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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

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

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

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Request ID: cder_mpl1r_wp194_nsdp_v01

Request Description: In this report, we described patients with sickle cell disease (SCD) who were and were not dispensed hydroxyurea, and estimated the number of hospitalizations and emergency department visits among those patients in the Sentinel Distributed Database (SDD).

Sentinel Routine Querying Module: Cohort Identification and Descriptive Analysis (CIDA) module, version 10.3.0.

Data Source: We distributed this request to 7 Sentinel Data Partners on April 30, 2021. The study period included data from January 1, 2000 through September 30, 2020. Please see Appendix A for a list of dates of available data for each Data Partner.

Study Design: We identified individuals with SCD and without specific cancers which hydroxyurea may have been used to treat. See Appendix C for a list of International Classifications of Disease, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) diagnosis codes used to define inclusion and exclusion criteria in this report. Among those patients, we evaluated the occurrence of emergency department (ED) and inpatient (IP) encounters during periods when no hydroxyurea was dispensed, and during periods when hydroxyurea was dispensed. Results were stratified by age group, race, year, and five-year group by age group. This is a Type 2 analysis as described in the Query Request Package (QRP) documentation.

Cohort Eligibility Criteria: Three cohorts of patients were identified:

1. SCD cohort: Patients were included in this cohort if they had a SCD diagnosis in any care setting at any time during the query period. Patients were required to be enrolled in health insurance plans with both medical and drug coverage on the date of their first qualifying SCD diagnosis (index date); cohort re-entry was not allowed. Please see Appendix C for a list of ICD-9-CM and ICD-10-CM diagnosis codes used to define inclusion and exclusion criteria in this report.

2. Hydroxyurea-unexposed cohort: Patients were included in this cohort if they had a SCD diagnosis in any care setting at any time during the query period. Patients were required to be enrolled in health insurance plans with both medical and drug coverage on the date of their first qualifying SCD diagnosis (index date); cohort re-entry was not allowed. Follow-up of patients ended upon dispensing of ≥30 days' supply of hydroxyurea, which was defined using outpatient dispensing data and National Drug Codes (NDCs). Please refer to Appendix B for a list of generic and brand names of medical products used to define exposures in this report.

3. Hydroxyurea-exposed cohort: Patients included in this cohort were required to have a diagnosis of SCD at any time prior to the first qualifying (index) dispensing of ≥30 days' supply of hydroxyurea (exposure of interest). Patients were required to be enrolled in health insurance plans with both medical and drug coverage on the date of the index date; cohort re-entry was not allowed.

In all three cohorts, patients with a diagnosis of chronic myeloid leukemia and certain head and neck cancers in the 183 days prior to and including the index date were excluded due to competing indications for hydroxyurea. Additionally, follow-up of all patients ended upon diagnosis of any of these cancers. We included patients of all ages categorized into the following groups based on age at index date: 0-17 years, 18-49 years, and 50+ years. The first age group was further divided into groups of 0-5 years, 6-11 years, and 12-17 years; the final age group was further divided into groups of 50-59 years, and 60+ years.

Outcome of Interest: We defined the outcome of interest as any encounter in the ED or IP setting. All encounters that occurred during follow-up were counted.

Follow-Up Time:

    1. <u>SCD cohort:</u> Follow-up began on the day of the first SCD diagnosis and continued until the first occurrence of: 1) disenrollment, 2) death, 3) the end date of the data provided by each Data Partner, 4) the end of the query period, or 5) diagnosis of the same cancers listed for exclusion.

    2. <u>Hydroxyurea-unexposed cohort:</u> Follow-up began on the day of the first SCD diagnosis and continued until the first occurrence of: 1) disenrollment, 2) death, 3) the end date of the data provided by each Data Partner, 4) the end of the query period, 5) diagnosis of the same cancers listed for exclusion, or 6) hydroxyurea dispensing of ≥30 days' supply.

    3. <u>Hydroxyurea-exposed cohort:</u> Follow-up began on the day after the first valid hydroxyurea dispensing of ≥30 days' supply and continued until the first occurrence of: 1) disenrollment, 2) death, 3) the end date of the data provided by each Data Partner, 4) the end of the query period, or 5) diagnosis of the same cancers listed for exclusion.

Additional Baseline Tables: A baseline table is presented for the SCD cohort and four additional cohorts as described below.

    1. <u>SCD not dispensed hydroxyurea:</u> Patients were included in this cohort if they had a SCD diagnosis in any care setting at any time during the query period. Patients were required to be enrolled in health insurance plans with both medical and drug coverage on the date of their first valid SCD diagnosis (index date); cohort re-entry was not allowed. Patients with any hydroxyurea dispensing or any diagnosis of the cancers listed as exclusions in the 183 days prior to and including the index date were excluded.

    2. <u>SCD never dispensed hydroxyurea:</u> Patients were included in this cohort if they had a SCD diagnosis in any care setting at any time during the query period. Patients were required to be enrolled in health insurance plans with both medical and drug coverage on the date of their first qualifying SCD diagnosis (index date); cohort re-entry was not allowed. Patients with any hydroxyurea dispensing in the 183 days prior to their index date through the end of their enrollment or any diagnosis of the cancers listed as exclusions in the 183 days prior to and including the index date were excluded.

    3. <u>SCD ever dispensed hydroxyurea:</u> Patients were included in this cohort if they had a SCD diagnosis in any care setting at any time during the query period. Patients were additionally required to have a dispensing of any days' supply of hydroxyurea in the 183 days prior to their first qualifying SCD diagnosis (index) through the end of their enrollment. Patients were required to be enrolled in health insurance plans with both medical and drug coverage on the index date; cohort re-entry was not allowed. Patients with a diagnosis of any of the cancers listed as exclusions in the 183 days prior to and including the index date were excluded.

    4. <u>SCD and cancer:</u> To characterize the patients excluded for specified cancers, patients were included in this cohort if they had a SCD diagnosis in any care setting at any time during the query period, and were additionally required to have a diagnosis of chronic myeloid leukemia or certain head and neck cancers in the 183 days prior to and including the index date. Patients were required to be enrolled in health insurance plans with both medical and drug coverage on the date of their first qualifying SCD diagnosis (index date); cohort re-entry was not allowed.

Baseline Characteristics: For all cohorts, we considered the following demographic characteristics on the index date: age, sex, race, ethnicity, and calendar year. We assessed the following characteristics in the 183 days prior to and including the index date: Charlson/Elixhauser combined comorbidity score[1], health services and drug utilization, acquired hypothyroidism, acute myocardial infarction, Alzheimer's disease and related disorders, anemia, asthma, atrial fibrillation, benign prostatic hyperplasia, breast cancer, chronic kidney disease, colorectal cancer, chronic obstructive pulmonary disease (COPD) and bronchiectasis, depression, diabetes, endometrial cancer, glaucoma, heart failure, hyperlipidemia, hypertension, ischemic heart disease, lung cancer, osteoporosis, prostate cancer, rheumatoid arthritis and osteoarthritis, stroke and transient ischemic attack, acute myeloid leukemia, acute chest syndrome, and use of the following medical products: crizanlizumab, gabapentin, non-steroidal anti-inflammatory drugs (NSAIDs), pregabalin, voxelotor, L-glutamine oral powder (Endari™), and any glutamine. In the hydroxyurea-exposed cohort, we additionally evaluated use of crizanlizumab, voxelotor, Endari™, and any glutamine in the 30 days prior to index through 60 days following index, as well as at any point in the patient's recorded history. Please see Appendix D for a list of ICD-9-CM and ICD-10-CM diagnosis codes, Appendix E for a list of generic and brand names of medical products and Appendix F for a list of Healthcare Common Procedure Coding System (HCPCS) codes used to define baseline characteristics in this request.

Limitations: Algorithms to define exposures, inclusion, and exclusion criteria are imperfect and may result in misclassification. Therefore, data should be interpreted with this limitation in mind.

Please see Appendices G - L for the specifications of QRP parameters used in this request.

Notes: 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).

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[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

> **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"

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

Table 1a. Aggregated Baseline Table for Patients With Sickle Cell Disease and Without Specified Cancers[1] in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Characteristic	Number	
Number of unique patients	113,036	
Demographics	**Mean**	**Standard Deviation**
Mean Age (Years)	44.5	20.2
Age (Years)	**Number**	**Percent**
0-5	8,220	7.3%
6-11	3,938	3.5%
12-17	4,581	4.1%
18-49	48,702	43.1%
50-59	13,024	11.5%
60+	34,571	30.6%
Sex		
Female	67,831	60.0%
Male	45,205	40.0%
Race		
Unknown	44,649	39.5%
American Indian or Alaska Native	183	0.2%
Asian	976	0.9%
Black or African American	45,472	40.2%
Native Hawaiian or Other Pacific Islander	67	0.1%
White	21,689	19.2%
Ethnicity		
Hispanic Origin	2158	1.9%
Non-Hispanic Origin	62,047	54.9%
Unknown	48,831	43.2%
Year		
2000	1,172	1.0%
2001	764	0.7%
2002	620	0.5%
2003	560	0.5%
2004	511	0.5%
2005	392	0.3%
2006	1,639	1.4%
2007	1,865	1.6%
2008	7,044	6.2%
2009	4,205	3.7%
2010	13,252	11.7%
2011	8,725	7.7%
2012	8,518	7.5%
2013	8,938	7.9%
2014	8,539	7.6%
2015	8,503	7.5%
2016	8,901	7.9%
2017	8,765	7.8%

Table 1a. Aggregated Baseline Table for Patients With Sickle Cell Disease and Without Specified Cancers[1] in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Demographics	Number	Percent
2018	8,567	7.6%
2019	7,967	7.0%
2020	3,589	3.2%

Health Characteristics Assessed in the Prior 183 Days	Mean	Standard Deviation
Charlson/Elixhauser Combined Comorbidity Score[2]	2.3	2.8

	Number	Percent
Acute myeloid leukemia	150	0.1%
Acquired hypothyroidism	13,023	11.5%
Acute chest syndrome	3,525	3.1%
Acute myocardial infarction	2,147	1.9%
Alzheimer's disease and related disorders	5,956	5.3%
Anemia	112,978	99.9%
Asthma	14,878	13.2%
Atrial fibrillation	8,777	7.8%
Benign prostatic hyperplasia	4,900	4.3%
Breast cancer	2,767	2.4%
Chronic kidney disease	24,942	22.1%
Colorectal cancer	1,572	1.4%
Chronic obstructive pulmonary disease (COPD) and bronchiectasis	16,009	14.2%
Depression	17,990	15.9%
Diabetes	26,814	23.7%
Endometrial cancer	393	0.3%
Glaucoma	7,030	6.2%
Heart failure	14,692	13.0%
Hyperlipidemia	34,490	30.5%
Hypertension	51,364	45.4%
Ischemic heart disease	18,037	16.0%
Lung cancer	1,411	1.2%
Osteoperosis	5,586	4.9%
Prostate cancer	1,821	1.6%
Rheumatoid arthritis/osteoarthritis	23,377	20.7%
Stroke/transient ischemic attack	9,701	8.6%

Medical Product Use in the Prior 183 Days		
Crizanlizumab	17	<0.1%
Gabapentin	9,871	8.7%
Pregabalin	2,148	1.9%
Non-steroidal anti-inflammatory drugs (NSAIDs)	17,985	15.9%
Voxelotor	18	<0.1%
L-glutamine oral powder (Endari™)	106	0.1%
Any glutamine	107	0.1%

Medical Product Ever		
Crizanlizumab	351	0.3%
Voxelotor	557	0.5%

Table 1a. Aggregated Baseline Table for Patients With Sickle Cell Disease and Without Specified Cancers[1] in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Medical Product Ever	Number	Percent
L-glutamine oral powder (Endari[TM])	1,217	1.1%
Any glutamine	1,227	1.1%

Health Service Utilization Intensity Assessed in the Prior 183 Days	Mean	Standard Deviation
Mean number of ambulatory encounters	13.8	18.2
Mean number of emergency room encounters	1.2	3.5
Mean number of inpatient hospital encounters	0.8	1.5
Mean number of non-acute institutional encounters	0.1	0.7
Mean number of other ambulatory encounters	6.7	14
Mean number of unique drug classes	5.9	4.8
Mean number of generics	6.5	5.4

[1]See Appendix C for a list of codes used to define specified cancers for which hydroxyurea may have been used to treat.

[2]The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date (index date).

