of third degree of head, face, and neck | Diagnosis | ICD-10-CM |
| T20.30 | Burn of third degree of head, face, and neck, unspecified site | Diagnosis | ICD-10-CM |
| T20.30XA | Burn of third degree of head, face, and neck, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T20.30XD | Burn of third degree of head, face, and neck, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.30XS | Burn of third degree of head, face, and neck, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T20.31 | Burn of third degree of ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.311 | Burn of third degree of right ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.311A | Burn of third degree of right ear [any part, except ear drum], initial encounter | Diagnosis | ICD-10-CM |
| T20.311D | Burn of third degree of right ear [any part, except ear drum], subsequent encounter | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T20.311S | Burn of third degree of right ear [any part, except ear drum], sequela | Diagnosis | ICD-10-CM |
| T20.312 | Burn of third degree of left ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.312A | Burn of third degree of left ear [any part, except ear drum], initial encounter | Diagnosis | ICD-10-CM |
| T20.312D | Burn of third degree of left ear [any part, except ear drum], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.312S | Burn of third degree of left ear [any part, except ear drum], sequela | Diagnosis | ICD-10-CM |
| T20.319 | Burn of third degree of unspecified ear [any part, except ear drum] | Diagnosis | ICD-10-CM |
| T20.319A | Burn of third degree of unspecified ear [any part, except ear drum], initial encounter | Diagnosis | ICD-10-CM |
| T20.319D | Burn of third degree of unspecified ear [any part, except ear drum], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.319S | Burn of third degree of unspecified ear [any part, except ear drum], sequela | Diagnosis | ICD-10-CM |
| T20.32 | Burn of third degree of lip(s) | Diagnosis | ICD-10-CM |
| T20.32XA | Burn of third degree of lip(s), initial encounter | Diagnosis | ICD-10-CM |
| T20.32XD | Burn of third degree of lip(s), subsequent encounter | Diagnosis | ICD-10-CM |
| T20.32XS | Burn of third degree of lip(s), sequela | Diagnosis | ICD-10-CM |
| T20.33 | Burn of third degree of chin | Diagnosis | ICD-10-CM |
| T20.33XA | Burn of third degree of chin, initial encounter | Diagnosis | ICD-10-CM |
| T20.33XD | Burn of third degree of chin, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.33XS | Burn of third degree of chin, sequela | Diagnosis | ICD-10-CM |
| T20.34 | Burn of third degree of nose (septum) | Diagnosis | ICD-10-CM |
| T20.34XA | Burn of third degree of nose (septum), initial encounter | Diagnosis | ICD-10-CM |
| T20.34XD | Burn of third degree of nose (septum), subsequent encounter | Diagnosis | ICD-10-CM |
| T20.34XS | Burn of third degree of nose (septum), sequela | Diagnosis | ICD-10-CM |
| T20.35 | Burn of third degree of scalp [any part] | Diagnosis | ICD-10-CM |
| T20.35XA | Burn of third degree of scalp [any part], initial encounter | Diagnosis | ICD-10-CM |
| T20.35XD | Burn of third degree of scalp [any part], subsequent encounter | Diagnosis | ICD-10-CM |
| T20.35XS | Burn of third degree of scalp [any part], sequela | Diagnosis | ICD-10-CM |
| T20.36 | Burn of third degree of forehead and cheek | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T20.36XA | Burn of third degree of forehead and cheek, initial encounter | Diagnosis | ICD-10-CM |
| T20.36XD | Burn of third degree of forehead and cheek, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.36XS | Burn of third degree of forehead and cheek, sequela | Diagnosis | ICD-10-CM |
| T20.37 | Burn of third degree of neck | Diagnosis | ICD-10-CM |
| T20.37XA | Burn of third degree of neck, initial encounter | Diagnosis | ICD-10-CM |
| T20.37XD | Burn of third degree of neck, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.37XS | Burn of third degree of neck, sequela | Diagnosis | ICD-10-CM |
| T20.39 | Burn of third degree of multiple sites of head, face, and neck | Diagnosis | ICD-10-CM |
| T20.39XA | Burn of third degree of multiple sites of head, face, and neck, initial encounter | Diagnosis | ICD-10-CM |
| T20.39XD | Burn of third degree of multiple sites of head, face, and neck, subsequent encounter | Diagnosis | ICD-10-CM |
| T20.39XS | Burn of third degree of multiple sites of head, face, and neck, sequela | Diagnosis | ICD-10-CM |
| T21 | Burn and corrosion of trunk | Diagnosis | ICD-10-CM |
| T21.0 | Burn of unspecified degree of trunk | Diagnosis | ICD-10-CM |
| T21.00 | Burn of unspecified degree of trunk, unspecified site | Diagnosis | ICD-10-CM |
| T21.00XA | Burn of unspecified degree of trunk, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T21.00XD | Burn of unspecified degree of trunk, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.00XS | Burn of unspecified degree of trunk, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T21.01 | Burn of unspecified degree of chest wall | Diagnosis | ICD-10-CM |
| T21.01XA | Burn of unspecified degree of chest wall, initial encounter | Diagnosis | ICD-10-CM |
| T21.01XD | Burn of unspecified degree of chest wall, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.01XS | Burn of unspecified degree of chest wall, sequela | Diagnosis | ICD-10-CM |
| T21.02 | Burn of unspecified degree of abdominal wall | Diagnosis | ICD-10-CM |
| T21.02XA | Burn of unspecified degree of abdominal wall, initial encounter | Diagnosis | ICD-10-CM |
| T21.02XD | Burn of unspecified degree of abdominal wall, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.02XS | Burn of unspecified degree of abdominal wall, sequela | Diagnosis | ICD-10-CM |
| T21.03 | Burn of unspecified degree of upper back | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T21.03XA | Burn of unspecified degree of upper back, initial encounter | Diagnosis | ICD-10-CM |
| T21.03XD | Burn of unspecified degree of upper back, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.03XS | Burn of unspecified degree of upper back, sequela | Diagnosis | ICD-10-CM |
| T21.04 | Burn of unspecified degree of lower back | Diagnosis | ICD-10-CM |
| T21.04XA | Burn of unspecified degree of lower back, initial encounter | Diagnosis | ICD-10-CM |
| T21.04XD | Burn of unspecified degree of lower back, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.04XS | Burn of unspecified degree of lower back, sequela | Diagnosis | ICD-10-CM |
| T21.05 | Burn of unspecified degree of buttock | Diagnosis | ICD-10-CM |
| T21.05XA | Burn of unspecified degree of buttock, initial encounter | Diagnosis | ICD-10-CM |
| T21.05XD | Burn of unspecified degree of buttock, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.05XS | Burn of unspecified degree of buttock, sequela | Diagnosis | ICD-10-CM |
| T21.06 | Burn of unspecified degree of male genital region | Diagnosis | ICD-10-CM |
| T21.06XA | Burn of unspecified degree of male genital region, initial encounter | Diagnosis | ICD-10-CM |
| T21.06XD | Burn of unspecified degree of male genital region, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.06XS | Burn of unspecified degree of male genital region, sequela | Diagnosis | ICD-10-CM |
| T21.07 | Burn of unspecified degree of female genital region | Diagnosis | ICD-10-CM |
| T21.07XA | Burn of unspecified degree of female genital region, initial encounter | Diagnosis | ICD-10-CM |
| T21.07XD | Burn of unspecified degree of female genital region, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.07XS | Burn of unspecified degree of female genital region, sequela | Diagnosis | ICD-10-CM |
| T21.09 | Burn of unspecified degree of other site of trunk | Diagnosis | ICD-10-CM |
| T21.09XA | Burn of unspecified degree of other site of trunk, initial encounter | Diagnosis | ICD-10-CM |
| T21.09XD | Burn of unspecified degree of other site of trunk, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.09XS | Burn of unspecified degree of other site of trunk, sequela | Diagnosis | ICD-10-CM |
| T21.1 | Burn of first degree of trunk | Diagnosis | ICD-10-CM |
| T21.10 | Burn of first degree of trunk, unspecified site | Diagnosis | ICD-10-CM |
| T21.10XA | Burn of first degree of trunk, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| | | 0 | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T21.10XD | Burn of first degree of trunk, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.10XS | Burn of first degree of trunk, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T21.11 | Burn of first degree of chest wall | Diagnosis | ICD-10-CM |
| T21.11XA | Burn of first degree of chest wall, initial encounter | Diagnosis | ICD-10-CM |
| T21.11XD | Burn of first degree of chest wall, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.11XS | Burn of first degree of chest wall, sequela | Diagnosis | ICD-10-CM |
| T21.12 | Burn of first degree of abdominal wall | Diagnosis | ICD-10-CM |
| T21.12XA | Burn of first degree of abdominal wall, initial encounter | Diagnosis | ICD-10-CM |
| T21.12XD | Burn of first degree of abdominal wall, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.12XS | Burn of first degree of abdominal wall, sequela | Diagnosis | ICD-10-CM |
| T21.13 | Burn of first degree of upper back | Diagnosis | ICD-10-CM |
| T21.13XA | Burn of first degree of upper back, initial encounter | Diagnosis | ICD-10-CM |
| T21.13XD | Burn of first degree of upper back, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.13XS | Burn of first degree of upper back, sequela | Diagnosis | ICD-10-CM |
| T21.14 | Burn of first degree of lower back | Diagnosis | ICD-10-CM |
| T21.14XA | Burn of first degree of lower back, initial encounter | Diagnosis | ICD-10-CM |
| T21.14XD | Burn of first degree of lower back, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.14XS | Burn of first degree of lower back, sequela | Diagnosis | ICD-10-CM |
| T21.15 | Burn of first degree of buttock | Diagnosis | ICD-10-CM |
| T21.15XA | Burn of first degree of buttock, initial encounter | Diagnosis | ICD-10-CM |
| T21.15XD | Burn of first degree of buttock, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.15XS | Burn of first degree of buttock, sequela | Diagnosis | ICD-10-CM |
| T21.16 | Burn of first degree of male genital region | Diagnosis | ICD-10-CM |
| T21.16XA | Burn of first degree of male genital region, initial encounter | Diagnosis | ICD-10-CM |
| T21.16XD | Burn of first degree of male genital region, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.16XS | Burn of first degree of male genital region, sequela | Diagnosis | ICD-10-CM |
| | | 5 | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T21.17 | Burn of first degree of female genital region | Diagnosis | ICD-10-CM |
| T21.17XA | Burn of first degree of female genital region, initial encounter | Diagnosis | ICD-10-CM |
| T21.17XD | Burn of first degree of female genital region, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.17XS | Burn of first degree of female genital region, sequela | Diagnosis | ICD-10-CM |
| T21.19 | Burn of first degree of other site of trunk | Diagnosis | ICD-10-CM |
| T21.19XA | Burn of first degree of other site of trunk, initial encounter | Diagnosis | ICD-10-CM |
| T21.19XD | Burn of first degree of other site of trunk, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.19XS | Burn of first degree of other site of trunk, sequela | Diagnosis | ICD-10-CM |
| T21.2 | Burn of second degree of trunk | Diagnosis | ICD-10-CM |
| T21.20 | Burn of second degree of trunk, unspecified site | Diagnosis | ICD-10-CM |
| T21.20XA | Burn of second degree of trunk, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T21.20XD | Burn of second degree of trunk, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.20XS | Burn of second degree of trunk, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T21.21 | Burn of second degree of chest wall | Diagnosis | ICD-10-CM |
| T21.21XA | Burn of second degree of chest wall, initial encounter | Diagnosis | ICD-10-CM |
| T21.21XD | Burn of second degree of chest wall, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.21XS | Burn of second degree of chest wall, sequela | Diagnosis | ICD-10-CM |
| T21.22 | Burn of second degree of abdominal wall | Diagnosis | ICD-10-CM |
| T21.22XA | Burn of second degree of abdominal wall, initial encounter | Diagnosis | ICD-10-CM |
| T21.22XD | Burn of second degree of abdominal wall, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.22XS | Burn of second degree of abdominal wall, sequela | Diagnosis | ICD-10-CM |
| T21.23 | Burn of second degree of upper back | Diagnosis | ICD-10-CM |
| T21.23XA | Burn of second degree of upper back, initial encounter | Diagnosis | ICD-10-CM |
| T21.23XD | Burn of second degree of upper back, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.23XS | Burn of second degree of upper back, sequela | Diagnosis | ICD-10-CM |
| T21.24 | Burn of second degree of lower back | Diagnosis | ICD-10-CM |
| | | 2.00.0000 | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T21.24XA | Burn of second degree of lower back, initial encounter | Diagnosis | ICD-10-CM |
| T21.24XD | Burn of second degree of lower back, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.24XS | Burn of second degree of lower back, sequela | Diagnosis | ICD-10-CM |
| T21.25 | Burn of second degree of buttock | Diagnosis | ICD-10-CM |
| T21.25XA | Burn of second degree of buttock, initial encounter | Diagnosis | ICD-10-CM |
| T21.25XD | Burn of second degree of buttock, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.25XS | Burn of second degree of buttock, sequela | Diagnosis | ICD-10-CM |
| T21.26 | Burn of second degree of male genital region | Diagnosis | ICD-10-CM |
| T21.26XA | Burn of second degree of male genital region, initial encounter | Diagnosis | ICD-10-CM |
| T21.26XD | Burn of second degree of male genital region, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.26XS | Burn of second degree of male genital region, sequela | Diagnosis | ICD-10-CM |
| T21.27 | Burn of second degree of female genital region | Diagnosis | ICD-10-CM |
| T21.27XA | Burn of second degree of female genital region, initial encounter | Diagnosis | ICD-10-CM |
| T21.27XD | Burn of second degree of female genital region, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.27XS | Burn of second degree of female genital region, sequela | Diagnosis | ICD-10-CM |
| T21.29 | Burn of second degree of other site of trunk | Diagnosis | ICD-10-CM |
| T21.29XA | Burn of second degree of other site of trunk, initial encounter | Diagnosis | ICD-10-CM |
| T21.29XD | Burn of second degree of other site of trunk, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.29XS | Burn of second degree of other site of trunk, sequela | Diagnosis | ICD-10-CM |
| T21.3 | Burn of third degree of trunk | Diagnosis | ICD-10-CM |
| T21.30 | Burn of third degree of trunk, unspecified site | Diagnosis | ICD-10-CM |
| T21.30XA | Burn of third degree of trunk, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T21.30XD | Burn of third degree of trunk, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.30XS | Burn of third degree of trunk, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T21.31 | Burn of third degree of chest wall | Diagnosis | ICD-10-CM |
| T21.31XA | Burn of third degree of chest wall, initial encounter | Diagnosis | ICD-10-CM |
| | | 2.00.0000 | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T21.31XD | Burn of third degree of chest wall, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.31XS | Burn of third degree of chest wall, sequela | Diagnosis | ICD-10-CM |
| T21.32 | Burn of third degree of abdominal wall | Diagnosis | ICD-10-CM |
| T21.32XA | Burn of third degree of abdominal wall, initial encounter | Diagnosis | ICD-10-CM |
| T21.32XD | Burn of third degree of abdominal wall, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.32XS | Burn of third degree of abdominal wall, sequela | Diagnosis | ICD-10-CM |
| T21.33 | Burn of third degree of upper back | Diagnosis | ICD-10-CM |
| T21.33XA | Burn of third degree of upper back, initial encounter | Diagnosis | ICD-10-CM |
| T21.33XD | Burn of third degree of upper back, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.33XS | Burn of third degree of upper back, sequela | Diagnosis | ICD-10-CM |
| T21.34 | Burn of third degree of lower back | Diagnosis | ICD-10-CM |
| T21.34XA | Burn of third degree of lower back, initial encounter | Diagnosis | ICD-10-CM |
| T21.34XD | Burn of third degree of lower back, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.34XS | Burn of third degree of lower back, sequela | Diagnosis | ICD-10-CM |
| T21.35 | Burn of third degree of buttock | Diagnosis | ICD-10-CM |
| T21.35XA | Burn of third degree of buttock, initial encounter | Diagnosis | ICD-10-CM |
| T21.35XD | Burn of third degree of buttock, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.35XS | Burn of third degree of buttock, sequela | Diagnosis | ICD-10-CM |
| T21.36 | Burn of third degree of male genital region | Diagnosis | ICD-10-CM |
| T21.36XA | Burn of third degree of male genital region, initial encounter | Diagnosis | ICD-10-CM |
| T21.36XD | Burn of third degree of male genital region, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.36XS | Burn of third degree of male genital region, sequela | Diagnosis | ICD-10-CM |
| T21.37 | Burn of third degree of female genital region | Diagnosis | ICD-10-CM |
| T21.37XA | Burn of third degree of female genital region, initial encounter | Diagnosis | ICD-10-CM |
| T21.37XD | Burn of third degree of female genital region, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.37XS | Burn of third degree of female genital region, sequela | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T21.39 | Burn of third degree of other site of trunk | Diagnosis | ICD-10-CM |
| T21.39XA | Burn of third degree of other site of trunk, initial encounter | Diagnosis | ICD-10-CM |
| T21.39XD | Burn of third degree of other site of trunk, subsequent encounter | Diagnosis | ICD-10-CM |
| T21.39XS | Burn of third degree of other site of trunk, sequela | Diagnosis | ICD-10-CM |
| T22 | Burn and corrosion of shoulder and upper limb, except wrist and hand | Diagnosis | ICD-10-CM |
| T22.0 | Burn of unspecified degree of shoulder and upper limb, except wrist and hand | Diagnosis | ICD-10-CM |
| T22.00 | Burn of unspecified degree of shoulder and upper limb, except wrist and hand, unspecified site | | |
| | | Diagnosis | ICD-10-CM |
| T22.00XA | Burn of unspecified degree of shoulder and upper limb, except wrist and hand, unspecified site, initial encounter | | |
| | | Diagnosis | ICD-10-CM |
| T22.00XD | Burn of unspecified degree of shoulder and upper limb, except wrist and hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.00XS | Burn of unspecified degree of shoulder and upper limb, except wrist and hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T22.01 | Burn of unspecified degree of forearm | Diagnosis | ICD-10-CM |
| T22.011 | Burn of unspecified degree of right forearm | Diagnosis | ICD-10-CM |
| T22.011A | Burn of unspecified degree of right forearm, initial encounter | Diagnosis | ICD-10-CM |
| T22.011D | Burn of unspecified degree of right forearm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.011S | Burn of unspecified degree of right forearm, sequela | Diagnosis | ICD-10-CM |
| T22.012 | Burn of unspecified degree of left forearm | Diagnosis | ICD-10-CM |
| T22.012A | Burn of unspecified degree of left forearm, initial encounter | Diagnosis | ICD-10-CM |
| T22.012D | Burn of unspecified degree of left forearm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.012S | Burn of unspecified degree of left forearm, sequela | Diagnosis | ICD-10-CM |
| T22.019 | Burn of unspecified degree of unspecified forearm | Diagnosis | ICD-10-CM |
| T22.019A | Burn of unspecified degree of unspecified forearm, initial encounter | Diagnosis | ICD-10-CM |
| T22.019D | Burn of unspecified degree of unspecified forearm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.019S | Burn of unspecified degree of unspecified forearm, sequela | Diagnosis | ICD-10-CM |
| T22.02 | Burn of unspecified degree of elbow | Diagnosis | ICD-10-CM |
| T22.021 | Burn of unspecified degree of right elbow | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T22.021A | Burn of unspecified degree of right elbow, initial encounter | Diagnosis | ICD-10-CM |
| T22.021D | Burn of unspecified degree of right elbow, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.021S | Burn of unspecified degree of right elbow, sequela | Diagnosis | ICD-10-CM |
| T22.022 | Burn of unspecified degree of left elbow | Diagnosis | ICD-10-CM |
| T22.022A | Burn of unspecified degree of left elbow, initial encounter | Diagnosis | ICD-10-CM |
| T22.022D | Burn of unspecified degree of left elbow, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.022S | Burn of unspecified degree of left elbow, sequela | Diagnosis | ICD-10-CM |
| T22.029 | Burn of unspecified degree of unspecified elbow | Diagnosis | ICD-10-CM |
| T22.029A | Burn of unspecified degree of unspecified elbow, initial encounter | Diagnosis | ICD-10-CM |
| T22.029D | Burn of unspecified degree of unspecified elbow, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.029S | Burn of unspecified degree of unspecified elbow, sequela | Diagnosis | ICD-10-CM |
| T22.03 | Burn of unspecified degree of upper arm | Diagnosis | ICD-10-CM |
| T22.031 | Burn of unspecified degree of right upper arm | Diagnosis | ICD-10-CM |
| T22.031A | Burn of unspecified degree of right upper arm, initial encounter | Diagnosis | ICD-10-CM |
| T22.031D | Burn of unspecified degree of right upper arm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.031S | Burn of unspecified degree of right upper arm, sequela | Diagnosis | ICD-10-CM |
| T22.032 | Burn of unspecified degree of left upper arm | Diagnosis | ICD-10-CM |
| T22.032A | Burn of unspecified degree of left upper arm, initial encounter | Diagnosis | ICD-10-CM |
| T22.032D | Burn of unspecified degree of left upper arm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.032S | Burn of unspecified degree of left upper arm, sequela | Diagnosis | ICD-10-CM |
| T22.039 | Burn of unspecified degree of unspecified upper arm | Diagnosis | ICD-10-CM |
| T22.039A | Burn of unspecified degree of unspecified upper arm, initial encounter | Diagnosis | ICD-10-CM |
| T22.039D | Burn of unspecified degree of unspecified upper arm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.039S | Burn of unspecified degree of unspecified upper arm, sequela | Diagnosis | ICD-10-CM |
| T22.04 | Burn of unspecified degree of axilla | Diagnosis | ICD-10-CM |
| T22.041 | Burn of unspecified degree of right axilla | Diagnosis | ICD-10-CM |
| | | 0 | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-------------|
| T22.041A | Burn of unspecified degree of right axilla, initial encounter | Diagnosis | ICD-10-CM |
| T22.041D | Burn of unspecified degree of right axilla, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.041S | Burn of unspecified degree of right axilla, sequela | Diagnosis | ICD-10-CM |
| T22.042 | Burn of unspecified degree of left axilla | Diagnosis | ICD-10-CM |
| T22.042A | Burn of unspecified degree of left axilla, initial encounter | Diagnosis | ICD-10-CM |
| T22.042D | Burn of unspecified degree of left axilla, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.042S | Burn of unspecified degree of left axilla, sequela | Diagnosis | ICD-10-CM |
| T22.049 | Burn of unspecified degree of unspecified axilla | Diagnosis | ICD-10-CM |
| T22.049A | Burn of unspecified degree of unspecified axilla, initial encounter | Diagnosis | ICD-10-CM |
| T22.049D | Burn of unspecified degree of unspecified axilla, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.049S | Burn of unspecified degree of unspecified axilla, sequela | Diagnosis | ICD-10-CM |
| T22.05 | Burn of unspecified degree of shoulder | Diagnosis | ICD-10-CM |
| T22.051 | Burn of unspecified degree of right shoulder | Diagnosis | ICD-10-CM |
| T22.051A | Burn of unspecified degree of right shoulder, initial encounter | Diagnosis | ICD-10-CM |
| T22.051D | Burn of unspecified degree of right shoulder, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.051S | Burn of unspecified degree of right shoulder, sequela | Diagnosis | ICD-10-CM |
| T22.052 | Burn of unspecified degree of left shoulder | Diagnosis | ICD-10-CM |
| T22.052A | Burn of unspecified degree of left shoulder, initial encounter | Diagnosis | ICD-10-CM |
| T22.052D | Burn of unspecified degree of left shoulder, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.052S | Burn of unspecified degree of left shoulder, sequela | Diagnosis | ICD-10-CM |
| T22.059 | Burn of unspecified degree of unspecified shoulder | Diagnosis | ICD-10-CM |
| T22.059A | Burn of unspecified degree of unspecified shoulder, initial encounter | Diagnosis | ICD-10-CM |
| T22.059D | Burn of unspecified degree of unspecified shoulder, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.059S | Burn of unspecified degree of unspecified shoulder, sequela | Diagnosis | ICD-10-CM |
| T22.06 | Burn of unspecified degree of scapular region | Diagnosis | ICD-10-CM |
| T22.061 | Burn of unspecified degree of right scapular region | Diagnosis | ICD-10-CM |
| | | Diagnosis | 100 10 0141 |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|------------|
| T22.061A | Burn of unspecified degree of right scapular region, initial encounter | Diagnosis | ICD-10-CM |
| T22.061D | Burn of unspecified degree of right scapular region, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.061S | Burn of unspecified degree of right scapular region, sequela | Diagnosis | ICD-10-CM |
| T22.062 | Burn of unspecified degree of left scapular region | Diagnosis | ICD-10-CM |
| T22.062A | Burn of unspecified degree of left scapular region, initial encounter | Diagnosis | ICD-10-CM |
| T22.062D | Burn of unspecified degree of left scapular region, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.062S | Burn of unspecified degree of left scapular region, sequela | Diagnosis | ICD-10-CM |
| T22.069 | Burn of unspecified degree of unspecified scapular region | Diagnosis | ICD-10-CM |
| T22.069A | Burn of unspecified degree of unspecified scapular region, initial encounter | Diagnosis | ICD-10-CM |
| T22.069D | Burn of unspecified degree of unspecified scapular region, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.069S | Burn of unspecified degree of unspecified scapular region, sequela | Diagnosis | ICD-10-CM |
| T22.09 | Burn of unspecified degree of multiple sites of shoulder and upper limb, except wrist and hand | Diagnosis | ICD-10-CM |
| T22.091 | Burn of unspecified degree of multiple sites of right shoulder and upper limb, except wrist and hand | Ũ | |
| | | Diagnosis | ICD-10-CM |
| T22.091A | Burn of unspecified degree of multiple sites of right shoulder and upper limb, except wrist and hand, initial encounter | Ũ | |
| | | Diagnosis | ICD-10-CM |
| T22.091D | Burn of unspecified degree of multiple sites of right shoulder and upper limb, except wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.091S | Burn of unspecified degree of multiple sites of right shoulder and upper limb, except wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T22.092 | Burn of unspecified degree of multiple sites of left shoulder and upper limb, except wrist and hand | 2.06.10010 | 102 20 011 |
| | | Diagnosis | ICD-10-CM |
| T22.092A | Burn of unspecified degree of multiple sites of left shoulder and upper limb, except wrist and hand, initial encounter | | |
| | | Diagnosis | ICD-10-CM |
| T22.092D | Burn of unspecified degree of multiple sites of left shoulder and upper limb, except wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.092S | Burn of unspecified degree of multiple sites of left shoulder and upper limb, except wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T22.099 | Burn of unspecified degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand | | |
| | | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T22.099A | Burn of unspecified degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, initial encounter | | |
| | | Diagnosis | ICD-10-CM |
| T22.099D | Burn of unspecified degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, subsequent encounter | Diagnosis | |
| T22.099S | Burn of unspecified degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T22.1 | Burn of first degree of shoulder and upper limb, except wrist and hand | Diagnosis | ICD-10-CM |
| T22.10 | Burn of first degree of shoulder and upper limb, except wrist and hand, unspecified site | Diagnosis | ICD-10-CM |
| T22.10 | Burn of first degree of shoulder and upper limb, except wrist and hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| 122.1074 | burn of hist degree of shoulder and upper hind, except what and hand, dispectived site, initial encounter | Diagnosis | ICD-10-CM |
| T22.10XD | Burn of first degree of shoulder and upper limb, except wrist and hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.10XS | Burn of first degree of shoulder and upper limb, except wrist and hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T22.11 | Burn of first degree of forearm | Diagnosis | ICD-10-CM |
| T22.111 | Burn of first degree of right forearm | Diagnosis | ICD-10-CM |
| T22.111A | Burn of first degree of right forearm, initial encounter | Diagnosis | ICD-10-CM |
| T22.111D | Burn of first degree of right forearm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.111S | Burn of first degree of right forearm, sequela | Diagnosis | ICD-10-CM |
| T22.112 | Burn of first degree of left forearm | Diagnosis | ICD-10-CM |
| T22.112A | Burn of first degree of left forearm, initial encounter | Diagnosis | ICD-10-CM |
| T22.112D | Burn of first degree of left forearm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.112S | Burn of first degree of left forearm, sequela | Diagnosis | ICD-10-CM |
| T22.119 | Burn of first degree of unspecified forearm | Diagnosis | ICD-10-CM |
| T22.119A | Burn of first degree of unspecified forearm, initial encounter | Diagnosis | ICD-10-CM |
| T22.119D | Burn of first degree of unspecified forearm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.119S | Burn of first degree of unspecified forearm, sequela | Diagnosis | ICD-10-CM |
| T22.12 | Burn of first degree of elbow | Diagnosis | ICD-10-CM |
| T22.121 | Burn of first degree of right elbow | Diagnosis | ICD-10-CM |
| T22.121A | Burn of first degree of right elbow, initial encounter | 6 | |
| - | | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T22.121D | Burn of first degree of right elbow, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.121S | Burn of first degree of right elbow, sequela | Diagnosis | ICD-10-CM |
| T22.122 | Burn of first degree of left elbow | Diagnosis | ICD-10-CM |
| T22.122A | Burn of first degree of left elbow, initial encounter | Diagnosis | ICD-10-CM |
| T22.122D | Burn of first degree of left elbow, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.122S | Burn of first degree of left elbow, sequela | Diagnosis | ICD-10-CM |
| T22.129 | Burn of first degree of unspecified elbow | Diagnosis | ICD-10-CM |
| T22.129A | Burn of first degree of unspecified elbow, initial encounter | Diagnosis | ICD-10-CM |
| T22.129D | Burn of first degree of unspecified elbow, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.129S | Burn of first degree of unspecified elbow, sequela | Diagnosis | ICD-10-CM |
| T22.13 | Burn of first degree of upper arm | Diagnosis | ICD-10-CM |
| T22.131 | Burn of first degree of right upper arm | Diagnosis | ICD-10-CM |
| T22.131A | Burn of first degree of right upper arm, initial encounter | Diagnosis | ICD-10-CM |
| T22.131D | Burn of first degree of right upper arm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.131S | Burn of first degree of right upper arm, sequela | Diagnosis | ICD-10-CM |
| T22.132 | Burn of first degree of left upper arm | Diagnosis | ICD-10-CM |
| T22.132A | Burn of first degree of left upper arm, initial encounter | Diagnosis | ICD-10-CM |
| T22.132D | Burn of first degree of left upper arm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.132S | Burn of first degree of left upper arm, sequela | Diagnosis | ICD-10-CM |
| T22.139 | Burn of first degree of unspecified upper arm | Diagnosis | ICD-10-CM |
| T22.139A | Burn of first degree of unspecified upper arm, initial encounter | Diagnosis | ICD-10-CM |
| T22.139D | Burn of first degree of unspecified upper arm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.139S | Burn of first degree of unspecified upper arm, sequela | Diagnosis | ICD-10-CM |
| T22.14 | Burn of first degree of axilla | Diagnosis | ICD-10-CM |
| T22.141 | Burn of first degree of right axilla | Diagnosis | ICD-10-CM |
| T22.141A | Burn of first degree of right axilla, initial encounter | Diagnosis | ICD-10-CM |
| | | 2.00.0000 | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T22.141D | Burn of first degree of right axilla, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.141S | Burn of first degree of right axilla, sequela | Diagnosis | ICD-10-CM |
| T22.142 | Burn of first degree of left axilla | Diagnosis | ICD-10-CM |
| T22.142A | Burn of first degree of left axilla, initial encounter | Diagnosis | ICD-10-CM |
| T22.142D | Burn of first degree of left axilla, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.142S | Burn of first degree of left axilla, sequela | Diagnosis | ICD-10-CM |
| T22.149 | Burn of first degree of unspecified axilla | Diagnosis | ICD-10-CM |
| T22.149A | Burn of first degree of unspecified axilla, initial encounter | Diagnosis | ICD-10-CM |
| T22.149D | Burn of first degree of unspecified axilla, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.149S | Burn of first degree of unspecified axilla, sequela | Diagnosis | ICD-10-CM |
| T22.15 | Burn of first degree of shoulder | Diagnosis | ICD-10-CM |
| T22.151 | Burn of first degree of right shoulder | Diagnosis | ICD-10-CM |
| T22.151A | Burn of first degree of right shoulder, initial encounter | Diagnosis | ICD-10-CM |
| T22.151D | Burn of first degree of right shoulder, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.151S | Burn of first degree of right shoulder, sequela | Diagnosis | ICD-10-CM |
| T22.152 | Burn of first degree of left shoulder | Diagnosis | ICD-10-CM |
| T22.152A | Burn of first degree of left shoulder, initial encounter | Diagnosis | ICD-10-CM |
| T22.152D | Burn of first degree of left shoulder, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.152S | Burn of first degree of left shoulder, sequela | Diagnosis | ICD-10-CM |
| T22.159 | Burn of first degree of unspecified shoulder | Diagnosis | ICD-10-CM |
| T22.159A | Burn of first degree of unspecified shoulder, initial encounter | Diagnosis | ICD-10-CM |
| T22.159D | Burn of first degree of unspecified shoulder, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.159S | Burn of first degree of unspecified shoulder, sequela | Diagnosis | ICD-10-CM |
| T22.16 | Burn of first degree of scapular region | Diagnosis | ICD-10-CM |
| T22.161 | Burn of first degree of right scapular region | Diagnosis | ICD-10-CM |
| T22.161A | Burn of first degree of right scapular region, initial encounter | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T22.161D | Burn of first degree of right scapular region, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.161S | Burn of first degree of right scapular region, sequela | Diagnosis | ICD-10-CM |
| T22.162 | Burn of first degree of left scapular region | Diagnosis | ICD-10-CM |
| T22.162A | Burn of first degree of left scapular region, initial encounter | Diagnosis | ICD-10-CM |
| T22.162D | Burn of first degree of left scapular region, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.162S | Burn of first degree of left scapular region, sequela | Diagnosis | ICD-10-CM |
| T22.169 | Burn of first degree of unspecified scapular region | Diagnosis | ICD-10-CM |
| T22.169A | Burn of first degree of unspecified scapular region, initial encounter | Diagnosis | ICD-10-CM |
| T22.169D | Burn of first degree of unspecified scapular region, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.169S | Burn of first degree of unspecified scapular region, sequela | Diagnosis | ICD-10-CM |
| T22.19 | Burn of first degree of multiple sites of shoulder and upper limb, except wrist and hand | Diagnosis | ICD-10-CM |
| T22.191 | Burn of first degree of multiple sites of right shoulder and upper limb, except wrist and hand | Diagnosis | ICD-10-CM |
| T22.191A | Burn of first degree of multiple sites of right shoulder and upper limb, except wrist and hand, initial encounter | | |
| T22.191D | Burn of first degree of multiple sites of right shoulder and upper limb, event writt and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.191D | Burn of first degree of multiple sites of right shoulder and upper limb, except wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| | Burn of first degree of multiple sites of right shoulder and upper limb, except wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T22.192 | Burn of first degree of multiple sites of left shoulder and upper limb, except wrist and hand | Diagnosis | ICD-10-CM |
| T22.192A | Burn of first degree of multiple sites of left shoulder and upper limb, except wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| T22.192D | Burn of first degree of multiple sites of left shoulder and upper limb, except wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.192S | Burn of first degree of multiple sites of left shoulder and upper limb, except wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T22.199 | Burn of first degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand | Diagnosis | |
| | | Diagnosis | ICD-10-CM |
| T22.199A | Burn of first degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, initial encounter | | |
| | | Diagnosis | ICD-10-CM |
| T22.199D | Burn of first degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.199S | Burn of first degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T22.2 | Burn of second degree of shoulder and upper limb, except wrist and hand | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T22.20 | Burn of second degree of shoulder and upper limb, except wrist and hand, unspecified site | Diagnosis | ICD-10-CM |
| T22.20XA | Burn of second degree of shoulder and upper limb, except wrist and hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T22.20XD | Burn of second degree of shoulder and upper limb, except wrist and hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.20XS | Burn of second degree of shoulder and upper limb, except wrist and hand, unspecified site, sequela | C C | ICD-10-CM |
| T22.21 | Burn of second degree of forearm | Diagnosis | |
| T22.211 | Burn of second degree of right forearm | Diagnosis | ICD-10-CM |
| T22.211A | Burn of second degree of right forearm, initial encounter | Diagnosis | ICD-10-CM |
| T22.211A | Burn of second degree of right forearm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.211D | | Diagnosis | ICD-10-CM |
| | Burn of second degree of right forearm, sequela | Diagnosis | ICD-10-CM |
| T22.212 | Burn of second degree of left forearm | Diagnosis | ICD-10-CM |
| T22.212A | Burn of second degree of left forearm, initial encounter | Diagnosis | ICD-10-CM |
| T22.212D | Burn of second degree of left forearm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.212S | Burn of second degree of left forearm, sequela | Diagnosis | ICD-10-CM |
| T22.219 | Burn of second degree of unspecified forearm | Diagnosis | ICD-10-CM |
| T22.219A | Burn of second degree of unspecified forearm, initial encounter | Diagnosis | ICD-10-CM |
| T22.219D | Burn of second degree of unspecified forearm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.219S | Burn of second degree of unspecified forearm, sequela | Diagnosis | ICD-10-CM |
| T22.22 | Burn of second degree of elbow | Diagnosis | ICD-10-CM |
| T22.221 | Burn of second degree of right elbow | Diagnosis | ICD-10-CM |
| T22.221A | Burn of second degree of right elbow, initial encounter | Diagnosis | ICD-10-CM |
| T22.221D | Burn of second degree of right elbow, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.221S | Burn of second degree of right elbow, sequela | Diagnosis | ICD-10-CM |
| T22.222 | Burn of second degree of left elbow | Diagnosis | ICD-10-CM |
| T22.222A | Burn of second degree of left elbow, initial encounter | Diagnosis | ICD-10-CM |
| T22.222D | Burn of second degree of left elbow, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.222S | Burn of second degree of left elbow, sequela | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T22.229 | Burn of second degree of unspecified elbow | Diagnosis | ICD-10-CM |
| T22.229A | Burn of second degree of unspecified elbow, initial encounter | Diagnosis | ICD-10-CM |
| T22.229D | Burn of second degree of unspecified elbow, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.229S | Burn of second degree of unspecified elbow, sequela | Diagnosis | ICD-10-CM |
| T22.23 | Burn of second degree of upper arm | Diagnosis | ICD-10-CM |
| T22.231 | Burn of second degree of right upper arm | Diagnosis | ICD-10-CM |
| T22.231A | Burn of second degree of right upper arm, initial encounter | Diagnosis | ICD-10-CM |
| T22.231D | Burn of second degree of right upper arm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.231S | Burn of second degree of right upper arm, sequela | Diagnosis | ICD-10-CM |
| T22.232 | Burn of second degree of left upper arm | Diagnosis | ICD-10-CM |
| T22.232A | Burn of second degree of left upper arm, initial encounter | Diagnosis | ICD-10-CM |
| T22.232D | Burn of second degree of left upper arm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.232S | Burn of second degree of left upper arm, sequela | Diagnosis | ICD-10-CM |
| T22.239 | Burn of second degree of unspecified upper arm | Diagnosis | ICD-10-CM |
| T22.239A | Burn of second degree of unspecified upper arm, initial encounter | Diagnosis | ICD-10-CM |
| T22.239D | Burn of second degree of unspecified upper arm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.239S | Burn of second degree of unspecified upper arm, sequela | Diagnosis | ICD-10-CM |
| T22.24 | Burn of second degree of axilla | Diagnosis | ICD-10-CM |
| T22.241 | Burn of second degree of right axilla | Diagnosis | ICD-10-CM |
| T22.241A | Burn of second degree of right axilla, initial encounter | Diagnosis | ICD-10-CM |
| T22.241D | Burn of second degree of right axilla, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.241S | Burn of second degree of right axilla, sequela | Diagnosis | ICD-10-CM |
| T22.242 | Burn of second degree of left axilla | Diagnosis | ICD-10-CM |
| T22.242A | Burn of second degree of left axilla, initial encounter | Diagnosis | ICD-10-CM |
| T22.242D | Burn of second degree of left axilla, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.242S | Burn of second degree of left axilla, sequela | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T22.249 | Burn of second degree of unspecified axilla | Diagnosis | ICD-10-CM |
| T22.249A | Burn of second degree of unspecified axilla, initial encounter | Diagnosis | ICD-10-CM |
| T22.249D | Burn of second degree of unspecified axilla, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.249S | Burn of second degree of unspecified axilla, sequela | Diagnosis | ICD-10-CM |
| T22.25 | Burn of second degree of shoulder | Diagnosis | ICD-10-CM |
| T22.251 | Burn of second degree of right shoulder | Diagnosis | ICD-10-CM |
| T22.251A | Burn of second degree of right shoulder, initial encounter | Diagnosis | ICD-10-CM |
| T22.251D | Burn of second degree of right shoulder, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.251S | Burn of second degree of right shoulder, sequela | Diagnosis | ICD-10-CM |
| T22.252 | Burn of second degree of left shoulder | Diagnosis | ICD-10-CM |
| T22.252A | Burn of second degree of left shoulder, initial encounter | Diagnosis | ICD-10-CM |
| T22.252D | Burn of second degree of left shoulder, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.252S | Burn of second degree of left shoulder, sequela | Diagnosis | ICD-10-CM |
| T22.259 | Burn of second degree of unspecified shoulder | Diagnosis | ICD-10-CM |
| T22.259A | Burn of second degree of unspecified shoulder, initial encounter | Diagnosis | ICD-10-CM |
| T22.259D | Burn of second degree of unspecified shoulder, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.259S | Burn of second degree of unspecified shoulder, sequela | Diagnosis | ICD-10-CM |
| T22.26 | Burn of second degree of scapular region | Diagnosis | ICD-10-CM |
| T22.261 | Burn of second degree of right scapular region | Diagnosis | ICD-10-CM |
| T22.261A | Burn of second degree of right scapular region, initial encounter | Diagnosis | ICD-10-CM |
| T22.261D | Burn of second degree of right scapular region, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.261S | Burn of second degree of right scapular region, sequela | Diagnosis | ICD-10-CM |
| T22.262 | Burn of second degree of left scapular region | Diagnosis | ICD-10-CM |
| T22.262A | Burn of second degree of left scapular region, initial encounter | Diagnosis | ICD-10-CM |
| T22.262D | Burn of second degree of left scapular region, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.262S | Burn of second degree of left scapular region, sequela | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T22.269 | Burn of second degree of unspecified scapular region | Diagnosis | ICD-10-CM |
| T22.269A | Burn of second degree of unspecified scapular region, initial encounter | Diagnosis | ICD-10-CM |
| T22.269D | Burn of second degree of unspecified scapular region, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.269S | Burn of second degree of unspecified scapular region, sequela | Diagnosis | ICD-10-CM |
| T22.29 | Burn of second degree of multiple sites of shoulder and upper limb, except wrist and hand | Diagnosis | ICD-10-CM |
| T22.291 | Burn of second degree of multiple sites of right shoulder and upper limb, except wrist and hand | C | |
| T22.291A | Burn of second degree of multiple sites of right shoulder and upper limb, except wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| | | Diagnosis | ICD-10-CM |
| T22.291D | Burn of second degree of multiple sites of right shoulder and upper limb, except wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.291S | Burn of second degree of multiple sites of right shoulder and upper limb, except wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T22.292 | Burn of second degree of multiple sites of left shoulder and upper limb, except wrist and hand | - | |
| | | Diagnosis | ICD-10-CM |
| T22.292A | Burn of second degree of multiple sites of left shoulder and upper limb, except wrist and hand, initial encounter | | |
| | | Diagnosis | ICD-10-CM |
| T22.292D | Burn of second degree of multiple sites of left shoulder and upper limb, except wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.292S | Burn of second degree of multiple sites of left shoulder and upper limb, except wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T22.299 | Burn of second degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand | | |
| T22.299A | Burn of second degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| | | Diagnosis | ICD-10-CM |
| T22.299D | Burn of second degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, subsequent encounter | | |
| T22 2000 | | Diagnosis | ICD-10-CM |
| T22.299S | Burn of second degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T22.3 | Burn of third degree of shoulder and upper limb, except wrist and hand | Diagnosis | ICD-10-CM |
| T22.30 | Burn of third degree of shoulder and upper limb, except wrist and hand, unspecified site | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T22.30XA | Burn of third degree of shoulder and upper limb, except wrist and hand, unspecified site, initial encounter | - | |
| | Burn of third degree of chaulder and upper limb, event writt and hand, upper official site, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.30XD | Burn of third degree of shoulder and upper limb, except wrist and hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.30XS | Burn of third degree of shoulder and upper limb, except wrist and hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T22.31 | Burn of third degree of forearm | Diagnosis | ICD-10-CM |
| T22.311 | Burn of third degree of right forearm | Diagnosis | ICD-10-CM |
| T22.311A | Burn of third degree of right forearm, initial encounter | Diagnosis | ICD-10-CM |
| T22.311D | Burn of third degree of right forearm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.311S | Burn of third degree of right forearm, sequela | Diagnosis | ICD-10-CM |
| T22.312 | Burn of third degree of left forearm | Diagnosis | ICD-10-CM |
| T22.312A | Burn of third degree of left forearm, initial encounter | Diagnosis | ICD-10-CM |
| T22.312D | Burn of third degree of left forearm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.312S | Burn of third degree of left forearm, sequela | Diagnosis | ICD-10-CM |
| T22.319 | Burn of third degree of unspecified forearm | Diagnosis | ICD-10-CM |
| T22.319A | Burn of third degree of unspecified forearm, initial encounter | Diagnosis | ICD-10-CM |
| T22.319D | Burn of third degree of unspecified forearm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.319S | Burn of third degree of unspecified forearm, sequela | Diagnosis | ICD-10-CM |
| T22.32 | Burn of third degree of elbow | Diagnosis | ICD-10-CM |
| T22.321 | Burn of third degree of right elbow | Diagnosis | ICD-10-CM |
| T22.321A | Burn of third degree of right elbow, initial encounter | Diagnosis | ICD-10-CM |
| T22.321D | Burn of third degree of right elbow, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.321S | Burn of third degree of right elbow, sequela | Diagnosis | ICD-10-CM |
| T22.322 | Burn of third degree of left elbow | Diagnosis | ICD-10-CM |
| T22.322A | Burn of third degree of left elbow, initial encounter | | |
| T22.322D | Burn of third degree of left elbow, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.3225 | Burn of third degree of left elbow, sequela | Diagnosis | ICD-10-CM |
| T22.3223 | Burn of third degree of unspecified elbow | Diagnosis | ICD-10-CM |
| 122.323 | buill of third degree of dispectiled elbow | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T22.329A | Burn of third degree of unspecified elbow, initial encounter | Diagnosis | ICD-10-CM |
| T22.329D | Burn of third degree of unspecified elbow, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.329S | Burn of third degree of unspecified elbow, sequela | Diagnosis | ICD-10-CM |
| T22.33 | Burn of third degree of upper arm | Diagnosis | ICD-10-CM |
| T22.331 | Burn of third degree of right upper arm | Diagnosis | ICD-10-CM |
| T22.331A | Burn of third degree of right upper arm, initial encounter | Diagnosis | ICD-10-CM |
| T22.331D | Burn of third degree of right upper arm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.331S | Burn of third degree of right upper arm, sequela | Diagnosis | ICD-10-CM |
| T22.332 | Burn of third degree of left upper arm | Diagnosis | ICD-10-CM |
| T22.332A | Burn of third degree of left upper arm, initial encounter | Diagnosis | ICD-10-CM |
| T22.332D | Burn of third degree of left upper arm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.332S | Burn of third degree of left upper arm, sequela | Diagnosis | ICD-10-CM |
| T22.339 | Burn of third degree of unspecified upper arm | Diagnosis | ICD-10-CM |
| T22.339A | Burn of third degree of unspecified upper arm, initial encounter | Diagnosis | ICD-10-CM |
| T22.339D | Burn of third degree of unspecified upper arm, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.339S | Burn of third degree of unspecified upper arm, sequela | Diagnosis | ICD-10-CM |
| T22.34 | Burn of third degree of axilla | Diagnosis | ICD-10-CM |
| T22.341 | Burn of third degree of right axilla | Diagnosis | ICD-10-CM |
| T22.341A | Burn of third degree of right axilla, initial encounter | Diagnosis | ICD-10-CM |
| T22.341D | Burn of third degree of right axilla, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.341S | Burn of third degree of right axilla, sequela | Diagnosis | ICD-10-CM |
| T22.342 | Burn of third degree of left axilla | Diagnosis | ICD-10-CM |
| T22.342A | Burn of third degree of left axilla, initial encounter | Diagnosis | ICD-10-CM |
| T22.342D | Burn of third degree of left axilla, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.342S | Burn of third degree of left axilla, sequela | Diagnosis | ICD-10-CM |
| T22.349 | Burn of third degree of unspecified axilla | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T22.349A | Burn of third degree of unspecified axilla, initial encounter | Diagnosis | ICD-10-CM |
| T22.349D | Burn of third degree of unspecified axilla, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.349S | Burn of third degree of unspecified axilla, sequela | Diagnosis | ICD-10-CM |
| T22.35 | Burn of third degree of shoulder | Diagnosis | ICD-10-CM |
| T22.351 | Burn of third degree of right shoulder | Diagnosis | ICD-10-CM |
| T22.351A | Burn of third degree of right shoulder, initial encounter | Diagnosis | ICD-10-CM |
| T22.351D | Burn of third degree of right shoulder, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.351S | Burn of third degree of right shoulder, sequela | Diagnosis | ICD-10-CM |
| T22.352 | Burn of third degree of left shoulder | Diagnosis | ICD-10-CM |
| T22.352A | Burn of third degree of left shoulder, initial encounter | Diagnosis | ICD-10-CM |
| T22.352D | Burn of third degree of left shoulder, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.352S | Burn of third degree of left shoulder, sequela | Diagnosis | ICD-10-CM |
| T22.359 | Burn of third degree of unspecified shoulder | Diagnosis | ICD-10-CM |
| T22.359A | Burn of third degree of unspecified shoulder, initial encounter | Diagnosis | ICD-10-CM |
| T22.359D | Burn of third degree of unspecified shoulder, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.359S | Burn of third degree of unspecified shoulder, sequela | Diagnosis | ICD-10-CM |
| T22.36 | Burn of third degree of scapular region | Diagnosis | ICD-10-CM |
| T22.361 | Burn of third degree of right scapular region | Diagnosis | ICD-10-CM |
| T22.361A | Burn of third degree of right scapular region, initial encounter | Diagnosis | ICD-10-CM |
| T22.361D | Burn of third degree of right scapular region, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.361S | Burn of third degree of right scapular region, sequela | Diagnosis | ICD-10-CM |
| T22.362 | Burn of third degree of left scapular region | Diagnosis | ICD-10-CM |
| T22.362A | Burn of third degree of left scapular region, initial encounter | Diagnosis | ICD-10-CM |
| T22.362D | Burn of third degree of left scapular region, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.362S | Burn of third degree of left scapular region, sequela | Diagnosis | ICD-10-CM |
| T22.369 | Burn of third degree of unspecified scapular region | Diagnosis | ICD-10-CM |
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|------------------|--|---------------|-----------|
| Code T22.369A | Description Burn of third degree of unspecified scapular region, initial encounter | Code Category | Code Type |
| T22.369D | Burn of third degree of unspecified scapular region, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.369D | | Diagnosis | ICD-10-CM |
| | Burn of third degree of unspecified scapular region, sequela | Diagnosis | ICD-10-CM |
| T22.39 | Burn of third degree of multiple sites of shoulder and upper limb, except wrist and hand | Diagnosis | ICD-10-CM |
| T22.391 | Burn of third degree of multiple sites of right shoulder and upper limb, except wrist and hand | D | |
| T22.391A | Burn of third degree of multiple sites of right shoulder and upper limb, except wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| 122.391A | Butt of third degree of multiple sites of right shoulder and upper inno, except whist and hand, initial encounter | Diagnosis | ICD-10-CM |
| T22.391D | Burn of third degree of multiple sites of right shoulder and upper limb, except wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.391S | Burn of third degree of multiple sites of right shoulder and upper limb, except wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T22.392 | Burn of third degree of multiple sites of left shoulder and upper limb, except wrist and hand | Diagnosis | ICD-10-CM |
| T22.392A | Burn of third degree of multiple sites of left shoulder and upper limb, except wrist and hand, initial encounter | Diagnosis | |
| | | Diagnosis | ICD-10-CM |
| T22.392D | Burn of third degree of multiple sites of left shoulder and upper limb, except wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.392S | Burn of third degree of multiple sites of left shoulder and upper limb, except wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T22.399 | Burn of third degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand | | |
| | | Diagnosis | ICD-10-CM |
| T22.399A | Burn of third degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, initial encounter | | |
| | | Diagnosis | ICD-10-CM |
| T22.399D | Burn of third degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T22.399S | Burn of third degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T23 | Burn and corrosion of wrist and hand | Diagnosis | ICD-10-CM |
| T23.0 | Burn of unspecified degree of wrist and hand | Diagnosis | ICD-10-CM |
| T23.00 | Burn of unspecified degree of hand, unspecified site | - | ICD-10-CM |
| T23.001 | Burn of unspecified degree of right hand, unspecified site | Diagnosis | |
| T23.001A | Burn of unspecified degree of right hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T23.001A | Burn of unspecified degree of right hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.001D | | Diagnosis | ICD-10-CM |
| 123.0015 | Burn of unspecified degree of right hand, unspecified site, sequela | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T23.002 | Burn of unspecified degree of left hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.002A | Burn of unspecified degree of left hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T23.002D | Burn of unspecified degree of left hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.002S | Burn of unspecified degree of left hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T23.009 | Burn of unspecified degree of unspecified hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.009A | Burn of unspecified degree of unspecified hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T23.009D | Burn of unspecified degree of unspecified hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.009S | Burn of unspecified degree of unspecified hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T23.01 | Burn of unspecified degree of thumb (nail) | Diagnosis | ICD-10-CM |
| T23.011 | Burn of unspecified degree of right thumb (nail) | Diagnosis | ICD-10-CM |
| T23.011A | Burn of unspecified degree of right thumb (nail), initial encounter | Diagnosis | ICD-10-CM |
| T23.011D | Burn of unspecified degree of right thumb (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T23.011S | Burn of unspecified degree of right thumb (nail), sequela | Diagnosis | ICD-10-CM |
| T23.012 | Burn of unspecified degree of left thumb (nail) | Diagnosis | ICD-10-CM |
| T23.012A | Burn of unspecified degree of left thumb (nail), initial encounter | Diagnosis | ICD-10-CM |
| T23.012D | Burn of unspecified degree of left thumb (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T23.012S | Burn of unspecified degree of left thumb (nail), sequela | Diagnosis | ICD-10-CM |
| T23.019 | Burn of unspecified degree of unspecified thumb (nail) | Diagnosis | ICD-10-CM |
| T23.019A | Burn of unspecified degree of unspecified thumb (nail), initial encounter | Diagnosis | ICD-10-CM |
| T23.019D | Burn of unspecified degree of unspecified thumb (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T23.019S | Burn of unspecified degree of unspecified thumb (nail), sequela | Diagnosis | ICD-10-CM |
| T23.02 | Burn of unspecified degree of single finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.021 | Burn of unspecified degree of single right finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.021A | Burn of unspecified degree of single right finger (nail) except thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.021D | Burn of unspecified degree of single right finger (nail) except thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.021S | Burn of unspecified degree of single right finger (nail) except thumb, sequela | Diagnosis | ICD-10-CM |
| | | 0 | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T23.022 | Burn of unspecified degree of single left finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.022A | Burn of unspecified degree of single left finger (nail) except thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.022D | Burn of unspecified degree of single left finger (nail) except thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.022S | Burn of unspecified degree of single left finger (nail) except thumb, sequela | Diagnosis | ICD-10-CM |
| T23.029 | Burn of unspecified degree of unspecified single finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.029A | Burn of unspecified degree of unspecified single finger (nail) except thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.029D | Burn of unspecified degree of unspecified single finger (nail) except thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.029S | Burn of unspecified degree of unspecified single finger (nail) except thumb, sequela | Diagnosis | ICD-10-CM |
| T23.03 | Burn of unspecified degree of multiple fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.031 | Burn of unspecified degree of multiple right fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.031A | Burn of unspecified degree of multiple right fingers (nail), not including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.031D | Burn of unspecified degree of multiple right fingers (nail), not including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.031S | Burn of unspecified degree of multiple right fingers (nail), not including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.032 | Burn of unspecified degree of multiple left fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.032A | Burn of unspecified degree of multiple left fingers (nail), not including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.032D | Burn of unspecified degree of multiple left fingers (nail), not including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.032S | Burn of unspecified degree of multiple left fingers (nail), not including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.039 | Burn of unspecified degree of unspecified multiple fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.039A | Burn of unspecified degree of unspecified multiple fingers (nail), not including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.039D | Burn of unspecified degree of unspecified multiple fingers (nail), not including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.039S | Burn of unspecified degree of unspecified multiple fingers (nail), not including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.04 | Burn of unspecified degree of multiple fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.041 | Burn of unspecified degree of multiple right fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.041A | Burn of unspecified degree of multiple right fingers (nail), including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.041D | Burn of unspecified degree of multiple right fingers (nail), including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.041S | Burn of unspecified degree of multiple right fingers (nail), including thumb, sequela | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T23.042 | Burn of unspecified degree of multiple left fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.042A | Burn of unspecified degree of multiple left fingers (nail), including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.042D | Burn of unspecified degree of multiple left fingers (nail), including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.042S | Burn of unspecified degree of multiple left fingers (nail), including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.049 | Burn of unspecified degree of unspecified multiple fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.049A | Burn of unspecified degree of unspecified multiple fingers (nail), including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.049D | Burn of unspecified degree of unspecified multiple fingers (nail), including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.049S | Burn of unspecified degree of unspecified multiple fingers (nail), including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.05 | Burn of unspecified degree of palm | Diagnosis | ICD-10-CM |
| T23.051 | Burn of unspecified degree of right palm | Diagnosis | ICD-10-CM |
| T23.051A | Burn of unspecified degree of right palm, initial encounter | Diagnosis | ICD-10-CM |
| T23.051D | Burn of unspecified degree of right palm, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.051S | Burn of unspecified degree of right palm, sequela | Diagnosis | ICD-10-CM |
| T23.052 | Burn of unspecified degree of left palm | Diagnosis | ICD-10-CM |
| T23.052A | Burn of unspecified degree of left palm, initial encounter | Diagnosis | ICD-10-CM |
| T23.052D | Burn of unspecified degree of left palm, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.052S | Burn of unspecified degree of left palm, sequela | Diagnosis | ICD-10-CM |
| T23.059 | Burn of unspecified degree of unspecified palm | Diagnosis | ICD-10-CM |
| T23.059A | Burn of unspecified degree of unspecified palm, initial encounter | Diagnosis | ICD-10-CM |
| T23.059D | Burn of unspecified degree of unspecified palm, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.059S | Burn of unspecified degree of unspecified palm, sequela | Diagnosis | ICD-10-CM |
| T23.06 | Burn of unspecified degree of back of hand | Diagnosis | ICD-10-CM |
| T23.061 | Burn of unspecified degree of back of right hand | Diagnosis | ICD-10-CM |
| T23.061A | Burn of unspecified degree of back of right hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.061D | Burn of unspecified degree of back of right hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.061S | Burn of unspecified degree of back of right hand, sequela | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T23.062 | Burn of unspecified degree of back of left hand | Diagnosis | ICD-10-CM |
| T23.062A | Burn of unspecified degree of back of left hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.062D | Burn of unspecified degree of back of left hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.062S | Burn of unspecified degree of back of left hand, sequela | Diagnosis | ICD-10-CM |
| T23.069 | Burn of unspecified degree of back of unspecified hand | Diagnosis | ICD-10-CM |
| T23.069A | Burn of unspecified degree of back of unspecified hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.069D | Burn of unspecified degree of back of unspecified hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.069S | Burn of unspecified degree of back of unspecified hand, sequela | Diagnosis | ICD-10-CM |
| T23.07 | Burn of unspecified degree of wrist | Diagnosis | ICD-10-CM |
| T23.071 | Burn of unspecified degree of right wrist | Diagnosis | ICD-10-CM |
| T23.071A | Burn of unspecified degree of right wrist, initial encounter | Diagnosis | ICD-10-CM |
| T23.071D | Burn of unspecified degree of right wrist, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.071S | Burn of unspecified degree of right wrist, sequela | Diagnosis | ICD-10-CM |
| T23.072 | Burn of unspecified degree of left wrist | Diagnosis | ICD-10-CM |
| T23.072A | Burn of unspecified degree of left wrist, initial encounter | Diagnosis | ICD-10-CM |
| T23.072D | Burn of unspecified degree of left wrist, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.072S | Burn of unspecified degree of left wrist, sequela | Diagnosis | ICD-10-CM |
| T23.079 | Burn of unspecified degree of unspecified wrist | Diagnosis | ICD-10-CM |
| T23.079A | Burn of unspecified degree of unspecified wrist, initial encounter | Diagnosis | ICD-10-CM |
| T23.079D | Burn of unspecified degree of unspecified wrist, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.079S | Burn of unspecified degree of unspecified wrist, sequela | Diagnosis | ICD-10-CM |
| T23.09 | Burn of unspecified degree of multiple sites of wrist and hand | Diagnosis | ICD-10-CM |
| T23.091 | Burn of unspecified degree of multiple sites of right wrist and hand | Diagnosis | ICD-10-CM |
| T23.091A | Burn of unspecified degree of multiple sites of right wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.091D | Burn of unspecified degree of multiple sites of right wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.091S | Burn of unspecified degree of multiple sites of right wrist and hand, sequela | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T23.092 | Burn of unspecified degree of multiple sites of left wrist and hand | Diagnosis | ICD-10-CM |
| T23.092A | Burn of unspecified degree of multiple sites of left wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.092D | Burn of unspecified degree of multiple sites of left wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.092S | Burn of unspecified degree of multiple sites of left wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T23.099 | Burn of unspecified degree of multiple sites of unspecified wrist and hand | Diagnosis | ICD-10-CM |
| T23.099A | Burn of unspecified degree of multiple sites of unspecified wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.099D | Burn of unspecified degree of multiple sites of unspecified wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.099S | Burn of unspecified degree of multiple sites of unspecified wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T23.1 | Burn of first degree of wrist and hand | Diagnosis | ICD-10-CM |
| T23.10 | Burn of first degree of hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.101 | Burn of first degree of right hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.101A | Burn of first degree of right hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T23.101D | Burn of first degree of right hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.101S | Burn of first degree of right hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T23.102 | Burn of first degree of left hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.102A | Burn of first degree of left hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T23.102D | Burn of first degree of left hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.102S | Burn of first degree of left hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T23.109 | Burn of first degree of unspecified hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.109A | Burn of first degree of unspecified hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T23.109D | Burn of first degree of unspecified hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.109S | Burn of first degree of unspecified hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T23.11 | Burn of first degree of thumb (nail) | Diagnosis | ICD-10-CM |
| T23.111 | Burn of first degree of right thumb (nail) | Diagnosis | ICD-10-CM |
| T23.111A | Burn of first degree of right thumb (nail), initial encounter | Diagnosis | ICD-10-CM |
| T23.111D | Burn of first degree of right thumb (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T23.111S | Burn of first degree of right thumb (nail), sequela | Diagnosis | ICD-10-CM |
| T23.112 | Burn of first degree of left thumb (nail) | Diagnosis | ICD-10-CM |
| T23.112A | Burn of first degree of left thumb (nail), initial encounter | Diagnosis | ICD-10-CM |
| T23.112D | Burn of first degree of left thumb (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T23.112S | Burn of first degree of left thumb (nail), sequela | Diagnosis | ICD-10-CM |
| T23.119 | Burn of first degree of unspecified thumb (nail) | Diagnosis | ICD-10-CM |
| T23.119A | Burn of first degree of unspecified thumb (nail), initial encounter | Diagnosis | ICD-10-CM |
| T23.119D | Burn of first degree of unspecified thumb (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T23.119S | Burn of first degree of unspecified thumb (nail), sequela | Diagnosis | ICD-10-CM |
| T23.12 | Burn of first degree of single finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.121 | Burn of first degree of single right finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.121A | Burn of first degree of single right finger (nail) except thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.121D | Burn of first degree of single right finger (nail) except thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.121S | Burn of first degree of single right finger (nail) except thumb, sequela | Diagnosis | ICD-10-CM |
| T23.122 | Burn of first degree of single left finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.122A | Burn of first degree of single left finger (nail) except thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.122D | Burn of first degree of single left finger (nail) except thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.122S | Burn of first degree of single left finger (nail) except thumb, sequela | Diagnosis | ICD-10-CM |
| T23.129 | Burn of first degree of unspecified single finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.129A | Burn of first degree of unspecified single finger (nail) except thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.129D | Burn of first degree of unspecified single finger (nail) except thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.129S | Burn of first degree of unspecified single finger (nail) except thumb, sequela | Diagnosis | ICD-10-CM |
| T23.13 | Burn of first degree of multiple fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.131 | Burn of first degree of multiple right fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.131A | Burn of first degree of multiple right fingers (nail), not including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.131D | Burn of first degree of multiple right fingers (nail), not including thumb, subsequent encounter | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T23.131S | Burn of first degree of multiple right fingers (nail), not including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.132 | Burn of first degree of multiple left fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.132A | Burn of first degree of multiple left fingers (nail), not including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.132D | Burn of first degree of multiple left fingers (nail), not including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.132S | Burn of first degree of multiple left fingers (nail), not including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.139 | Burn of first degree of unspecified multiple fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.139A | Burn of first degree of unspecified multiple fingers (nail), not including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.139D | Burn of first degree of unspecified multiple fingers (nail), not including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.139S | Burn of first degree of unspecified multiple fingers (nail), not including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.14 | Burn of first degree of multiple fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.141 | Burn of first degree of multiple right fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.141A | Burn of first degree of multiple right fingers (nail), including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.141D | Burn of first degree of multiple right fingers (nail), including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.141S | Burn of first degree of multiple right fingers (nail), including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.142 | Burn of first degree of multiple left fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.142A | Burn of first degree of multiple left fingers (nail), including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.142D | Burn of first degree of multiple left fingers (nail), including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.142S | Burn of first degree of multiple left fingers (nail), including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.149 | Burn of first degree of unspecified multiple fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.149A | Burn of first degree of unspecified multiple fingers (nail), including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.149D | Burn of first degree of unspecified multiple fingers (nail), including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.149S | Burn of first degree of unspecified multiple fingers (nail), including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.15 | Burn of first degree of palm | Diagnosis | ICD-10-CM |
| T23.151 | Burn of first degree of right palm | Diagnosis | ICD-10-CM |
| T23.151A | Burn of first degree of right palm, initial encounter | Diagnosis | ICD-10-CM |
| T23.151D | Burn of first degree of right palm, subsequent encounter | Diagnosis | ICD-10-CM |
| | | 2.00.0000 | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T23.151S | Burn of first degree of right palm, sequela | Diagnosis | ICD-10-CM |
| T23.152 | Burn of first degree of left palm | Diagnosis | ICD-10-CM |
| T23.152A | Burn of first degree of left palm, initial encounter | Diagnosis | ICD-10-CM |
| T23.152D | Burn of first degree of left palm, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.152S | Burn of first degree of left palm, sequela | Diagnosis | ICD-10-CM |
| T23.159 | Burn of first degree of unspecified palm | Diagnosis | ICD-10-CM |
| T23.159A | Burn of first degree of unspecified palm, initial encounter | Diagnosis | ICD-10-CM |
| T23.159D | Burn of first degree of unspecified palm, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.159S | Burn of first degree of unspecified palm, sequela | Diagnosis | ICD-10-CM |
| T23.16 | Burn of first degree of back of hand | Diagnosis | ICD-10-CM |
| T23.161 | Burn of first degree of back of right hand | Diagnosis | ICD-10-CM |
| T23.161A | Burn of first degree of back of right hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.161D | Burn of first degree of back of right hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.161S | Burn of first degree of back of right hand, sequela | Diagnosis | ICD-10-CM |
| T23.162 | Burn of first degree of back of left hand | Diagnosis | ICD-10-CM |
| T23.162A | Burn of first degree of back of left hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.162D | Burn of first degree of back of left hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.162S | Burn of first degree of back of left hand, sequela | Diagnosis | ICD-10-CM |
| T23.169 | Burn of first degree of back of unspecified hand | Diagnosis | ICD-10-CM |
| T23.169A | Burn of first degree of back of unspecified hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.169D | Burn of first degree of back of unspecified hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.169S | Burn of first degree of back of unspecified hand, sequela | Diagnosis | ICD-10-CM |
| T23.17 | Burn of first degree of wrist | Diagnosis | ICD-10-CM |
| T23.171 | Burn of first degree of right wrist | Diagnosis | ICD-10-CM |
| T23.171A | Burn of first degree of right wrist, initial encounter | Diagnosis | ICD-10-CM |
| T23.171D | Burn of first degree of right wrist, subsequent encounter | Diagnosis | ICD-10-CM |
| | | 2.00.0000 | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T23.171S | Burn of first degree of right wrist, sequela | Diagnosis | ICD-10-CM |
| T23.172 | Burn of first degree of left wrist | Diagnosis | ICD-10-CM |
| T23.172A | Burn of first degree of left wrist, initial encounter | Diagnosis | ICD-10-CM |
| T23.172D | Burn of first degree of left wrist, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.172S | Burn of first degree of left wrist, sequela | Diagnosis | ICD-10-CM |
| T23.179 | Burn of first degree of unspecified wrist | Diagnosis | ICD-10-CM |
| T23.179A | Burn of first degree of unspecified wrist, initial encounter | Diagnosis | ICD-10-CM |
| T23.179D | Burn of first degree of unspecified wrist, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.179S | Burn of first degree of unspecified wrist, sequela | Diagnosis | ICD-10-CM |
| T23.19 | Burn of first degree of multiple sites of wrist and hand | Diagnosis | ICD-10-CM |
| T23.191 | Burn of first degree of multiple sites of right wrist and hand | Diagnosis | ICD-10-CM |
| T23.191A | Burn of first degree of multiple sites of right wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.191D | Burn of first degree of multiple sites of right wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.191S | Burn of first degree of multiple sites of right wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T23.192 | Burn of first degree of multiple sites of left wrist and hand | Diagnosis | ICD-10-CM |
| T23.192A | Burn of first degree of multiple sites of left wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.192D | Burn of first degree of multiple sites of left wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.192S | Burn of first degree of multiple sites of left wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T23.199 | Burn of first degree of multiple sites of unspecified wrist and hand | Diagnosis | ICD-10-CM |
| T23.199A | Burn of first degree of multiple sites of unspecified wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.199D | Burn of first degree of multiple sites of unspecified wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.199S | Burn of first degree of multiple sites of unspecified wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T23.2 | Burn of second degree of wrist and hand | Diagnosis | ICD-10-CM |
| T23.20 | Burn of second degree of hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.201 | Burn of second degree of right hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.201A | Burn of second degree of right hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| | | 0 | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T23.201D | Burn of second degree of right hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.201S | Burn of second degree of right hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T23.202 | Burn of second degree of left hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.202A | Burn of second degree of left hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T23.202D | Burn of second degree of left hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.202S | Burn of second degree of left hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T23.209 | Burn of second degree of unspecified hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.209A | Burn of second degree of unspecified hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T23.209D | Burn of second degree of unspecified hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.209S | Burn of second degree of unspecified hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T23.21 | Burn of second degree of thumb (nail) | Diagnosis | ICD-10-CM |
| T23.211 | Burn of second degree of right thumb (nail) | Diagnosis | ICD-10-CM |
| T23.211A | Burn of second degree of right thumb (nail), initial encounter | Diagnosis | ICD-10-CM |
| T23.211D | Burn of second degree of right thumb (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T23.211S | Burn of second degree of right thumb (nail), sequela | Diagnosis | ICD-10-CM |
| T23.212 | Burn of second degree of left thumb (nail) | Diagnosis | ICD-10-CM |
| T23.212A | Burn of second degree of left thumb (nail), initial encounter | Diagnosis | ICD-10-CM |
| T23.212D | Burn of second degree of left thumb (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T23.212S | Burn of second degree of left thumb (nail), sequela | Diagnosis | ICD-10-CM |
| T23.219 | Burn of second degree of unspecified thumb (nail) | Diagnosis | ICD-10-CM |
| T23.219A | Burn of second degree of unspecified thumb (nail), initial encounter | Diagnosis | ICD-10-CM |
| T23.219D | Burn of second degree of unspecified thumb (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T23.219S | Burn of second degree of unspecified thumb (nail), sequela | Diagnosis | ICD-10-CM |
| T23.22 | Burn of second degree of single finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.221 | Burn of second degree of single right finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.221A | Burn of second degree of single right finger (nail) except thumb, initial encounter | Diagnosis | ICD-10-CM |
| | | - | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T23.221D | Burn of second degree of single right finger (nail) except thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.221S | Burn of second degree of single right finger (nail) except thumb, sequela | Diagnosis | ICD-10-CM |
| T23.222 | Burn of second degree of single left finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.222A | Burn of second degree of single left finger (nail) except thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.222D | Burn of second degree of single left finger (nail) except thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.222S | Burn of second degree of single left finger (nail) except thumb, sequela | Diagnosis | ICD-10-CM |
| T23.229 | Burn of second degree of unspecified single finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.229A | Burn of second degree of unspecified single finger (nail) except thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.229D | Burn of second degree of unspecified single finger (nail) except thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.229S | Burn of second degree of unspecified single finger (nail) except thumb, sequela | Diagnosis | ICD-10-CM |
| T23.23 | Burn of second degree of multiple fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.231 | Burn of second degree of multiple right fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.231A | Burn of second degree of multiple right fingers (nail), not including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.231D | Burn of second degree of multiple right fingers (nail), not including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.231S | Burn of second degree of multiple right fingers (nail), not including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.232 | Burn of second degree of multiple left fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.232A | Burn of second degree of multiple left fingers (nail), not including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.232D | Burn of second degree of multiple left fingers (nail), not including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.232S | Burn of second degree of multiple left fingers (nail), not including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.239 | Burn of second degree of unspecified multiple fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.239A | Burn of second degree of unspecified multiple fingers (nail), not including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.239D | Burn of second degree of unspecified multiple fingers (nail), not including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.239S | Burn of second degree of unspecified multiple fingers (nail), not including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.24 | Burn of second degree of multiple fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.241 | Burn of second degree of multiple right fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.241A | Burn of second degree of multiple right fingers (nail), including thumb, initial encounter | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T23.241D | Burn of second degree of multiple right fingers (nail), including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.241S | Burn of second degree of multiple right fingers (nail), including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.242 | Burn of second degree of multiple left fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.242A | Burn of second degree of multiple left fingers (nail), including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.242D | Burn of second degree of multiple left fingers (nail), including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.242S | Burn of second degree of multiple left fingers (nail), including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.249 | Burn of second degree of unspecified multiple fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.249A | Burn of second degree of unspecified multiple fingers (nail), including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.249D | Burn of second degree of unspecified multiple fingers (nail), including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.249S | Burn of second degree of unspecified multiple fingers (nail), including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.25 | Burn of second degree of palm | Diagnosis | ICD-10-CM |
| T23.251 | Burn of second degree of right palm | Diagnosis | ICD-10-CM |
| T23.251A | Burn of second degree of right palm, initial encounter | Diagnosis | ICD-10-CM |
| T23.251D | Burn of second degree of right palm, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.251S | Burn of second degree of right palm, sequela | Diagnosis | ICD-10-CM |
| T23.252 | Burn of second degree of left palm | Diagnosis | ICD-10-CM |
| T23.252A | Burn of second degree of left palm, initial encounter | Diagnosis | ICD-10-CM |
| T23.252D | Burn of second degree of left palm, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.252S | Burn of second degree of left palm, sequela | Diagnosis | ICD-10-CM |
| T23.259 | Burn of second degree of unspecified palm | Diagnosis | ICD-10-CM |
| T23.259A | Burn of second degree of unspecified palm, initial encounter | Diagnosis | ICD-10-CM |
| T23.259D | Burn of second degree of unspecified palm, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.259S | Burn of second degree of unspecified palm, sequela | Diagnosis | ICD-10-CM |
| T23.26 | Burn of second degree of back of hand | Diagnosis | ICD-10-CM |
| T23.261 | Burn of second degree of back of right hand | Diagnosis | ICD-10-CM |
| T23.261A | Burn of second degree of back of right hand, initial encounter | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T23.261D | Burn of second degree of back of right hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.261S | Burn of second degree of back of right hand, sequela | Diagnosis | ICD-10-CM |
| T23.262 | Burn of second degree of back of left hand | Diagnosis | ICD-10-CM |
| T23.262A | Burn of second degree of back of left hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.262D | Burn of second degree of back of left hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.262S | Burn of second degree of back of left hand, sequela | Diagnosis | ICD-10-CM |
| T23.269 | Burn of second degree of back of unspecified hand | Diagnosis | ICD-10-CM |
| T23.269A | Burn of second degree of back of unspecified hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.269D | Burn of second degree of back of unspecified hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.269S | Burn of second degree of back of unspecified hand, sequela | Diagnosis | ICD-10-CM |
| T23.27 | Burn of second degree of wrist | Diagnosis | ICD-10-CM |
| T23.271 | Burn of second degree of right wrist | Diagnosis | ICD-10-CM |
| T23.271A | Burn of second degree of right wrist, initial encounter | Diagnosis | ICD-10-CM |
| T23.271D | Burn of second degree of right wrist, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.271S | Burn of second degree of right wrist, sequela | Diagnosis | ICD-10-CM |
| T23.272 | Burn of second degree of left wrist | Diagnosis | ICD-10-CM |
| T23.272A | Burn of second degree of left wrist, initial encounter | Diagnosis | ICD-10-CM |
| T23.272D | Burn of second degree of left wrist, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.272S | Burn of second degree of left wrist, sequela | Diagnosis | ICD-10-CM |
| T23.279 | Burn of second degree of unspecified wrist | Diagnosis | ICD-10-CM |
| T23.279A | Burn of second degree of unspecified wrist, initial encounter | Diagnosis | ICD-10-CM |
| T23.279D | Burn of second degree of unspecified wrist, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.279S | Burn of second degree of unspecified wrist, sequela | Diagnosis | ICD-10-CM |
| T23.29 | Burn of second degree of multiple sites of wrist and hand | Diagnosis | ICD-10-CM |
| T23.291 | Burn of second degree of multiple sites of right wrist and hand | Diagnosis | ICD-10-CM |
| T23.291A | Burn of second degree of multiple sites of right wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T23.291D | Burn of second degree of multiple sites of right wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.291S | Burn of second degree of multiple sites of right wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T23.292 | Burn of second degree of multiple sites of left wrist and hand | Diagnosis | ICD-10-CM |
| T23.292A | Burn of second degree of multiple sites of left wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.292D | Burn of second degree of multiple sites of left wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.292S | Burn of second degree of multiple sites of left wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T23.299 | Burn of second degree of multiple sites of unspecified wrist and hand | Diagnosis | ICD-10-CM |
| T23.299A | Burn of second degree of multiple sites of unspecified wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.299D | Burn of second degree of multiple sites of unspecified wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.299S | Burn of second degree of multiple sites of unspecified wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T23.3 | Burn of third degree of wrist and hand | Diagnosis | ICD-10-CM |
| T23.30 | Burn of third degree of hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.301 | Burn of third degree of right hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.301A | Burn of third degree of right hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T23.301D | Burn of third degree of right hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.301S | Burn of third degree of right hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T23.302 | Burn of third degree of left hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.302A | Burn of third degree of left hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T23.302D | Burn of third degree of left hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.302S | Burn of third degree of left hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T23.309 | Burn of third degree of unspecified hand, unspecified site | Diagnosis | ICD-10-CM |
| T23.309A | Burn of third degree of unspecified hand, unspecified site, initial encounter | Diagnosis | ICD-10-CM |
| T23.309D | Burn of third degree of unspecified hand, unspecified site, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.309S | Burn of third degree of unspecified hand, unspecified site, sequela | Diagnosis | ICD-10-CM |
| T23.31 | Burn of third degree of thumb (nail) | Diagnosis | ICD-10-CM |
| T23.311 | Burn of third degree of right thumb (nail) | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T23.311A | Burn of third degree of right thumb (nail), initial encounter | Diagnosis | ICD-10-CM |
| T23.311D | Burn of third degree of right thumb (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T23.311S | Burn of third degree of right thumb (nail), sequela | Diagnosis | ICD-10-CM |
| T23.312 | Burn of third degree of left thumb (nail) | Diagnosis | ICD-10-CM |
| T23.312A | Burn of third degree of left thumb (nail), initial encounter | Diagnosis | ICD-10-CM |
| T23.312D | Burn of third degree of left thumb (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T23.312S | Burn of third degree of left thumb (nail), sequela | Diagnosis | ICD-10-CM |
| T23.319 | Burn of third degree of unspecified thumb (nail) | Diagnosis | ICD-10-CM |
| T23.319A | Burn of third degree of unspecified thumb (nail), initial encounter | Diagnosis | ICD-10-CM |
| T23.319D | Burn of third degree of unspecified thumb (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T23.319S | Burn of third degree of unspecified thumb (nail), sequela | Diagnosis | ICD-10-CM |
| T23.32 | Burn of third degree of single finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.321 | Burn of third degree of single right finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.321A | Burn of third degree of single right finger (nail) except thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.321D | Burn of third degree of single right finger (nail) except thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.321S | Burn of third degree of single right finger (nail) except thumb, sequela | Diagnosis | ICD-10-CM |
| T23.322 | Burn of third degree of single left finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.322A | Burn of third degree of single left finger (nail) except thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.322D | Burn of third degree of single left finger (nail) except thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.322S | Burn of third degree of single left finger (nail) except thumb, sequela | Diagnosis | ICD-10-CM |
| T23.329 | Burn of third degree of unspecified single finger (nail) except thumb | Diagnosis | ICD-10-CM |
| T23.329A | Burn of third degree of unspecified single finger (nail) except thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.329D | Burn of third degree of unspecified single finger (nail) except thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.329S | Burn of third degree of unspecified single finger (nail) except thumb, sequela | Diagnosis | ICD-10-CM |
| T23.33 | Burn of third degree of multiple fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.331 | Burn of third degree of multiple right fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T23.331A | Burn of third degree of multiple right fingers (nail), not including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.331D | Burn of third degree of multiple right fingers (nail), not including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.331S | Burn of third degree of multiple right fingers (nail), not including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.332 | Burn of third degree of multiple left fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.332A | Burn of third degree of multiple left fingers (nail), not including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.332D | Burn of third degree of multiple left fingers (nail), not including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.332S | Burn of third degree of multiple left fingers (nail), not including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.339 | Burn of third degree of unspecified multiple fingers (nail), not including thumb | Diagnosis | ICD-10-CM |
| T23.339A | Burn of third degree of unspecified multiple fingers (nail), not including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.339D | Burn of third degree of unspecified multiple fingers (nail), not including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.339S | Burn of third degree of unspecified multiple fingers (nail), not including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.34 | Burn of third degree of multiple fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.341 | Burn of third degree of multiple right fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.341A | Burn of third degree of multiple right fingers (nail), including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.341D | Burn of third degree of multiple right fingers (nail), including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.341S | Burn of third degree of multiple right fingers (nail), including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.342 | Burn of third degree of multiple left fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.342A | Burn of third degree of multiple left fingers (nail), including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.342D | Burn of third degree of multiple left fingers (nail), including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.342S | Burn of third degree of multiple left fingers (nail), including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.349 | Burn of third degree of unspecified multiple fingers (nail), including thumb | Diagnosis | ICD-10-CM |
| T23.349A | Burn of third degree of unspecified multiple fingers (nail), including thumb, initial encounter | Diagnosis | ICD-10-CM |
| T23.349D | Burn of third degree of unspecified multiple fingers (nail), including thumb, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.349S | Burn of third degree of unspecified multiple fingers (nail), including thumb, sequela | Diagnosis | ICD-10-CM |
| T23.35 | Burn of third degree of palm | Diagnosis | ICD-10-CM |
| T23.351 | Burn of third degree of right palm | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T23.351A | Burn of third degree of right palm, initial encounter | Diagnosis | ICD-10-CM |
| T23.351D | Burn of third degree of right palm, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.351S | Burn of third degree of right palm, sequela | Diagnosis | ICD-10-CM |
| T23.352 | Burn of third degree of left palm | Diagnosis | ICD-10-CM |
| T23.352A | Burn of third degree of left palm, initial encounter | Diagnosis | ICD-10-CM |
| T23.352D | Burn of third degree of left palm, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.352S | Burn of third degree of left palm, sequela | Diagnosis | ICD-10-CM |
| T23.359 | Burn of third degree of unspecified palm | Diagnosis | ICD-10-CM |
| T23.359A | Burn of third degree of unspecified palm, initial encounter | Diagnosis | ICD-10-CM |
| T23.359D | Burn of third degree of unspecified palm, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.359S | Burn of third degree of unspecified palm, sequela | Diagnosis | ICD-10-CM |
| T23.36 | Burn of third degree of back of hand | Diagnosis | ICD-10-CM |
| T23.361 | Burn of third degree of back of right hand | Diagnosis | ICD-10-CM |
| T23.361A | Burn of third degree of back of right hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.361D | Burn of third degree of back of right hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.361S | Burn of third degree of back of right hand, sequela | Diagnosis | ICD-10-CM |
| T23.362 | Burn of third degree of back of left hand | Diagnosis | ICD-10-CM |
| T23.362A | Burn of third degree of back of left hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.362D | Burn of third degree of back of left hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.362S | Burn of third degree of back of left hand, sequela | Diagnosis | ICD-10-CM |
| T23.369 | Burn of third degree of back of unspecified hand | Diagnosis | ICD-10-CM |
| T23.369A | Burn of third degree of back of unspecified hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.369D | Burn of third degree of back of unspecified hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.369S | Burn of third degree of back of unspecified hand, sequela | Diagnosis | ICD-10-CM |
| T23.37 | Burn of third degree of wrist | Diagnosis | ICD-10-CM |
| T23.371 | Burn of third degree of right wrist | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T23.371A | Burn of third degree of right wrist, initial encounter | Diagnosis | ICD-10-CM |
| T23.371D | Burn of third degree of right wrist, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.371S | Burn of third degree of right wrist, sequela | Diagnosis | ICD-10-CM |
| T23.372 | Burn of third degree of left wrist | Diagnosis | ICD-10-CM |
| T23.372A | Burn of third degree of left wrist, initial encounter | Diagnosis | ICD-10-CM |
| T23.372D | Burn of third degree of left wrist, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.372S | Burn of third degree of left wrist, sequela | Diagnosis | ICD-10-CM |
| T23.379 | Burn of third degree of unspecified wrist | Diagnosis | ICD-10-CM |
| T23.379A | Burn of third degree of unspecified wrist, initial encounter | Diagnosis | ICD-10-CM |
| T23.379D | Burn of third degree of unspecified wrist, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.379S | Burn of third degree of unspecified wrist, sequela | Diagnosis | ICD-10-CM |
| T23.39 | Burn of third degree of multiple sites of wrist and hand | Diagnosis | ICD-10-CM |
| T23.391 | Burn of third degree of multiple sites of right wrist and hand | Diagnosis | ICD-10-CM |
| T23.391A | Burn of third degree of multiple sites of right wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.391D | Burn of third degree of multiple sites of right wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.391S | Burn of third degree of multiple sites of right wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T23.392 | Burn of third degree of multiple sites of left wrist and hand | Diagnosis | ICD-10-CM |
| T23.392A | Burn of third degree of multiple sites of left wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.392D | Burn of third degree of multiple sites of left wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.392S | Burn of third degree of multiple sites of left wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T23.399 | Burn of third degree of multiple sites of unspecified wrist and hand | Diagnosis | ICD-10-CM |
| T23.399A | Burn of third degree of multiple sites of unspecified wrist and hand, initial encounter | Diagnosis | ICD-10-CM |
| T23.399D | Burn of third degree of multiple sites of unspecified wrist and hand, subsequent encounter | Diagnosis | ICD-10-CM |
| T23.399S | Burn of third degree of multiple sites of unspecified wrist and hand, sequela | Diagnosis | ICD-10-CM |
| T24 | Burn and corrosion of lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.0 | Burn of unspecified degree of lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|------------|--|---------------|-----------|
| T24.00 | Burn of unspecified degree of unspecified site of lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.001 | Burn of unspecified degree of unspecified site of right lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.001A | Burn of unspecified degree of unspecified site of right lower limb, except ankle and foot, initial encounter | | |
| T2 4 004 D | | Diagnosis | ICD-10-CM |
| T24.001D | Burn of unspecified degree of unspecified site of right lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.001S | Burn of unspecified degree of unspecified site of right lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.002 | Burn of unspecified degree of unspecified site of left lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.002A | Burn of unspecified degree of unspecified site of left lower limb, except ankle and foot, initial encounter | | |
| T24 002D | | Diagnosis | ICD-10-CM |
| T24.002D | Burn of unspecified degree of unspecified site of left lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.002S | Burn of unspecified degree of unspecified site of left lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.009 | Burn of unspecified degree of unspecified site of unspecified lower limb, except ankle and foot | | |
| T24.009A | Burn of unspecified degree of unspecified site of unspecified lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| 124.00JA | but of unspectied degree of unspectied site of unspectied lower hind, except annie and loot, initial encounter | | |
| T24.009D | Durn of unconsitived degrees of unconstitived site of unconstitived lower limb, event and/o and fact, subsequent encounter | Diagnosis | ICD-10-CM |
| | Burn of unspecified degree of unspecified site of unspecified lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.009S | Burn of unspecified degree of unspecified site of unspecified lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.01 | Burn of unspecified degree of thigh | Diagnosis | ICD-10-CM |
| T24.011 | Burn of unspecified degree of right thigh | Diagnosis | ICD-10-CM |
| T24.011A | Burn of unspecified degree of right thigh, initial encounter | Diagnosis | ICD-10-CM |
| T24.011D | Burn of unspecified degree of right thigh, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.011S | Burn of unspecified degree of right thigh, sequela | Diagnosis | ICD-10-CM |
| T24.012 | Burn of unspecified degree of left thigh | Diagnosis | ICD-10-CM |
| T24.012A | Burn of unspecified degree of left thigh, initial encounter | Diagnosis | ICD-10-CM |
| T24.012D | Burn of unspecified degree of left thigh, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.012S | Burn of unspecified degree of left thigh, sequela | Diagnosis | ICD-10-CM |
| T24.019 | Burn of unspecified degree of unspecified thigh | Diagnosis | ICD-10-CM |
| | | 2.00.0000 | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T24.019A | Burn of unspecified degree of unspecified thigh, initial encounter | Diagnosis | ICD-10-CM |
| T24.019D | Burn of unspecified degree of unspecified thigh, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.019S | Burn of unspecified degree of unspecified thigh, sequela | Diagnosis | ICD-10-CM |
| T24.02 | Burn of unspecified degree of knee | Diagnosis | ICD-10-CM |
| T24.021 | Burn of unspecified degree of right knee | Diagnosis | ICD-10-CM |
| T24.021A | Burn of unspecified degree of right knee, initial encounter | Diagnosis | ICD-10-CM |
| T24.021D | Burn of unspecified degree of right knee, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.021S | Burn of unspecified degree of right knee, sequela | Diagnosis | ICD-10-CM |
| T24.022 | Burn of unspecified degree of left knee | Diagnosis | ICD-10-CM |
| T24.022A | Burn of unspecified degree of left knee, initial encounter | Diagnosis | ICD-10-CM |
| T24.022D | Burn of unspecified degree of left knee, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.022S | Burn of unspecified degree of left knee, sequela | Diagnosis | ICD-10-CM |
| T24.029 | Burn of unspecified degree of unspecified knee | Diagnosis | ICD-10-CM |
| T24.029A | Burn of unspecified degree of unspecified knee, initial encounter | Diagnosis | ICD-10-CM |
| T24.029D | Burn of unspecified degree of unspecified knee, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.029S | Burn of unspecified degree of unspecified knee, sequela | Diagnosis | ICD-10-CM |
| T24.03 | Burn of unspecified degree of lower leg | Diagnosis | ICD-10-CM |
| T24.031 | Burn of unspecified degree of right lower leg | Diagnosis | ICD-10-CM |
| T24.031A | Burn of unspecified degree of right lower leg, initial encounter | Diagnosis | ICD-10-CM |
| T24.031D | Burn of unspecified degree of right lower leg, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.031S | Burn of unspecified degree of right lower leg, sequela | Diagnosis | ICD-10-CM |
| T24.032 | Burn of unspecified degree of left lower leg | Diagnosis | ICD-10-CM |
| T24.032A | Burn of unspecified degree of left lower leg, initial encounter | Diagnosis | ICD-10-CM |
| T24.032D | Burn of unspecified degree of left lower leg, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.032S | Burn of unspecified degree of left lower leg, sequela | Diagnosis | ICD-10-CM |
| T24.039 | Burn of unspecified degree of unspecified lower leg | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|---|---------------|------------|
| T24.039A | Burn of unspecified degree of unspecified lower leg, initial encounter | Diagnosis | ICD-10-CM |
| T24.039D | Burn of unspecified degree of unspecified lower leg, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.039S | Burn of unspecified degree of unspecified lower leg, sequela | Diagnosis | ICD-10-CM |
| T24.09 | Burn of unspecified degree of multiple sites of lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.091 | Burn of unspecified degree of multiple sites of right lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.091A | Burn of unspecified degree of multiple sites of right lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.091D | Burn of unspecified degree of multiple sites of right lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.091S | Burn of unspecified degree of multiple sites of right lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.092 | Burn of unspecified degree of multiple sites of left lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.092A | Burn of unspecified degree of multiple sites of left lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.092D | Burn of unspecified degree of multiple sites of left lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.092S | Burn of unspecified degree of multiple sites of left lower limb, except ankle and foot, sequela | Ū | ICD-10-CM |
| T24.099 | Burn of unspecified degree of multiple sites of unspecified lower limb, except ankle and foot | Diagnosis | ICD-10-CIM |
| | | Diagnosis | ICD-10-CM |
| T24.099A | Burn of unspecified degree of multiple sites of unspecified lower limb, except ankle and foot, initial encounter | | |
| | | Diagnosis | ICD-10-CM |
| T24.099D | Burn of unspecified degree of multiple sites of unspecified lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.099S | Burn of unspecified degree of multiple sites of unspecified lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.1 | Burn of first degree of lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.10 | Burn of first degree of unspecified site of lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.101 | Burn of first degree of unspecified site of right lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.101A | Burn of first degree of unspecified site of right lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.101D | Burn of first degree of unspecified site of right lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.101S | Burn of first degree of unspecified site of right lower limb, except ankle and foot, sequela | 0 | ICD-10-CM |
| T24.102 | Burn of first degree of unspecified site of left lower limb, except ankle and foot | Diagnosis | |
| T24.102A | Burn of first degree of unspecified site of left lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.102A | Burn of first degree of unspecified site of left lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| 124.1020 | buth of hist degree of unspectied site of left lower limb, except ankle and loot, subsequent encounter | Diagnosis | ICD-10-CM |