Table 1b. Aggregated Baseline Table for Patients With Sickle Cell Disease Not Dispensed Hydroxyurea at Baseline in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Characteristic	Number	
Number of unique patients	108,471	
Demographics	**Mean**	**Standard Deviation**
Mean Age (Years)	45.1	20.1
Age (Years)	**Number**	**Percent**
0-5	8,060	7.4%
6-11	3,581	3.3%
12-17	4,246	3.9%
18-49	45,760	42.2%
50-59	12,586	11.6%
60+	34,238	31.6%
Sex		
Female	65,536	60.4%
Male	42,935	39.6%
Race		
Unknown	42,580	39.3%
American Indian or Alaska Native	176	0.2%
Asian	969	0.9%
Black or African American	43,128	39.8%
Native Hawaiian or Other Pacific Islander	64	0.1%
White	21,554	19.9%
Ethnicity		
Hispanic Origin	2,082	1.9%
Non-Hispanic Origin	59,764	55.1%
Unknown	46,625	43.0%
Year		
2000	1,115	1.0%
2001	777	0.7%
2002	622	0.6%
2003	556	0.5%
2004	504	0.5%
2005	393	0.4%
2006	1,547	1.4%
2007	1,814	1.7%
2008	6,709	6.2%
2009	4,139	3.8%
2010	11,300	10.4%
2011	8,822	8.1%
2012	8,448	7.8%
2013	8,681	8.0%
2014	8,297	7.6%
2015	8,266	7.6%
2016	8,657	8.0%
2017	8,466	7.8%

Table 1b. Aggregated Baseline Table for Patients With Sickle Cell Disease Not Dispensed Hydroxyurea at Baseline in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Demographics	Number	Percent
2018	8,306	7.7%
2019	7,585	7.0%
2020	3,467	3.2%

Health Characteristics Assessed in the Prior 183 Days	Mean	Standard Deviation
Charlson/Elixhauser Combined Comorbidity Score[1]	2.3	2.8

	Number	Percent
Acute myeloid leukemia	145	0.1%
Acquired hypothyroidism	12,877	11.9%
Acute chest syndrome	3,079	2.8%
Acute myocardial infarction	2,131	2.0%
Alzheimer's disease and related disorders	5,916	5.5%
Anemia	108,413	99.9%
Asthma	14,280	13.2%
Atrial fibrillation	8,647	8.0%
Benign prostatic hyperplasia	4,846	4.5%
Breast cancer	2,752	2.5%
Chronic kidney disease	24,377	22.5%
Colorectal cancer	1,558	1.4%
Chronic obstructive pulmonary disease (COPD) and bronchiectasis	15,771	14.5%
Depression	17,485	16.1%
Diabetes	26,562	24.5%
Endometrial cancer	391	0.4%
Glaucoma	6,904	6.4%
Heart failure	14,369	13.2%
Hyperlipidemia	34,141	31.5%
Hypertension	50,251	46.3%
Ischemic heart disease	17,814	16.4%
Lung cancer	1,401	1.3%
Osteoperosis	5,470	5.0%
Prostate cancer	1,799	1.7%
Rheumatoid arthritis/osteoarthritis	22,913	21.1%
Stroke/transient ischemic attack	9,473	8.7%

Medical Product Use in the Prior 183 Days		
Crizanlizumab	*****	*****
Gabapentin	9,564	8.8%
Pregabalin	2,107	1.9%
Non-steroidal anti-inflammatory drugs (NSAIDs)	16,716	15.4%
Voxelotor	17	<0.1%
L-glutamine oral powder (Endari[TM])	78	0.1%
Any glutamine	78	0.1%

Medical Product Ever		
Crizanlizumab	288	0.3%
Voxelotor	464	0.4%

Table 1b. Aggregated Baseline Table for Patients With Sickle Cell Disease Not Dispensed Hydroxyurea at Baseline in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Medical Product Ever	Number	Percent
L-glutamine oral powder (Endari[TM])	1,033	1.0%
Any glutamine	1,042	1.0%

Health Service Utilization Intensity Assessed in the Prior 183 Days	Mean	Standard Deviation
Mean number of ambulatory encounters	13.9	18.4
Mean number of emergency room encounters	1.2	3.5
Mean number of inpatient hospital encounters	0.7	1.5
Mean number of non-acute institutional encounters	0.1	0.7
Mean number of other ambulatory encounters	6.8	14.2
Mean number of unique drug classes	5.8	4.8
Mean number of generics	6.4	5.5

[1]The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date (index date).

*****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 1c. Aggregated Baseline Table for Patients With Sickle Cell Disease Never Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Characteristic	Number	
Number of unique patients	101,638	
Demographics	**Mean**	**Standard Deviation**
Mean Age (Years)	46.3	19.7
Age (Years)	**Number**	**Percent**
0-5	7,358	7.2%
6-11	3,143	3.1%
12-17	3,827	3.8%
18-49	40,979	40.3%
50-59	12,255	12.1%
60+	34,076	33.5%
Sex		
Female	61,984	61.0%
Male	39,654	39.0%
Race		
Unknown	40,176	39.5%
American Indian or Alaska Native	161	0.2%
Asian	950	0.9%
Black or African American	38,903	38.3%
Native Hawaiian or Other Pacific Islander	61	0.1%
White	21,387	21.0%
Ethnicity		
Hispanic Origin	1,988	2.0%
Non-Hispanic Origin	55,604	54.7%
Unknown	44,046	43.3%
Year		
2000	675	0.7%
2001	632	0.6%
2002	537	0.5%
2003	512	0.5%
2004	470	0.5%
2005	388	0.4%
2006	1,406	1.4%
2007	1,694	1.7%
2008	6,310	6.2%
2009	3,909	3.8%
2010	8,668	8.5%
2011	7,762	7.6%
2012	7,808	7.7%
2013	8,166	8.0%
2014	7,861	7.7%
2015	7,950	7.8%
2016	8,446	8.3%
2017	8,431	8.3%

Table 1c. Aggregated Baseline Table for Patients With Sickle Cell Disease Never Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Demographics	Number	Percent
2018	8,360	8.2%
2019	7,830	7.7%
2020	3,823	3.8%

Health Characteristics Assessed in the Prior 183 Days	Mean	Standard Deviation
Charlson/Elixhauser Combined Comorbidity Score[1]	2.4	2.9

	Number	Percent
Acute myeloid leukemia	137	0.1%
Acquired hypothyroidism	12,772	12.6%
Acute chest syndrome	2,619	2.6%
Acute myocardial infarction	2,141	2.1%
Alzheimer's disease and related disorders	5,934	5.8%
Anemia	101,580	99.9%
Asthma	13,387	13.2%
Atrial fibrillation	8,604	8.5%
Benign prostatic hyperplasia	4,795	4.7%
Breast cancer	2,728	2.7%
Chronic kidney disease	24,097	23.7%
Colorectal cancer	1,557	1.5%
Chronic obstructive pulmonary disease (COPD) and bronchiectasis	15,309	15.1%
Depression	16,940	16.7%
Diabetes	26,347	25.9%
Endometrial cancer	393	0.4%
Glaucoma	6,778	6.7%
Heart failure	14,212	14.0%
Hyperlipidemia	33,794	33.2%
Hypertension	49,230	48.4%
Ischemic heart disease	17,608	17.3%
Lung cancer	1,398	1.4%
Osteoperosis	5,387	5.3%
Prostate cancer	1,788	1.8%
Rheumatoid arthritis/osteoarthritis	22,510	22.1%
Stroke/transient ischemic attack	9,255	9.1%

Medical Product Use in the Prior 183 Days		
Crizanlizumab	21	<0.1%
Gabapentin	9,524	9.4%
Pregabalin	2,068	2.0%
Non-steroidal anti-inflammatory drugs (NSAIDs)	15,391	15.1%
Voxelotor	37	<0.1%
L-glutamine oral powder (Endari[TM])	140	0.1%
Any glutamine	141	0.1%

Medical Product Ever		
Crizanlizumab	142	0.1%
Voxelotor	255	0.3%

Table 1c. Aggregated Baseline Table for Patients With Sickle Cell Disease Never Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Medical Product Ever	Number	Percent
L-glutamine oral powder (Endari[TM])	604	0.6%
Any glutamine	607	0.6%
Health Service Utilization Intensity Assessed in the Prior 183 Days	**Mean**	**Standard Deviation**
Mean number of ambulatory encounters	14.1	18.5
Mean number of emergency room encounters	1.2	3.3
Mean number of inpatient hospital encounters	0.7	1.4
Mean number of non-acute institutional encounters	0.2	0.7
Mean number of other ambulatory encounters	6.8	14.3
Mean number of unique drug classes	6	4.9
Mean number of generics	6.6	5.5

[1]The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date (index date).

Table 1d. Aggregated Baseline Table for Patients With Sickle Cell Disease Ever Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Characteristic	Number	
Number of unique patients	16,483	
Demographics	**Mean**	**Standard Deviation**
Mean Age (Years)	31.2	14
Age (Years)	**Number**	**Percent**
0-5	921	5.6%
6-11	900	5.5%
12-17	922	5.6%
18-49	11,707	71.0%
50-59	1,284	7.8%
60+	749	4.5%
Sex		
Female	8,721	52.9%
Male	7,762	47.1%
Race		
Unknown	5,718	34.7%
American Indian or Alaska Native	*****	*****
Asian	32	0.2%
Black or African American	10,339	62.7%
Native Hawaiian or Other Pacific Islander	*****	*****
White	359	2.2%
Ethnicity		
Hispanic Origin	234	1.4%
Non-Hispanic Origin	10,094	61.2%
Unknown	6,155	37.3%
Year		
2000	500	3.0%
2001	140	0.8%
2002	91	0.6%
2003	56	0.3%
2004	59	0.4%
2005	39	0.2%
2006	268	1.6%
2007	203	1.2%
2008	789	4.8%
2009	376	2.3%
2010	4,715	28.6%
2011	1,238	7.5%
2012	1,041	6.3%
2013	1,146	7.0%
2014	1,044	6.3%
2015	972	5.9%
2016	903	5.5%
2017	921	5.6%

Table 1d. Aggregated Baseline Table for Patients With Sickle Cell Disease Ever Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Demographics	Number	Percent
2018	830	5.0%
2019	814	4.9%
2020	338	2.1%

Health Characteristics Assessed in the Prior 183 Days	Mean	Standard Deviation
Charlson/Elixhauser Combined Comorbidity Score[1]	1.7	2

	Number	Percent
Acute myeloid leukemia	22	0.1%
Acquired hypothyroidism	473	2.9%
Acute chest syndrome	1,666	10.1%
Acute myocardial infarction	69	0.4%
Alzheimer's disease and related disorders	94	0.6%
Anemia	16,483	100.0%
Asthma	2,409	14.6%
Atrial fibrillation	368	2.2%
Benign prostatic hyperplasia	159	1.0%
Breast cancer	69	0.4%
Chronic kidney disease	1,954	11.9%
Colorectal cancer	24	0.1%
Chronic obstructive pulmonary disease (COPD) and bronchiectasis	1,258	7.6%
Depression	2,093	12.7%
Diabetes	892	5.4%
Endometrial cancer	*****	*****
Glaucoma	381	2.3%
Heart failure	1,147	7.0%
Hyperlipidemia	1,096	6.6%
Hypertension	3,851	23.4%
Ischemic heart disease	839	5.1%
Lung cancer	25	0.2%
Osteoperosis	334	2.0%
Prostate cancer	53	0.3%
Rheumatoid arthritis/osteoarthritis	1,529	9.3%
Stroke/transient ischemic attack	723	4.4%
Medical Product Use in the Prior 183 Days		
Crizanlizumab	11	0.1%
Gabapentin	825	5.0%
Pregabalin	175	1.1%
Non-steroidal anti-inflammatory drugs (NSAIDs)	3,668	22.3%
Voxelotor	13	0.1%
L-glutamine oral powder (Endari[TM])	72	0.4%
Any glutamine	73	0.4%
Medical Product Ever		
Crizanlizumab	298	1.8%
Voxelotor	464	2.8%

Table 1d. Aggregated Baseline Table for Patients With Sickle Cell Disease Ever Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Medical Product Ever	Number	Percent
L-glutamine oral powder (Endari[TM])	977	5.9%
Any glutamine	987	6.0%

Health Service Utilization Intensity Assessed in the Prior 183 Days	Mean	Standard Deviation
Mean number of ambulatory encounters	13.1	17.5
Mean number of emergency room encounters	2.3	5.7
Mean number of inpatient hospital encounters	1.3	2.2
Mean number of non-acute institutional encounters	0.1	0.5
Mean number of other ambulatory encounters	7.9	14.9
Mean number of unique drug classes	4.9	3.7
Mean number of generics	5.6	4.3

[1]The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date (index date).

*****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 1e. Aggregated Baseline Table for Patients With Sickle Cell Disease and With Specified Cancers[1] in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Characteristic	Number	
Number of unique patients	6,712	
Demographics	**Mean**	**Standard Deviation**
Mean Age (Years)	44.8	20.2
Age (Years)	**Number**	**Percent**
0-5	73	1.1%
6-11	55	0.8%
12-17	107	1.6%
18-49	4,060	60.5%
50-59	612	9.1%
60+	1,805	26.9%
Sex		
Female	3,618	53.9%
Male	3,094	46.1%
Race		
Unknown	1,489	22.2%
American Indian or Alaska Native	*****	*****
Asian	46	0.7%
Black or African American	3,866	57.6%
Native Hawaiian or Other Pacific Islander	*****	*****
White	1,296	19.3%
Ethnicity		
Hispanic Origin	126	1.9%
Non-Hispanic Origin	5,029	74.9%
Unknown	1,557	23.2%
Year		
2000	*****	*****
2001	*****	*****
2002	*****	*****
2003	*****	*****
2004	*****	*****
2005	*****	*****
2006	15	0.2%
2007	40	0.6%
2008	134	2.0%
2009	95	1.4%
2010	395	5.9%
2011	477	7.1%
2012	541	8.1%
2013	524	7.8%
2014	648	9.7%
2015	687	10.2%
2016	724	10.8%
2017	669	10.0%

Table 1e. Aggregated Baseline Table for Patients With Sickle Cell Disease and With Specified Cancers[1] in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Demographics	Number	Percent
2018	669	10.0%
2019	720	10.7%
2020	349	5.2%

Health Characteristics Assessed in the Prior 183 Days	Mean	Standard Deviation
Charlson/Elixhauser Combined Comorbidity Score[2]	4.1	3.3

	Number	Percent
Acute myeloid leukemia	51	0.8%
Acquired hypothyroidism	737	11.0%
Acute chest syndrome	1,120	16.7%
Acute myocardial infarction	167	2.5%
Alzheimer's disease and related disorders	326	4.9%
Anemia	6,712	100.0%
Asthma	1,320	19.7%
Atrial fibrillation	584	8.7%
Benign prostatic hyperplasia	331	4.9%
Breast cancer	127	1.9%
Chronic kidney disease	2,019	30.1%
Colorectal cancer	102	1.5%
Chronic obstructive pulmonary disease (COPD) and bronchiectasis	1,410	21.0%
Depression	1,587	23.6%
Diabetes	1,277	19.0%
Endometrial cancer	20	0.3%
Glaucoma	362	5.4%
Heart failure	1,087	16.2%
Hyperlipidemia	1,788	26.6%
Hypertension	3,384	50.4%
Ischemic heart disease	1,192	17.8%
Lung cancer	135	2.0%
Osteoperosis	315	4.7%
Prostate cancer	99	1.5%
Rheumatoid arthritis/osteoarthritis	1,525	22.7%
Stroke/transient ischemic attack	657	9.8%

Medical Product Use in the Prior 183 Days		
Crizanlizumab	*****	*****
Gabapentin	807	12.0%
Pregabalin	151	2.2%
Non-steroidal anti-inflammatory drugs (NSAIDs)	1,419	21.1%
Voxelotor	12	0.2%
L-glutamine oral powder (Endari™)	45	0.7%
Any glutamine	45	0.7%

Medical Product Ever		
Crizanlizumab	130	1.9%
Voxelotor	172	2.6%

Table 1e. Aggregated Baseline Table for Patients With Sickle Cell Disease and With Specified Cancers[1] in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Medical Product Ever	Number	Percent
L-glutamine oral powder (Endari[TM])	365	5.4%
Any glutamine	365	5.4%
Health Service Utilization Intensity Assessed in the Prior 183 Days	**Mean**	**Standard Deviation**
Mean number of ambulatory encounters	21.1	21
Mean number of emergency room encounters	3.4	7.9
Mean number of inpatient hospital encounters	2.5	3.1
Mean number of non-acute institutional encounters	0.2	0.8
Mean number of other ambulatory encounters	16.8	22.4
Mean number of unique drug classes	7	4.9
Mean number of generics	8.1	5.6

[1]See Appendix C for a list of codes used to define specified cancers for which hydroxyurea may have been used to treat.

[2]The Charlson/Elixhauser Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date (index date).

*****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 2. Medication Use Around First Valid Hydroxyurea Dispensing ≥ 30 Days' Supply Among Patients with Sickle Cell Disease and Without Specified Cancers[1] in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

Characteristic	Number	
Number of unique patients	15,013	
Medical Product Use in the Prior 183 Days	**Number**	**Percent**
Crizanlizumab	13	0.1%
Gabapentin	969	6.5%
Pregabalin	199	1.3%
Non-steroidal anti-inflammatory drugs (NSAIDs)	4,043	26.9%
Voxelotor	*****	*****
L-glutamine oral powder (Endari[TM])	88	0.6%
Any glutamine	89	0.6%
Medical Product Use Ever		
Crizanlizumab	281	1.9%
Voxelotor	432	2.9%
L-glutamine oral powder (Endari[TM])	926	6.2%
Any glutamine	936	6.2%
Medical Product Use in the 30 Days Prior Through 60 Days After First Valid Dispensing		
Crizanlizumab	18	0.1%
Voxelotor	*****	*****
L-glutamine oral powder (Endari[TM])	79	0.5%
Any glutamine	81	0.5%

[1]See Appendix C for a list of codes used to define specified cancers for which hydroxyurea may have been used to treat.

*****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 3a. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease (SCD) in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED visits	113,036	74,104	65.6%	743,941	6.6	10.0	336,150.7	22.1
Hospitalizations	113,036	64,910	57.4%	381,823	3.4	5.9	336,150.7	11.4
Hospitalizations or ED visits[1]	113,036	87,975	77.8%	1,082,221	9.6	12.3	336,150.7	32.2

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

Table 3b. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease (SCD) in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Age Group

Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED Visits								
Total	113,036	74,104	65.6%	743,941	6.6	10.0	336,150.7	22.1
0-17 years	16,739	10,687	63.8%	80,078	4.8	7.5	63,148.1	12.7
0-5 years	8,220	5,306	64.5%	34,149	4.2	6.4	33,966.1	10.1
6-11 years	3,938	2,474	62.8%	18,060	4.6	7.3	14,092.6	12.8
12-17 years	4,581	2,907	63.5%	27,869	6.1	9.6	15,089.4	18.5
18-49 years	48,702	34,049	69.9%	502,257	10.3	14.8	145,259.7	34.6
50+ years	47,595	29,368	61.7%	161,606	3.4	5.5	127,742.9	12.7
50-59 years	13,024	8,872	68.1%	69,719	5.4	7.9	39,180.2	17.8
60+ years	34,571	20,496	59.3%	91,887	2.7	4.5	88,562.8	10.4
Hospitalizations								
Total	113,036	64,910	57.4%	381,823	3.4	5.9	336,150.7	11.4
0-17 years	16,739	6,082	36.3%	30,979	1.9	5.1	63,148.1	4.9
0-5 years	8,220	2,689	32.7%	11,517	1.4	4.3	33,966.1	3.4
6-11 years	3,938	1,510	38.3%	7,699	2.0	5.1	14,092.6	5.5
12-17 years	4,581	1,883	41.1%	11,763	2.6	6.2	15,089.4	7.8
18-49 years	48,702	29,102	59.8%	229,399	4.7	7.9	145,259.7	15.8
50+ years	47,595	29,726	62.5%	121,445	2.6	4.1	127,742.9	9.5
50-59 years	13,024	7,651	58.7%	41,891	3.2	5.5	39,180.2	10.7
60+ years	34,571	22,075	63.9%	79,554	2.3	3.6	88,562.8	9.0
Hospitalizations or ED Visits[1]								
Total	113,036	87,975	77.8%	1,082,221	9.6	12.3	336,150.7	32.2
0-17 years	16,739	11,457	68.4%	99,677	6.0	8.7	63,148.1	15.8
0-5 years	8,220	5,597	68.1%	41,556	5.1	7.4	33,966.1	12.2
6-11 years	3,938	2,669	67.8%	22,782	5.8	8.5	14,092.6	16.2
12-17 years	4,581	3,191	69.7%	35,339	7.7	11.1	15,089.4	23.4
18-49 years	48,702	39,276	80.6%	707,460	14.5	18.0	145,259.7	48.7
50+ years	47,595	37,242	78.2%	275,084	5.8	7.4	127,742.9	21.5
50-59 years	13,024	10,258	78.8%	108,126	8.3	10.5	39,180.2	27.6
60+ years	34,571	26,984	78.1%	166,958	4.8	6.2	88,562.8	18.9

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

Table 3c. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease (SCD) in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year

Year	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED Visits								
Total	113,036	74,104	65.6%	743,941	6.6	10.0	336,150.7	22.1
2000	1,172	1,082	92.3%	38,445	32.8	35.5	10,472.5	36.7
2001	764	664	86.9%	11,816	15.5	17.8	5,766.2	20.5
2002	620	521	84.0%	7,222	11.6	13.9	4,441.3	16.3
2003	560	473	84.5%	6,395	11.4	13.5	3,822.8	16.7
2004	511	429	84.0%	5,258	10.3	12.3	3,224.1	16.3
2005	392	332	84.7%	3,624	9.2	10.9	2,150.6	16.9
2006	1,639	1,032	63.0%	7,495	4.6	7.3	7,135.4	10.5
2007	1,865	1,130	60.6%	8,055	4.3	7.1	6,973.9	11.6
2008	7,044	3,891	55.2%	26,622	3.8	6.8	21,721.4	12.3
2009	4,205	2,488	59.2%	15,915	3.8	6.4	12,405.8	12.8
2010	13,252	10,293	77.7%	199,522	15.1	19.4	58,416.2	34.2
2011	8,725	6,343	72.7%	79,060	9.1	12.5	34,219.1	23.1
2012	8,518	6,092	71.5%	65,901	7.7	10.8	30,049.2	21.9
2013	8,938	6,264	70.1%	60,698	6.8	9.7	28,760.2	21.1
2014	8,539	5,954	69.7%	54,016	6.3	9.1	25,678.5	21.0
2015	8,503	5,783	68.0%	46,253	5.4	8.0	22,724.9	20.4
2016	8,901	5,932	66.6%	38,132	4.3	6.4	21,164.7	18.0
2017	8,765	5,532	63.1%	31,476	3.6	5.7	16,954.5	18.6
2018	8,567	4,949	57.8%	21,437	2.5	4.3	12,233.8	17.5
2019	7,967	3,828	48.0%	13,962	1.8	3.6	6,701.7	20.8
2020	3,589	1,092	30.4%	2,637	0.7	2.4	1,134.0	23.3

Table 3c. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease (SCD) in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year

Year	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations								
Total	113,036	64,910	57.4%	381,823	3.4	5.9	336,150.7	11.4
2000	1,172	952	81.2%	18,793	16.0	19.7	10,472.5	17.9
2001	764	516	67.5%	4,599	6.0	8.9	5,766.2	8.0
2002	620	376	60.6%	2,221	3.6	5.9	4,441.3	5.0
2003	560	336	60.0%	2,031	3.6	6.0	3,822.8	5.3
2004	511	297	58.1%	1,845	3.6	6.2	3,224.1	5.7
2005	392	235	59.9%	1,161	3.0	4.9	2,150.6	5.4
2006	1,639	866	52.8%	4,249	2.6	4.9	7,135.4	6.0
2007	1,865	936	50.2%	3,828	2.1	4.1	6,973.9	5.5
2008	7,044	3,569	50.7%	11,080	1.6	3.1	21,721.4	5.1
2009	4,205	1,893	45.0%	6,475	1.5	3.4	12,405.8	5.2
2010	13,252	9,812	74.0%	114,141	8.6	11.6	58,416.2	19.5
2011	8,725	5,715	65.5%	39,752	4.6	7.0	34,219.1	11.6
2012	8,518	5,553	65.2%	33,612	3.9	6.1	30,049.2	11.2
2013	8,938	5,754	64.4%	30,765	3.4	5.3	28,760.2	10.7
2014	8,539	5,231	61.3%	25,779	3.0	4.9	25,678.5	10.0
2015	8,503	4,944	58.1%	22,706	2.7	4.6	22,724.9	10.0
2016	8,901	4,856	54.6%	19,535	2.2	4.0	21,164.7	9.2
2017	8,765	4,600	52.5%	16,659	1.9	3.6	16,954.5	9.8
2018	8,567	4,106	47.9%	12,426	1.5	3.0	12,233.8	10.2
2019	7,967	3,193	40.1%	8,153	1.0	2.6	6,701.7	12.2
2020	3,589	1,170	32.6%	2,013	0.6	1.7	1,134.0	17.8

Table 3c. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease (SCD) in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year

Year	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations or ED Visits[1]								
Total	113,036	87,975	77.8%	1,082,221	9.6	12.3	336,150.7	32.2
2000	1,172	1,103	94.1%	49,493	42.2	44.9	10,472.5	47.3
2001	764	685	89.7%	14,452	18.9	21.1	5,766.2	25.1
2002	620	539	86.9%	8,659	14.0	16.1	4,441.3	19.5
2003	560	490	87.5%	7,640	13.6	15.6	3,822.8	20.0
2004	511	451	88.3%	6,487	12.7	14.4	3,224.1	20.1
2005	392	349	89.0%	4,359	11.1	12.5	2,150.6	20.3
2006	1,639	1,261	76.9%	11,217	6.8	8.9	7,135.4	15.7
2007	1,865	1,395	74.8%	11,264	6.0	8.1	6,973.9	16.2
2008	7,044	5,055	71.8%	33,422	4.7	6.6	21,721.4	15.4
2009	4,205	2,893	68.8%	19,780	4.7	6.8	12,405.8	15.9
2010	13,252	11,624	87.7%	307,600	23.2	26.5	58,416.2	52.7
2011	8,725	7,286	83.5%	115,831	13.3	15.9	34,219.1	33.8
2012	8,518	7,100	83.4%	96,925	11.4	13.7	30,049.2	32.3
2013	8,938	7,418	83.0%	89,117	10.0	12.0	28,760.2	31.0
2014	8,539	7,016	82.2%	77,712	9.1	11.1	25,678.5	30.3
2015	8,503	6,825	80.3%	67,174	7.9	9.8	22,724.9	29.6
2016	8,901	6,988	78.5%	55,950	6.3	8.0	21,164.7	26.4
2017	8,765	6,649	75.9%	46,439	5.3	7.0	16,954.5	27.4
2018	8,567	6,115	71.4%	32,757	3.8	5.4	12,233.8	26.8
2019	7,967	4,980	62.5%	21,415	2.7	4.3	6,701.7	32.0
2020	3,589	1,753	48.8%	4,528	1.3	2.6	1,134.0	39.9

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

Table 3d. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease (SCD) in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Race

Race	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED Visits								
Total	113,036	74,104	65.6%	743,941	6.6	10.0	336,150.7	22.1
American Indian or Alaska Native	183	145	79.2%	1,881	10.3	13.0	636.1	29.6
Asian	976	493	50.5%	2,579	2.6	5.2	3,098.9	8.3
Black or African American	45,472	35,130	77.3%	514,214	11.3	14.6	159,598.9	32.2
Native Hawaiian or Other Pacific Islander	67	36	53.7%	235	3.5	6.5	202.2	11.6
White	21,689	12,838	59.2%	74,721	3.4	5.8	57,337.5	13.0
Unknown	44,649	25,462	57.0%	150,311	3.4	5.9	115,277.1	13.0
Hospitalizations								
Total	113,036	64,910	57.4%	381,823	3.4	5.9	336,150.7	11.4
American Indian or Alaska Native	183	135	73.8%	954	5.2	7.1	636.1	15.0
Asian	976	548	56.1%	1,916	2.0	3.5	3,098.9	6.2
Black or African American	45,472	31,771	69.9%	262,575	5.8	8.3	159,598.9	16.5
Native Hawaiian or Other Pacific Islander	67	33	49.3%	123	1.8	3.7	202.2	6.1
White	21,689	13,697	63.2%	49,687	2.3	3.6	57,337.5	8.7
Unknown	44,649	18,726	41.9%	66,568	1.5	3.6	115,277.1	5.8

Table 3d. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease (SCD) in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Race

Race	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations or ED Visits[1]								
Total	113,036	87,975	77.8%	1,082,221	9.6	12.3	336,150.7	32.2
American Indian or Alaska Native	183	162	88.5%	2,754	15.0	17.0	636.1	43.3
Asian	976	695	71.2%	4,303	4.4	6.2	3,098.9	13.9
Black or African American	45,472	39,868	87.7%	754,490	16.6	18.9	159,598.9	47.3
Native Hawaiian or Other Pacific Islander	67	46	68.7%	343	5.1	7.5	202.2	17.0
White	21,689	16,947	78.1%	120,634	5.6	7.1	57,337.5	21.0
Unknown	44,649	30,257	67.8%	199,697	4.5	6.6	115,277.1	17.3