| Code T24.102S | Description Burn of first degree of unspecified site of left lower limb, except ankle and foot, sequela | Code Category | Code Type |
|------------------|---|---------------|-----------|
| | | Diagnosis | ICD-10-CM |
| T24.109 | Burn of first degree of unspecified site of unspecified lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.109A | Burn of first degree of unspecified site of unspecified lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.109D | Burn of first degree of unspecified site of unspecified lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.109S | Burn of first degree of unspecified site of unspecified lower limb, except ankle and foot, sequela | - | ICD-10-CM |
| T24.11 | Burn of first degree of thigh | Diagnosis | |
| T24.111 | Burn of first degree of right thigh | Diagnosis | ICD-10-CM |
| T24.111A | Burn of first degree of right thigh, initial encounter | Diagnosis | ICD-10-CM |
| T24.111D | Burn of first degree of right thigh, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.1115 | Burn of first degree of right thigh, sequela | Diagnosis | ICD-10-CM |
| | | Diagnosis | ICD-10-CM |
| T24.112 | Burn of first degree of left thigh | Diagnosis | ICD-10-CM |
| T24.112A | Burn of first degree of left thigh, initial encounter | Diagnosis | ICD-10-CM |
| T24.112D | Burn of first degree of left thigh, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.112S | Burn of first degree of left thigh, sequela | Diagnosis | ICD-10-CM |
| T24.119 | Burn of first degree of unspecified thigh | Diagnosis | ICD-10-CM |
| T24.119A | Burn of first degree of unspecified thigh, initial encounter | Diagnosis | ICD-10-CM |
| T24.119D | Burn of first degree of unspecified thigh, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.119S | Burn of first degree of unspecified thigh, sequela | Diagnosis | ICD-10-CM |
| T24.12 | Burn of first degree of knee | Diagnosis | ICD-10-CM |
| T24.121 | Burn of first degree of right knee | Diagnosis | ICD-10-CM |
| T24.121A | Burn of first degree of right knee, initial encounter | Diagnosis | ICD-10-CM |
| T24.121D | Burn of first degree of right knee, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.121S | Burn of first degree of right knee, sequela | Diagnosis | ICD-10-CM |
| T24.122 | Burn of first degree of left knee | Diagnosis | ICD-10-CM |
| T24.122A | Burn of first degree of left knee, initial encounter | Diagnosis | ICD-10-CM |
| T24.122D | Burn of first degree of left knee, subsequent encounter | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-------------|
| T24.122S | Burn of first degree of left knee, sequela | Diagnosis | ICD-10-CM |
| T24.129 | Burn of first degree of unspecified knee | Diagnosis | ICD-10-CM |
| T24.129A | Burn of first degree of unspecified knee, initial encounter | Diagnosis | ICD-10-CM |
| T24.129D | Burn of first degree of unspecified knee, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.129S | Burn of first degree of unspecified knee, sequela | Diagnosis | ICD-10-CM |
| T24.13 | Burn of first degree of lower leg | Diagnosis | ICD-10-CM |
| T24.131 | Burn of first degree of right lower leg | Diagnosis | ICD-10-CM |
| T24.131A | Burn of first degree of right lower leg, initial encounter | Diagnosis | ICD-10-CM |
| T24.131D | Burn of first degree of right lower leg, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.131S | Burn of first degree of right lower leg, sequela | Diagnosis | ICD-10-CM |
| T24.132 | Burn of first degree of left lower leg | Diagnosis | ICD-10-CM |
| T24.132A | Burn of first degree of left lower leg, initial encounter | Diagnosis | ICD-10-CM |
| T24.132D | Burn of first degree of left lower leg, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.132S | Burn of first degree of left lower leg, sequela | Diagnosis | ICD-10-CM |
| T24.139 | Burn of first degree of unspecified lower leg | Diagnosis | ICD-10-CM |
| T24.139A | Burn of first degree of unspecified lower leg, initial encounter | Diagnosis | ICD-10-CM |
| T24.139D | Burn of first degree of unspecified lower leg, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.139S | Burn of first degree of unspecified lower leg, sequela | Diagnosis | ICD-10-CM |
| T24.19 | Burn of first degree of multiple sites of lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.191 | Burn of first degree of multiple sites of right lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.191A | Burn of first degree of multiple sites of right lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.191D | Burn of first degree of multiple sites of right lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.191S | Burn of first degree of multiple sites of right lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.192 | Burn of first degree of multiple sites of left lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.192A | Burn of first degree of multiple sites of left lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.192D | Burn of first degree of multiple sites of left lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| | | 510510515 | 100 10 0.01 |