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

Table 3e. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease (SCD) in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED Visits								
Total	113,036	74,104	65.6%	743,941	6.6	10.0	336,150.7	22.1
2000-2005								
Total	4,019	3,501	87.1%	72,760	18.1	20.8	29,877.5	24.4
0-17 years	1,962	1,696	86.4%	33,014	16.8	19.5	17,297.9	19.1
0-5 years	1,112	952	85.6%	12,520	11.3	13.2	9,935.3	12.6
6-11 years	456	393	86.2%	8,332	18.3	21.2	4,116.0	20.2
12-17 years	394	351	89.1%	12,162	30.9	34.6	3,246.6	37.5
18-49 years	1,624	1,450	89.3%	36,610	22.5	25.2	10,522.2	34.8
50+ years	433	355	82.0%	3,136	7.2	8.8	2,057.4	15.2
50-59 years	193	171	88.6%	2,078	10.8	12.2	1,184.5	17.5
60+ years	240	184	76.7%	1,058	4.4	5.8	872.9	12.1
2006-2010								
Total	28,005	18,834	67.3%	257,609	9.2	13.7	106,652.5	24.2
0-17 years	6,583	4,217	64.1%	26,749	4.1	6.3	26,078.6	10.3
0-5 years	3,237	2,056	63.5%	11,756	3.6	5.7	14,209.4	8.3
6-11 years	1,476	907	61.4%	5,372	3.6	5.9	5,425.3	9.9
12-17 years	1,870	1,254	67.1%	9,621	5.1	7.7	6,443.9	14.9
18-49 years	15,309	10,496	68.6%	198,495	13.0	18.9	56,430.8	35.2
50+ years	6,113	4,121	67.4%	32,365	5.3	7.9	24,143.1	13.4
50-59 years	2,911	1,999	68.7%	19,382	6.7	9.7	11,544.6	16.8
60+ years	3,202	2,122	66.3%	12,983	4.1	6.1	12,598.4	10.3

Table 3e. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease (SCD) in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
2011-2015								
Total	43,223	30,436	70.4%	305,928	7.1	10.1	141,432.0	21.6
0-17 years	5,093	3,044	59.8%	14,765	2.9	4.9	15,351.4	9.6
0-5 years	2,593	1,526	58.9%	7,287	2.8	4.8	8,013.4	9.1
6-11 years	1,154	696	60.3%	3,025	2.6	4.3	3,304.0	9.2
12-17 years	1,346	822	61.1%	4,453	3.3	5.4	4,034.1	11.0
18-49 years	17,896	13,362	74.7%	203,923	11.4	15.3	58,582.0	34.8
50+ years	20,234	14,030	69.3%	87,240	4.3	6.2	67,498.6	12.9
50-59 years	5,316	4,027	75.8%	35,656	6.7	8.9	19,181.0	18.6
60+ years	14,918	10,003	67.1%	51,584	3.5	5.2	48,317.6	10.7
2016-2020								
Total	37,789	21,333	56.5%	107,644	2.8	5.0	58,188.7	18.5
0-17 years	3,101	1,730	55.8%	5,550	1.8	3.2	4,420.2	12.6
0-5 years	1,278	772	60.4%	2,586	2.0	3.3	1,808.0	14.3
6-11 years	852	478	56.1%	1,331	1.6	2.8	1,247.3	10.7
12-17 years	971	480	49.4%	1,633	1.7	3.4	1,364.9	12.0
18-49 years	13,873	8,741	63.0%	63,229	4.6	7.2	19,724.6	32.1
50+ years	20,815	10,862	52.2%	38,865	1.9	3.6	34,043.8	11.4
50-59 years	4,604	2,675	58.1%	12,603	2.7	4.7	7,270.1	17.3
60+ years	16,211	8,187	50.5%	26,262	1.6	3.2	26,773.8	9.8

Table 3e. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease (SCD) in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations								
Total	113,036	64,910	57.4%	381,823	3.4	5.9	336,150.7	11.4
2000-2005								
Total	4,019	2,712	67.5%	30,650	7.6	11.3	29,877.5	10.3
0-17 years	1,962	1,164	59.3%	13,626	6.9	11.7	17,297.9	7.9
0-5 years	1,112	565	50.8%	4,692	4.2	8.3	9,935.3	4.7
6-11 years	456	306	67.1%	3,687	8.1	12.0	4,116.0	9.0
12-17 years	394	293	74.4%	5,247	13.3	17.9	3,246.6	16.2
18-49 years	1,624	1,232	75.9%	15,217	9.4	12.4	10,522.2	14.5
50+ years	433	316	73.0%	1,807	4.2	5.7	2,057.4	8.8
50-59 years	193	158	81.9%	1,153	6.0	7.3	1,184.5	9.7
60+ years	240	158	65.8%	654	2.7	4.1	872.9	7.5
2006-2010								
Total	28,005	17,076	61.0%	139,773	5.0	8.2	106,652.5	13.1
0-17 years	6,583	2,411	36.6%	9,617	1.5	4.0	26,078.6	3.7
0-5 years	3,237	1,026	31.7%	3,857	1.2	3.8	14,209.4	2.7
6-11 years	1,476	566	38.3%	2,097	1.4	3.7	5,425.3	3.9
12-17 years	1,870	819	43.8%	3,663	2.0	4.5	6,443.9	5.7
18-49 years	15,309	10,381	67.8%	105,052	6.9	10.1	56,430.8	18.6
50+ years	6,113	4,284	70.1%	25,104	4.1	5.9	24,143.1	10.4
50-59 years	2,911	1,932	66.4%	13,866	4.8	7.2	11,544.6	12.0
60+ years	3,202	2,352	73.5%	11,238	3.5	4.8	12,598.4	8.9

Table 3e. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease (SCD) in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
2011-2015								
Total	43,223	27,197	62.9%	152,614	3.5	5.6	141,432.0	10.8
0-17 years	5,093	1,628	32.0%	5,700	1.1	3.5	15,351.4	3.7
0-5 years	2,593	714	27.5%	2,169	0.8	3.0	8,013.4	2.7
6-11 years	1,154	415	36.0%	1,401	1.2	3.4	3,304.0	4.2
12-17 years	1,346	499	37.1%	2,130	1.6	4.3	4,034.1	5.3
18-49 years	17,896	10,897	60.9%	81,583	4.6	7.5	58,582.0	13.9
50+ years	20,234	14,672	72.5%	65,331	3.2	4.5	67,498.6	9.7
50-59 years	5,316	3,510	66.0%	20,226	3.8	5.8	19,181.0	10.5
60+ years	14,918	11,162	74.8%	45,105	3.0	4.0	48,317.6	9.3
2016-2020								
Total	37,789	17,925	47.4%	58,786	1.6	3.3	58,188.7	10.1
0-17 years	3,101	879	28.3%	2,036	0.7	2.3	4,420.2	4.6
0-5 years	1,278	384	30.0%	799	0.6	2.1	1,808.0	4.4
6-11 years	852	223	26.2%	514	0.6	2.3	1,247.3	4.1
12-17 years	971	272	28.0%	723	0.7	2.7	1,364.9	5.3
18-49 years	13,873	6,592	47.5%	27,547	2.0	4.2	19,724.6	14.0
50+ years	20,815	10,454	50.2%	29,203	1.4	2.8	34,043.8	8.6
50-59 years	4,604	2,051	44.5%	6,646	1.4	3.2	7,270.1	9.1
60+ years	16,211	8,403	51.8%	22,557	1.4	2.7	26,773.8	8.4

Table 3e. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease (SCD) in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations or ED Visits[1]								
Total	113,036	87,975	77.8%	1,082,221	9.6	12.3	336,150.7	32.2
2000-2005								
Total	4,019	3,617	90.0%	91,090	22.7	25.2	29,877.5	30.5
0-17 years	1,962	1,741	88.7%	41,286	21.0	23.7	17,297.9	23.9
0-5 years	1,112	970	87.2%	15,521	14.0	16.0	9,935.3	15.6
6-11 years	456	408	89.5%	10,534	23.1	25.8	4,116.0	25.6
12-17 years	394	363	92.1%	15,231	38.7	42.0	3,246.6	46.9
18-49 years	1,624	1,502	92.5%	45,670	28.1	30.4	10,522.2	43.4
50+ years	433	374	86.4%	4,134	9.5	11.1	2,057.4	20.1
50-59 years	193	177	91.7%	2,714	14.1	15.3	1,184.5	22.9
60+ years	240	197	82.1%	1,420	5.9	7.2	872.9	16.3
2006-2010								
Total	28,005	22,228	79.4%	383,283	13.7	17.2	106,652.5	35.9
0-17 years	6,583	4,528	68.8%	32,703	5.0	7.2	26,078.6	12.5
0-5 years	3,237	2,162	66.8%	14,126	4.4	6.5	14,209.4	9.9
6-11 years	1,476	989	67.0%	6,597	4.5	6.7	5,425.3	12.2
12-17 years	1,870	1,377	73.6%	11,980	6.4	8.7	6,443.9	18.6
18-49 years	15,309	12,657	82.7%	295,017	19.3	23.3	56,430.8	52.3
50+ years	6,113	5,043	82.5%	55,563	9.1	11.0	24,143.1	23.0
50-59 years	2,911	2,343	80.5%	32,199	11.1	13.7	11,544.6	27.9
60+ years	3,202	2,700	84.3%	23,364	7.3	8.7	12,598.4	18.5

Table 3e. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease (SCD) in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
2011-2015								
Total	43,223	35,645	82.5%	446,759	10.3	12.5	141,432.0	31.6
0-17 years	5,093	3,286	64.5%	18,668	3.7	5.7	15,351.4	12.2
0-5 years	2,593	1,622	62.6%	8,739	3.4	5.4	8,013.4	10.9
6-11 years	1,154	757	65.6%	3,942	3.4	5.2	3,304.0	11.9
12-17 years	1,346	907	67.4%	5,987	4.4	6.6	4,034.1	14.8
18-49 years	17,896	14,880	83.1%	278,906	15.6	18.7	58,582.0	47.6
50+ years	20,234	17,479	86.4%	149,185	7.4	8.5	67,498.6	22.1
50-59 years	5,316	4,557	85.7%	54,526	10.3	12.0	19,181.0	28.4
60+ years	14,918	12,922	86.6%	94,659	6.3	7.3	48,317.6	19.6
2016-2020								
Total	37,789	26,485	70.1%	161,089	4.3	6.1	58,188.7	27.7
0-17 years	3,101	1,902	61.3%	7,020	2.3	3.7	4,420.2	15.9
0-5 years	1,278	843	66.0%	3,170	2.5	3.8	1,808.0	17.5
6-11 years	852	515	60.4%	1,709	2.0	3.3	1,247.3	13.7
12-17 years	971	544	56.0%	2,141	2.2	3.9	1,364.9	15.7
18-49 years	13,873	10,237	73.8%	87,867	6.3	8.6	19,724.6	44.5
50+ years	20,815	14,346	68.9%	66,202	3.2	4.6	34,043.8	19.4
50-59 years	4,604	3,181	69.1%	18,687	4.1	5.9	7,270.1	25.7
60+ years	16,211	11,165	68.9%	47,515	2.9	4.3	26,773.8	17.7

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

Table 4a. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease While Not Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Days	Patient-Years	Events Per 10 Patient-Years
ED visits	113,036	69,866	61.8%	530,816	4.7	7.6	106,954,485	292,825.4	18.1
Hospitalizations	113,036	60,924	53.9%	266,459	2.4	4.4	106,954,485	292,825.4	9.1
Hospitalizations or ED visits[1]	113,036	84,558	74.8%	768,072	6.8	9.1	106,954,485	292,825.4	26.2

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

Table 4b. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease While Not Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Age Group

Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED Visits								
Total	113,036	69,866	61.8%	530,816	4.7	7.6	292,825.4	18.1
0-17 years	16,739	10,116	60.4%	58,658	3.5	5.8	55,772.0	10.5
0-5 years	8,220	5,194	63.2%	29,564	3.6	5.7	31,476.7	9.4
6-11 years	3,938	2,258	57.3%	11,446	2.9	5.1	11,694.2	9.8
12-17 years	4,581	2,664	58.2%	17,648	3.9	6.6	12,601.2	14.0
18-49 years	48,702	31,034	63.7%	319,777	6.6	10.3	114,040.8	28.0
50+ years	47,595	28,716	60.3%	152,381	3.2	5.3	123,012.6	12.4
50-59 years	13,024	8,434	64.8%	62,620	4.8	7.4	35,820.5	17.5
60+ years	34,571	20,282	58.7%	89,761	2.6	4.4	87,192.1	10.3
Hospitalizations								
Total	113,036	60,924	53.9%	266,459	2.4	4.4	292,825.4	9.1
0-17 years	16,739	5,550	33.2%	19,833	1.2	3.6	55,772.0	3.6
0-5 years	8,220	2,583	31.4%	9,132	1.1	3.5	31,476.7	2.9
6-11 years	3,938	1,315	33.4%	4,392	1.1	3.3	11,694.2	3.8
12-17 years	4,581	1,652	36.1%	6,309	1.4	3.8	12,601.2	5.0
18-49 years	48,702	26,256	53.9%	134,308	2.8	5.1	114,040.8	11.8
50+ years	47,595	29,118	61.2%	112,318	2.4	3.9	123,012.6	9.1
50-59 years	13,024	7,257	55.7%	34,955	2.7	4.8	35,820.5	9.8
60+ years	34,571	21,861	63.2%	77,363	2.2	3.5	87,192.1	8.9
Hospitalizations or ED Visits[1]								
Total	113,036	84,558	74.8%	768,072	6.8	9.1	292,825.4	26.2
0-17 years	16,739	10,914	65.2%	71,915	4.3	6.6	55,772.0	12.9
0-5 years	8,220	5,492	66.8%	35,603	4.3	6.5	31,476.7	11.3
6-11 years	3,938	2,458	62.4%	14,376	3.7	5.8	11,694.2	12.3
12-17 years	4,581	2,964	64.7%	21,936	4.8	7.4	12,601.2	17.4
18-49 years	48,702	37,005	76.0%	438,895	9.0	11.9	114,040.8	38.5
50+ years	47,595	36,639	77.0%	257,262	5.4	7.0	123,012.6	20.9
50-59 years	13,024	9,870	75.8%	94,482	7.3	9.6	35,820.5	26.4
60+ years	34,571	26,769	77.4%	162,780	4.7	6.1	87,192.1	18.7