| Code | | Code Cotosom | Code Ture- |
|---------------------|--|---------------|------------|
| Code T24.192S | Description Burn of first degree of multiple sites of left lower limb, except ankle and foot, sequela | Code Category | Code Type |
| T24.1923 | Burn of first degree of multiple sites of unspecified lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.199 T24.199A | | Diagnosis | ICD-10-CM |
| | Burn of first degree of multiple sites of unspecified lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.199D | Burn of first degree of multiple sites of unspecified lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.199S | Burn of first degree of multiple sites of unspecified lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.2 | Burn of second degree of lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.20 | Burn of second degree of unspecified site of lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.201 | Burn of second degree of unspecified site of right lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.201A | Burn of second degree of unspecified site of right lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.201D | Burn of second degree of unspecified site of right lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.201S | Burn of second degree of unspecified site of right lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.202 | Burn of second degree of unspecified site of left lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.202A | Burn of second degree of unspecified site of left lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.202D | Burn of second degree of unspecified site of left lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.202S | Burn of second degree of unspecified site of left lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.209 | Burn of second degree of unspecified site of unspecified lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.209A | Burn of second degree of unspecified site of unspecified lower limb, except ankle and foot, initial encounter | - | |
| | | Diagnosis | ICD-10-CM |
| T24.209D | Burn of second degree of unspecified site of unspecified lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.209S | Burn of second degree of unspecified site of unspecified lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.21 | Burn of second degree of thigh | Diagnosis | ICD-10-CM |
| T24.211 | Burn of second degree of right thigh | Diagnosis | ICD-10-CM |
| T24.211A | Burn of second degree of right thigh, initial encounter | Diagnosis | ICD-10-CM |
| T24.211D | Burn of second degree of right thigh, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.211S | Burn of second degree of right thigh, sequela | Diagnosis | ICD-10-CM |
| T24.212 | Burn of second degree of left thigh | Diagnosis | ICD-10-CM |
| T24.212A | Burn of second degree of left thigh, initial encounter | Diagnosis | ICD-10-CM |
| | | 5 | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T24.212D | Burn of second degree of left thigh, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.212S | Burn of second degree of left thigh, sequela | Diagnosis | ICD-10-CM |
| T24.219 | Burn of second degree of unspecified thigh | Diagnosis | ICD-10-CM |
| T24.219A | Burn of second degree of unspecified thigh, initial encounter | Diagnosis | ICD-10-CM |
| T24.219D | Burn of second degree of unspecified thigh, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.219S | Burn of second degree of unspecified thigh, sequela | Diagnosis | ICD-10-CM |
| T24.22 | Burn of second degree of knee | Diagnosis | ICD-10-CM |
| T24.221 | Burn of second degree of right knee | Diagnosis | ICD-10-CM |
| T24.221A | Burn of second degree of right knee, initial encounter | Diagnosis | ICD-10-CM |
| T24.221D | Burn of second degree of right knee, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.221S | Burn of second degree of right knee, sequela | Diagnosis | ICD-10-CM |
| T24.222 | Burn of second degree of left knee | Diagnosis | ICD-10-CM |
| T24.222A | Burn of second degree of left knee, initial encounter | Diagnosis | ICD-10-CM |
| T24.222D | Burn of second degree of left knee, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.222S | Burn of second degree of left knee, sequela | Diagnosis | ICD-10-CM |
| T24.229 | Burn of second degree of unspecified knee | Diagnosis | ICD-10-CM |
| T24.229A | Burn of second degree of unspecified knee, initial encounter | Diagnosis | ICD-10-CM |
| T24.229D | Burn of second degree of unspecified knee, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.229S | Burn of second degree of unspecified knee, sequela | Diagnosis | ICD-10-CM |
| T24.23 | Burn of second degree of lower leg | Diagnosis | ICD-10-CM |
| T24.231 | Burn of second degree of right lower leg | Diagnosis | ICD-10-CM |
| T24.231A | Burn of second degree of right lower leg, initial encounter | Diagnosis | ICD-10-CM |
| T24.231D | Burn of second degree of right lower leg, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.231S | Burn of second degree of right lower leg, sequela | Diagnosis | ICD-10-CM |
| T24.232 | Burn of second degree of left lower leg | Diagnosis | ICD-10-CM |
| T24.232A | Burn of second degree of left lower leg, initial encounter | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T24.232D | Burn of second degree of left lower leg, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.232S | Burn of second degree of left lower leg, sequela | Diagnosis | ICD-10-CM |
| T24.239 | Burn of second degree of unspecified lower leg | Diagnosis | ICD-10-CM |
| T24.239A | Burn of second degree of unspecified lower leg, initial encounter | Diagnosis | ICD-10-CM |
| T24.239D | Burn of second degree of unspecified lower leg, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.239S | Burn of second degree of unspecified lower leg, sequela | Diagnosis | ICD-10-CM |
| T24.29 | Burn of second degree of multiple sites of lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.291 | Burn of second degree of multiple sites of right lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.291A | Burn of second degree of multiple sites of right lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.291D | Burn of second degree of multiple sites of right lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.291S | Burn of second degree of multiple sites of right lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.292 | Burn of second degree of multiple sites of left lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.292A | Burn of second degree of multiple sites of left lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.292D | Burn of second degree of multiple sites of left lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.292S | Burn of second degree of multiple sites of left lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.299 | Burn of second degree of multiple sites of unspecified lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.299A | Burn of second degree of multiple sites of unspecified lower limb, except ankle and foot, initial encounter | 0 | |
| | | Diagnosis | ICD-10-CM |
| T24.299D | Burn of second degree of multiple sites of unspecified lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.299S | Burn of second degree of multiple sites of unspecified lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.3 | Burn of third degree of lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.30 | Burn of third degree of unspecified site of lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.301 | Burn of third degree of unspecified site of right lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.301A | Burn of third degree of unspecified site of right lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.301D | Burn of third degree of unspecified site of right lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.301S | Burn of third degree of unspecified site of right lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.302 | Burn of third degree of unspecified site of left lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T24.302A | Burn of third degree of unspecified site of left lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.302D | Burn of third degree of unspecified site of left lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.302S | Burn of third degree of unspecified site of left lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.309 | Burn of third degree of unspecified site of unspecified lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.309A | Burn of third degree of unspecified site of unspecified lower limb, except ankle and foot, initial encounter | | |
| T24 200D | | Diagnosis | ICD-10-CM |
| T24.309D | Burn of third degree of unspecified site of unspecified lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.309S | Burn of third degree of unspecified site of unspecified lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.31 | Burn of third degree of thigh | Diagnosis | ICD-10-CM |
| T24.311 | Burn of third degree of right thigh | Diagnosis | ICD-10-CM |
| T24.311A | Burn of third degree of right thigh, initial encounter | Diagnosis | ICD-10-CM |
| T24.311D | Burn of third degree of right thigh, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.311S | Burn of third degree of right thigh, sequela | Diagnosis | ICD-10-CM |
| T24.312 | Burn of third degree of left thigh | Diagnosis | ICD-10-CM |
| T24.312A | Burn of third degree of left thigh, initial encounter | Diagnosis | ICD-10-CM |
| T24.312D | Burn of third degree of left thigh, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.312S | Burn of third degree of left thigh, sequela | Diagnosis | ICD-10-CM |
| T24.319 | Burn of third degree of unspecified thigh | Diagnosis | ICD-10-CM |
| T24.319A | Burn of third degree of unspecified thigh, initial encounter | Diagnosis | ICD-10-CM |
| T24.319D | Burn of third degree of unspecified thigh, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.319S | Burn of third degree of unspecified thigh, sequela | Diagnosis | ICD-10-CM |
| T24.32 | Burn of third degree of knee | Diagnosis | ICD-10-CM |
| T24.321 | Burn of third degree of right knee | Diagnosis | ICD-10-CM |
| T24.321A | Burn of third degree of right knee, initial encounter | Diagnosis | ICD-10-CM |
| T24.321D | Burn of third degree of right knee, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.321S | Burn of third degree of right knee, sequela | C | |
| T24.322 | Burn of third degree of left knee | Diagnosis | ICD-10-CM |
| | | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T24.322A | Burn of third degree of left knee, initial encounter | Diagnosis | ICD-10-CM |
| T24.322D | Burn of third degree of left knee, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.322S | Burn of third degree of left knee, sequela | Diagnosis | ICD-10-CM |
| T24.329 | Burn of third degree of unspecified knee | Diagnosis | ICD-10-CM |
| T24.329A | Burn of third degree of unspecified knee, initial encounter | Diagnosis | ICD-10-CM |
| T24.329D | Burn of third degree of unspecified knee, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.329S | Burn of third degree of unspecified knee, sequela | Diagnosis | ICD-10-CM |
| T24.33 | Burn of third degree of lower leg | Diagnosis | ICD-10-CM |
| T24.331 | Burn of third degree of right lower leg | Diagnosis | ICD-10-CM |
| T24.331A | Burn of third degree of right lower leg, initial encounter | Diagnosis | ICD-10-CM |
| T24.331D | Burn of third degree of right lower leg, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.331S | Burn of third degree of right lower leg, sequela | Diagnosis | ICD-10-CM |
| T24.332 | Burn of third degree of left lower leg | Diagnosis | ICD-10-CM |
| T24.332A | Burn of third degree of left lower leg, initial encounter | Diagnosis | ICD-10-CM |
| T24.332D | Burn of third degree of left lower leg, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.332S | Burn of third degree of left lower leg, sequela | Diagnosis | ICD-10-CM |
| T24.339 | Burn of third degree of unspecified lower leg | Diagnosis | ICD-10-CM |
| T24.339A | Burn of third degree of unspecified lower leg, initial encounter | Diagnosis | ICD-10-CM |
| T24.339D | Burn of third degree of unspecified lower leg, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.339S | Burn of third degree of unspecified lower leg, sequela | Diagnosis | ICD-10-CM |
| T24.39 | Burn of third degree of multiple sites of lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.391 | Burn of third degree of multiple sites of right lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.391A | Burn of third degree of multiple sites of right lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.391D | Burn of third degree of multiple sites of right lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.391S | Burn of third degree of multiple sites of right lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.392 | Burn of third degree of multiple sites of left lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T24.392A | Burn of third degree of multiple sites of left lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.392D | Burn of third degree of multiple sites of left lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.392S | Burn of third degree of multiple sites of left lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T24.399 | Burn of third degree of multiple sites of unspecified lower limb, except ankle and foot | Diagnosis | ICD-10-CM |
| T24.399A | Burn of third degree of multiple sites of unspecified lower limb, except ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T24.399D | Burn of third degree of multiple sites of unspecified lower limb, except ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T24.399S | Burn of third degree of multiple sites of unspecified lower limb, except ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T25 | Burn and corrosion of ankle and foot | Diagnosis | ICD-10-CM |
| T25.0 | Burn of unspecified degree of ankle and foot | Diagnosis | ICD-10-CM |
| T25.01 | Burn of unspecified degree of ankle | Diagnosis | ICD-10-CM |
| T25.011 | Burn of unspecified degree of right ankle | Diagnosis | ICD-10-CM |
| T25.011A | Burn of unspecified degree of right ankle, initial encounter | Diagnosis | ICD-10-CM |
| T25.011D | Burn of unspecified degree of right ankle, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.011S | Burn of unspecified degree of right ankle, sequela | Diagnosis | ICD-10-CM |
| T25.012 | Burn of unspecified degree of left ankle | Diagnosis | ICD-10-CM |
| T25.012A | Burn of unspecified degree of left ankle, initial encounter | Diagnosis | ICD-10-CM |
| T25.012D | Burn of unspecified degree of left ankle, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.012S | Burn of unspecified degree of left ankle, sequela | Diagnosis | ICD-10-CM |
| T25.019 | Burn of unspecified degree of unspecified ankle | Diagnosis | ICD-10-CM |
| T25.019A | Burn of unspecified degree of unspecified ankle, initial encounter | Diagnosis | ICD-10-CM |
| T25.019D | Burn of unspecified degree of unspecified ankle, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.019S | Burn of unspecified degree of unspecified ankle, sequela | Diagnosis | ICD-10-CM |
| T25.02 | Burn of unspecified degree of foot | Diagnosis | ICD-10-CM |
| T25.021 | Burn of unspecified degree of right foot | Diagnosis | ICD-10-CM |
| T25.021A | Burn of unspecified degree of right foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.021D | Burn of unspecified degree of right foot, subsequent encounter | Diagnosis | ICD-10-CM |
| | | 0 | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T25.021S | Burn of unspecified degree of right foot, sequela | Diagnosis | ICD-10-CM |
| T25.022 | Burn of unspecified degree of left foot | Diagnosis | ICD-10-CM |
| T25.022A | Burn of unspecified degree of left foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.022D | Burn of unspecified degree of left foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.022S | Burn of unspecified degree of left foot, sequela | Diagnosis | ICD-10-CM |
| T25.029 | Burn of unspecified degree of unspecified foot | Diagnosis | ICD-10-CM |
| T25.029A | Burn of unspecified degree of unspecified foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.029D | Burn of unspecified degree of unspecified foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.029S | Burn of unspecified degree of unspecified foot, sequela | Diagnosis | ICD-10-CM |
| T25.03 | Burn of unspecified degree of toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.031 | Burn of unspecified degree of right toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.031A | Burn of unspecified degree of right toe(s) (nail), initial encounter | Diagnosis | ICD-10-CM |
| T25.031D | Burn of unspecified degree of right toe(s) (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T25.031S | Burn of unspecified degree of right toe(s) (nail), sequela | Diagnosis | ICD-10-CM |
| T25.032 | Burn of unspecified degree of left toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.032A | Burn of unspecified degree of left toe(s) (nail), initial encounter | Diagnosis | ICD-10-CM |
| T25.032D | Burn of unspecified degree of left toe(s) (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T25.032S | Burn of unspecified degree of left toe(s) (nail), sequela | Diagnosis | ICD-10-CM |
| T25.039 | Burn of unspecified degree of unspecified toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.039A | Burn of unspecified degree of unspecified toe(s) (nail), initial encounter | Diagnosis | ICD-10-CM |
| T25.039D | Burn of unspecified degree of unspecified toe(s) (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T25.039S | Burn of unspecified degree of unspecified toe(s) (nail), sequela | Diagnosis | ICD-10-CM |
| T25.09 | Burn of unspecified degree of multiple sites of ankle and foot | Diagnosis | ICD-10-CM |
| T25.091 | Burn of unspecified degree of multiple sites of right ankle and foot | Diagnosis | ICD-10-CM |
| T25.091A | Burn of unspecified degree of multiple sites of right ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.091D | Burn of unspecified degree of multiple sites of right ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T25.091S | Burn of unspecified degree of multiple sites of right ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T25.092 | Burn of unspecified degree of multiple sites of left ankle and foot | Diagnosis | ICD-10-CM |
| T25.092A | Burn of unspecified degree of multiple sites of left ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.092D | Burn of unspecified degree of multiple sites of left ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.092S | Burn of unspecified degree of multiple sites of left ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T25.099 | Burn of unspecified degree of multiple sites of unspecified ankle and foot | Diagnosis | ICD-10-CM |
| T25.099A | Burn of unspecified degree of multiple sites of unspecified ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.099D | Burn of unspecified degree of multiple sites of unspecified ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.099S | Burn of unspecified degree of multiple sites of unspecified ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T25.1 | Burn of first degree of ankle and foot | Diagnosis | ICD-10-CM |
| T25.11 | Burn of first degree of ankle | Diagnosis | ICD-10-CM |
| T25.111 | Burn of first degree of right ankle | Diagnosis | ICD-10-CM |
| T25.111A | Burn of first degree of right ankle, initial encounter | Diagnosis | ICD-10-CM |
| T25.111D | Burn of first degree of right ankle, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.111S | Burn of first degree of right ankle, sequela | Diagnosis | ICD-10-CM |
| T25.112 | Burn of first degree of left ankle | Diagnosis | ICD-10-CM |
| T25.112A | Burn of first degree of left ankle, initial encounter | Diagnosis | ICD-10-CM |
| T25.112D | Burn of first degree of left ankle, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.112S | Burn of first degree of left ankle, sequela | Diagnosis | ICD-10-CM |
| T25.119 | Burn of first degree of unspecified ankle | Diagnosis | ICD-10-CM |
| T25.119A | Burn of first degree of unspecified ankle, initial encounter | Diagnosis | ICD-10-CM |
| T25.119D | Burn of first degree of unspecified ankle, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.119S | Burn of first degree of unspecified ankle, sequela | Diagnosis | ICD-10-CM |
| T25.12 | Burn of first degree of foot | Diagnosis | ICD-10-CM |
| T25.121 | Burn of first degree of right foot | Diagnosis | ICD-10-CM |
| T25.121A | Burn of first degree of right foot, initial encounter | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T25.121D | Burn of first degree of right foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.121S | Burn of first degree of right foot, sequela | Diagnosis | ICD-10-CM |
| T25.122 | Burn of first degree of left foot | Diagnosis | ICD-10-CM |
| T25.122A | Burn of first degree of left foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.122D | Burn of first degree of left foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.122S | Burn of first degree of left foot, sequela | Diagnosis | ICD-10-CM |
| T25.129 | Burn of first degree of unspecified foot | Diagnosis | ICD-10-CM |
| T25.129A | Burn of first degree of unspecified foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.129D | Burn of first degree of unspecified foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.129S | Burn of first degree of unspecified foot, sequela | Diagnosis | ICD-10-CM |
| T25.13 | Burn of first degree of toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.131 | Burn of first degree of right toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.131A | Burn of first degree of right toe(s) (nail), initial encounter | Diagnosis | ICD-10-CM |
| T25.131D | Burn of first degree of right toe(s) (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T25.131S | Burn of first degree of right toe(s) (nail), sequela | Diagnosis | ICD-10-CM |
| T25.132 | Burn of first degree of left toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.132A | Burn of first degree of left toe(s) (nail), initial encounter | Diagnosis | ICD-10-CM |
| T25.132D | Burn of first degree of left toe(s) (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T25.132S | Burn of first degree of left toe(s) (nail), sequela | Diagnosis | ICD-10-CM |
| T25.139 | Burn of first degree of unspecified toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.139A | Burn of first degree of unspecified toe(s) (nail), initial encounter | Diagnosis | ICD-10-CM |
| T25.139D | Burn of first degree of unspecified toe(s) (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T25.139S | Burn of first degree of unspecified toe(s) (nail), sequela | Diagnosis | ICD-10-CM |
| T25.19 | Burn of first degree of multiple sites of ankle and foot | Diagnosis | ICD-10-CM |
| T25.191 | Burn of first degree of multiple sites of right ankle and foot | Diagnosis | ICD-10-CM |
| T25.191A | Burn of first degree of multiple sites of right ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T25.191D | Burn of first degree of multiple sites of right ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.191S | Burn of first degree of multiple sites of right ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T25.192 | Burn of first degree of multiple sites of left ankle and foot | Diagnosis | ICD-10-CM |
| T25.192A | Burn of first degree of multiple sites of left ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.192D | Burn of first degree of multiple sites of left ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.192S | Burn of first degree of multiple sites of left ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T25.199 | Burn of first degree of multiple sites of unspecified ankle and foot | Diagnosis | ICD-10-CM |
| T25.199A | Burn of first degree of multiple sites of unspecified ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.199D | Burn of first degree of multiple sites of unspecified ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.199S | Burn of first degree of multiple sites of unspecified ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T25.2 | Burn of second degree of ankle and foot | Diagnosis | ICD-10-CM |
| T25.21 | Burn of second degree of ankle | Diagnosis | ICD-10-CM |
| T25.211 | Burn of second degree of right ankle | Diagnosis | ICD-10-CM |
| T25.211A | Burn of second degree of right ankle, initial encounter | Diagnosis | ICD-10-CM |
| T25.211D | Burn of second degree of right ankle, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.211S | Burn of second degree of right ankle, sequela | Diagnosis | ICD-10-CM |
| T25.212 | Burn of second degree of left ankle | Diagnosis | ICD-10-CM |
| T25.212A | Burn of second degree of left ankle, initial encounter | Diagnosis | ICD-10-CM |
| T25.212D | Burn of second degree of left ankle, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.212S | Burn of second degree of left ankle, sequela | Diagnosis | ICD-10-CM |
| T25.219 | Burn of second degree of unspecified ankle | Diagnosis | ICD-10-CM |
| T25.219A | Burn of second degree of unspecified ankle, initial encounter | Diagnosis | ICD-10-CM |
| T25.219D | Burn of second degree of unspecified ankle, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.219S | Burn of second degree of unspecified ankle, sequela | Diagnosis | ICD-10-CM |
| T25.22 | Burn of second degree of foot | Diagnosis | ICD-10-CM |
| T25.221 | Burn of second degree of right foot | Diagnosis | ICD-10-CM |
| | | 6 | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T25.221A | Burn of second degree of right foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.221D | Burn of second degree of right foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.221S | Burn of second degree of right foot, sequela | Diagnosis | ICD-10-CM |
| T25.222 | Burn of second degree of left foot | Diagnosis | ICD-10-CM |
| T25.222A | Burn of second degree of left foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.222D | Burn of second degree of left foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.222S | Burn of second degree of left foot, sequela | Diagnosis | ICD-10-CM |
| T25.229 | Burn of second degree of unspecified foot | Diagnosis | ICD-10-CM |
| T25.229A | Burn of second degree of unspecified foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.229D | Burn of second degree of unspecified foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.229S | Burn of second degree of unspecified foot, sequela | Diagnosis | ICD-10-CM |
| T25.23 | Burn of second degree of toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.231 | Burn of second degree of right toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.231A | Burn of second degree of right toe(s) (nail), initial encounter | Diagnosis | ICD-10-CM |
| T25.231D | Burn of second degree of right toe(s) (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T25.231S | Burn of second degree of right toe(s) (nail), sequela | Diagnosis | ICD-10-CM |
| T25.232 | Burn of second degree of left toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.232A | Burn of second degree of left toe(s) (nail), initial encounter | Diagnosis | ICD-10-CM |
| T25.232D | Burn of second degree of left toe(s) (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T25.232S | Burn of second degree of left toe(s) (nail), sequela | Diagnosis | ICD-10-CM |
| T25.239 | Burn of second degree of unspecified toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.239A | Burn of second degree of unspecified toe(s) (nail), initial encounter | Diagnosis | ICD-10-CM |
| T25.239D | Burn of second degree of unspecified toe(s) (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T25.239S | Burn of second degree of unspecified toe(s) (nail), sequela | Diagnosis | ICD-10-CM |
| T25.29 | Burn of second degree of multiple sites of ankle and foot | Diagnosis | ICD-10-CM |
| T25.291 | Burn of second degree of multiple sites of right ankle and foot | Diagnosis | ICD-10-CM |
| | | - | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T25.291A | Burn of second degree of multiple sites of right ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.291D | Burn of second degree of multiple sites of right ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.291S | Burn of second degree of multiple sites of right ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T25.292 | Burn of second degree of multiple sites of left ankle and foot | Diagnosis | ICD-10-CM |
| T25.292A | Burn of second degree of multiple sites of left ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.292D | Burn of second degree of multiple sites of left ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.292S | Burn of second degree of multiple sites of left ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T25.299 | Burn of second degree of multiple sites of unspecified ankle and foot | Diagnosis | ICD-10-CM |
| T25.299A | Burn of second degree of multiple sites of unspecified ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.299D | Burn of second degree of multiple sites of unspecified ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.299S | Burn of second degree of multiple sites of unspecified ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T25.3 | Burn of third degree of ankle and foot | Diagnosis | ICD-10-CM |
| T25.31 | Burn of third degree of ankle | Diagnosis | ICD-10-CM |
| T25.311 | Burn of third degree of right ankle | Diagnosis | ICD-10-CM |
| T25.311A | Burn of third degree of right ankle, initial encounter | Diagnosis | ICD-10-CM |
| T25.311D | Burn of third degree of right ankle, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.311S | Burn of third degree of right ankle, sequela | Diagnosis | ICD-10-CM |
| T25.312 | Burn of third degree of left ankle | Diagnosis | ICD-10-CM |
| T25.312A | Burn of third degree of left ankle, initial encounter | Diagnosis | ICD-10-CM |
| T25.312D | Burn of third degree of left ankle, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.312S | Burn of third degree of left ankle, sequela | Diagnosis | ICD-10-CM |
| T25.319 | Burn of third degree of unspecified ankle | Diagnosis | ICD-10-CM |
| T25.319A | Burn of third degree of unspecified ankle, initial encounter | Diagnosis | ICD-10-CM |
| T25.319D | Burn of third degree of unspecified ankle, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.319S | Burn of third degree of unspecified ankle, sequela | Diagnosis | ICD-10-CM |
| T25.32 | Burn of third degree of foot | Diagnosis | ICD-10-CM |
| | | - | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T25.321 | Burn of third degree of right foot | Diagnosis | ICD-10-CM |
| T25.321A | Burn of third degree of right foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.321D | Burn of third degree of right foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.321S | Burn of third degree of right foot, sequela | Diagnosis | ICD-10-CM |
| T25.322 | Burn of third degree of left foot | Diagnosis | ICD-10-CM |
| T25.322A | Burn of third degree of left foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.322D | Burn of third degree of left foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.322S | Burn of third degree of left foot, sequela | Diagnosis | ICD-10-CM |
| T25.329 | Burn of third degree of unspecified foot | Diagnosis | ICD-10-CM |
| T25.329A | Burn of third degree of unspecified foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.329D | Burn of third degree of unspecified foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.329S | Burn of third degree of unspecified foot, sequela | Diagnosis | ICD-10-CM |
| T25.33 | Burn of third degree of toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.331 | Burn of third degree of right toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.331A | Burn of third degree of right toe(s) (nail), initial encounter | Diagnosis | ICD-10-CM |
| T25.331D | Burn of third degree of right toe(s) (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T25.331S | Burn of third degree of right toe(s) (nail), sequela | Diagnosis | ICD-10-CM |
| T25.332 | Burn of third degree of left toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.332A | Burn of third degree of left toe(s) (nail), initial encounter | Diagnosis | ICD-10-CM |
| T25.332D | Burn of third degree of left toe(s) (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T25.332S | Burn of third degree of left toe(s) (nail), sequela | Diagnosis | ICD-10-CM |
| T25.339 | Burn of third degree of unspecified toe(s) (nail) | Diagnosis | ICD-10-CM |
| T25.339A | Burn of third degree of unspecified toe(s) (nail), initial encounter | Diagnosis | ICD-10-CM |
| T25.339D | Burn of third degree of unspecified toe(s) (nail), subsequent encounter | Diagnosis | ICD-10-CM |
| T25.339S | Burn of third degree of unspecified toe(s) (nail), sequela | Diagnosis | ICD-10-CM |
| T25.39 | Burn of third degree of multiple sites of ankle and foot | Diagnosis | ICD-10-CM |
| | | 2102110313 | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T25.391 | Burn of third degree of multiple sites of right ankle and foot | Diagnosis | ICD-10-CM |
| T25.391A | Burn of third degree of multiple sites of right ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.391D | Burn of third degree of multiple sites of right ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.391S | Burn of third degree of multiple sites of right ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T25.392 | Burn of third degree of multiple sites of left ankle and foot | Diagnosis | ICD-10-CM |
| T25.392A | Burn of third degree of multiple sites of left ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.392D | Burn of third degree of multiple sites of left ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.392S | Burn of third degree of multiple sites of left ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T25.399 | Burn of third degree of multiple sites of unspecified ankle and foot | Diagnosis | ICD-10-CM |
| T25.399A | Burn of third degree of multiple sites of unspecified ankle and foot, initial encounter | Diagnosis | ICD-10-CM |
| T25.399D | Burn of third degree of multiple sites of unspecified ankle and foot, subsequent encounter | Diagnosis | ICD-10-CM |
| T25.399S | Burn of third degree of multiple sites of unspecified ankle and foot, sequela | Diagnosis | ICD-10-CM |
| T26 | Burn and corrosion confined to eye and adnexa | Diagnosis | ICD-10-CM |
| T26.0 | Burn of eyelid and periocular area | Diagnosis | ICD-10-CM |
| T26.00 | Burn of unspecified eyelid and periocular area | Diagnosis | ICD-10-CM |
| T26.00XA | Burn of unspecified eyelid and periocular area, initial encounter | Diagnosis | ICD-10-CM |
| T26.00XD | Burn of unspecified eyelid and periocular area, subsequent encounter | Diagnosis | ICD-10-CM |
| T26.00XS | Burn of unspecified eyelid and periocular area, sequela | Diagnosis | ICD-10-CM |
| T26.01 | Burn of right eyelid and periocular area | Diagnosis | ICD-10-CM |
| T26.01XA | Burn of right eyelid and periocular area, initial encounter | Diagnosis | ICD-10-CM |
| T26.01XD | Burn of right eyelid and periocular area, subsequent encounter | Diagnosis | ICD-10-CM |
| T26.01XS | Burn of right eyelid and periocular area, sequela | Diagnosis | ICD-10-CM |
| T26.02 | Burn of left eyelid and periocular area | Diagnosis | ICD-10-CM |
| T26.02XA | Burn of left eyelid and periocular area, initial encounter | Diagnosis | ICD-10-CM |
| T26.02XD | Burn of left eyelid and periocular area, subsequent encounter | Diagnosis | ICD-10-CM |
| T26.02XS | Burn of left eyelid and periocular area, sequela | Diagnosis | ICD-10-CM |
| | | 0 | |