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

Table 4c. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease While Not Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year

Year	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED Visits								
Total	113,036	69,866	61.8%	530,816	4.7	7.6	292,825.4	18.1
2000	1,172	1,037	88.5%	18,539	15.8	17.9	7,290.9	25.4
2001	764	657	86.0%	8,179	10.7	12.4	5,108.5	16.0
2002	620	515	83.1%	6,141	9.9	11.9	4,109.0	14.9
2003	560	470	83.9%	5,644	10.1	12.0	3,621.1	15.6
2004	511	420	82.2%	4,425	8.7	10.5	2,971.9	14.9
2005	392	328	83.7%	3,376	8.6	10.3	2,044.2	16.5
2006	1,639	981	59.9%	6,362	3.9	6.5	6,456.8	9.9
2007	1,865	1,089	58.4%	7,098	3.8	6.5	6,450.6	11.0
2008	7,044	3,692	52.4%	20,679	2.9	5.6	19,761.3	10.5
2009	4,205	2,409	57.3%	13,955	3.3	5.8	11,566.6	12.1
2010	13,252	8,883	67.0%	104,549	7.9	11.8	40,951.1	25.5
2011	8,725	6,039	69.2%	58,699	6.7	9.7	30,577.7	19.2
2012	8,518	5,822	68.3%	51,791	6.1	8.9	27,320.7	19.0
2013	8,938	5,955	66.6%	49,307	5.5	8.3	26,030.6	18.9
2014	8,539	5,638	66.0%	43,324	5.1	7.7	23,284.2	18.6
2015	8,503	5,529	65.0%	37,500	4.4	6.8	20,918.2	17.9
2016	8,901	5,686	63.9%	32,338	3.6	5.7	19,800.5	16.3
2017	8,765	5,261	60.0%	26,379	3.0	5.0	15,756.9	16.7
2018	8,567	4,748	55.4%	18,285	2.1	3.9	11,473.3	15.9
2019	7,967	3,649	45.8%	11,807	1.5	3.2	6,259.3	18.9
2020	3,589	1,058	29.5%	2,439	0.7	2.3	1,072.0	22.8

Table 4c. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease While Not Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year

Year	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations								
Total	113,036	60,924	53.9%	266,459	2.4	4.4	292,825.4	9.1
2000	1,172	906	77.3%	8,811	7.5	9.7	7,290.9	12.1
2001	764	510	66.8%	2,964	3.9	5.8	5,108.5	5.8
2002	620	373	60.2%	1,786	2.9	4.8	4,109.0	4.3
2003	560	328	58.6%	1,702	3.0	5.2	3,621.1	4.7
2004	511	288	56.4%	1,411	2.8	4.9	2,971.9	4.7
2005	392	231	58.9%	1,023	2.6	4.4	2,044.2	5.0
2006	1,639	815	49.7%	3,161	1.9	3.9	6,456.8	4.9
2007	1,865	888	47.6%	3,084	1.7	3.5	6,450.6	4.8
2008	7,044	3,379	48.0%	8,339	1.2	2.5	19,761.3	4.2
2009	4,205	1,819	43.3%	5,262	1.3	2.9	11,566.6	4.5
2010	13,252	8,521	64.3%	58,894	4.4	6.9	40,951.1	14.4
2011	8,725	5,405	61.9%	29,468	3.4	5.5	30,577.7	9.6
2012	8,518	5,306	62.3%	26,109	3.1	4.9	27,320.7	9.6
2013	8,938	5,438	60.8%	24,812	2.8	4.6	26,030.6	9.5
2014	8,539	4,932	57.8%	20,904	2.4	4.2	23,284.2	9.0
2015	8,503	4,671	54.9%	18,439	2.2	3.9	20,918.2	8.8
2016	8,901	4,639	52.1%	16,487	1.9	3.6	19,800.5	8.3
2017	8,765	4,371	49.9%	13,873	1.6	3.2	15,756.9	8.8
2018	8,567	3,938	46.0%	10,921	1.3	2.8	11,473.3	9.5
2019	7,967	3,033	38.1%	7,115	0.9	2.3	6,259.3	11.4
2020	3,589	1,133	31.6%	1,894	0.5	1.7	1,072.0	17.7

Table 4c. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease While Not Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year

Year	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations or ED Visits[1]								
Total	113,036	84,558	74.8%	768,072	6.8	9.1	292,825.4	26.2
2000	1,172	1,070	91.3%	24,135	20.6	22.6	7,290.9	33.1
2001	764	682	89.3%	10,002	13.1	14.7	5,108.5	19.6
2002	620	537	86.6%	7,333	11.8	13.7	4,109.0	17.8
2003	560	486	86.8%	6,720	12.0	13.8	3,621.1	18.6
2004	511	444	86.9%	5,411	10.6	12.2	2,971.9	18.2
2005	392	346	88.3%	4,035	10.3	11.7	2,044.2	19.7
2006	1,639	1,214	74.1%	9,053	5.5	7.5	6,456.8	14.0
2007	1,865	1,355	72.7%	9,667	5.2	7.1	6,450.6	15.0
2008	7,044	4,870	69.1%	26,232	3.7	5.4	19,761.3	13.3
2009	4,205	2,815	66.9%	17,172	4.1	6.1	11,566.6	14.8
2010	13,252	10,656	80.4%	159,958	12.1	15.0	40,951.1	39.1
2011	8,725	7,055	80.9%	85,995	9.9	12.2	30,577.7	28.1
2012	8,518	6,888	80.9%	75,876	8.9	11.0	27,320.7	27.8
2013	8,938	7,150	80.0%	72,254	8.1	10.1	26,030.6	27.8
2014	8,539	6,743	79.0%	62,557	7.3	9.3	23,284.2	26.9
2015	8,503	6,601	77.6%	54,560	6.4	8.3	20,918.2	26.1
2016	8,901	6,776	76.1%	47,406	5.3	7.0	19,800.5	23.9
2017	8,765	6,423	73.3%	38,890	4.4	6.1	15,756.9	24.7
2018	8,567	5,939	69.3%	28,265	3.3	4.8	11,473.3	24.6
2019	7,967	4,797	60.2%	18,339	2.3	3.8	6,259.3	29.3
2020	3,589	1,711	47.7%	4,212	1.2	2.5	1,072.0	39.3

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

Table 4d. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease While Not Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Race

Race	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED Visits								
Total	113,036	69,866	61.8%	530,816	4.7	7.6	292,825.4	18.1
American Indian or Alaska Native	183	136	74.3%	1,257	6.9	9.2	549.2	22.9
Asian	976	483	49.5%	2,359	2.4	4.9	3,006.9	7.8
Black or African American	45,472	32,300	71.0%	336,645	7.4	10.4	128,009.8	26.3
Native Hawaiian or Other Pacific Islander	67	33	49.3%	140	2.1	4.2	179.3	7.8
White	21,689	12,771	58.9%	72,383	3.3	5.7	56,710.8	12.8
Unknown	44,649	24,143	54.1%	118,032	2.6	4.9	104,369.5	11.3
Hospitalizations								
Total	113,036	60,924	53.9%	266,459	2.4	4.4	292,825.4	9.1
American Indian or Alaska Native	183	130	71.0%	661	3.6	5.1	549.2	12.0
Asian	976	540	55.3%	1,771	1.8	3.3	3,006.9	5.9
Black or African American	45,472	29,128	64.1%	166,446	3.7	5.7	128,009.8	13.0
Native Hawaiian or Other Pacific Islander	67	31	46.3%	81	1.2	2.6	179.3	4.5
White	21,689	13,620	62.8%	48,250	2.2	3.5	56,710.8	8.5
Unknown	44,649	17,475	39.1%	49,250	1.1	2.8	104,369.5	4.7

Table 4d. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease While Not Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Race

Race	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations or ED Visits[1]								
Total	113,036	84,558	74.8%	768,072	6.8	9.1	292,825.4	26.2
American Indian or Alaska Native	183	157	85.8%	1,867	10.2	11.9	549.2	34.0
Asian	976	689	70.6%	3,957	4.1	5.7	3,006.9	13.2
Black or African American	45,472	37,790	83.1%	489,648	10.8	13.0	128,009.8	38.3
Native Hawaiian or Other Pacific Islander	67	43	64.2%	214	3.2	5.0	179.3	11.9
White	21,689	16,877	77.8%	117,064	5.4	6.9	56,710.8	20.6
Unknown	44,649	29,002	65.0%	155,322	3.5	5.4	104,369.5	14.9

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

Table 4e. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease While Not Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED Visits								
Total	113,036	69,866	61.8%	530,816	4.7	7.6	292,825.4	18.1
2000-2005								
Total	4,019	3,427	85.3%	46,304	11.5	13.5	25,145.6	18.4
0-17 years	1,962	1,673	85.3%	20,254	10.3	12.1	14,470.0	14.0
0-5 years	1,112	950	85.4%	10,227	9.2	10.8	8,864.6	11.5
6-11 years	456	385	84.4%	4,308	9.4	11.2	3,234.8	13.3
12-17 years	394	338	85.8%	5,719	14.5	16.9	2,370.6	24.1
18-49 years	1,624	1,403	86.4%	23,194	14.3	16.5	8,702.5	26.7
50+ years	433	351	81.1%	2,856	6.6	8.1	1,973.1	14.5
50-59 years	193	167	86.5%	1,809	9.4	10.8	1,104.9	16.4
60+ years	240	184	76.7%	1,047	4.4	5.7	868.2	12.1
2006-2010								
Total	28,005	17,054	60.9%	152,643	5.5	9.0	85,186.4	17.9
0-17 years	6,583	4,023	61.1%	21,789	3.3	5.4	23,723.2	9.2
0-5 years	3,237	2,019	62.4%	10,424	3.2	5.2	13,407.4	7.8
6-11 years	1,476	833	56.4%	3,915	2.7	4.7	4,659.8	8.4
12-17 years	1,870	1,171	62.6%	7,450	4.0	6.4	5,656.0	13.2
18-49 years	15,309	9,191	60.0%	103,860	6.8	11.3	39,888.0	26.0
50+ years	6,113	3,840	62.8%	26,994	4.4	7.0	21,575.2	12.5
50-59 years	2,911	1,784	61.3%	15,073	5.2	8.4	9,490.9	15.9
60+ years	3,202	2,056	64.2%	11,921	3.7	5.8	12,084.3	9.9

Table 4e. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease While Not Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
2011-2015								
Total	43,223	28,983	67.1%	240,621	5.6	8.3	128,131.5	18.8
0-17 years	5,093	2,839	55.7%	12,000	2.4	4.2	13,783.5	8.7
0-5 years	2,593	1,485	57.3%	6,533	2.5	4.4	7,544.2	8.7
6-11 years	1,154	622	53.9%	2,211	1.9	3.6	2,796.2	7.9
12-17 years	1,346	732	54.4%	3,256	2.4	4.4	3,443.1	9.5
18-49 years	17,896	12,332	68.9%	144,131	8.1	11.7	48,408.7	29.8
50+ years	20,234	13,812	68.3%	84,490	4.2	6.1	65,939.3	12.8
50-59 years	5,316	3,888	73.1%	33,644	6.3	8.7	18,208.8	18.5
60+ years	14,918	9,924	66.5%	50,846	3.4	5.1	47,730.5	10.7
2016-2020								
Total	37,789	20,402	54.0%	91,248	2.4	4.5	54,361.9	16.8
0-17 years	3,101	1,581	51.0%	4,615	1.5	2.9	3,795.4	12.2
0-5 years	1,278	740	57.9%	2,380	1.9	3.2	1,660.6	14.3
6-11 years	852	418	49.1%	1,012	1.2	2.4	1,003.4	10.1
12-17 years	971	423	43.6%	1,223	1.3	2.9	1,131.4	10.8
18-49 years	13,873	8,108	58.4%	48,592	3.5	6.0	17,041.6	28.5
50+ years	20,815	10,713	51.5%	38,041	1.8	3.6	33,525.0	11.3
50-59 years	4,604	2,595	56.4%	12,094	2.6	4.7	7,015.9	17.2
60+ years	16,211	8,118	50.1%	25,947	1.6	3.2	26,509.1	9.8

Table 4e. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease While Not Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations								
Total	113,036	60,924	53.9%	266,459	2.4	4.4	292,825.4	9.1
2000-2005								
Total	4,019	2,636	65.6%	17,697	4.4	6.7	25,145.6	7.0
0-17 years	1,962	1,143	58.3%	7,482	3.8	6.5	14,470.0	5.2
0-5 years	1,112	564	50.7%	3,343	3.0	5.9	8,864.6	3.8
6-11 years	456	301	66.0%	1,738	3.8	5.8	3,234.8	5.4
12-17 years	394	278	70.6%	2,401	6.1	8.6	2,370.6	10.1
18-49 years	1,624	1,182	72.8%	8,604	5.3	7.3	8,702.5	9.9
50+ years	433	311	71.8%	1,611	3.7	5.2	1,973.1	8.2
50-59 years	193	154	79.8%	964	5.0	6.3	1,104.9	8.7
60+ years	240	157	65.4%	647	2.7	4.1	868.2	7.5
2006-2010								
Total	28,005	15,422	55.1%	78,740	2.8	5.1	85,186.4	9.2
0-17 years	6,583	2,220	33.7%	6,858	1.0	3.1	23,723.2	2.9
0-5 years	3,237	996	30.8%	3,218	1.0	3.2	13,407.4	2.4
6-11 years	1,476	496	33.6%	1,356	0.9	2.7	4,659.8	2.9
12-17 years	1,870	728	38.9%	2,284	1.2	3.1	5,656.0	4.0
18-49 years	15,309	9,187	60.0%	52,264	3.4	5.7	39,888.0	13.1
50+ years	6,113	4,015	65.7%	19,618	3.2	4.9	21,575.2	9.1
50-59 years	2,911	1,727	59.3%	9,426	3.2	5.5	9,490.9	9.9
60+ years	3,202	2,288	71.5%	10,192	3.2	4.5	12,084.3	8.4