| CodeDescriptionCode CategoriaT26.1Burn of cornea and conjunctival sacDiagnosT26.10Burn of cornea and conjunctival sac, unspecified eyeDiagnosT26.10XABurn of cornea and conjunctival sac, unspecified eye, initial encounterDiagnosT26.10XDBurn of cornea and conjunctival sac, unspecified eye, subsequent encounterDiagnosT26.10XSBurn of cornea and conjunctival sac, unspecified eye, subsequent encounterDiagnosT26.10XSBurn of cornea and conjunctival sac, unspecified eye, sequelaDiagnos | ICD-10-CM ICD-10-CM ICD-10-CM ICD-10-CM |
|---|--|
| T26.10Burn of cornea and conjunctival sac, unspecified eyeDiagnosT26.10XABurn of cornea and conjunctival sac, unspecified eye, initial encounterDiagnosT26.10XDBurn of cornea and conjunctival sac, unspecified eye, subsequent encounterDiagnosT26.10XDBurn of cornea and conjunctival sac, unspecified eye, subsequent encounterDiagnosT26.10XDBurn of cornea and conjunctival sac, unspecified eye, subsequent encounterDiagnos | ICD-10-CM ICD-10-CM ICD-10-CM |
| T26.10XA Burn of cornea and conjunctival sac, unspecified eye, initial encounter Diagnos T26.10XD Burn of cornea and conjunctival sac, unspecified eye, subsequent encounter Diagnos T26.10XD Burn of cornea and conjunctival sac, unspecified eye, subsequent encounter Diagnos | ICD-10-CM ICD-10-CM |
| T26.10XD Burn of cornea and conjunctival sac, unspecified eye, subsequent encounter Diagnos T26.10XS Burn of cornea and conjunctival sac, unspecified eye, subsequent encounter Diagnos | ICD-10-CM |
| T2C 40VC Durin of connect and conjunctival conjunctified and convolution | |
| T26.10XS Burn of cornea and conjunctival sac, unspecified eye, sequela | |
| | ICD-10-CM |
| T26.11 Burn of cornea and conjunctival sac, right eye Diagnos | ICD-10-CM |
| T26.11XA Burn of cornea and conjunctival sac, right eye, initial encounter Diagnos | ICD-10-CM |
| T26.11XD Burn of cornea and conjunctival sac, right eye, subsequent encounter Diagnos | ICD-10-CM |
| T26.11XS Burn of cornea and conjunctival sac, right eye, sequela Diagnos | ICD-10-CM |
| T26.12 Burn of cornea and conjunctival sac, left eye Diagnos | ICD-10-CM |
| T26.12XA Burn of cornea and conjunctival sac, left eye, initial encounter Diagnos | ICD-10-CM |
| T26.12XD Burn of cornea and conjunctival sac, left eye, subsequent encounter Diagnos | ICD-10-CM |
| T26.12XS Burn of cornea and conjunctival sac, left eye, sequela Diagnos | ICD-10-CM |
| T26.2 Burn with resulting rupture and destruction of eyeball Diagnos | ICD-10-CM |
| T26.20 Burn with resulting rupture and destruction of unspecified eyeball Diagnos | ICD-10-CM |
| T26.20XA Burn with resulting rupture and destruction of unspecified eyeball, initial encounter Diagnos | ICD-10-CM |
| T26.20XD Burn with resulting rupture and destruction of unspecified eyeball, subsequent encounter Diagnos | ICD-10-CM |
| T26.20XS Burn with resulting rupture and destruction of unspecified eyeball, sequela Diagnos | ICD-10-CM |
| T26.21 Burn with resulting rupture and destruction of right eyeball Diagnos | ICD-10-CM |
| T26.21XA Burn with resulting rupture and destruction of right eyeball, initial encounter Diagnos | ICD-10-CM |
| T26.21XD Burn with resulting rupture and destruction of right eyeball, subsequent encounter Diagnos | ICD-10-CM |
| T26.21XS Burn with resulting rupture and destruction of right eyeball, sequela Diagnos | ICD-10-CM |
| T26.22 Burn with resulting rupture and destruction of left eyeball Diagnos | ICD-10-CM |
| T26.22XA Burn with resulting rupture and destruction of left eyeball, initial encounter Diagnos | |
| T26.22XD Burn with resulting rupture and destruction of left eyeball, subsequent encounter Diagnos | |
| T26.22XS Burn with resulting rupture and destruction of left eyeball, sequela Diagnos | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T26.3 | Burns of other specified parts of eye and adnexa | Diagnosis | ICD-10-CM |
| T26.30 | Burns of other specified parts of unspecified eye and adnexa | Diagnosis | ICD-10-CM |
| T26.30XA | Burns of other specified parts of unspecified eye and adnexa, initial encounter | Diagnosis | ICD-10-CM |
| T26.30XD | Burns of other specified parts of unspecified eye and adnexa, subsequent encounter | Diagnosis | ICD-10-CM |
| T26.30XS | Burns of other specified parts of unspecified eye and adnexa, sequela | Diagnosis | ICD-10-CM |
| T26.31 | Burns of other specified parts of right eye and adnexa | Diagnosis | ICD-10-CM |
| T26.31XA | Burns of other specified parts of right eye and adnexa, initial encounter | Diagnosis | ICD-10-CM |
| T26.31XD | Burns of other specified parts of right eye and adnexa, subsequent encounter | Diagnosis | ICD-10-CM |
| T26.31XS | Burns of other specified parts of right eye and adnexa, sequela | Diagnosis | ICD-10-CM |
| T26.32 | Burns of other specified parts of left eye and adnexa | Diagnosis | ICD-10-CM |
| T26.32XA | Burns of other specified parts of left eye and adnexa, initial encounter | Diagnosis | ICD-10-CM |
| T26.32XD | Burns of other specified parts of left eye and adnexa, subsequent encounter | Diagnosis | ICD-10-CM |
| T26.32XS | Burns of other specified parts of left eye and adnexa, sequela | Diagnosis | ICD-10-CM |
| T26.4 | Burn of eye and adnexa, part unspecified | Diagnosis | ICD-10-CM |
| T26.40 | Burn of unspecified eye and adnexa, part unspecified | Diagnosis | ICD-10-CM |
| T26.40XA | Burn of unspecified eye and adnexa, part unspecified, initial encounter | Diagnosis | ICD-10-CM |
| T26.40XD | Burn of unspecified eye and adnexa, part unspecified, subsequent encounter | Diagnosis | ICD-10-CM |
| T26.40XS | Burn of unspecified eye and adnexa, part unspecified, sequela | Diagnosis | ICD-10-CM |
| T26.41 | Burn of right eye and adnexa, part unspecified | Diagnosis | ICD-10-CM |
| T26.41XA | Burn of right eye and adnexa, part unspecified, initial encounter | Diagnosis | ICD-10-CM |
| T26.41XD | Burn of right eye and adnexa, part unspecified, subsequent encounter | Diagnosis | ICD-10-CM |
| T26.41XS | Burn of right eye and adnexa, part unspecified, sequela | Diagnosis | ICD-10-CM |
| T26.42 | Burn of left eye and adnexa, part unspecified | Diagnosis | ICD-10-CM |
| T26.42XA | Burn of left eye and adnexa, part unspecified, initial encounter | Diagnosis | ICD-10-CM |
| T26.42XD | Burn of left eye and adnexa, part unspecified, subsequent encounter | Diagnosis | ICD-10-CM |
| T26.42XS | Burn of left eye and adnexa, part unspecified, sequela | Diagnosis | ICD-10-CM |
| | | - | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-------------|
| T27 | Burn and corrosion of respiratory tract | Diagnosis | ICD-10-CM |
| T27.0 | Burn of larynx and trachea | Diagnosis | ICD-10-CM |
| T27.0XXA | Burn of larynx and trachea, initial encounter | Diagnosis | ICD-10-CM |
| T27.0XXD | Burn of larynx and trachea, subsequent encounter | Diagnosis | ICD-10-CM |
| T27.0XXS | Burn of larynx and trachea, sequela | Diagnosis | ICD-10-CM |
| T27.1 | Burn involving larynx and trachea with lung | Diagnosis | ICD-10-CM |
| T27.1XXA | Burn involving larynx and trachea with lung, initial encounter | Diagnosis | ICD-10-CM |
| T27.1XXD | Burn involving larynx and trachea with lung, subsequent encounter | Diagnosis | ICD-10-CM |
| T27.1XXS | Burn involving larynx and trachea with lung, sequela | Diagnosis | ICD-10-CM |
| T27.2 | Burn of other parts of respiratory tract | Diagnosis | ICD-10-CM |
| T27.2XXA | Burn of other parts of respiratory tract, initial encounter | Diagnosis | ICD-10-CM |
| T27.2XXD | Burn of other parts of respiratory tract, subsequent encounter | Diagnosis | ICD-10-CM |
| T27.2XXS | Burn of other parts of respiratory tract, sequela | Diagnosis | ICD-10-CM |
| T27.3 | Burn of respiratory tract, part unspecified | Diagnosis | ICD-10-CM |
| T27.3XXA | Burn of respiratory tract, part unspecified, initial encounter | Diagnosis | ICD-10-CM |
| T27.3XXD | Burn of respiratory tract, part unspecified, subsequent encounter | Diagnosis | ICD-10-CM |
| T27.3XXS | Burn of respiratory tract, part unspecified, sequela | Diagnosis | ICD-10-CM |
| T28 | Burn and corrosion of other internal organs | Diagnosis | ICD-10-CM |
| T28.0 | Burn of mouth and pharynx | Diagnosis | ICD-10-CM |
| T28.0XXA | Burn of mouth and pharynx, initial encounter | Diagnosis | ICD-10-CM |
| T28.0XXD | Burn of mouth and pharynx, subsequent encounter | Diagnosis | ICD-10-CM |
| T28.0XXS | Burn of mouth and pharynx, sequela | Diagnosis | ICD-10-CM |
| T28.1 | Burn of esophagus | Diagnosis | ICD-10-CM |
| T28.1XXA | Burn of esophagus, initial encounter | Diagnosis | ICD-10-CM |
| T28.1XXD | Burn of esophagus, subsequent encounter | Diagnosis | ICD-10-CM |
| T28.1XXS | Burn of esophagus, sequela | Diagnosis | ICD-10-CM |
| | | Diagnosis | ICD TO-CIVI |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T28.2 | Burn of other parts of alimentary tract | Diagnosis | ICD-10-CM |
| T28.2XXA | Burn of other parts of alimentary tract, initial encounter | Diagnosis | ICD-10-CM |
| T28.2XXD | Burn of other parts of alimentary tract, subsequent encounter | Diagnosis | ICD-10-CM |
| T28.2XXS | Burn of other parts of alimentary tract, sequela | Diagnosis | ICD-10-CM |
| T28.3 | Burn of internal genitourinary organs | Diagnosis | ICD-10-CM |
| T28.3XXA | Burn of internal genitourinary organs, initial encounter | Diagnosis | ICD-10-CM |
| T28.3XXD | Burn of internal genitourinary organs, subsequent encounter | Diagnosis | ICD-10-CM |
| T28.3XXS | Burn of internal genitourinary organs, sequela | Diagnosis | ICD-10-CM |
| T28.4 | Burns of other and unspecified internal organs | Diagnosis | ICD-10-CM |
| T28.40 | Burn of unspecified internal organ | Diagnosis | ICD-10-CM |
| T28.40XA | Burn of unspecified internal organ, initial encounter | Diagnosis | ICD-10-CM |
| T28.40XD | Burn of unspecified internal organ, subsequent encounter | Diagnosis | ICD-10-CM |
| T28.40XS | Burn of unspecified internal organ, sequela | Diagnosis | ICD-10-CM |
| T28.41 | Burn of ear drum | Diagnosis | ICD-10-CM |
| T28.411 | Burn of right ear drum | Diagnosis | ICD-10-CM |
| T28.411A | Burn of right ear drum, initial encounter | Diagnosis | ICD-10-CM |
| T28.411D | Burn of right ear drum, subsequent encounter | Diagnosis | ICD-10-CM |
| T28.411S | Burn of right ear drum, sequela | Diagnosis | ICD-10-CM |
| T28.412 | Burn of left ear drum | Diagnosis | ICD-10-CM |
| T28.412A | Burn of left ear drum, initial encounter | Diagnosis | ICD-10-CM |
| T28.412D | Burn of left ear drum, subsequent encounter | Diagnosis | ICD-10-CM |
| T28.412S | Burn of left ear drum, sequela | Diagnosis | ICD-10-CM |
| T28.419 | Burn of unspecified ear drum | Diagnosis | ICD-10-CM |
| T28.419A | Burn of unspecified ear drum, initial encounter | Diagnosis | ICD-10-CM |
| T28.419D | Burn of unspecified ear drum, subsequent encounter | Diagnosis | ICD-10-CM |
| T28.419S | Burn of unspecified ear drum, sequela | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| T28.49 | Burn of other internal organ | Diagnosis | ICD-10-CM |
| T28.49XA | Burn of other internal organ, initial encounter | Diagnosis | ICD-10-CM |
| T28.49XD | Burn of other internal organ, subsequent encounter | Diagnosis | ICD-10-CM |
| T28.49XS | Burn of other internal organ, sequela | Diagnosis | ICD-10-CM |
| Т30 | Burn and corrosion, body region unspecified | Diagnosis | ICD-10-CM |
| Т30.0 | Burn of unspecified body region, unspecified degree | Diagnosis | ICD-10-CM |
| T31 | Burns classified according to extent of body surface involved | Diagnosis | ICD-10-CM |
| T31.0 | Burns involving less than 10% of body surface | Diagnosis | ICD-10-CM |
| T31.1 | Burns involving 10-19% of body surface | Diagnosis | ICD-10-CM |
| T31.10 | Burns involving 10-19% of body surface with 0% to 9% third degree burns | Diagnosis | ICD-10-CM |
| T31.11 | Burns involving 10-19% of body surface with 10-19% third degree burns | Diagnosis | ICD-10-CM |
| T31.2 | Burns involving 20-29% of body surface | Diagnosis | ICD-10-CM |
| T31.20 | Burns involving 20-29% of body surface with 0% to 9% third degree burns | Diagnosis | ICD-10-CM |
| T31.21 | Burns involving 20-29% of body surface with 10-19% third degree burns | Diagnosis | ICD-10-CM |
| T31.22 | Burns involving 20-29% of body surface with 20-29% third degree burns | Diagnosis | ICD-10-CM |
| T31.3 | Burns involving 30-39% of body surface | Diagnosis | ICD-10-CM |
| T31.30 | Burns involving 30-39% of body surface with 0% to 9% third degree burns | Diagnosis | ICD-10-CM |
| T31.31 | Burns involving 30-39% of body surface with 10-19% third degree burns | Diagnosis | ICD-10-CM |
| T31.32 | Burns involving 30-39% of body surface with 20-29% third degree burns | Diagnosis | ICD-10-CM |
| T31.33 | Burns involving 30-39% of body surface with 30-39% third degree burns | Diagnosis | ICD-10-CM |
| T31.4 | Burns involving 40-49% of body surface | Diagnosis | ICD-10-CM |
| T31.40 | Burns involving 40-49% of body surface with 0% to 9% third degree burns | Diagnosis | ICD-10-CM |
| T31.41 | Burns involving 40-49% of body surface with 10-19% third degree burns | Diagnosis | ICD-10-CM |
| T31.42 | Burns involving 40-49% of body surface with 20-29% third degree burns | Diagnosis | ICD-10-CM |
| T31.43 | Burns involving 40-49% of body surface with 30-39% third degree burns | Diagnosis | ICD-10-CM |
| T31.44 | Burns involving 40-49% of body surface with 40-49% third degree burns | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| T31.5 | Burns involving 50-59% of body surface | Diagnosis | ICD-10-CM |
| T31.50 | Burns involving 50-59% of body surface with 0% to 9% third degree burns | Diagnosis | ICD-10-CM |
| T31.51 | Burns involving 50-59% of body surface with 10-19% third degree burns | Diagnosis | ICD-10-CM |
| T31.52 | Burns involving 50-59% of body surface with 20-29% third degree burns | Diagnosis | ICD-10-CM |
| T31.53 | Burns involving 50-59% of body surface with 30-39% third degree burns | Diagnosis | ICD-10-CM |
| T31.54 | Burns involving 50-59% of body surface with 40-49% third degree burns | Diagnosis | ICD-10-CM |
| T31.55 | Burns involving 50-59% of body surface with 50-59% third degree burns | Diagnosis | ICD-10-CM |
| T31.6 | Burns involving 60-69% of body surface | Diagnosis | ICD-10-CM |
| T31.60 | Burns involving 60-69% of body surface with 0% to 9% third degree burns | Diagnosis | ICD-10-CM |
| T31.61 | Burns involving 60-69% of body surface with 10-19% third degree burns | Diagnosis | ICD-10-CM |
| T31.62 | Burns involving 60-69% of body surface with 20-29% third degree burns | Diagnosis | ICD-10-CM |
| T31.63 | Burns involving 60-69% of body surface with 30-39% third degree burns | Diagnosis | ICD-10-CM |
| T31.64 | Burns involving 60-69% of body surface with 40-49% third degree burns | Diagnosis | ICD-10-CM |
| T31.65 | Burns involving 60-69% of body surface with 50-59% third degree burns | Diagnosis | ICD-10-CM |
| T31.66 | Burns involving 60-69% of body surface with 60-69% third degree burns | Diagnosis | ICD-10-CM |
| T31.7 | Burns involving 70-79% of body surface | Diagnosis | ICD-10-CM |
| T31.70 | Burns involving 70-79% of body surface with 0% to 9% third degree burns | Diagnosis | ICD-10-CM |
| T31.71 | Burns involving 70-79% of body surface with 10-19% third degree burns | Diagnosis | ICD-10-CM |
| T31.72 | Burns involving 70-79% of body surface with 20-29% third degree burns | Diagnosis | ICD-10-CM |
| T31.73 | Burns involving 70-79% of body surface with 30-39% third degree burns | Diagnosis | ICD-10-CM |
| T31.74 | Burns involving 70-79% of body surface with 40-49% third degree burns | Diagnosis | ICD-10-CM |
| T31.75 | Burns involving 70-79% of body surface with 50-59% third degree burns | Diagnosis | ICD-10-CM |
| T31.76 | Burns involving 70-79% of body surface with 60-69% third degree burns | Diagnosis | ICD-10-CM |
| T31.77 | Burns involving 70-79% of body surface with 70-79% third degree burns | Diagnosis | ICD-10-CM |
| T31.8 | Burns involving 80-89% of body surface | Diagnosis | ICD-10-CM |
| T31.80 | Burns involving 80-89% of body surface with 0% to 9% third degree burns | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T31.81 | Burns involving 80-89% of body surface with 10-19% third degree burns | Diagnosis | ICD-10-CM |
| T31.82 | Burns involving 80-89% of body surface with 20-29% third degree burns | Diagnosis | ICD-10-CM |
| T31.83 | Burns involving 80-89% of body surface with 30-39% third degree burns | Diagnosis | ICD-10-CM |
| T31.84 | Burns involving 80-89% of body surface with 40-49% third degree burns | Diagnosis | ICD-10-CM |
| T31.85 | Burns involving 80-89% of body surface with 50-59% third degree burns | Diagnosis | ICD-10-CM |
| T31.86 | Burns involving 80-89% of body surface with 60-69% third degree burns | Diagnosis | ICD-10-CM |
| T31.87 | Burns involving 80-89% of body surface with 70-79% third degree burns | Diagnosis | ICD-10-CM |
| T31.88 | Burns involving 80-89% of body surface with 80-89% third degree burns | Diagnosis | ICD-10-CM |
| T31.9 | Burns involving 90% or more of body surface | Diagnosis | ICD-10-CM |
| T31.90 | Burns involving 90% or more of body surface with 0% to 9% third degree burns | Diagnosis | ICD-10-CM |
| T31.91 | Burns involving 90% or more of body surface with 10-19% third degree burns | Diagnosis | ICD-10-CM |
| T31.92 | Burns involving 90% or more of body surface with 20-29% third degree burns | Diagnosis | ICD-10-CM |
| T31.93 | Burns involving 90% or more of body surface with 30-39% third degree burns | Diagnosis | ICD-10-CM |
| T31.94 | Burns involving 90% or more of body surface with 40-49% third degree burns | Diagnosis | ICD-10-CM |
| T31.95 | Burns involving 90% or more of body surface with 50-59% third degree burns | Diagnosis | ICD-10-CM |
| T31.96 | Burns involving 90% or more of body surface with 60-69% third degree burns | Diagnosis | ICD-10-CM |
| T31.97 | Burns involving 90% or more of body surface with 70-79% third degree burns | Diagnosis | ICD-10-CM |
| T31.98 | Burns involving 90% or more of body surface with 80-89% third degree burns | Diagnosis | ICD-10-CM |
| T31.99 | Burns involving 90% or more of body surface with 90% or more third degree burns | Diagnosis | ICD-10-CM |
| V81.81XA | Occupant of railway train or railway vehicle injured due to explosion or fire on train, initial encounter | Diagnosis | ICD-10-CM |
| V81.81XD | Occupant of railway train or railway vehicle injured due to explosion or fire on train, subsequent encounter | Diagnosis | ICD-10-CM |
| V91.0 | Burn due to watercraft on fire | Diagnosis | ICD-10-CM |
| V91.00 | Burn due to merchant ship on fire | Diagnosis | ICD-10-CM |
| V91.00XA | Burn due to merchant ship on fire, initial encounter | Diagnosis | ICD-10-CM |
| V91.00XD | Burn due to merchant ship on fire, subsequent encounter | Diagnosis | ICD-10-CM |
| V91.00XS | Burn due to merchant ship on fire, sequela | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| V91.01 | Burn due to passenger ship on fire | Diagnosis | ICD-10-CM |
| V91.01XA | Burn due to passenger ship on fire, initial encounter | Diagnosis | ICD-10-CM |
| V91.01XD | Burn due to passenger ship on fire, subsequent encounter | Diagnosis | ICD-10-CM |
| V91.01XS | Burn due to passenger ship on fire, sequela | Diagnosis | ICD-10-CM |
| V91.02 | Burn due to fishing boat on fire | Diagnosis | ICD-10-CM |
| V91.02XA | Burn due to fishing boat on fire, initial encounter | Diagnosis | ICD-10-CM |
| V91.02XD | Burn due to fishing boat on fire, subsequent encounter | Diagnosis | ICD-10-CM |
| V91.02XS | Burn due to fishing boat on fire, sequela | Diagnosis | ICD-10-CM |
| V91.03 | Burn due to other powered watercraft on fire | Diagnosis | ICD-10-CM |
| V91.03XA | Burn due to other powered watercraft on fire, initial encounter | Diagnosis | ICD-10-CM |
| V91.03XD | Burn due to other powered watercraft on fire, subsequent encounter | Diagnosis | ICD-10-CM |
| V91.03XS | Burn due to other powered watercraft on fire, sequela | Diagnosis | ICD-10-CM |
| V91.04 | Burn due to sailboat on fire | Diagnosis | ICD-10-CM |
| V91.04XA | Burn due to sailboat on fire, initial encounter | Diagnosis | ICD-10-CM |
| V91.04XD | Burn due to sailboat on fire, subsequent encounter | Diagnosis | ICD-10-CM |
| V91.04XS | Burn due to sailboat on fire, sequela | Diagnosis | ICD-10-CM |
| V91.05 | Burn due to canoe or kayak on fire | Diagnosis | ICD-10-CM |
| V91.05XA | Burn due to canoe or kayak on fire, initial encounter | Diagnosis | ICD-10-CM |
| V91.05XD | Burn due to canoe or kayak on fire, subsequent encounter | Diagnosis | ICD-10-CM |
| V91.05XS | Burn due to canoe or kayak on fire, sequela | Diagnosis | ICD-10-CM |
| V91.06 | Burn due to (nonpowered) inflatable craft on fire | Diagnosis | ICD-10-CM |
| V91.06XA | Burn due to (nonpowered) inflatable craft on fire, initial encounter | Diagnosis | ICD-10-CM |
| V91.06XD | Burn due to (nonpowered) inflatable craft on fire, subsequent encounter | Diagnosis | ICD-10-CM |
| V91.06XS | Burn due to (nonpowered) inflatable craft on fire, sequela | Diagnosis | ICD-10-CM |
| V91.07 | Burn due to water-skis on fire | Diagnosis | ICD-10-CM |
| V91.07XA | Burn due to water-skis on fire, initial encounter | C | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| V91.07XD | Burn due to water-skis on fire, subsequent encounter | Diagnosis | ICD-10-CM |
| V91.07XS | Burn due to water-skis on fire, sequela | Diagnosis | ICD-10-CM |
| V91.08 | Burn due to other unpowered watercraft on fire | Diagnosis | ICD-10-CM |
| V91.08XA | Burn due to other unpowered watercraft on fire, initial encounter | Diagnosis | ICD-10-CM |
| V91.08XD | Burn due to other unpowered watercraft on fire, subsequent encounter | Diagnosis | ICD-10-CM |
| V91.08XS | Burn due to other unpowered watercraft on fire, sequela | Diagnosis | ICD-10-CM |
| V91.09 | Burn due to unspecified watercraft on fire | Diagnosis | ICD-10-CM |
| V91.09XA | Burn due to unspecified watercraft on fire, initial encounter | Diagnosis | ICD-10-CM |
| V91.09XD | Burn due to unspecified watercraft on fire, subsequent encounter | Diagnosis | ICD-10-CM |
| V91.09XS | Burn due to unspecified watercraft on fire, sequela | Diagnosis | ICD-10-CM |
| V93.0 | Burn due to localized fire on board watercraft | Diagnosis | ICD-10-CM |
| V93.00 | Burn due to localized fire on board merchant vessel | Diagnosis | ICD-10-CM |
| V93.00XA | Burn due to localized fire on board merchant vessel, initial encounter | Diagnosis | ICD-10-CM |
| V93.00XD | Burn due to localized fire on board merchant vessel, subsequent encounter | Diagnosis | ICD-10-CM |
| V93.00XS | Burn due to localized fire on board merchant vessel, sequela | Diagnosis | ICD-10-CM |
| V93.01 | Burn due to localized fire on board passenger vessel | Diagnosis | ICD-10-CM |
| V93.01XA | Burn due to localized fire on board passenger vessel, initial encounter | Diagnosis | ICD-10-CM |
| V93.01XD | Burn due to localized fire on board passenger vessel, subsequent encounter | Diagnosis | ICD-10-CM |
| V93.01XS | Burn due to localized fire on board passenger vessel, sequela | Diagnosis | ICD-10-CM |
| V93.02 | Burn due to localized fire on board fishing boat | Diagnosis | ICD-10-CM |
| V93.02XA | Burn due to localized fire on board fishing boat, initial encounter | Diagnosis | ICD-10-CM |
| V93.02XD | Burn due to localized fire on board fishing boat, subsequent encounter | Diagnosis | ICD-10-CM |
| V93.02XS | Burn due to localized fire on board fishing boat, sequela | Diagnosis | ICD-10-CM |
| V93.03 | Burn due to localized fire on board other powered watercraft | Diagnosis | ICD-10-CM |
| V93.03XA | Burn due to localized fire on board other powered watercraft, initial encounter | 0 | ICD-10-CM |
| V93.03XD | Burn due to localized fire on board other powered watercraft, subsequent encounter | Diagnosis | |
| | | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| V93.03XS | Burn due to localized fire on board other powered watercraft, sequela | Diagnosis | ICD-10-CM |
| V93.04 | Burn due to localized fire on board sailboat | Diagnosis | ICD-10-CM |
| V93.04XA | Burn due to localized fire on board sailboat, initial encounter | Diagnosis | ICD-10-CM |
| V93.04XD | Burn due to localized fire on board sailboat, subsequent encounter | Diagnosis | ICD-10-CM |
| V93.04XS | Burn due to localized fire on board sailboat, sequela | Diagnosis | ICD-10-CM |
| V93.09 | Burn due to localized fire on board unspecified watercraft | Diagnosis | ICD-10-CM |
| V93.09XA | Burn due to localized fire on board unspecified watercraft, initial encounter | Diagnosis | ICD-10-CM |
| V93.09XD | Burn due to localized fire on board unspecified watercraft, subsequent encounter | Diagnosis | ICD-10-CM |
| V93.09XS | Burn due to localized fire on board unspecified watercraft, sequela | Diagnosis | ICD-10-CM |
| V93.1 | Other burn on board watercraft | Diagnosis | ICD-10-CM |
| V93.10 | Other burn on board merchant vessel | Diagnosis | ICD-10-CM |
| V93.10XA | Other burn on board merchant vessel, initial encounter | Diagnosis | ICD-10-CM |
| V93.10XD | Other burn on board merchant vessel, subsequent encounter | Diagnosis | ICD-10-CM |
| V93.10XS | Other burn on board merchant vessel, sequela | Diagnosis | ICD-10-CM |
| V93.11 | Other burn on board passenger vessel | Diagnosis | ICD-10-CM |
| V93.11XA | Other burn on board passenger vessel, initial encounter | Diagnosis | ICD-10-CM |
| V93.11XD | Other burn on board passenger vessel, subsequent encounter | Diagnosis | ICD-10-CM |
| V93.11XS | Other burn on board passenger vessel, sequela | Diagnosis | ICD-10-CM |
| V93.12 | Other burn on board fishing boat | Diagnosis | ICD-10-CM |
| V93.12XA | Other burn on board fishing boat, initial encounter | Diagnosis | ICD-10-CM |
| V93.12XD | Other burn on board fishing boat, subsequent encounter | Diagnosis | ICD-10-CM |
| V93.12XS | Other burn on board fishing boat, sequela | Diagnosis | ICD-10-CM |
| V93.13 | Other burn on board other powered watercraft | Diagnosis | ICD-10-CM |
| V93.13XA | Other burn on board other powered watercraft, initial encounter | Diagnosis | ICD-10-CM |
| V93.13XD | Other burn on board other powered watercraft, subsequent encounter | Diagnosis | ICD-10-CM |
| V93.13XS | Other burn on board other powered watercraft, sequela | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| V93.14 | Other burn on board sailboat | Diagnosis | ICD-10-CM |
| V93.14XA | Other burn on board sailboat, initial encounter | Diagnosis | ICD-10-CM |
| V93.14XD | Other burn on board sailboat, subsequent encounter | Diagnosis | ICD-10-CM |
| V93.14XS | Other burn on board sailboat, sequela | Diagnosis | ICD-10-CM |
| V93.19 | Other burn on board unspecified watercraft | Diagnosis | ICD-10-CM |
| V93.19XA | Other burn on board unspecified watercraft, initial encounter | Diagnosis | ICD-10-CM |
| V93.19XS | Other burn on board unspecified watercraft, sequela | Diagnosis | ICD-10-CM |
| X00.0XXA | Exposure to flames in uncontrolled fire in building or structure, initial encounter | Diagnosis | ICD-10-CM |
| X00.0XXD | Exposure to flames in uncontrolled fire in building or structure, subsequent encounter | Diagnosis | ICD-10-CM |
| X02.0XXA | Exposure to flames in controlled fire in building or structure, initial encounter | Diagnosis | ICD-10-CM |
| X02.0XXD | Exposure to flames in controlled fire in building or structure, subsequent encounter | Diagnosis | ICD-10-CM |
| X08.00 | Exposure to bed fire due to unspecified burning material | Diagnosis | ICD-10-CM |
| X08.00XA | Exposure to bed fire due to unspecified burning material, initial encounter | Diagnosis | ICD-10-CM |
| X08.00XD | Exposure to bed fire due to unspecified burning material, subsequent encounter | Diagnosis | ICD-10-CM |
| X08.00XS | Exposure to bed fire due to unspecified burning material, sequela | Diagnosis | ICD-10-CM |
| X08.01 | Exposure to bed fire due to burning cigarette | Diagnosis | ICD-10-CM |
| X08.01XA | Exposure to bed fire due to burning cigarette, initial encounter | Diagnosis | ICD-10-CM |
| X08.01XD | Exposure to bed fire due to burning cigarette, subsequent encounter | Diagnosis | ICD-10-CM |
| X08.01XS | Exposure to bed fire due to burning cigarette, sequela | Diagnosis | ICD-10-CM |
| X08.09 | Exposure to bed fire due to other burning material | Diagnosis | ICD-10-CM |
| X08.09XA | Exposure to bed fire due to other burning material, initial encounter | Diagnosis | ICD-10-CM |
| X08.09XD | Exposure to bed fire due to other burning material, subsequent encounter | Diagnosis | ICD-10-CM |
| X08.09XS | Exposure to bed fire due to other burning material, sequela | Diagnosis | ICD-10-CM |
| X08.10 | Exposure to sofa fire due to unspecified burning material | Diagnosis | ICD-10-CM |
| X08.10XA | Exposure to sofa fire due to unspecified burning material, initial encounter | Diagnosis | ICD-10-CM |
| X08.10XD | Exposure to sofa fire due to unspecified burning material, subsequent encounter | 6 | |
| | | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| X08.10XS | Exposure to sofa fire due to unspecified burning material, sequela | Diagnosis | ICD-10-CM |
| X08.11 | Exposure to sofa fire due to burning cigarette | Diagnosis | ICD-10-CM |
| X08.11XA | Exposure to sofa fire due to burning cigarette, initial encounter | Diagnosis | ICD-10-CM |
| X08.11XD | Exposure to sofa fire due to burning cigarette, subsequent encounter | Diagnosis | ICD-10-CM |
| X08.11XS | Exposure to sofa fire due to burning cigarette, sequela | Diagnosis | ICD-10-CM |
| X08.19 | Exposure to sofa fire due to other burning material | Diagnosis | ICD-10-CM |
| X08.19XA | Exposure to sofa fire due to other burning material, initial encounter | Diagnosis | ICD-10-CM |
| X08.19XD | Exposure to sofa fire due to other burning material, subsequent encounter | Diagnosis | ICD-10-CM |
| X08.19XS | Exposure to sofa fire due to other burning material, sequela | Diagnosis | ICD-10-CM |
| X08.20 | Exposure to other furniture fire due to unspecified burning material | Diagnosis | ICD-10-CM |
| X08.20XA | Exposure to other furniture fire due to unspecified burning material, initial encounter | Diagnosis | ICD-10-CM |
| X08.20XD | Exposure to other furniture fire due to unspecified burning material, subsequent encounter | Diagnosis | ICD-10-CM |
| X08.20XS | Exposure to other furniture fire due to unspecified burning material, sequela | Diagnosis | ICD-10-CM |
| X08.21 | Exposure to other furniture fire due to burning cigarette | Diagnosis | ICD-10-CM |
| X08.21XA | Exposure to other furniture fire due to burning cigarette, initial encounter | Diagnosis | ICD-10-CM |
| X08.21XD | Exposure to other furniture fire due to burning cigarette, subsequent encounter | Diagnosis | ICD-10-CM |
| X08.21XS | Exposure to other furniture fire due to burning cigarette, sequela | Diagnosis | ICD-10-CM |
| X08.29 | Exposure to other furniture fire due to other burning material | Diagnosis | ICD-10-CM |
| X08.29XA | Exposure to other furniture fire due to other burning material, initial encounter | Diagnosis | ICD-10-CM |
| X08.29XD | Exposure to other furniture fire due to other burning material, subsequent encounter | Diagnosis | ICD-10-CM |
| X08.29XS | Exposure to other furniture fire due to other burning material, sequela | Diagnosis | ICD-10-CM |
| X08.8XXA | Exposure to other specified smoke, fire and flames, initial encounter | Diagnosis | ICD-10-CM |
| X08.8XXD | Exposure to other specified smoke, fire and flames, subsequent encounter | Diagnosis | ICD-10-CM |
| X76.XXXA | Intentional self-harm by smoke, fire and flames, initial encounter | Diagnosis | ICD-10-CM |
| X76.XXXD | Intentional self-harm by smoke, fire and flames, subsequent encounter | Diagnosis | ICD-10-CM |
| X77.3XXA | Intentional self-harm by hot household appliances, initial encounter | Diagnosis | ICD-10-CM |
| | , | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| X77.3XXD | Intentional self-harm by hot household appliances, subsequent encounter | Diagnosis | ICD-10-CM |
| X77.8XXA | Intentional self-harm by other hot objects, initial encounter | Diagnosis | ICD-10-CM |
| X77.8XXD | Intentional self-harm by other hot objects, subsequent encounter | Diagnosis | ICD-10-CM |
| X77.9XXA | Intentional self-harm by unspecified hot objects, initial encounter | Diagnosis | ICD-10-CM |
| X77.9XXD | Intentional self-harm by unspecified hot objects, subsequent encounter | Diagnosis | ICD-10-CM |
| Y26.XXXA | Exposure to smoke, fire and flames, undetermined intent, initial encounter | Diagnosis | ICD-10-CM |
| Y26.XXXD | Exposure to smoke, fire and flames, undetermined intent, subsequent encounter | Diagnosis | ICD-10-CM |
| Y27.3XXA | Contact with hot household appliance, undetermined intent, initial encounter | Diagnosis | ICD-10-CM |
| Y27.3XXD | Contact with hot household appliance, undetermined intent, subsequent encounter | Diagnosis | ICD-10-CM |
| Y27.8XXA | Contact with other hot objects, undetermined intent, initial encounter | Diagnosis | ICD-10-CM |
| Y27.8XXD | Contact with other hot objects, undetermined intent, subsequent encounter | Diagnosis | ICD-10-CM |
| Y27.9XXA | Contact with unspecified hot objects, undetermined intent, initial encounter | Diagnosis | ICD-10-CM |
| Y27.9XXD | Contact with unspecified hot objects, undetermined intent, subsequent encounter | Diagnosis | ICD-10-CM |
| | Glaucoma | | |
| 362.85 | Retinal nerve fiber bundle defects | Diagnosis | ICD-9-CM |
| 365.00 | Unspecified preglaucoma | Diagnosis | ICD-9-CM |
| 365.01 | Borderline glaucoma, open angle with borderline findings, low risk | Diagnosis | ICD-9-CM |
| 365.02 | Borderline glaucoma with anatomical narrow angle | Diagnosis | ICD-9-CM |
| 365.03 | Borderline glaucoma with steroid responders | Diagnosis | ICD-9-CM |
| 365.04 | Borderline glaucoma with ocular hypertension | Diagnosis | ICD-9-CM |
| 365.10 | Unspecified open-angle glaucoma | Diagnosis | ICD-9-CM |
| 365.11 | Primary open-angle glaucoma | Diagnosis | ICD-9-CM |
| 365.12 | Low tension open-angle glaucoma | Diagnosis | ICD-9-CM |
| 365.13 | Pigmentary open-angle glaucoma | Diagnosis | ICD-9-CM |
| 365.15 | Residual stage of open angle glaucoma | Diagnosis | ICD-9-CM |
| 365.20 | Unspecified primary angle-closure glaucoma | Diagnosis | ICD-9-CM |
| | | - | |



| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| 365.21 | Intermittent angle-closure glaucoma | Diagnosis | ICD-9-CM |
| 365.22 | Acute angle-closure glaucoma | Diagnosis | ICD-9-CM |
| 365.23 | Chronic angle-closure glaucoma | Diagnosis | ICD-9-CM |
| 365.24 | Residual stage of angle-closure glaucoma | Diagnosis | ICD-9-CM |
| 365.31 | Corticosteroid-induced glaucoma, glaucomatous stage | Diagnosis | ICD-9-CM |
| 365.32 | Corticosteroid-induced glaucoma, residual stage | Diagnosis | ICD-9-CM |
| 365.41 | Glaucoma associated with chamber angle anomalies | Diagnosis | ICD-9-CM |
| 365.42 | Glaucoma associated with anomalies of iris | Diagnosis | ICD-9-CM |
| 365.43 | Glaucoma associated with other anterior segment anomalies | Diagnosis | ICD-9-CM |
| 365.51 | Phacolytic glaucoma | Diagnosis | ICD-9-CM |
| 365.52 | Pseudoexfoliation glaucoma | Diagnosis | ICD-9-CM |
| 365.59 | Glaucoma associated with other lens disorders | Diagnosis | ICD-9-CM |
| 365.60 | Glaucoma associated with unspecified ocular disorder | Diagnosis | ICD-9-CM |
| 365.61 | Glaucoma associated with pupillary block | Diagnosis | ICD-9-CM |
| 365.62 | Glaucoma associated with ocular inflammations | Diagnosis | ICD-9-CM |
| 365.63 | Glaucoma associated with vascular disorders of eye | Diagnosis | ICD-9-CM |
| 365.64 | Glaucoma associated with tumors or cysts | Diagnosis | ICD-9-CM |
| 365.65 | Glaucoma associated with ocular trauma | Diagnosis | ICD-9-CM |
| 365.81 | Hypersecretion glaucoma | Diagnosis | ICD-9-CM |
| 365.82 | Glaucoma with increased episcleral venous pressure | Diagnosis | ICD-9-CM |
| 365.83 | Aqueous misdirection | Diagnosis | ICD-9-CM |
| 365.89 | Other specified glaucoma | Diagnosis | ICD-9-CM |
| 365.9 | Unspecified glaucoma | Diagnosis | ICD-9-CM |
| 377.14 | Glaucomatous atrophy (cupping) of optic disc | Diagnosis | ICD-9-CM |
| H40.001 | Preglaucoma, unspecified, right eye | Diagnosis | ICD-10-CM |
| H40.002 | Preglaucoma, unspecified, left eye | Diagnosis | ICD-10-CM |
| | | Diagnosis | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| H40.003 | Preglaucoma, unspecified, bilateral | Diagnosis | ICD-10-CM |
| H40.009 | Preglaucoma, unspecified, unspecified eye | Diagnosis | ICD-10-CM |
| H40.011 | Open angle with borderline findings, low risk, right eye | Diagnosis | ICD-10-CM |
| H40.012 | Open angle with borderline findings, low risk, left eye | Diagnosis | ICD-10-CM |
| H40.013 | Open angle with borderline findings, low risk, bilateral | Diagnosis | ICD-10-CM |
| H40.019 | Open angle with borderline findings, low risk, unspecified eye | Diagnosis | ICD-10-CM |
| H40.031 | Anatomical narrow angle, right eye | Diagnosis | ICD-10-CM |
| H40.032 | Anatomical narrow angle, left eye | Diagnosis | ICD-10-CM |
| H40.033 | Anatomical narrow angle, bilateral | Diagnosis | ICD-10-CM |
| H40.039 | Anatomical narrow angle, unspecified eye | Diagnosis | ICD-10-CM |
| H40.041 | Steroid responder, right eye | Diagnosis | ICD-10-CM |
| H40.042 | Steroid responder, left eye | Diagnosis | ICD-10-CM |
| H40.043 | Steroid responder, bilateral | Diagnosis | ICD-10-CM |
| H40.049 | Steroid responder, unspecified eye | Diagnosis | ICD-10-CM |
| H40.051 | Ocular hypertension, right eye | Diagnosis | ICD-10-CM |
| H40.052 | Ocular hypertension, left eye | Diagnosis | ICD-10-CM |
| H40.053 | Ocular hypertension, bilateral | Diagnosis | ICD-10-CM |
| H40.059 | Ocular hypertension, unspecified eye | Diagnosis | ICD-10-CM |
| H40.10X0 | Unspecified open-angle glaucoma, stage unspecified | Diagnosis | ICD-10-CM |
| H40.10X1 | Unspecified open-angle glaucoma, mild stage | Diagnosis | ICD-10-CM |
| H40.10X2 | Unspecified open-angle glaucoma, moderate stage | Diagnosis | ICD-10-CM |
| H40.10X3 | Unspecified open-angle glaucoma, severe stage | Diagnosis | ICD-10-CM |
| H40.10X4 | Unspecified open-angle glaucoma, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1110 | Primary open-angle glaucoma, right eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1111 | Primary open-angle glaucoma, right eye, mild stage | Diagnosis | ICD-10-CM |
| H40.1112 | Primary open-angle glaucoma, right eye, moderate stage | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| H40.1113 | Primary open-angle glaucoma, right eye, severe stage | Diagnosis | ICD-10-CM |
| H40.1114 | Primary open-angle glaucoma, right eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1120 | Primary open-angle glaucoma, left eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1121 | Primary open-angle glaucoma, left eye, mild stage | Diagnosis | ICD-10-CM |
| H40.1122 | Primary open-angle glaucoma, left eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.1123 | Primary open-angle glaucoma, left eye, severe stage | Diagnosis | ICD-10-CM |
| H40.1124 | Primary open-angle glaucoma, left eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1130 | Primary open-angle glaucoma, bilateral, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1131 | Primary open-angle glaucoma, bilateral, mild stage | Diagnosis | ICD-10-CM |
| H40.1132 | Primary open-angle glaucoma, bilateral, moderate stage | Diagnosis | ICD-10-CM |
| H40.1133 | Primary open-angle glaucoma, bilateral, severe stage | Diagnosis | ICD-10-CM |
| H40.1134 | Primary open-angle glaucoma, bilateral, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1190 | Primary open-angle glaucoma, unspecified eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1191 | Primary open-angle glaucoma, unspecified eye, mild stage | Diagnosis | ICD-10-CM |
| H40.1192 | Primary open-angle glaucoma, unspecified eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.1193 | Primary open-angle glaucoma, unspecified eye, severe stage | Diagnosis | ICD-10-CM |
| H40.1194 | Primary open-angle glaucoma, unspecified eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.11X0 | Primary open-angle glaucoma, stage unspecified | Diagnosis | ICD-10-CM |
| H40.11X1 | Primary open-angle glaucoma, mild stage | Diagnosis | ICD-10-CM |
| H40.11X2 | Primary open-angle glaucoma, moderate stage | Diagnosis | ICD-10-CM |
| H40.11X3 | Primary open-angle glaucoma, severe stage | Diagnosis | ICD-10-CM |
| H40.11X4 | Primary open-angle glaucoma, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1210 | Low-tension glaucoma, right eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1211 | Low-tension glaucoma, right eye, mild stage | Diagnosis | ICD-10-CM |
| H40.1212 | Low-tension glaucoma, right eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.1213 | Low-tension glaucoma, right eye, severe stage | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| H40.1214 | Low-tension glaucoma, right eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1220 | Low-tension glaucoma, left eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1221 | Low-tension glaucoma, left eye, mild stage | Diagnosis | ICD-10-CM |
| H40.1222 | Low-tension glaucoma, left eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.1223 | Low-tension glaucoma, left eye, severe stage | Diagnosis | ICD-10-CM |
| H40.1224 | Low-tension glaucoma, left eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1230 | Low-tension glaucoma, bilateral, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1231 | Low-tension glaucoma, bilateral, mild stage | Diagnosis | ICD-10-CM |
| H40.1232 | Low-tension glaucoma, bilateral, moderate stage | Diagnosis | ICD-10-CM |
| H40.1233 | Low-tension glaucoma, bilateral, severe stage | Diagnosis | ICD-10-CM |
| H40.1234 | Low-tension glaucoma, bilateral, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1290 | Low-tension glaucoma, unspecified eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1291 | Low-tension glaucoma, unspecified eye, mild stage | Diagnosis | ICD-10-CM |
| H40.1292 | Low-tension glaucoma, unspecified eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.1293 | Low-tension glaucoma, unspecified eye, severe stage | Diagnosis | ICD-10-CM |
| H40.1294 | Low-tension glaucoma, unspecified eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1310 | Pigmentary glaucoma, right eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1311 | Pigmentary glaucoma, right eye, mild stage | Diagnosis | ICD-10-CM |
| H40.1312 | Pigmentary glaucoma, right eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.1313 | Pigmentary glaucoma, right eye, severe stage | Diagnosis | ICD-10-CM |
| H40.1314 | Pigmentary glaucoma, right eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1320 | Pigmentary glaucoma, left eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1321 | Pigmentary glaucoma, left eye, mild stage | Diagnosis | ICD-10-CM |
| H40.1322 | Pigmentary glaucoma, left eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.1323 | Pigmentary glaucoma, left eye, severe stage | Diagnosis | ICD-10-CM |
| H40.1324 | Pigmentary glaucoma, left eye, indeterminate stage | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| H40.1330 | Pigmentary glaucoma, bilateral, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1331 | Pigmentary glaucoma, bilateral, mild stage | Diagnosis | ICD-10-CM |
| H40.1332 | Pigmentary glaucoma, bilateral, moderate stage | Diagnosis | ICD-10-CM |
| H40.1333 | Pigmentary glaucoma, bilateral, severe stage | Diagnosis | ICD-10-CM |
| H40.1334 | Pigmentary glaucoma, bilateral, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1390 | Pigmentary glaucoma, unspecified eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1391 | Pigmentary glaucoma, unspecified eye, mild stage | Diagnosis | ICD-10-CM |
| H40.1392 | Pigmentary glaucoma, unspecified eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.1393 | Pigmentary glaucoma, unspecified eye, severe stage | Diagnosis | ICD-10-CM |
| H40.1394 | Pigmentary glaucoma, unspecified eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1410 | Capsular glaucoma with pseudoexfoliation of lens, right eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1411 | Capsular glaucoma with pseudoexfoliation of lens, right eye, mild stage | Diagnosis | ICD-10-CM |
| H40.1412 | Capsular glaucoma with pseudoexfoliation of lens, right eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.1413 | Capsular glaucoma with pseudoexfoliation of lens, right eye, severe stage | Diagnosis | ICD-10-CM |
| H40.1414 | Capsular glaucoma with pseudoexfoliation of lens, right eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1420 | Capsular glaucoma with pseudoexfoliation of lens, left eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1421 | Capsular glaucoma with pseudoexfoliation of lens, left eye, mild stage | Diagnosis | ICD-10-CM |
| H40.1422 | Capsular glaucoma with pseudoexfoliation of lens, left eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.1423 | Capsular glaucoma with pseudoexfoliation of lens, left eye, severe stage | Diagnosis | ICD-10-CM |
| H40.1424 | Capsular glaucoma with pseudoexfoliation of lens, left eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1430 | Capsular glaucoma with pseudoexfoliation of lens, bilateral, stage unspecified | Diagnosis | ICD-10-CM |
| H40.1431 | Capsular glaucoma with pseudoexfoliation of lens, bilateral, mild stage | Diagnosis | ICD-10-CM |
| H40.1432 | Capsular glaucoma with pseudoexfoliation of lens, bilateral, moderate stage | Diagnosis | ICD-10-CM |
| H40.1433 | Capsular glaucoma with pseudoexfoliation of lens, bilateral, severe stage | Diagnosis | ICD-10-CM |
| H40.1434 | Capsular glaucoma with pseudoexfoliation of lens, bilateral, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.1490 | Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, stage unspecified | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| H40.1491 | Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, mild stage | Diagnosis | ICD-10-CM |
| H40.1492 | Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.1493 | Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, severe stage | Diagnosis | ICD-10-CM |
| H40.1494 | Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.151 | Residual stage of open-angle glaucoma, right eye | Diagnosis | ICD-10-CM |
| H40.152 | Residual stage of open-angle glaucoma, left eye | Diagnosis | ICD-10-CM |
| H40.153 | Residual stage of open-angle glaucoma, bilateral | Diagnosis | ICD-10-CM |
| H40.159 | Residual stage of open-angle glaucoma, unspecified eye | Diagnosis | ICD-10-CM |
| H40.20X0 | Unspecified primary angle-closure glaucoma, stage unspecified | Diagnosis | ICD-10-CM |
| H40.20X1 | Unspecified primary angle-closure glaucoma, mild stage | Diagnosis | ICD-10-CM |
| H40.20X2 | Unspecified primary angle-closure glaucoma, moderate stage | Diagnosis | ICD-10-CM |
| H40.20X3 | Unspecified primary angle-closure glaucoma, severe stage | Diagnosis | ICD-10-CM |
| H40.20X4 | Unspecified primary angle-closure glaucoma, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.211 | Acute angle-closure glaucoma, right eye | Diagnosis | ICD-10-CM |
| H40.212 | Acute angle-closure glaucoma, left eye | Diagnosis | ICD-10-CM |
| H40.213 | Acute angle-closure glaucoma, bilateral | Diagnosis | ICD-10-CM |
| H40.219 | Acute angle-closure glaucoma, unspecified eye | Diagnosis | ICD-10-CM |
| H40.2210 | Chronic angle-closure glaucoma, right eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.2211 | Chronic angle-closure glaucoma, right eye, mild stage | Diagnosis | ICD-10-CM |
| H40.2212 | Chronic angle-closure glaucoma, right eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.2213 | Chronic angle-closure glaucoma, right eye, severe stage | Diagnosis | ICD-10-CM |
| H40.2214 | Chronic angle-closure glaucoma, right eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.2220 | Chronic angle-closure glaucoma, left eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.2221 | Chronic angle-closure glaucoma, left eye, mild stage | Diagnosis | ICD-10-CM |
| H40.2222 | Chronic angle-closure glaucoma, left eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.2223 | Chronic angle-closure glaucoma, left eye, severe stage | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| H40.2224 | Chronic angle-closure glaucoma, left eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.2230 | Chronic angle-closure glaucoma, bilateral, stage unspecified | Diagnosis | ICD-10-CM |
| H40.2231 | Chronic angle-closure glaucoma, bilateral, mild stage | Diagnosis | ICD-10-CM |
| H40.2232 | Chronic angle-closure glaucoma, bilateral, moderate stage | Diagnosis | ICD-10-CM |
| H40.2233 | Chronic angle-closure glaucoma, bilateral, severe stage | Diagnosis | ICD-10-CM |
| H40.2234 | Chronic angle-closure glaucoma, bilateral, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.2290 | Chronic angle-closure glaucoma, unspecified eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.2291 | Chronic angle-closure glaucoma, unspecified eye, mild stage | Diagnosis | ICD-10-CM |
| H40.2292 | Chronic angle-closure glaucoma, unspecified eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.2293 | Chronic angle-closure glaucoma, unspecified eye, severe stage | Diagnosis | ICD-10-CM |
| H40.2294 | Chronic angle-closure glaucoma, unspecified eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.231 | Intermittent angle-closure glaucoma, right eye | Diagnosis | ICD-10-CM |
| H40.232 | Intermittent angle-closure glaucoma, left eye | Diagnosis | ICD-10-CM |
| H40.233 | Intermittent angle-closure glaucoma, bilateral | Diagnosis | ICD-10-CM |
| H40.239 | Intermittent angle-closure glaucoma, unspecified eye | Diagnosis | ICD-10-CM |
| H40.241 | Residual stage of angle-closure glaucoma, right eye | Diagnosis | ICD-10-CM |
| H40.242 | Residual stage of angle-closure glaucoma, left eye | Diagnosis | ICD-10-CM |
| H40.243 | Residual stage of angle-closure glaucoma, bilateral | Diagnosis | ICD-10-CM |
| H40.249 | Residual stage of angle-closure glaucoma, unspecified eye | Diagnosis | ICD-10-CM |
| H40.30X0 | Glaucoma secondary to eye trauma, unspecified eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.30X1 | Glaucoma secondary to eye trauma, unspecified eye, mild stage | Diagnosis | ICD-10-CM |
| H40.30X2 | Glaucoma secondary to eye trauma, unspecified eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.30X3 | Glaucoma secondary to eye trauma, unspecified eye, severe stage | Diagnosis | ICD-10-CM |
| H40.30X4 | Glaucoma secondary to eye trauma, unspecified eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.31X0 | Glaucoma secondary to eye trauma, right eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.31X1 | Glaucoma secondary to eye trauma, right eye, mild stage | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| H40.31X2 | Glaucoma secondary to eye trauma, right eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.31X3 | Glaucoma secondary to eye trauma, right eye, severe stage | Diagnosis | ICD-10-CM |
| H40.31X4 | Glaucoma secondary to eye trauma, right eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.32X0 | Glaucoma secondary to eye trauma, left eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.32X1 | Glaucoma secondary to eye trauma, left eye, mild stage | Diagnosis | ICD-10-CM |
| H40.32X2 | Glaucoma secondary to eye trauma, left eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.32X3 | Glaucoma secondary to eye trauma, left eye, severe stage | Diagnosis | ICD-10-CM |
| H40.32X4 | Glaucoma secondary to eye trauma, left eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.33X0 | Glaucoma secondary to eye trauma, bilateral, stage unspecified | Diagnosis | ICD-10-CM |
| H40.33X1 | Glaucoma secondary to eye trauma, bilateral, mild stage | Diagnosis | ICD-10-CM |
| H40.33X2 | Glaucoma secondary to eye trauma, bilateral, moderate stage | Diagnosis | ICD-10-CM |
| H40.33X3 | Glaucoma secondary to eye trauma, bilateral, severe stage | Diagnosis | ICD-10-CM |
| H40.33X4 | Glaucoma secondary to eye trauma, bilateral, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.40X0 | Glaucoma secondary to eye inflammation, unspecified eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.40X1 | Glaucoma secondary to eye inflammation, unspecified eye, mild stage | Diagnosis | ICD-10-CM |
| H40.40X2 | Glaucoma secondary to eye inflammation, unspecified eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.40X3 | Glaucoma secondary to eye inflammation, unspecified eye, severe stage | Diagnosis | ICD-10-CM |
| H40.40X4 | Glaucoma secondary to eye inflammation, unspecified eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.41X0 | Glaucoma secondary to eye inflammation, right eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.41X1 | Glaucoma secondary to eye inflammation, right eye, mild stage | Diagnosis | ICD-10-CM |
| H40.41X2 | Glaucoma secondary to eye inflammation, right eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.41X3 | Glaucoma secondary to eye inflammation, right eye, severe stage | Diagnosis | ICD-10-CM |
| H40.41X4 | Glaucoma secondary to eye inflammation, right eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.42X0 | Glaucoma secondary to eye inflammation, left eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.42X1 | Glaucoma secondary to eye inflammation, left eye, mild stage | Diagnosis | ICD-10-CM |
| H40.42X2 | Glaucoma secondary to eye inflammation, left eye, moderate stage | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| H40.42X3 | Glaucoma secondary to eye inflammation, left eye, severe stage | Diagnosis | ICD-10-CM |
| H40.42X4 | Glaucoma secondary to eye inflammation, left eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.43X0 | Glaucoma secondary to eye inflammation, bilateral, stage unspecified | Diagnosis | ICD-10-CM |
| H40.43X1 | Glaucoma secondary to eye inflammation, bilateral, mild stage | Diagnosis | ICD-10-CM |
| H40.43X2 | Glaucoma secondary to eye inflammation, bilateral, moderate stage | Diagnosis | ICD-10-CM |
| H40.43X3 | Glaucoma secondary to eye inflammation, bilateral, severe stage | Diagnosis | ICD-10-CM |
| H40.43X4 | Glaucoma secondary to eye inflammation, bilateral, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.50X0 | Glaucoma secondary to other eye disorders, unspecified eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.50X1 | Glaucoma secondary to other eye disorders, unspecified eye, mild stage | Diagnosis | ICD-10-CM |
| H40.50X2 | Glaucoma secondary to other eye disorders, unspecified eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.50X3 | Glaucoma secondary to other eye disorders, unspecified eye, severe stage | Diagnosis | ICD-10-CM |
| H40.50X4 | Glaucoma secondary to other eye disorders, unspecified eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.51X0 | Glaucoma secondary to other eye disorders, right eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.51X1 | Glaucoma secondary to other eye disorders, right eye, mild stage | Diagnosis | ICD-10-CM |
| H40.51X2 | Glaucoma secondary to other eye disorders, right eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.51X3 | Glaucoma secondary to other eye disorders, right eye, severe stage | Diagnosis | ICD-10-CM |
| H40.51X4 | Glaucoma secondary to other eye disorders, right eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.52X0 | Glaucoma secondary to other eye disorders, left eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.52X1 | Glaucoma secondary to other eye disorders, left eye, mild stage | Diagnosis | ICD-10-CM |
| H40.52X2 | Glaucoma secondary to other eye disorders, left eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.52X3 | Glaucoma secondary to other eye disorders, left eye, severe stage | Diagnosis | ICD-10-CM |
| H40.52X4 | Glaucoma secondary to other eye disorders, left eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.53X0 | Glaucoma secondary to other eye disorders, bilateral, stage unspecified | Diagnosis | ICD-10-CM |
| H40.53X1 | Glaucoma secondary to other eye disorders, bilateral, mild stage | Diagnosis | ICD-10-CM |
| H40.53X2 | Glaucoma secondary to other eye disorders, bilateral, moderate stage | Diagnosis | ICD-10-CM |
| H40.53X3 | Glaucoma secondary to other eye disorders, bilateral, severe stage | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| H40.53X4 | Glaucoma secondary to other eye disorders, bilateral, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.60X0 | Glaucoma secondary to drugs, unspecified eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.60X1 | Glaucoma secondary to drugs, unspecified eye, mild stage | Diagnosis | ICD-10-CM |
| H40.60X2 | Glaucoma secondary to drugs, unspecified eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.60X3 | Glaucoma secondary to drugs, unspecified eye, severe stage | Diagnosis | ICD-10-CM |
| H40.60X4 | Glaucoma secondary to drugs, unspecified eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.61X0 | Glaucoma secondary to drugs, right eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.61X1 | Glaucoma secondary to drugs, right eye, mild stage | Diagnosis | ICD-10-CM |
| H40.61X2 | Glaucoma secondary to drugs, right eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.61X3 | Glaucoma secondary to drugs, right eye, severe stage | Diagnosis | ICD-10-CM |
| H40.61X4 | Glaucoma secondary to drugs, right eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.62X0 | Glaucoma secondary to drugs, left eye, stage unspecified | Diagnosis | ICD-10-CM |
| H40.62X1 | Glaucoma secondary to drugs, left eye, mild stage | Diagnosis | ICD-10-CM |
| H40.62X2 | Glaucoma secondary to drugs, left eye, moderate stage | Diagnosis | ICD-10-CM |
| H40.62X3 | Glaucoma secondary to drugs, left eye, severe stage | Diagnosis | ICD-10-CM |
| H40.62X4 | Glaucoma secondary to drugs, left eye, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.63X0 | Glaucoma secondary to drugs, bilateral, stage unspecified | Diagnosis | ICD-10-CM |
| H40.63X1 | Glaucoma secondary to drugs, bilateral, mild stage | Diagnosis | ICD-10-CM |
| H40.63X2 | Glaucoma secondary to drugs, bilateral, moderate stage | Diagnosis | ICD-10-CM |
| H40.63X3 | Glaucoma secondary to drugs, bilateral, severe stage | Diagnosis | ICD-10-CM |
| H40.63X4 | Glaucoma secondary to drugs, bilateral, indeterminate stage | Diagnosis | ICD-10-CM |
| H40.811 | Glaucoma with increased episcleral venous pressure, right eye | Diagnosis | ICD-10-CM |
| H40.812 | Glaucoma with increased episcleral venous pressure, left eye | Diagnosis | ICD-10-CM |
| H40.813 | Glaucoma with increased episcleral venous pressure, bilateral | Diagnosis | ICD-10-CM |
| H40.819 | Glaucoma with increased episcleral venous pressure, unspecified eye | Diagnosis | ICD-10-CM |
| H40.821 | Hypersecretion glaucoma, right eye | Diagnosis | ICD-10-CM |
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| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| H40.822 | Hypersecretion glaucoma, left eye | Diagnosis | ICD-10-CM |
| H40.823 | Hypersecretion glaucoma, bilateral | Diagnosis | ICD-10-CM |
| H40.829 | Hypersecretion glaucoma, unspecified eye | Diagnosis | ICD-10-CM |
| H40.831 | Aqueous misdirection, right eye | Diagnosis | ICD-10-CM |
| H40.832 | Aqueous misdirection, left eye | Diagnosis | ICD-10-CM |
| H40.833 | Aqueous misdirection, bilateral | Diagnosis | ICD-10-CM |
| H40.839 | Aqueous misdirection, unspecified eye | Diagnosis | ICD-10-CM |
| H40.89 | Other specified glaucoma | Diagnosis | ICD-10-CM |
| H40.9 | Unspecified glaucoma | Diagnosis | ICD-10-CM |
| H42 | Glaucoma in diseases classified elsewhere | Diagnosis | ICD-10-CM |
| H44.511 | Absolute glaucoma, right eye | Diagnosis | ICD-10-CM |
| H44.512 | Absolute glaucoma, left eye | Diagnosis | ICD-10-CM |
| H44.513 | Absolute glaucoma, bilateral | Diagnosis | ICD-10-CM |
| H44.519 | Absolute glaucoma, unspecified eye | Diagnosis | ICD-10-CM |
| H47.231 | Glaucomatous optic atrophy, right eye | Diagnosis | ICD-10-CM |
| H47.232 | Glaucomatous optic atrophy, left eye | Diagnosis | ICD-10-CM |
| H47.233 | Glaucomatous optic atrophy, bilateral | Diagnosis | ICD-10-CM |
| H47.239 | Glaucomatous optic atrophy, unspecified eye | Diagnosis | ICD-10-CM |
| Q15.0 | Congenital glaucoma | Diagnosis | ICD-10-CM |
| | Autism | | |
| 299.0 | Autistic disorder | Diagnosis | ICD-9-CM |
| 299.00 | Autistic disorder, current or active state | Diagnosis | ICD-9-CM |
| 299.01 | Autistic disorder, residual state | Diagnosis | ICD-9-CM |
| 299.1 | Childhood disintegrative disorder | Diagnosis | ICD-9-CM |
| 299.11 | Childhood disintegrative disorder, residual state | Diagnosis | ICD-9-CM |
| 299.8 | Other specified pervasive developmental disorders | Diagnosis | ICD-9-CM |
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| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| 299.80 | Other specified pervasive developmental disorders, current or active state | Diagnosis | ICD-9-CM |
| 299.81 | Other specified pervasive developmental disorders, residual state | Diagnosis | ICD-9-CM |
| 299.9 | Unspecified pervasive developmental disorder | Diagnosis | ICD-9-CM |
| 299.90 | Unspecified pervasive developmental disorder, current or active state | Diagnosis | ICD-9-CM |
| 299.91 | Unspecified pervasive developmental disorder, residual state | Diagnosis | ICD-9-CM |
| F84.0 | Autistic disorder | Diagnosis | ICD-10-CM |
| F84.3 | Other childhood disintegrative disorder | Diagnosis | ICD-10-CM |
| F84.5 | Asperger's syndrome | Diagnosis | ICD-10-CM |
| F84.8 | Other pervasive developmental disorders | Diagnosis | ICD-10-CM |
| F84.9 | Pervasive developmental disorder, unspecified | Diagnosis | ICD-10-CM |
| | Marfans Syndrome | | |
| 759.82 | Marfan's syndrome | Diagnosis | ICD-9-CM |
| Q87.4 | Marfan's syndrome | Diagnosis | ICD-10-CM |
| Q87.40 | Marfan's syndrome, unspecified | Diagnosis | ICD-10-CM |
| Q87.41 | Marfan's syndrome with cardiovascular manifestations | Diagnosis | ICD-10-CM |
| Q87.410 | Marfan's syndrome with aortic dilation | Diagnosis | ICD-10-CM |
| Q87.418 | Marfan's syndrome with other cardiovascular manifestations | Diagnosis | ICD-10-CM |
| Q87.42 | Marfan's syndrome with ocular manifestations | Diagnosis | ICD-10-CM |
| Q87.43 | Marfan's syndrome with skeletal manifestation | Diagnosis | ICD-10-CM |
| | Pheochromocytoma/Paraganglioma | | |
| 194.0 | Malignant neoplasm of adrenal gland | Diagnosis | ICD-9-CM |
| 194.6 | Malignant neoplasm of aortic body and other paraganglia | Diagnosis | ICD-9-CM |
| 227.6 | Benign neoplasm of aortic body and other paraganglia | Diagnosis | ICD-9-CM |
| 237.2 | Neoplasm of uncertain behavior of adrenal gland | Diagnosis | ICD-9-CM |
| 237.3 | Neoplasm of uncertain behavior of paraganglia | Diagnosis | ICD-9-CM |
| 238.8 | Neoplasm of uncertain behavior of other specified sites | Diagnosis | ICD-9-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C74.1 | Malignant neoplasm of medulla of adrenal gland | Diagnosis | ICD-10-CM |
| C74.9 | Malignant neoplasm of unspecified part of adrenal gland | Diagnosis | ICD-10-CM |
| C75.5 | Malignant neoplasm of aortic body and other paraganglia | Diagnosis | ICD-10-CM |
| D35.0 | Benign neoplasm of adrenal gland | Diagnosis | ICD-10-CM |
| D35.6 | Benign neoplasm of aortic body and other paraganglia | Diagnosis | ICD-10-CM |
| D44.1 | Neoplasm of uncertain behavior of adrenal gland | Diagnosis | ICD-10-CM |
| D44.6 | Neoplasm of uncertain behavior of carotid body | Diagnosis | ICD-10-CM |
| D44.7 | Neoplasm of uncertain behavior of aortic body and other paraganglia | Diagnosis | ICD-10-CM |
| D48.7 | Neoplasm of uncertain behavior of other specified sites | Diagnosis | ICD-10-CM |
| | Diabetes | | |
| 249.00 | Secondary diabetes mellitus without mention of complication, not stated as uncontrolled, or unspecified | Diagnosis | ICD-9-CM |
| 249.01 | Secondary diabetes mellitus without mention of complication, uncontrolled | Diagnosis | ICD-9-CM |
| 249.10 | Secondary diabetes mellitus with ketoacidosis, not stated as uncontrolled, or unspecified | Diagnosis | ICD-9-CM |
| 249.11 | Secondary diabetes mellitus with ketoacidosis, uncontrolled | Diagnosis | ICD-9-CM |
| 249.20 | Secondary diabetes mellitus with hyperosmolarity, not stated as uncontrolled, or unspecified | Diagnosis | ICD-9-CM |
| 249.21 | Secondary diabetes mellitus with hyperosmolarity, uncontrolled | Diagnosis | ICD-9-CM |
| 249.30 | Secondary diabetes mellitus with other coma, not stated as uncontrolled, or unspecified | Diagnosis | ICD-9-CM |
| 249.31 | Secondary diabetes mellitus with other coma, uncontrolled | Diagnosis | ICD-9-CM |
| 249.40 | Secondary diabetes mellitus with renal manifestations, not stated as uncontrolled, or unspecified | Diagnosis | ICD-9-CM |
| 249.41 | Secondary diabetes mellitus with renal manifestations, uncontrolled | Diagnosis | ICD-9-CM |
| 249.50 | Secondary diabetes mellitus with ophthalmic manifestations, not stated as uncontrolled, or unspecified | Diagnosis | ICD-9-CM |
| 249.51 | Secondary diabetes mellitus with ophthalmic manifestations, uncontrolled | Diagnosis | ICD-9-CM |
| 249.60 | Secondary diabetes mellitus with neurological manifestations, not stated as uncontrolled, or unspecified | Diagnosis | ICD-9-CM |
| 249.61 | Secondary diabetes mellitus with neurological manifestations, uncontrolled | Diagnosis | ICD-9-CM |
| 249.70 | Secondary diabetes mellitus with peripheral circulatory disorders, not stated as uncontrolled, or unspecified | Diagnosis | ICD-9-CM |
| 249.71 | Secondary diabetes mellitus with peripheral circulatory disorders, uncontrolled | Diagnosis | ICD-9-CM |
| | | 2.0010010 | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 249.80 | Secondary diabetes mellitus with other specified manifestations, not stated as uncontrolled, or unspecified | Diagnosis | ICD-9-CM |
| 249.81 | Secondary diabetes mellitus with other specified manifestations, uncontrolled | Diagnosis | ICD-9-CM |
| 249.90 | Secondary diabetes mellitus with unspecified complication, not stated as uncontrolled, or unspecified | Diagnosis | ICD-9-CM |
| 249.91 | Secondary diabetes mellitus with unspecified complication, uncontrolled | Diagnosis | ICD-9-CM |
| 250.00 | Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.01 | Diabetes mellitus without mention of complication, type I [juvenile type], not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.02 | Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled | Diagnosis | ICD-9-CM |
| 250.03 | Diabetes mellitus without mention of complication, type I [juvenile type], uncontrolled | Diagnosis | ICD-9-CM |
| 250.10 | Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.11 | Diabetes with ketoacidosis, type I [juvenile type], not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.12 | Diabetes with ketoacidosis, type II or unspecified type, uncontrolled | Diagnosis | ICD-9-CM |
| 250.13 | Diabetes with ketoacidosis, type I [juvenile type], uncontrolled | Diagnosis | ICD-9-CM |
| 250.20 | Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.21 | Diabetes with hyperosmolarity, type I [juvenile type], not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.22 | Diabetes with hyperosmolarity, type II or unspecified type, uncontrolled | Diagnosis | ICD-9-CM |
| 250.23 | Diabetes with hyperosmolarity, type I [juvenile type], uncontrolled | Diagnosis | ICD-9-CM |
| 250.30 | Diabetes with other coma, type II or unspecified type, not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.31 | Diabetes with other coma, type I [juvenile type], not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.32 | Diabetes with other coma, type II or unspecified type, uncontrolled | Diagnosis | ICD-9-CM |
| 250.33 | Diabetes with other coma, type I [juvenile type], uncontrolled | Diagnosis | ICD-9-CM |
| 250.40 | Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.41 | Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.42 | Diabetes with renal manifestations, type II or unspecified type, uncontrolled | Diagnosis | ICD-9-CM |
| 250.43 | Diabetes with renal manifestations, type I [juvenile type], uncontrolled | Diagnosis | ICD-9-CM |
| 250.50 | Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.51 | Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled | Diagnosis | ICD-9-CM |
| | | 2.00.0010 | |



| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| 250.52 | Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled | Diagnosis | ICD-9-CM |
| 250.53 | Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled | Diagnosis | ICD-9-CM |
| 250.60 | Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.61 | Diabetes with neurological manifestations, type I [juvenile type], not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.62 | Diabetes with neurological manifestations, type II or unspecified type, uncontrolled | Diagnosis | ICD-9-CM |
| 250.63 | Diabetes with neurological manifestations, type I [juvenile type], uncontrolled | Diagnosis | ICD-9-CM |
| 250.70 | Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.71 | Diabetes with peripheral circulatory disorders, type I [juvenile type], not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.72 | Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled | Diagnosis | ICD-9-CM |
| 250.73 | Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled | Diagnosis | ICD-9-CM |
| 250.80 | Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.81 | Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.82 | Diabetes with other specified manifestations, type II or unspecified type, uncontrolled | Diagnosis | ICD-9-CM |
| 250.83 | Diabetes with other specified manifestations, type I [juvenile type], uncontrolled | Diagnosis | ICD-9-CM |
| 250.90 | Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.91 | Diabetes with unspecified complication, type I [juvenile type], not stated as uncontrolled | Diagnosis | ICD-9-CM |
| 250.92 | Diabetes with unspecified complication, type II or unspecified type, uncontrolled | Diagnosis | ICD-9-CM |
| 250.93 | Diabetes with unspecified complication, type I [juvenile type], uncontrolled | Diagnosis | ICD-9-CM |
| 357.2 | Polyneuropathy in diabetes | Diagnosis | ICD-9-CM |
| 362.01 | Background diabetic retinopathy | Diagnosis | ICD-9-CM |
| 362.02 | Proliferative diabetic retinopathy | Diagnosis | ICD-9-CM |
| 362.03 | Nonproliferative diabetic retinopathy NOS | Diagnosis | ICD-9-CM |
| 362.04 | Mild nonproliferative diabetic retinopathy | Diagnosis | ICD-9-CM |
| 362.05 | Moderate nonproliferative diabetic retinopathy | Diagnosis | ICD-9-CM |
| 362.06 | Severe nonproliferative diabetic retinopathy | Diagnosis | ICD-9-CM |
| | | 0 - | |