Table 4e. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease While Not Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
2011-2015								
Total	43,223	25,752	59.6%	119,732	2.8	4.6	128,131.5	9.3
0-17 years	5,093	1,431	28.1%	3,961	0.8	2.8	13,783.5	2.9
0-5 years	2,593	668	25.8%	1,859	0.7	2.8	7,544.2	2.5
6-11 years	1,154	342	29.6%	941	0.8	2.8	2,796.2	3.4
12-17 years	1,346	421	31.3%	1,161	0.9	2.8	3,443.1	3.4
18-49 years	17,896	9,860	55.1%	53,186	3.0	5.4	48,408.7	11.0
50+ years	20,234	14,461	71.5%	62,585	3.1	4.3	65,939.3	9.5
50-59 years	5,316	3,381	63.6%	18,318	3.4	5.4	18,208.8	10.1
60+ years	14,918	11,080	74.3%	44,267	3.0	4.0	47,730.5	9.3
2016-2020								
Total	37,789	17,114	45.3%	50,290	1.3	2.9	54,361.9	9.3
0-17 years	3,101	756	24.4%	1,532	0.5	2.0	3,795.4	4.0
0-5 years	1,278	355	27.8%	712	0.6	2.0	1,660.6	4.3
6-11 years	852	176	20.7%	357	0.4	2.0	1,003.4	3.6
12-17 years	971	225	23.2%	463	0.5	2.1	1,131.4	4.1
18-49 years	13,873	6,027	43.4%	20,254	1.5	3.4	17,041.6	11.9
50+ years	20,815	10,331	49.6%	28,504	1.4	2.8	33,525.0	8.5
50-59 years	4,604	1,995	43.3%	6,247	1.4	3.1	7,015.9	8.9
60+ years	16,211	8,336	51.4%	22,257	1.4	2.7	26,509.1	8.4

Table 4e. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease While Not Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations or ED Visits[1]								
Total	113,036	84,558	74.8%	768,072	6.8	9.1	292,825.4	26.2
2000-2005								
Total	4,019	3,565	88.7%	57,636	14.3	16.2	25,145.6	22.9
0-17 years	1,962	1,730	88.2%	25,211	12.8	14.6	14,470.0	17.4
0-5 years	1,112	970	87.2%	12,455	11.2	12.8	8,864.6	14.1
6-11 years	456	404	88.6%	5,479	12.0	13.6	3,234.8	16.9
12-17 years	394	356	90.4%	7,277	18.5	20.4	2,370.6	30.7
18-49 years	1,624	1,465	90.2%	28,652	17.6	19.6	8,702.5	32.9
50+ years	433	370	85.5%	3,773	8.7	10.2	1,973.1	19.1
50-59 years	193	173	89.6%	2,365	12.3	13.7	1,104.9	21.4
60+ years	240	197	82.1%	1,408	5.9	7.1	868.2	16.2
2006-2010								
Total	28,005	20,910	74.7%	222,082	7.9	10.6	85,186.4	26.1
0-17 years	6,583	4,338	65.9%	26,225	4.0	6.0	23,723.2	11.1
0-5 years	3,237	2,132	65.9%	12,465	3.9	5.8	13,407.4	9.3
6-11 years	1,476	915	62.0%	4,737	3.2	5.2	4,659.8	10.2
12-17 years	1,870	1,291	69.0%	9,023	4.8	7.0	5,656.0	16.0
18-49 years	15,309	11,764	76.8%	150,944	9.9	12.8	39,888.0	37.8
50+ years	6,113	4,808	78.7%	44,913	7.3	9.3	21,575.2	20.8
50-59 years	2,911	2,165	74.4%	23,605	8.1	10.9	9,490.9	24.9
60+ years	3,202	2,643	82.5%	21,308	6.7	8.1	12,084.3	17.6

Table 4e. Summary of Hospitalizations and Emergency Department (ED) Visits Among Patients With Sickle Cell Disease While Not Dispensed Hydroxyurea in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
2011-2015								
Total	43,223	34,437	79.7%	351,242	8.1	10.2	128,131.5	27.4
0-17 years	5,093	3,096	60.8%	14,745	2.9	4.8	13,783.5	10.7
0-5 years	2,593	1,581	61.0%	7,785	3.0	4.9	7,544.2	10.3
6-11 years	1,154	684	59.3%	2,880	2.5	4.2	2,796.2	10.3
12-17 years	1,346	831	61.7%	4,080	3.0	4.9	3,443.1	11.8
18-49 years	17,896	14,078	78.7%	192,668	10.8	13.7	48,408.7	39.8
50+ years	20,234	17,263	85.3%	143,829	7.1	8.3	65,939.3	21.8
50-59 years	5,316	4,422	83.2%	50,698	9.5	11.5	18,208.8	27.8
60+ years	14,918	12,841	86.1%	93,131	6.2	7.3	47,730.5	19.5
2016-2020								
Total	37,789	25,646	67.9%	137,112	3.6	5.3	54,361.9	25.2
0-17 years	3,101	1,750	56.4%	5,734	1.8	3.3	3,795.4	15.1
0-5 years	1,278	809	63.3%	2,898	2.3	3.6	1,660.6	17.5
6-11 years	852	455	53.4%	1,280	1.5	2.8	1,003.4	12.8
12-17 years	971	486	50.1%	1,556	1.6	3.2	1,131.4	13.8
18-49 years	13,873	9,698	69.9%	66,631	4.8	6.9	17,041.6	39.1
50+ years	20,815	14,198	68.2%	64,747	3.1	4.6	33,525.0	19.3
50-59 years	4,604	3,110	67.5%	17,814	3.9	5.7	7,015.9	25.4
60+ years	16,211	11,088	68.4%	46,933	2.9	4.2	26,509.1	17.7

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

Table 5a. Summary of Hospitalizations and Emergency Department (ED) Visits After Hydroxyurea Dispensing Among Patients With Sickle Cell Disease in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020

	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED visits	15,013	11,458	76.3%	229,031	15.3	20.0	47,144.4	48.6
Hospitalizations	15,013	11,096	73.9%	125,255	8.3	11.3	47,144.4	26.6
Hospitalizations or ED visits[1]	15,013	12,840	85.5%	338,738	22.6	26.4	47,144.4	71.9

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

Table 5b. Summary of Hospitalizations and Emergency Department (ED) Visits After Hydroxyurea Dispensing Among Patients With Sickle Cell Disease in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Age Group

Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED Visits								
Total	15,013	11,458	76.3%	229,031	15.3	20.0	47,144.4	48.6
0-17 years	2,227	1,539	69.1%	16,742	7.5	10.9	7,305.8	22.9
0-5 years	467	331	70.9%	2,718	5.8	8.2	1,465.9	18.5
6-11 years	844	582	69.0%	5,471	6.5	9.4	2,903.1	18.8
12-17 years	916	626	68.3%	8,553	9.3	13.7	2,936.9	29.1
18-49 years	10,686	8,544	80.0%	200,656	18.8	23.5	34,193.8	58.7
50+ years	2,100	1,375	65.5%	11,633	5.5	8.5	5,644.8	20.6
50-59 years	1,288	933	72.4%	8,835	6.9	9.5	3,932.4	22.5
60+ years	812	442	54.4%	2,798	3.4	6.3	1,712.5	16.3
Hospitalizations								
Total	15,013	11,096	73.9%	125,255	8.3	11.3	47,144.4	26.6
0-17 years	2,227	1,316	59.1%	9,594	4.3	7.3	7,305.8	13.1
0-5 years	467	256	54.8%	1,282	2.7	5.0	1,465.9	8.7
6-11 years	844	490	58.1%	3,050	3.6	6.2	2,903.1	10.5
12-17 years	916	570	62.2%	5,262	5.7	9.2	2,936.9	17.9
18-49 years	10,686	8,351	78.1%	104,740	9.8	12.5	34,193.8	30.6
50+ years	2,100	1,429	68.0%	10,921	5.2	7.6	5,644.8	19.3
50-59 years	1,288	950	73.8%	8,112	6.3	8.5	3,932.4	20.6
60+ years	812	479	59.0%	2,809	3.5	5.9	1,712.5	16.4
Hospitalizations or ED Visits[1]								
Total	15,013	12,840	85.5%	338,738	22.6	26.4	47,144.4	71.9
0-17 years	2,227	1,684	75.6%	22,291	10.0	13.2	7,305.8	30.5
0-5 years	467	361	77.3%	3,418	7.3	9.5	1,465.9	23.3
6-11 years	844	626	74.2%	7,250	8.6	11.6	2,903.1	25.0
12-17 years	916	697	76.1%	11,623	12.7	16.7	2,936.9	39.6
18-49 years	10,686	9,494	88.8%	294,522	27.6	31.0	34,193.8	86.1
50+ years	2,100	1,662	79.1%	21,925	10.4	13.2	5,644.8	38.8
50-59 years	1,288	1,096	85.1%	16,496	12.8	15.1	3,932.4	41.9
60+ years	812	566	69.7%	5,429	6.7	9.6	1,712.5	31.7

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

Table 5c. Summary of Hospitalizations and Emergency Department (ED) Visits After Hydroxyurea Dispensing Among Patients With Sickle Cell Disease in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year

Year	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED Visits								
Total	15,013	11,458	76.3%	229,031	15.3	20.0	47,144.4	48.6
2000	73	69	94.5%	3,762	51.5	54.5	595.8	63.1
2001	64	60	93.8%	2,627	41.0	43.8	495.6	53.0
2002	65	61	93.8%	3,140	48.3	51.5	566.6	55.4
2003	73	72	98.6%	3,364	46.1	46.7	564.2	59.6
2004	88	83	94.3%	4,094	46.5	49.3	624.9	65.5
2005	52	48	92.3%	2,188	42.1	45.6	340.2	64.3
2006	154	101	65.6%	2,237	14.5	22.1	616.3	36.3
2007	148	98	66.2%	1,830	12.4	18.7	600.3	30.5
2008	478	365	76.4%	5,285	11.1	14.5	1,628.9	32.4
2009	374	290	77.5%	4,144	11.1	14.3	1,415.1	29.3
2010	2,419	2,039	84.3%	56,036	23.2	27.5	11,333.0	49.4
2011	1,474	1,240	84.1%	36,013	24.4	29.0	6,173.4	58.3
2012	1,136	951	83.7%	22,405	19.7	23.6	4,186.6	53.5
2013	1,238	981	79.2%	21,019	17.0	21.4	4,096.8	51.3
2014	1,191	972	81.6%	14,765	12.4	15.2	3,610.4	40.9
2015	1,230	930	75.6%	13,073	10.6	14.1	3,230.7	40.5
2016	1,149	869	75.6%	12,697	11.1	14.6	2,529.2	50.2
2017	1,137	843	74.1%	9,458	8.3	11.2	2,108.0	44.9
2018	1,006	669	66.5%	6,567	6.5	9.8	1,414.2	46.4
2019	1,008	557	55.3%	3,511	3.5	6.3	854.1	41.1
2020	456	160	35.1%	816	1.8	5.1	160.3	50.9

Table 5c. Summary of Hospitalizations and Emergency Department (ED) Visits After Hydroxyurea Dispensing Among Patients With Sickle Cell Disease in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year

Year	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations								
Total	15,013	11,096	73.9%	125,255	8.3	11.3	47,144.4	26.6
2000	73	69	94.5%	2,135	29.2	30.9	595.8	35.8
2001	64	58	90.6%	1,930	30.2	33.3	495.6	38.9
2002	65	64	98.5%	1,681	25.9	26.3	566.6	29.7
2003	73	70	95.9%	1,720	23.6	24.6	564.2	30.5
2004	88	80	90.9%	1,835	20.9	22.9	624.9	29.4
2005	52	45	86.5%	921	17.7	20.5	340.2	27.1
2006	154	113	73.4%	1,212	7.9	10.7	616.3	19.7
2007	148	107	72.3%	1,049	7.1	9.8	600.3	17.5
2008	478	326	68.2%	2,604	5.4	8.0	1,628.9	16.0
2009	374	269	71.9%	1,983	5.3	7.4	1,415.1	14.0
2010	2,419	2,146	88.7%	33,131	13.7	15.4	11,333.0	29.2
2011	1,474	1,262	85.6%	19,771	13.4	15.7	6,173.4	32.0
2012	1,136	948	83.5%	12,760	11.2	13.5	4,186.6	30.5
2013	1,238	954	77.1%	11,031	8.9	11.6	4,096.8	26.9
2014	1,191	952	79.9%	8,375	7.0	8.8	3,610.4	23.2
2015	1,230	891	72.4%	7,348	6.0	8.2	3,230.7	22.7
2016	1,149	770	67.0%	5,629	4.9	7.3	2,529.2	22.3
2017	1,137	755	66.4%	4,779	4.2	6.3	2,108.0	22.7
2018	1,006	579	57.6%	3,096	3.1	5.3	1,414.2	21.9
2019	1,008	498	49.4%	1,919	1.9	3.9	854.1	22.5
2020	456	140	30.7%	346	0.8	2.5	160.3	21.6

Table 5c. Summary of Hospitalizations and Emergency Department (ED) Visits After Hydroxyurea Dispensing Among Patients With Sickle Cell Disease in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year

Year	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations or ED Visits[1]								
Total	15,013	12,840	85.5%	338,738	22.6	26.4	47,144.4	71.9
2000	73	70	95.9%	5,050	69.2	72.1	595.8	84.8
2001	64	60	93.8%	3,749	58.6	62.5	495.6	75.7
2002	65	65	100.0%	4,066	62.6	62.6	566.6	71.8
2003	73	72	98.6%	4,301	58.9	59.7	564.2	76.2
2004	88	85	96.6%	5,085	57.8	59.8	624.9	81.4
2005	52	48	92.3%	2,642	50.8	55.0	340.2	77.7
2006	154	126	81.8%	3,110	20.2	24.7	616.3	50.5
2007	148	118	79.7%	2,533	17.1	21.5	600.3	42.2
2008	478	390	81.6%	6,647	13.9	17.0	1,628.9	40.8
2009	374	318	85.0%	5,179	13.8	16.3	1,415.1	36.6
2010	2,419	2,282	94.3%	87,209	36.1	38.2	11,333.0	77.0
2011	1,474	1,367	92.7%	54,331	36.9	39.7	6,173.4	88.0
2012	1,136	1,049	92.3%	34,154	30.1	32.6	4,186.6	81.6
2013	1,238	1,093	88.3%	31,181	25.2	28.5	4,096.8	76.1
2014	1,191	1,077	90.4%	22,409	18.8	20.8	3,610.4	62.1
2015	1,230	1,047	85.1%	19,803	16.1	18.9	3,230.7	61.3
2016	1,149	954	83.0%	17,770	15.5	18.6	2,529.2	70.3
2017	1,137	942	82.8%	13,792	12.1	14.6	2,108.0	65.4
2018	1,006	762	75.7%	9,350	9.3	12.3	1,414.2	66.1
2019	1,008	692	68.7%	5,229	5.2	7.6	854.1	61.2
2020	456	223	48.9%	1,148	2.5	5.1	160.3	71.6

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

Table 5d. Summary of Hospitalizations and Emergency Department (ED) Visits After Hydroxyurea Dispensing Among Patients With Sickle Cell Disease in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Race

Race	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED Visits								
Total	15,013	12,840	85.5%	338,738	22.6	26.4	47,144.4	71.9
American Indian or Alaska Native	*****	*****	85.7%	*****	22.6	26.4	*****	64.0
Asian	29	21	72.4%	238	8.2	11.3	103.2	23.1
Black or African American	9,526	7,813	82.0%	189,718	19.9	24.3	34,082.1	55.7
Native Hawaiian or Other Pacific Islander	*****	*****	83.3%	*****	15.8	19.0	*****	40.0
White	328	199	60.7%	2,647	8.1	13.3	727.7	36.4
Unknown	5,096	3,396	66.6%	35,699	7.0	10.5	12,108.7	29.5
Hospitalization								
Total	15,013	11,096	73.9%	125,255	8.3	11.3	47,144.4	26.6
American Indian or Alaska Native	*****	*****	71.4%	*****	10.9	15.3	*****	30.9
Asian	29	19	65.5%	154	5.3	8.1	103.2	14.9
Black or African American	9,526	7,853	82.4%	104,205	10.9	13.3	34,082.1	30.6
Native Hawaiian or Other Pacific Islander	*****	*****	83.3%	*****	7.0	8.4	*****	17.7
White	328	216	65.9%	1,640	5.0	7.6	727.7	22.5
Unknown	5,096	2,983	58.5%	18,908	3.7	6.3	12,108.7	15.6

Table 5d. Summary of Hospitalizations and Emergency Department (ED) Visits After Hydroxyurea Dispensing Among Patients With Sickle Cell Disease in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Race

Race	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations or ED Visits[1]								
Total	15,013	12,840	85.5%	338,738	22.6	26.4	47,144.4	71.9
American Indian or Alaska Native	*****	*****	89.3%	*****	32.5	36.4	*****	91.8
Asian	29	23	79.3%	373	12.9	16.2	103.2	36.2
Black or African American	9,526	8,705	91.4%	284,363	29.9	32.7	34,082.1	83.4
Native Hawaiian or Other Pacific Islander	*****	*****	100.0%	*****	21.5	21.5	*****	54.3
White	328	256	78.0%	4,021	12.3	15.7	727.7	55.3
Unknown	5,096	3,825	75.1%	48,943	9.6	12.8	12,108.7	40.4

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

*****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 5e. Summary of Hospitalizations and Emergency Department (ED) Visits After Hydroxyurea Dispensing Among Patients With Sickle Cell Disease in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
ED Visits								
Total	15,013	11,458	76.3%	229,031	15.3	20.0	47,144.4	48.6
2000-2005								
Total	415	393	94.7%	19,175	46.2	48.8	3,187.2	60.2
0-17 years	135	128	94.8%	5,184	38.4	40.5	1,374.7	37.7
0-5 years	*****	*****	90.9%	*****	27.5	30.2	*****	21.8
6-11 years	*****	*****	94.2%	*****	26.6	28.2	*****	25.6
12-17 years	72	69	95.8%	3,500	48.6	50.7	695.4	50.3
18-49 years	266	254	95.5%	13,732	51.6	54.1	1,743.1	78.8
50+ years	14	11	78.6%	259	18.5	23.5	69.4	37.3
50-59 years	*****	*****	91.7%	*****	21.6	23.5	*****	37.8
60+ years	*****	*****	0.0%	*****	0.0	0.0	*****	0.0
2006-2010								
Total	3,573	2,893	81.0%	69,532	19.5	24.0	15,593.6	44.6
0-17 years	578	443	76.6%	5,699	9.9	12.9	2,478.1	23.0
0-5 years	*****	*****	82.7%	*****	10.0	12.1	*****	19.4
6-11 years	*****	*****	78.1%	*****	9.3	11.9	*****	19.9
12-17 years	256	187	73.0%	2,648	10.3	14.2	935.2	28.3
18-49 years	2,531	2,106	83.2%	60,208	23.8	28.6	11,226.0	53.6
50+ years	464	344	74.1%	3,625	7.8	10.5	1,889.5	19.2
50-59 years	*****	*****	76.2%	*****	8.2	10.7	*****	18.5
60+ years	*****	*****	68.3%	*****	6.8	10.0	*****	21.7

Table 5e. Summary of Hospitalizations and Emergency Department (ED) Visits After Hydroxyurea Dispensing Among Patients With Sickle Cell Disease in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
2011-2015								
Total	6,269	5,074	80.9%	107,275	17.1	21.1	21,297.9	50.4
0-17 years	804	583	72.5%	4,470	5.6	7.7	2,442.2	18.3
0-5 years	196	146	74.5%	1,138	5.8	7.8	607.7	18.7
6-11 years	310	213	68.7%	1,521	4.9	7.1	920.2	16.5
12-17 years	298	224	75.2%	1,811	6.1	8.1	914.3	19.8
18-49 years	4,631	3,889	84.0%	97,202	21.0	25.0	16,230.4	59.9
50+ years	834	602	72.2%	5,603	6.7	9.3	2,625.3	21.3
50-59 years	531	409	77.0%	4,251	8.0	10.4	1,764.0	24.1
60+ years	303	193	63.7%	1,352	4.5	7.0	861.3	15.7
2016-2020								
Total	4,756	3,098	65.1%	33,049	6.9	10.7	7,065.8	46.8
0-17 years	710	385	54.2%	1,389	2.0	3.6	1,010.9	13.7
0-5 years	162	94	58.0%	301	1.9	3.2	216.8	13.9
6-11 years	258	145	56.2%	494	1.9	3.4	402.2	12.3
12-17 years	290	146	50.3%	594	2.0	4.1	391.9	15.2
18-49 years	3,258	2,295	70.4%	29,514	9.1	12.9	4,994.3	59.1
50+ years	788	418	53.0%	2,146	2.7	5.1	1,060.6	20.2
50-59 years	404	253	62.6%	1,538	3.8	6.1	595.8	25.8
60+ years	384	165	43.0%	608	1.6	3.7	464.7	13.1

Table 5e. Summary of Hospitalizations and Emergency Department (ED) Visits After Hydroxyurea Dispensing Among Patients With Sickle Cell Disease in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations								
Total	15,013	11,096	73.9%	125,255	8.3	11.3	47,144.4	26.6
2000-2005								
Total	415	386	93.0%	10,222	24.6	26.5	3,187.2	32.1
0-17 years	135	128	94.8%	3,207	23.8	25.1	1,374.7	23.3
0-5 years	*****	*****	90.9%	*****	21.4	23.5	*****	17.0
6-11 years	*****	*****	94.2%	*****	17.8	18.9	*****	17.1
12-17 years	72	69	95.8%	2,047	28.4	29.7	695.4	29.4
18-49 years	266	247	92.9%	6,832	25.7	27.7	1,743.1	39.2
50+ years	14	11	78.6%	183	13.1	16.6	69.4	26.4
50-59 years	*****	*****	91.7%	*****	15.3	16.6	*****	26.7
60+ years	*****	*****	0.0%	*****	0.0	0.0	*****	0.0
2006-2010								
Total	3,573	2,961	82.9%	39,979	11.2	13.5	15,593.6	25.6
0-17 years	578	408	70.6%	3,006	5.2	7.4	2,478.1	12.1
0-5 years	*****	*****	70.4%	*****	5.1	7.2	*****	9.9
6-11 years	*****	*****	71.4%	*****	4.9	6.9	*****	10.6
12-17 years	256	179	69.9%	1,411	5.5	7.9	935.2	15.1
18-49 years	2,531	2,157	85.2%	33,177	13.1	15.4	11,226.0	29.6
50+ years	464	396	85.3%	3,796	8.2	9.6	1,889.5	20.1
50-59 years	*****	*****	88.6%	*****	8.8	9.9	*****	19.9
60+ years	*****	*****	76.4%	*****	6.6	8.6	*****	21.0

Table 5e. Summary of Hospitalizations and Emergency Department (ED) Visits After Hydroxyurea Dispensing Among Patients With Sickle Cell Disease in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
2011-2015								
Total	6,269	5,007	79.9%	59,285	9.5	11.8	21,297.9	27.8
0-17 years	804	509	63.3%	2,644	3.3	5.2	2,442.2	10.8
0-5 years	196	123	62.8%	444	2.3	3.6	607.7	7.3
6-11 years	310	177	57.1%	775	2.5	4.4	920.2	8.4
12-17 years	298	209	70.1%	1,425	4.8	6.8	914.3	15.6
18-49 years	4,631	3,869	83.5%	51,376	11.1	13.3	16,230.4	31.7
50+ years	834	629	75.4%	5,265	6.3	8.4	2,625.3	20.1
50-59 years	531	415	78.2%	3,877	7.3	9.3	1,764.0	22.0
60+ years	303	214	70.6%	1,388	4.6	6.5	861.3	16.1
2016-2020								
Total	4,756	2,742	57.7%	15,769	3.3	5.8	7,065.8	22.3
0-17 years	710	271	38.2%	737	1.0	2.7	1,010.9	7.3
0-5 years	162	54	33.3%	106	0.7	2.0	216.8	4.9
6-11 years	258	104	40.3%	252	1.0	2.4	402.2	6.3
12-17 years	290	113	39.0%	379	1.3	3.4	391.9	9.7
18-49 years	3,258	2,078	63.8%	13,355	4.1	6.4	4,994.3	26.7
50+ years	788	393	49.9%	1,677	2.1	4.3	1,060.6	15.8
50-59 years	404	222	55.0%	1,065	2.6	4.8	595.8	17.9
60+ years	384	171	44.5%	612	1.6	3.6	464.7	13.2

Table 5e. Summary of Hospitalizations and Emergency Department (ED) Visits After Hydroxyurea Dispensing Among Patients With Sickle Cell Disease in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
Hospitalizations or ED Visits[1]								
Total	15,013	12,840	85.5%	338,738	22.6	26.4	47,144.4	71.9
2000-2005								
Total	415	400	96.4%	24,893	60.0	62.2	3,187.2	78.1
0-17 years	135	132	97.8%	6,937	51.4	52.6	1,374.7	50.5
0-5 years	*****	*****	90.9%	*****	41.5	45.6	*****	32.9
6-11 years	*****	*****	98.1%	*****	36.4	37.2	*****	35.1
12-17 years	72	71	98.6%	4,586	63.7	64.6	695.4	65.9
18-49 years	266	257	96.6%	17,618	66.2	68.6	1,743.1	101.1
50+ years	14	11	78.6%	338	24.1	30.7	69.4	48.7
50-59 years	*****	*****	91.7%	*****	28.2	30.7	*****	49.4
60+ years	*****	*****	0.0%	*****	0.0	0.0	*****	0.0
2006-2010								
Total	3,573	3,234	90.5%	104,678	29.3	32.4	15,593.6	67.1
0-17 years	578	482	83.4%	7,286	12.6	15.1	2,478.1	29.4
0-5 years	*****	*****	86.7%	*****	12.3	14.2	*****	23.9
6-11 years	*****	*****	84.4%	*****	12.0	14.2	*****	25.8
12-17 years	256	208	81.3%	3,399	13.3	16.3	935.2	36.3
18-49 years	2,531	2,334	92.2%	90,183	35.6	38.6	11,226.0	80.3
50+ years	464	418	90.1%	7,209	15.5	17.2	1,889.5	38.2
50-59 years	341	315	92.4%	5,633	16.5	17.9	1,504.1	37.5
60+ years	123	103	83.7%	1,576	12.8	15.3	385.4	40.9

Table 5e. Summary of Hospitalizations and Emergency Department (ED) Visits After Hydroxyurea Dispensing Among Patients With Sickle Cell Disease in the Sentinel Distributed Database (SDD) from January 1, 2000 to September 30, 2020, by Year Group and Age Group

Year Group and Age Group	Patients with SCD Diagnosis (Number)	Patients with at Least One Event (Number)	Patients with an Event Among All Patients	Total Events	Average Number of Events Per Patient Among All Patients	Average Number of Events Per Patient Among Patients with Any Event	Patient-Years	Events Per 10 Patient-Years
2011-2015								
Total	6,269	5,633	89.9%	161,878	25.8	28.7	21,297.9	76.0
0-17 years	804	640	79.6%	6,161	7.7	9.6	2,442.2	25.2
0-5 years	196	164	83.7%	1,379	7.0	8.4	607.7	22.7
6-11 years	310	228	73.5%	2,001	6.5	8.8	920.2	21.7
12-17 years	298	248	83.2%	2,781	9.3	11.2	914.3	30.4
18-49 years	4,631	4,282	92.5%	145,059	31.3	33.9	16,230.4	89.4
50+ years	834	711	85.3%	10,658	12.8	15.0	2,625.3	40.6
50-59 years	531	472	88.9%	7,982	15.0	16.9	1,764.0	45.3
60+ years	303	239	78.9%	2,676	8.8	11.2	861.3	31.1
2016-2020								
Total	4,756	3,573	75.1%	47,289	9.9	13.2	7,065.8	66.9
0-17 years	710	430	60.6%	1,907	2.7	4.4	1,010.9	18.9
0-5 years	162	102	63.0%	380	2.3	3.7	216.8	17.5
6-11 years	258	158	61.2%	670	2.6	4.2	402.2	16.7
12-17 years	290	170	58.6%	857	3.0	5.0	391.9	21.9
18-49 years	3,258	2,621	80.4%	41,662	12.8	15.9	4,994.3	83.4
50+ years	788	522	66.2%	3,720	4.7	7.1	1,060.6	35.1
50-59 years	404	298	73.8%	2,543	6.3	8.5	595.8	42.7
60+ years	384	224	58.3%	1,177	3.1	5.3	464.7	25.3

[1]ED visits occuring on the same day as hospitalization admission are only counted once in this measure, thus the total events may be less than the sum of the ED visit and hospitalization measures combined.