| Code | Description | Code Category | |
|----------|---|---------------|-----------|
| 366.41 | Diabetic cataract | Code Category | Code Type |
| | | Diagnosis | ICD-9-CM |
| E08.00 | Diabetes mellitus due to underlying condition with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC) | Diagnosis | ICD-10-CM |
| E08.01 | Diabetes mellitus due to underlying condition with hyperosmolarity with coma | Diagnosis | ICD-10-CM |
| E08.10 | Diabetes mellitus due to underlying condition with ketoacidosis without coma | Diagnosis | ICD-10-CM |
| E08.11 | Diabetes mellitus due to underlying condition with ketoacidosis with coma | Diagnosis | ICD-10-CM |
| E08.21 | Diabetes mellitus due to underlying condition with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E08.22 | Diabetes mellitus due to underlying condition with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E08.29 | Diabetes mellitus due to underlying condition with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E08.311 | Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E08.319 | Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy without macular edema | 2.08.10010 | 100 20 0 |
| | | Diagnosis | ICD-10-CM |
| E08.321 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema | | |
| | | Diagnosis | ICD-10-CM |
| E08.3211 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, right eye | | |
| | | Diagnosis | ICD-10-CM |
| E08.3212 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, left eye | | |
| | | Diagnosis | ICD-10-CM |
| E08.3213 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, bilateral | | |
| | | Diagnosis | ICD-10-CM |
| E08.3219 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye | | |
| | | Diagnosis | ICD-10-CM |
| E08.329 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema | | |
| | | Diagnosis | ICD-10-CM |
| E08.3291 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, right eye | | |
| | | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E08.3292 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, left eye | coue category | couciype |
| E08.3293 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E08.3299 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E08.331 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E08.3311 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E08.3312 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E08.3313 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E08.3319 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E08.339 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E08.3391 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| | | Diagnosis | ICD-10-CM |
| E08.3392 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E08.3393 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, bilateral | | |
| E08.3399 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| | | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E08.341 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema | | |
| | | Diagnosis | ICD-10-CM |
| E08.3411 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, right eye | | |
| | | Diagnosis | ICD-10-CM |
| E08.3412 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, left eye | | |
| | | Diagnosis | ICD-10-CM |
| E08.3413 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, bilateral | | |
| | | Diagnosis | ICD-10-CM |
| E08.3419 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye | | |
| | | Diagnosis | ICD-10-CM |
| E08.349 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema | | |
| | | Diagnosis | ICD-10-CM |
| E08.3491 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, right eye | | |
| | | Diagnosis | ICD-10-CM |
| E08.3492 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, left eye | | |
| | | Diagnosis | ICD-10-CM |
| E08.3493 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, bilateral | | |
| | | Diagnosis | ICD-10-CM |
| E08.3499 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E08.351 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema | | |
| | | Diagnosis | ICD-10-CM |
| E08.3511 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, right eye | | |
| 500 2542 | | Diagnosis | ICD-10-CM |
| E08.3512 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, left eye | 5 | |
| E08.3513 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| 200.3313 | Subcles meaning due to underging condition with promerative diabetic retinopathy with macular cacina, shateral | | |
| | | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|--|------------------------|-----------|
| E08.3519 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, unspecified eye | coue category | |
| E08.3521 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye | Diagnosis | ICD-10-CM |
| E08.3522 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye | Diagnosis | ICD-10-CM |
| E08.3523 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E08.3529 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, | Diagnosis | ICD-10-CM |
| E08.3531 | unspecified eye Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right | Diagnosis | ICD-10-CM |
| E08.3532 | eye Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye | Diagnosis | ICD-10-CM |
| E08.3533 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E08.3539 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E08.3541 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye | Diagnosis | ICD-10-CM |
| E08.3542 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye | Diagnosis Diagnosis | ICD-10-CM |
| E08.3543 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral | Ū | ICD-10-CM |
| E08.3549 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous | Diagnosis Diagnosis | ICD-10-CM |
| E08.3551 | Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, right eye | Diagnosis | ICD-10-CM |
| E08.3552 | Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, left eye | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|--------------------|--|---------------|-----------|
| E08.3553 | Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, bilateral | Diagnosis | ICD-10-CM |
| E08.3559 | Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, unspecified eye | Diagnosis | ICD-10-CM |
| E08.359 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema | U U | |
| E08.3591 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E08.3592 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E08.3593 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| | | Diagnosis | ICD-10-CM |
| E08.3599 E08.36 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, unspecified eye Diabetes mellitus due to underlying condition with diabetic cataract | Diagnosis | ICD-10-CM |
| E08.37X1 | Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, right eye | Diagnosis | ICD-10-CM |
| E08.37X2 | Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, left eye | Diagnosis | ICD-10-CM |
| E08.37X3 | Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, bilateral | Diagnosis | ICD-10-CM |
| | | Diagnosis | ICD-10-CM |
| E08.37X9 | Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, unspecified eye | Diagnosis | ICD-10-CM |
| E08.39 | Diabetes mellitus due to underlying condition with other diabetic ophthalmic complication | Diagnosis | ICD-10-CM |
| E08.40 | Diabetes mellitus due to underlying condition with diabetic neuropathy, unspecified | Diagnosis | ICD-10-CM |
| E08.41 | Diabetes mellitus due to underlying condition with diabetic mononeuropathy | Diagnosis | ICD-10-CM |
| E08.42 | Diabetes mellitus due to underlying condition with diabetic polyneuropathy | Diagnosis | ICD-10-CM |
| E08.43 | Diabetes mellitus due to underlying condition with diabetic autonomic (poly)neuropathy | Diagnosis | ICD-10-CM |
| E08.44 | Diabetes mellitus due to underlying condition with diabetic amyotrophy | Diagnosis | ICD-10-CM |
| E08.49 | Diabetes mellitus due to underlying condition with other diabetic neurological complication | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| E08.51 | Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy without gangrene | Diagnosis | ICD-10-CM |
| E08.52 | Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy with gangrene | Diagnosis | ICD-10-CM |
| E08.59 | Diabetes mellitus due to underlying condition with other circulatory complications | Diagnosis | ICD-10-CM |
| E08.610 | Diabetes mellitus due to underlying condition with diabetic neuropathic arthropathy | Diagnosis | ICD-10-CM |
| E08.618 | Diabetes mellitus due to underlying condition with other diabetic arthropathy | Diagnosis | ICD-10-CM |
| E08.620 | Diabetes mellitus due to underlying condition with diabetic dermatitis | Diagnosis | ICD-10-CM |
| E08.621 | Diabetes mellitus due to underlying condition with foot ulcer | Diagnosis | ICD-10-CM |
| E08.622 | Diabetes mellitus due to underlying condition with other skin ulcer | Diagnosis | ICD-10-CM |
| E08.628 | Diabetes mellitus due to underlying condition with other skin complications | Diagnosis | ICD-10-CM |
| E08.630 | Diabetes mellitus due to underlying condition with periodontal disease | Diagnosis | ICD-10-CM |
| E08.638 | Diabetes mellitus due to underlying condition with other oral complications | Diagnosis | ICD-10-CM |
| E08.641 | Diabetes mellitus due to underlying condition with hypoglycemia with coma | Diagnosis | ICD-10-CM |
| E08.649 | Diabetes mellitus due to underlying condition with hypoglycemia without coma | Diagnosis | ICD-10-CM |
| E08.65 | Diabetes mellitus due to underlying condition with hyperglycemia | Diagnosis | ICD-10-CM |
| E08.69 | Diabetes mellitus due to underlying condition with other specified complication | Diagnosis | ICD-10-CM |
| E08.8 | Diabetes mellitus due to underlying condition with unspecified complications | Diagnosis | ICD-10-CM |
| E08.9 | Diabetes mellitus due to underlying condition without complications | 0 | |
| | | Diagnosis | ICD-10-CM |
| E09.00 | Drug or chemical induced diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC) | Diagnosis | ICD-10-CM |
| E09.01 | Drug or chemical induced diabetes mellitus with hyperosmolarity with coma | Diagnosis | ICD-10-CM |
| E09.10 | Drug or chemical induced diabetes mellitus with ketoacidosis without coma | Diagnosis | ICD-10-CM |
| E09.11 | Drug or chemical induced diabetes mellitus with ketoacidosis with coma | Diagnosis | ICD-10-CM |
| E09.21 | Drug or chemical induced diabetes mellitus with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E09.22 | Drug or chemical induced diabetes mellitus with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E09.29 | Drug or chemical induced diabetes mellitus with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E09.311 | Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| | | | |



| Code E09.319 | Description Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy without macular edema | Code Category | Code Type |
|-----------------|---|---------------|-----------|
| | | Diagnosis | ICD-10-CM |
| E09.321 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema | | |
| | | Diagnosis | ICD-10-CM |
| E09.3211 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye | | |
| | | Diagnosis | ICD-10-CM |
| E09.3212 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye | | |
| | | Diagnosis | ICD-10-CM |
| E09.3213 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral | - | |
| | | Diagnosis | ICD-10-CM |
| E09.3219 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye | | |
| | | Diagnosis | ICD-10-CM |
| E09.329 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema | | |
| | | Diagnosis | ICD-10-CM |
| E09.3291 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye | | |
| | | Diagnosis | ICD-10-CM |
| E09.3292 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye | Ũ | |
| | | Diagnosis | ICD-10-CM |
| E09.3293 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral | | |
| | | Diagnosis | ICD-10-CM |
| E09.3299 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye | 2.08.10010 | 100 10 0 |
| | | Diagnosis | ICD-10-CM |
| E09.331 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema | Diagnosis | |
| | | <u>.</u> | |
| E09.3311 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| 200.0011 | brug of element induced diabetes mentus with moderate nonpromerative diabetic retinopathy with macual edema, fight eye | | |
| F00 2212 | Drug er shemiet indused disketes mellitus with mederate nennreliferative disketis ratioenathy with meauler edame. Left suc | Diagnosis | ICD-10-CM |
| E09.3312 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye | | |
| | | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E09.3313 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral | coue category | code Type |
| E09.3319 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E09.339 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E09.3391 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E09.3392 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E09.3393 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E09.3399 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E09.341 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E09.3411 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E09.3412 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E09.3413 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E09.3419 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E09.349 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| | | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E09.3491 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye | | |
| | | Diagnosis | ICD-10-CM |
| E09.3492 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye | | |
| | | Diagnosis | ICD-10-CM |
| E09.3493 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral | | |
| | | Diagnosis | ICD-10-CM |
| E09.3499 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E09.351 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema | | |
| | | Diagnosis | ICD-10-CM |
| E09.3511 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye | | |
| 500 0540 | | Diagnosis | ICD-10-CM |
| E09.3512 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye | | |
| E09.3513 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| 200.0010 | | | |
| E09.3519 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| 200.0010 | | | |
| E09.3521 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye | Diagnosis | ICD-10-CM |
| LU9.3321 | | | |
| E09.3522 | Drug or chamical induced disketes mallitus with proliferative disketic ratio anothy with traction rational data champat involving the magula left ave | Diagnosis | ICD-10-CM |
| EU9.3522 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye | | |
| 500 2522 | | Diagnosis | ICD-10-CM |
| E09.3523 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral | | |
| | | Diagnosis | ICD-10-CM |
| E09.3529 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye | | |
| | | Diagnosis | ICD-10-CM |
| E09.3531 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye | | |
| | | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|---------------------|---|---------------|-----------|
| E09.3532 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye | | |
| E09.3533 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E09.3539 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E09.3541 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye | Diagnosis | ICD-10-CM |
| E09.3542 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye | Diagnosis | ICD-10-CM |
| E09.3543 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral | Diagnosis | ICD-10-CM |
| E09.3549 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous | Diagnosis | ICD-10-CM |
| E09.3549 | Drug or chemical induced diabetes mellitus with promerative diabetic retinopathy, right eye | Diagnosis | ICD-10-CM |
| E09.3551 | Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, light eye | Diagnosis | ICD-10-CM |
| E09.3553 | Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, icrease | Diagnosis | ICD-10-CM |
| E09.3559 | Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye | Diagnosis | ICD-10-CM |
| | | Diagnosis | ICD-10-CM |
| E09.359 E09.3591 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E09.3592 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E09.3593 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| | | Diagnosis | ICD-10-CM |
| E09.3599 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |



| Codo | Description | Code Cotegory | |
|----------------|--|---------------|-----------|
| Code E09.36 | Description Drug or chemical induced diabetes mellitus with diabetic cataract | Code Category | Code Type |
| 200100 | | Diagnosis | ICD-10-CM |
| E09.37X1 | Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, right eye | Diagnosis | |
| | | Diagnosis | ICD-10-CM |
| E09.37X2 | Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, left eye | 0 | |
| | | Diagnosis | ICD-10-CM |
| E09.37X3 | Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral | | |
| | | Diagnosis | ICD-10-CM |
| E09.37X9 | Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye | Diagnosis | ICD-10-CM |
| E09.39 | Drug or chemical induced diabetes mellitus with other diabetic ophthalmic complication | | |
| | | Diagnosis | ICD-10-CM |
| E09.40 | Drug or chemical induced diabetes mellitus with neurological complications with diabetic neuropathy, unspecified | Diagnosis | ICD-10-CM |
| E09.41 | Drug or chemical induced diabetes mellitus with neurological complications with diabetic mononeuropathy | Diagnosis | ICD-10-CM |
| E09.42 | Drug or chemical induced diabetes mellitus with neurological complications with diabetic polyneuropathy | | |
| | | Diagnosis | ICD-10-CM |
| E09.43 | Drug or chemical induced diabetes mellitus with neurological complications with diabetic autonomic (poly)neuropathy | Diagnosis | ICD-10-CM |
| E09.44 | Drug or chemical induced diabetes mellitus with neurological complications with diabetic amyotrophy | | |
| | | Diagnosis | ICD-10-CM |
| E09.49 | Drug or chemical induced diabetes mellitus with neurological complications with other diabetic neurological complication | Diagnosis | ICD-10-CM |
| E09.51 | Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy without gangrene | Diagnosis | ICD-10-CM |
| E09.52 | Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy with gangrene | Diagnosis | ICD-10-CM |
| E09.59 | Drug or chemical induced diabetes mellitus with other circulatory complications | Diagnosis | ICD-10-CM |
| E09.610 | Drug or chemical induced diabetes mellitus with diabetic neuropathic arthropathy | Diagnosis | ICD-10-CM |
| E09.618 | Drug or chemical induced diabetes mellitus with other diabetic arthropathy | Diagnosis | ICD-10-CM |
| E09.620 | Drug or chemical induced diabetes mellitus with diabetic dermatitis | Diagnosis | ICD-10-CM |
| E09.621 | Drug or chemical induced diabetes mellitus with foot ulcer | Diagnosis | ICD-10-CM |
| E09.622 | Drug or chemical induced diabetes mellitus with other skin ulcer | Diagnosis | ICD-10-CM |
| | | - | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E09.628 | Drug or chemical induced diabetes mellitus with other skin complications | Diagnosis | ICD-10-CM |
| E09.630 | Drug or chemical induced diabetes mellitus with periodontal disease | Diagnosis | ICD-10-CM |
| E09.638 | Drug or chemical induced diabetes mellitus with other oral complications | Diagnosis | ICD-10-CM |
| E09.641 | Drug or chemical induced diabetes mellitus with hypoglycemia with coma | Diagnosis | ICD-10-CM |
| E09.649 | Drug or chemical induced diabetes mellitus with hypoglycemia without coma | Diagnosis | ICD-10-CM |
| E09.65 | Drug or chemical induced diabetes mellitus with hyperglycemia | Diagnosis | ICD-10-CM |
| E09.69 | Drug or chemical induced diabetes mellitus with other specified complication | Diagnosis | ICD-10-CM |
| E09.8 | Drug or chemical induced diabetes mellitus with unspecified complications | Diagnosis | ICD-10-CM |
| E09.9 | Drug or chemical induced diabetes mellitus without complications | Diagnosis | ICD-10-CM |
| E10.10 | Type 1 diabetes mellitus with ketoacidosis without coma | Diagnosis | ICD-10-CM |
| E10.11 | Type 1 diabetes mellitus with ketoacidosis with coma | Diagnosis | ICD-10-CM |
| E10.21 | Type 1 diabetes mellitus with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E10.22 | Type 1 diabetes mellitus with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E10.29 | Type 1 diabetes mellitus with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E10.311 | Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E10.319 | Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E10.321 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E10.3211 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3212 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3213 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral | - | |
| | | Diagnosis | ICD-10-CM |
| E10.3219 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.329 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E10.3291 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3292 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3293 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral | | |
| | | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E10.3299 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.331 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E10.3311 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3312 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3313 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral | | |
| E10.3319 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.3319 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema. | Diagnosis | ICD-10-CM |
| L10.339 | Type I diabetes menitus with moderate nonpromerative diabetic retinopathy without macdial edema | Diagnosis | ICD-10-CM |
| E10.3391 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | |
| | | Diagnosis | ICD-10-CM |
| E10.3392 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye | Bidghosis | |
| | | Diagnosis | ICD-10-CM |
| E10.3393 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral | | |
| | | Diagnosis | ICD-10-CM |
| E10.3399 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.341 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E10.3411 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3412 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3413 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral | | |
| | | Diagnosis | ICD-10-CM |
| E10.3419 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.349 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E10.3491 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3492 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3493 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral | 0 | |
| | | Diagnosis | ICD-10-CM |
| E10.3499 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E10.351 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E10.3511 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3512 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3513 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E10.3519 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye | - | |
| E10.3521 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye | Diagnosis | ICD-10-CM |
| E10.3522 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye | Diagnosis | ICD-10-CM |
| E10.3523 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E10.3529 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E10.3531 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye | Diagnosis | ICD-10-CM |
| E10.3532 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye | Diagnosis | ICD-10-CM |
| E10.3533 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E10.3539 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E10.3541 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, | Diagnosis | ICD-10-CM |
| E10.3542 | right eye Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, | Diagnosis | ICD-10-CM |
| | left eye | Diagnosis | ICD-10-CM |



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|------------------|---|---------------|-----------|
| Code E10.3543 | Description Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, | Code Category | Code Type |
| 210.0010 | bilateral | | |
| E10.3549 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, | Diagnosis | ICD-10-CM |
| E10.3551 | Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, right eye | Diagnosis | ICD-10-CM |
| E10.3551 | | Diagnosis | ICD-10-CM |
| | Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, left eye | Diagnosis | ICD-10-CM |
| E10.3553 | Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral | Diagnosis | ICD-10-CM |
| E10.3559 | Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye | Diagnosis | ICD-10-CM |
| E10.359 | Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E10.3591 | Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3592 | Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3593 | Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E10.3599 | Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.36 | Type 1 diabetes mellitus with diabetic cataract | Diagnosis | ICD-10-CM |
| E10.37X1 | Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye | Diagnosis | ICD-10-CM |
| E10.37X2 | Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye | Diagnosis | ICD-10-CM |
| E10.37X3 | Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral | Diagnosis | ICD-10-CM |
| E10.37X9 | Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye | Diagnosis | ICD-10-CM |
| E10.39 | Type 1 diabetes mellitus with other diabetic ophthalmic complication | Diagnosis | ICD-10-CM |
| E10.40 | Type 1 diabetes mellitus with diabetic neuropathy, unspecified | Diagnosis | ICD-10-CM |
| E10.41 | Type 1 diabetes mellitus with diabetic mononeuropathy | Diagnosis | ICD-10-CM |
| E10.42 | Type 1 diabetes mellitus with diabetic polyneuropathy | Diagnosis | ICD-10-CM |
| E10.43 | Type 1 diabetes mellitus with diabetic autonomic (poly)neuropathy | Diagnosis | ICD-10-CM |
| E10.44 | Type 1 diabetes mellitus with diabetic amyotrophy | Diagnosis | ICD-10-CM |
| E10.49 | Type 1 diabetes mellitus with other diabetic neurological complication | Diagnosis | ICD-10-CM |
| E10.51 | Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene | U U | |
| E10.52 | Type 1 diabetes mellitus with diabetic peripheral angiopathy with gangrene | Diagnosis | ICD-10-CM |
| 210.52 | Type I address mental address perprised angiopatity with Sangrene | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E10.59 | Type 1 diabetes mellitus with other circulatory complications | Diagnosis | ICD-10-CM |
| E10.610 | Type 1 diabetes mellitus with diabetic neuropathic arthropathy | Diagnosis | ICD-10-CM |
| E10.618 | Type 1 diabetes mellitus with other diabetic arthropathy | Diagnosis | ICD-10-CM |
| E10.620 | Type 1 diabetes mellitus with diabetic dermatitis | Diagnosis | ICD-10-CM |
| E10.621 | Type 1 diabetes mellitus with foot ulcer | Diagnosis | ICD-10-CM |
| E10.622 | Type 1 diabetes mellitus with other skin ulcer | Diagnosis | ICD-10-CM |
| E10.628 | Type 1 diabetes mellitus with other skin complications | Diagnosis | ICD-10-CM |
| E10.630 | Type 1 diabetes mellitus with periodontal disease | Diagnosis | ICD-10-CM |
| E10.638 | Type 1 diabetes mellitus with other oral complications | Diagnosis | ICD-10-CM |
| E10.641 | Type 1 diabetes mellitus with hypoglycemia with coma | Diagnosis | ICD-10-CM |
| E10.649 | Type 1 diabetes mellitus with hypoglycemia without coma | Diagnosis | ICD-10-CM |
| E10.65 | Type 1 diabetes mellitus with hyperglycemia | Diagnosis | ICD-10-CM |
| E10.69 | Type 1 diabetes mellitus with other specified complication | Diagnosis | ICD-10-CM |
| E10.8 | Type 1 diabetes mellitus with unspecified complications | Diagnosis | ICD-10-CM |
| E10.9 | Type 1 diabetes mellitus without complications | | |
| | | Diagnosis | ICD-10-CM |
| E11.00 | Type 2 diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC) | Diagnosis | ICD-10-CM |
| E11.01 | Type 2 diabetes mellitus with hyperosmolarity with coma | Diagnosis | ICD-10-CM |
| E11.10 | Type 2 diabetes mellitus with ketoacidosis without coma | Diagnosis | ICD-10-CM |
| E11.11 | Type 2 diabetes mellitus with ketoacidosis with coma | Diagnosis | ICD-10-CM |
| E11.21 | Type 2 diabetes mellitus with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E11.22 | Type 2 diabetes mellitus with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E11.29 | Type 2 diabetes mellitus with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E11.311 | Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E11.319 | Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E11.321 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E11.3211 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E11.3212 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3213 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral | | |
| | | Diagnosis | ICD-10-CM |
| E11.3219 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E11.329 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E11.3291 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3292 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3293 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral | | |
| | | Diagnosis | ICD-10-CM |
| E11.3299 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E11.331 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E11.3311 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3312 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3313 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral | | |
| E11.3319 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E11.3319 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, dispectined eye | Diagnosis | ICD-10-CM |
| E11.559 | Type 2 diabetes menitus with moderate nonpromerative diabetic retinopatity without macular edema | Diamaria | |
| E11.3391 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| 211.5551 | | Diagnosis | ICD-10-CM |
| E11.3392 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | |
| | · / · · · · · · · · · · · · · · · · · · | Diagnosis | ICD-10-CM |
| E11.3393 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | |
| | | Diagnosis | ICD-10-CM |
| E11.3399 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye | 0 | |
| E11.341 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E11.3411 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3411 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, light eye | Diagnosis | ICD-10-CM |
| L11.341Z | Type 2 diabetes menitus with severe nonpromerative diabetic retinopathy with matular edema, left eye | Diagnosis | ICD-10-CM |



| Code E11.3413 | Description Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral | Code Category | Code Type |
|------------------|---|---------------|-----------|
| E11.3413 | Type 2 diabetes mentus with severe honpromerative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E11.3419 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E11.349 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E11.3491 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3492 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3493 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | |
| | | Diagnosis | ICD-10-CM |
| E11.3499 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E11.351 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E11.3511 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3512 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3513 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E11.3519 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye | | |
| | | Diagnosis | ICD-10-CM |
| E11.3521 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye | | |
| | | Diagnosis | ICD-10-CM |
| E11.3522 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye | | |
| | | Diagnosis | ICD-10-CM |
| E11.3523 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral | | |
| | | Diagnosis | ICD-10-CM |
| E11.3529 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye | | |
| | | Diagnosis | ICD-10-CM |
| E11.3531 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye | | |
| | | Diagnosis | ICD-10-CM |
| E11.3532 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye | | |
| | | Diagnosis | ICD-10-CM |
| | | | |



| Code E11.3533 | Description Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral | Code Category | Code Type |
|------------------|---|------------------------|-------------|
| E11.5555 | Type 2 diabetes menitus with promerative diabetic retinopathy with traction retinar detachment not involving the macula, bilateral | | |
| E11.3539 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| L11.5555 | | | |
| E11.3541 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, | Diagnosis | ICD-10-CM |
| 211.5541 | right eye | 5 | |
| E11.3542 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, | Diagnosis | ICD-10-CM |
| | left eye | Diagnasia | |
| E11.3543 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, | Diagnosis | ICD-10-CM |
| | bilateral | Diagnosis | ICD-10-CM |
| E11.3549 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, | Diagnosis Diagnosis | ICD-10-CIVI |
| E11.3551 | Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, right eye | Diagnosis | ICD-10-CM |
| E11.3552 | Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, left eye | Diagnosis | ICD-10-CM |
| E11.3553 | Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral | Diagnosis | ICD-10-CM |
| E11.3559 | Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye | Diagnosis | ICD-10-CM |
| E11.359 | Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E11.3591 | Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3592 | Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3593 | Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E11.3599 | Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E11.36 | Type 2 diabetes mellitus with diabetic cataract | Diagnosis | ICD-10-CM |
| E11.37X1 | Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye | Diagnosis | ICD-10-CM |
| E11.37X2 | Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye | Diagnosis | ICD-10-CM |
| E11.37X3 | Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral | Diagnosis | ICD-10-CM |
| E11.37X9 | Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye | Diagnosis | ICD-10-CM |
| E11.39 | Type 2 diabetes mellitus with other diabetic ophthalmic complication | Diagnosis | ICD-10-CM |
| E11.40 | Type 2 diabetes mellitus with diabetic neuropathy, unspecified | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| E11.41 | Type 2 diabetes mellitus with diabetic mononeuropathy | Diagnosis | ICD-10-CM |
| E11.42 | Type 2 diabetes mellitus with diabetic polyneuropathy | Diagnosis | ICD-10-CM |
| E11.43 | Type 2 diabetes mellitus with diabetic autonomic (poly)neuropathy | Diagnosis | ICD-10-CM |
| E11.44 | Type 2 diabetes mellitus with diabetic amyotrophy | Diagnosis | ICD-10-CM |
| E11.49 | Type 2 diabetes mellitus with other diabetic neurological complication | Diagnosis | ICD-10-CM |
| E11.51 | Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene | Diagnosis | ICD-10-CM |
| E11.52 | Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene | Diagnosis | ICD-10-CM |
| E11.59 | Type 2 diabetes mellitus with other circulatory complications | Diagnosis | ICD-10-CM |
| E11.610 | Type 2 diabetes mellitus with diabetic neuropathic arthropathy | Diagnosis | ICD-10-CM |
| E11.618 | Type 2 diabetes mellitus with other diabetic arthropathy | Diagnosis | ICD-10-CM |
| E11.620 | Type 2 diabetes mellitus with diabetic dermatitis | Diagnosis | ICD-10-CM |
| E11.621 | Type 2 diabetes mellitus with foot ulcer | Diagnosis | ICD-10-CM |
| E11.622 | Type 2 diabetes mellitus with other skin ulcer | Diagnosis | ICD-10-CM |
| E11.628 | Type 2 diabetes mellitus with other skin complications | Diagnosis | ICD-10-CM |
| E11.630 | Type 2 diabetes mellitus with periodontal disease | Diagnosis | ICD-10-CM |
| E11.638 | Type 2 diabetes mellitus with other oral complications | Diagnosis | ICD-10-CM |
| E11.641 | Type 2 diabetes mellitus with hypoglycemia with coma | Diagnosis | ICD-10-CM |
| E11.649 | Type 2 diabetes mellitus with hypoglycemia without coma | Diagnosis | ICD-10-CM |
| E11.65 | Type 2 diabetes mellitus with hyperglycemia | Diagnosis | ICD-10-CM |
| E11.69 | Type 2 diabetes mellitus with other specified complication | Diagnosis | ICD-10-CM |
| E11.8 | Type 2 diabetes mellitus with unspecified complications | Diagnosis | ICD-10-CM |
| E11.9 | Type 2 diabetes mellitus without complications | Ŭ | |
| | | Diagnosis | ICD-10-CM |
| E13.00 | Other specified diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC) | Diagnosis | ICD-10-CM |
| E13.01 | Other specified diabetes mellitus with hyperosmolarity with coma | Diagnosis | ICD-10-CM |
| E13.10 | Other specified diabetes mellitus with ketoacidosis without coma | Diagnosis | ICD-10-CM |
| | | 2.00.0000 | |



| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E13.11 | Other specified diabetes mellitus with ketoacidosis with coma | Diagnosis | ICD-10-CM |
| E13.21 | Other specified diabetes mellitus with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E13.22 | Other specified diabetes mellitus with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E13.29 | Other specified diabetes mellitus with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E13.311 | Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E13.319 | Other specified diabetes mellitus with unspecified diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E13.321 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema | | |
| | | Diagnosis | ICD-10-CM |
| E13.3211 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye | | |
| | | Diagnosis | ICD-10-CM |
| E13.3212 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye | | |
| | | Diagnosis | ICD-10-CM |
| E13.3213 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3219 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.329 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E13.3291 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3292 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3293 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3299 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.331 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E13.3311 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3312 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3313 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3319 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.339 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E13.3391 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3392 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3393 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| | | | |



| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E13.3399 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.341 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E13.3411 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3412 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3413 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3419 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.349 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E13.3491 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3492 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3493 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3499 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.351 | Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E13.3511 | Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3512 | Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3513 | Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3519 | Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.3521 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye | Diagnosis | ICD-10-CM |
| E13.3522 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye | Diagnosis | ICD-10-CM |
| E13.3523 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E13.3529 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E13.3531 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye | Diagnosis | ICD-10-CM |
| E13.3532 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye | Diagnosis | ICD-10-CM |
| E13.3533 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E13.3539 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E13.3541 | Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye | U U | |
| E13.3542 | Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal | Diagnosis | ICD-10-CM |
| | detachment, left eye | Diagnosis | ICD-10-CM |



| Code E13.3543 | Description Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal | Code Category | Code Type |
|------------------|--|---------------|-----------|
| E15.5545 | detachment, bilateral | | |
| F12 2F40 | | Diagnosis | ICD-10-CM |
| E13.3549 | Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal | Diagnosis | ICD-10-CM |
| E13.3551 | Other specified diabetes mellitus with stable proliferative diabetic retinopathy, right eye | Diagnosis | ICD-10-CM |
| E13.3552 | Other specified diabetes mellitus with stable proliferative diabetic retinopathy, left eye | Diagnosis | ICD-10-CM |
| E13.3553 | Other specified diabetes mellitus with stable proliferative diabetic retinopathy, bilateral | Diagnosis | ICD-10-CM |
| E13.3559 | Other specified diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye | Diagnosis | ICD-10-CM |
| E13.359 | Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E13.3591 | Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3592 | Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3593 | Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral | | |
| | | Diagnosis | ICD-10-CM |
| E13.3599 | Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.36 | Other specified diabetes mellitus with diabetic cataract | Diagnosis | ICD-10-CM |
| E13.39 | Other specified diabetes mellitus with other diabetic ophthalmic complication | Diagnosis | ICD-10-CM |
| E13.40 | Other specified diabetes mellitus with diabetic neuropathy, unspecified | Diagnosis | ICD-10-CM |
| E13.41 | Other specified diabetes mellitus with diabetic mononeuropathy | Diagnosis | ICD-10-CM |
| E13.42 | Other specified diabetes mellitus with diabetic polyneuropathy | Diagnosis | ICD-10-CM |
| E13.43 | Other specified diabetes mellitus with diabetic autonomic (poly)neuropathy | Diagnosis | ICD-10-CM |
| E13.44 | Other specified diabetes mellitus with diabetic amyotrophy | Diagnosis | ICD-10-CM |
| E13.49 | Other specified diabetes mellitus with other diabetic neurological complication | Diagnosis | ICD-10-CM |
| E13.51 | Other specified diabetes mellitus with diabetic peripheral angiopathy without gangrene | Diagnosis | ICD-10-CM |
| E13.52 | Other specified diabetes mellitus with diabetic peripheral angiopathy with gangrene | Diagnosis | ICD-10-CM |
| E13.59 | Other specified diabetes mellitus with other circulatory complications | Diagnosis | ICD-10-CM |
| E13.610 | Other specified diabetes mellitus with diabetic neuropathic arthropathy | C | |
| E13.618 | Other specified diabetes mellitus with other diabetic arthropathy | Diagnosis | ICD-10-CM |
| E13.620 | Other specified diabetes mellitus with diabetic dermatitis | Diagnosis | ICD-10-CM |
| 213.020 | other specified diabetes mentas with diabetic definitities | Diagnosis | ICD-10-CM |



| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| E13.621 | Other specified diabetes mellitus with foot ulcer | Diagnosis | ICD-10-CM |
| E13.622 | Other specified diabetes mellitus with other skin ulcer | Diagnosis | ICD-10-CM |
| E13.628 | Other specified diabetes mellitus with other skin complications | Diagnosis | ICD-10-CM |
| E13.630 | Other specified diabetes mellitus with periodontal disease | Diagnosis | ICD-10-CM |
| E13.638 | Other specified diabetes mellitus with other oral complications | Diagnosis | ICD-10-CM |
| E13.641 | Other specified diabetes mellitus with hypoglycemia with coma | Diagnosis | ICD-10-CM |
| E13.649 | Other specified diabetes mellitus with hypoglycemia without coma | Diagnosis | ICD-10-CM |
| E13.65 | Other specified diabetes mellitus with hyperglycemia | Diagnosis | ICD-10-CM |
| E13.69 | Other specified diabetes mellitus with other specified complication | Diagnosis | ICD-10-CM |
| E13.8 | Other specified diabetes mellitus with unspecified complications | Diagnosis | ICD-10-CM |
| E13.9 | Other specified diabetes mellitus without complications | Diagnosis | ICD-10-CM |

Appendix E. Technical Specifications for this Request

Specifications for Type 2 Request: cder_mpl1p_wp069

The Center for Drug Evaluation and Research (CDER) has requested execution of the Cohort Identification and Descriptive Analysis (CIDA) tool 11.2.3 to quantify beta blocker utilization in the Sentinel Distributed Database (SDD). This request will be executed in either 2 or 3 runs. The cohorts to be included in each run is as follows: Run 1: Includes cohorts 1-8. Run 2: Includes cohort 9.

Run 3: Includes cohorts 1-2.

| Query period: | 01/01/2008 - Most Recent Availal |
|--|------------------------------------|
| Coverage requirement: | Medical & Drug Coverage |
| Pre-index enrollment requirement: | 183 days (for patients > 6 months |
| Post-index enrollment requirement: | 365 days (for scenarios 2,4,6,8 on |
| Post-episode enrollment requirement for Type 2 analyses: | N/A |
| Enrollment gap: | 45 |
| Age groups (years): | 0-1, 2-5, 6-12, 13-17 |
| Stratifications: | Age group, Sex, Calendar year, Be |
| Censor output categorization: | 0-2 months, 3-5 months, 6-8 mon |
| Restrictions: | None |
| Distribution of index-defining codes: | Ν |

| cenario | Index Exposure | Cohort definition | Incident exposure washout period | Incident w/ respect to: | Exclude evidence of days supply if exposure washout includes dispensings | Treatment episode gap | Exposure episode extension | Minimum exposure episode duration | Minimum days supplied | Maximum exposure episode duration | Minimum cumulative dose of index medication | Maximum cumulative dose of index medication | Evaluation period for cumulative dose determination | Care setting | Principal diagnosis position | Forced supply to attach to dispensings | Create Baseline Table? | Censor treatment episode (enc follow-up time) at evidence of |
|---------|-------------------|--|---|----------------------------|--|---|-------------------------------|--------------------------------------|--------------------------|--|---|---|---|-----------------|---------------------------------|--|------------------------------|---|
| 1 | Beta Blockers | All valid exposure episodes during the query period. | 183 | Beta Blockers | Washout lookback period should search for evidence of days supply | N/A | 0 | 1 | 1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Yes | Death; DP end date; Query end date; Disenrollment; E of Treatment Episode |
| 2 | Beta Blockers | All valid exposure episodes during the query period. | 183 | Beta Blockers | Washout lookback period should search for evidence of days supply | N/A | 0 | 1 | 1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Yes | Death; DP end date; Query end date; Disenrollment; E of Treatment Episode |
| 6 | Beta Blockers | All valid exposure episodes during the query period. | 183 | Beta Blockers | Washout lookback period should search for evidence of days supply | 50% of prior dispensing' s days supplied | 0 | 1 | 1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Yes | Death; DP end date; Query end date; Disenrollment; Er of Treatment Episode |
| 7 | Beta Blockers | All valid exposure episodes during the query period. | 183 | Beta Blockers | Washout lookback period should search for evidence of days supply | 100% of prior dispensing' s days supplied | 0 | 1 | 1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Yes | Death; DP end date; Query end date; Disenrollment; E of Treatment Episode |
| 8 | Beta Blockers | All valid exposure episodes during the query period. | 183 | Beta Blockers | Washout lookback period should search for evidence of days supply | 100% of prior dispensing' s days supplied | 0 | 1 | 1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Yes | Death; DP end date; Query end date; Disenrollment; E of Treatment Episode |
| 9 | Beta Blockers | All valid exposure episodes during the query period. | 0 | N/A | Washout lookback period should search for evidence of days supply | N/A | 0 | 1 | 1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Yes | Death; DP end date; Query end date; Disenrollment; E of Treatment Episode |



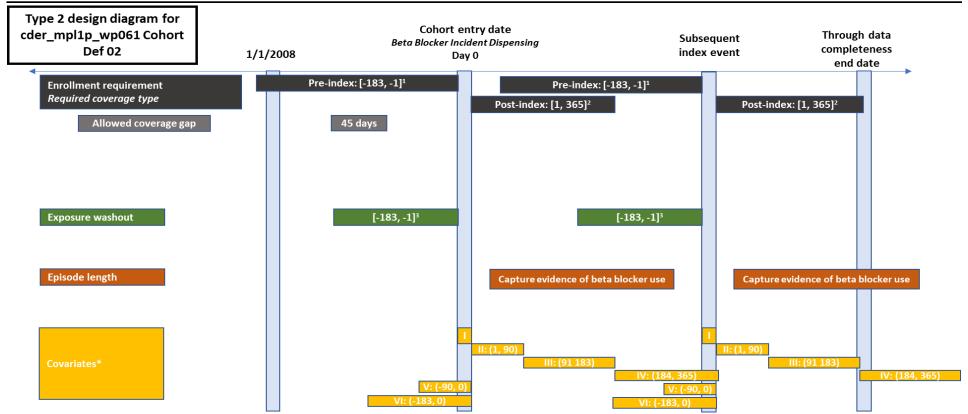
lable Data

hs), since birth (for patients < 6 months); Cohorts 1-8 only)

Beta Blocker onths, 9-11 months, ≥12 months



Appendix F. Design Diagram for this Request



*Covariates:

Window I: Age, year, sex, selective beta blockers, non-selective beta blockers, metoprolol (any/regular/ER), propranolol(any/regular/ER), hemangeol, acebutol, atenolol, betaxolol, bisprolol, carvedilol, labetalol, nadolol, nebivolol, pindolol, timolol, hypoglycemia

Window II-IV: hypoglycemia

Window V: Hypertension, hemangioma, heart failure, congenital heart disease, atrial fibrillation, long QT syndrome, other cardiac arrhythmias, cardiac arrhythmias (composite), pulmonary hypertension, cardiomyopathy, coronary artery disease, portal hypertension, anxiety disorder, tremor, migraine, thyrotoxicosis, burns, glaucoma, autism, Marfan's syndrome, pheochromocytoma/paraganglioma, any of the health characteristics, none of the health characteristics

Window VI: Diabetes

¹Enrollment requirements will be less than 183 days for patients under 12 months of age. ²Post-index enrollment will only be required for scenarios 2, 4, 6, 8.