*****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 6a. Summary of Time from Cohort Entry Until Censoring[1] in the Sentinel Distributed Database between January 1, 2000 and September 30, 2020

| | | Number of Patients by Time from Cohort Entry to Censoring | | | | | | | | | | | |
| | | 1 – <3 Months | | 3 – <6 Months | | 6 – <12 Months | | 1 – <2 Years | | 2 – <5 Years | | 5+ Years | |
	Total Number of Patients	Number of Patients	Percent of Total Patients	Number of Patients	Percent of Total Patients	Number of Patients	Percent of Total Patients	Number of Patients	Percent of Total Patients	Number of Patients	Percent of Total Patients	Number of Patients	Percent of Total Patients
Sickle Cell Disease and Without Specified Cancers[2]	113,036	12,118	10.7%	9,854	8.7%	13,740	12.2%	20,888	18.5%	33,690	29.8%	22,746	20.1%
Sickle Cell Disease While Not Dispensed Hydroxyurea	113,036	18,617	16.5%	10,453	9.2%	13,971	12.4%	20,054	17.7%	31,114	27.5%	18,827	16.7%
Sickle Cell Disease and Without Specified Cancers After Dispensed Hydroxyurea[2]	15,013	1,088	7.2%	1,334	8.9%	1,838	12.2%	2,862	19.1%	4,557	30.4%	3,334	22.2%

[1]See Appendix G for specifications of censoring criteria for each cohort.

[2]See Appendix C for a list of codes used to define specified cancers for which hydroxyurea may have been used to treat.

Table 6a. Summary of Time from Cohort Entry Until Censoring[1] in the Sentinel Distributed Database between January 1, 2000 and September 30, 2020

	Distribution of Length of Follow-up in Days, by Patient						
	Minimum	**Q1**	**Median**	**Q3**	**Maximum**	**Mean**	**Standard Deviation**
Sickle Cell Disease and Without Specified Cancers[2]	1	260	728	1,567	6,966	1,086	1,097
Sickle Cell Disease While Not Dispensed Hydroxyurea	1	175	587	1,375	6,966	946	1,028
Sickle Cell Disease and Without Specified Cancers After Dispensed Hydroxyurea[2]	0	314	791	1,662	6,918	1,147	1,082

[1]See Appendix G for specifications of censoring criteria for each cohort.

[2]See Appendix C for a list of codes used to define specified cancers for which hydroxyurea may have been used to treat.

Table 6b. Summary of Reasons for Censoring in the Sentinel Distributed Database between January 1, 2000 and September 30, 2020[1]

	Total Number of Episodes	Disenrollment		Death		Data Partner End Date		Query End Date		Cancer diagnosis among all patients or initiation of ≥30 days' supply of hydroxyurea among unexposed	
		Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes
Sickle Cell Disease and Without Specified Cancers[2]	113,036	86,891	76.9%	17,086	15.1%	33,824	29.9%	0	0.0%	5,571	4.9%
Sickle Cell Disease While Not Dispensed Hydroxyurea	113,036	77,015	68.1%	15,711	13.9%	30,124	26.6%	0	0.0%	17,172	15.2%
Sickle Cell Disease and Without Specified Cancers After Dispensed Hydroxyurea[2]	15,013	11,045	73.6%	1,507	10.0%	4,219	28.1%	0	0.0%	2,071	13.8%

[1]An episode may be censored due to more than one reason if they occur on the same date. Therefore, the sum of the reasons for censoring may be greater than the total number of patients.

[2]See Appendix C for a list of codes used to define specified cancers for which hydroxyurea may have been used to treat.

Masked ID	DP Start Date[1]	DP End Date[1]
DP01	01/01/2008	02/29/2020
DP02	06/01/2007	10/31/2019
DP03	01/01/2006	08/31/2020
DP04	01/01/2000	12/31/2018
DP05	01/01/2000	07/31/2019
DP06	01/01/2008	03/31/2020
DP07	01/01/2010	09/30/2020

[1]Start and end dates are based on the minimum and maximum dates within each DP. The month with the maximum date must have at least 80% of the number of records in the previous month.

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

Generic Name	Brand Name
Hydroxyurea	
hydroxyurea	Hydrea
hydroxyurea	Droxia
hydroxyurea	Hydroxyurea
hydroxyurea	Mylocel
hydroxyurea	Siklos

Code	Description	Code Type	Code Category
	Sickle Cell Disease (SCD)		
282.6	Sickle-cell disease	ICD-9-CM	Diagnosis
282.60	Sickle-cell disease, unspecified	ICD-9-CM	Diagnosis
282.61	Hb-SS disease without crisis	ICD-9-CM	Diagnosis
282.62	Hb-SS disease with crisis	ICD-9-CM	Diagnosis
282.63	Sickle-cell/Hb-C disease without crisis	ICD-9-CM	Diagnosis
282.64	Sickle-cell/Hb-C disease with crisis	ICD-9-CM	Diagnosis
282.68	Other sickle-cell disease without crisis	ICD-9-CM	Diagnosis
282.69	Other sickle-cell disease with crisis	ICD-9-CM	Diagnosis
D57.0	Hb-SS disease with crisis	ICD-10-CM	Diagnosis
D57.00	Hb-SS disease with crisis, unspecified	ICD-10-CM	Diagnosis
D57.01	Hb-SS disease with acute chest syndrome	ICD-10-CM	Diagnosis
D57.02	Hb-SS disease with splenic sequestration	ICD-10-CM	Diagnosis
D57.03	Hb-SS disease with cerebral vascular involvement	ICD-10-CM	Diagnosis
D57.09	Hb-SS disease with crisis with other specified complication	ICD-10-CM	Diagnosis
D57.1	Sickle-cell disease without crisis	ICD-10-CM	Diagnosis
D57.2	Sickle-cell/Hb-C disease	ICD-10-CM	Diagnosis
D57.20	Sickle-cell/Hb-C disease without crisis	ICD-10-CM	Diagnosis
D57.21	Sickle-cell/Hb-C disease with crisis	ICD-10-CM	Diagnosis
D57.211	Sickle-cell/Hb-C disease with acute chest syndrome	ICD-10-CM	Diagnosis
D57.212	Sickle-cell/Hb-C disease with splenic sequestration	ICD-10-CM	Diagnosis
D57.213	Sickle-cell/Hb-C disease with cerebral vascular involvement	ICD-10-CM	Diagnosis
D57.218	Sickle-cell/Hb-C disease with crisis with other specified complication	ICD-10-CM	Diagnosis
D57.219	Sickle-cell/Hb-C disease with crisis, unspecified	ICD-10-CM	Diagnosis
D57.8	Other sickle-cell disorders	ICD-10-CM	Diagnosis
D57.80	Other sickle-cell disorders without crisis	ICD-10-CM	Diagnosis
D57.81	Other sickle-cell disorders with crisis	ICD-10-CM	Diagnosis
D57.811	Other sickle-cell disorders with acute chest syndrome	ICD-10-CM	Diagnosis
D57.812	Other sickle-cell disorders with splenic sequestration	ICD-10-CM	Diagnosis
D57.813	Other sickle-cell disorders with cerebral vascular involvement	ICD-10-CM	Diagnosis
D57.818	Other sickle-cell disorders with crisis with other specified complication	ICD-10-CM	Diagnosis
D57.819	Other sickle-cell disorders with crisis, unspecified	ICD-10-CM	Diagnosis
	Specific Cancers which may be Treated with Hydroxyurea		
171.0	Malignant neoplasm of connective and other soft tissue of head, face, and neck	ICD-9-CM	Diagnosis
173.42	Squamous cell carcinoma of scalp and skin of neck	ICD-9-CM	Diagnosis
173.92	Squamous cell carcinoma of skin, site unspecified	ICD-9-CM	Diagnosis
192.1	Malignant neoplasm of cerebral meninges	ICD-9-CM	Diagnosis
192.3	Malignant neoplasm of spinal meninges	ICD-9-CM	Diagnosis
195.0	Malignant neoplasm of head, face, and neck	ICD-9-CM	Diagnosis
205.1	Chronic myeloid leukemia	ICD-9-CM	Diagnosis
205.10	Chronic myeloid leukemia, without mention of having achieved remission	ICD-9-CM	Diagnosis
205.11	Chronic myeloid leukemia in remission	ICD-9-CM	Diagnosis
205.12	Chronic myeloid leukemia, in relapse	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
238.4	Neoplasm of uncertain behavior of polycythemia vera	ICD-9-CM	Diagnosis
238.71	Essential thrombocythemia	ICD-9-CM	Diagnosis
289.0	Polycythemia, secondary	ICD-9-CM	Diagnosis
289.6	Familial polycythemia	ICD-9-CM	Diagnosis
C44.42	Squamous cell carcinoma of skin of scalp and neck	ICD-10-CM	Diagnosis
C44.92	Squamous cell carcinoma of skin, unspecified	ICD-10-CM	Diagnosis
C49.0	Malignant neoplasm of connective and soft tissue of head, face and neck	ICD-10-CM	Diagnosis
C70	Malignant neoplasm of meninges	ICD-10-CM	Diagnosis
C70.0	Malignant neoplasm of cerebral meninges	ICD-10-CM	Diagnosis
C70.1	Malignant neoplasm of spinal meninges	ICD-10-CM	Diagnosis
C70.9	Malignant neoplasm of meninges, unspecified	ICD-10-CM	Diagnosis
C76.0	Malignant neoplasm of head, face and neck	ICD-10-CM	Diagnosis
C92.1	Chronic myeloid leukemia, BCR/ABL-positive	ICD-10-CM	Diagnosis
C92.10	Chronic myeloid leukemia, BCR/ABL-positive, not having achieved remission	ICD-10-CM	Diagnosis
C92.11	Chronic myeloid leukemia, BCR/ABL-positive, in remission	ICD-10-CM	Diagnosis
C92.12	Chronic myeloid leukemia, BCR/ABL-positive, in relapse	ICD-10-CM	Diagnosis
C92.2	Atypical chronic myeloid leukemia, BCR/ABL-negative	ICD-10-CM	Diagnosis
C92.20	Atypical chronic myeloid leukemia, BCR/ABL-negative, not having achieved	ICD-10-CM	Diagnosis
C92.21	Atypical chronic myeloid leukemia, BCR/ABL-negative, in remission	ICD-10-CM	Diagnosis
C92.22	Atypical chronic myeloid leukemia, BCR/ABL-negative, in relapse	ICD-10-CM	Diagnosis
D45	Polycythemia vera	ICD-10-CM	Diagnosis
D47.3	Essential (hemorrhagic) thrombocythemia	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
Acute Myeloid Leukemia			
205.0	Acute myeloid leukemia	ICD-9-CM	Diagnosis
205.00	Acute myeloid leukemia, without mention of having achieved remission	ICD-9-CM	Diagnosis
205.01	Acute myeloid leukemia in remission	ICD-9-CM	Diagnosis
205.02	Acute myeloid leukemia, in relapse	ICD-9-CM	Diagnosis
C92.6	Acute myeloid leukemia with 11q23-abnormality	ICD-10-CM	Diagnosis
C92.60	Acute myeloid leukemia with 11q23-abnormality not having achieved remission	ICD-10-CM	Diagnosis
C92.61	Acute myeloid leukemia with 11q23-abnormality in remission	ICD-10-CM	Diagnosis
C92.62	Acute myeloid leukemia with 11q23-abnormality in relapse	ICD-10-CM	Diagnosis
C92.A	Acute myeloid leukemia with multilineage dysplasia	ICD-10-CM	Diagnosis
C92.A0	Acute myeloid leukemia with multilineage dysplasia, not having achieved remission	ICD-10-CM	Diagnosis
C92.A1	Acute myeloid leukemia with multilineage dysplasia, in remission	ICD-10-CM	Diagnosis
C92.A2	Acute myeloid leukemia with multilineage dysplasia, in relapse	ICD-10-CM	Diagnosis
Acute Chest Syndrome			
517.3	Acute chest syndrome	ICD-9-CM	Diagnosis
D57.01	Hb-SS disease with acute chest syndrome	ICD-10-CM	Diagnosis
D57.211	Sickle-cell/Hb-C disease with acute chest syndrome	ICD-10-CM	Diagnosis
D57.411	Sickle-cell thalassemia, unspecified, with acute chest syndrome	ICD-10-CM	Diagnosis
D57.811	Other sickle-cell disorders with acute chest syndrome	ICD-10-CM	Diagnosis
Acquired Hypothyroidism			
244.0	Postsurgical hypothyroidism	ICD-9-CM	Diagnosis
244.1	Other postablative hypothyroidism	ICD-9-CM	Diagnosis
244.2	Iodine hypothyroidism	ICD-9-CM	Diagnosis
244.3	Other iatrogenic hypothyroidism	ICD-9-CM	Diagnosis
244.8	Other specified acquired hypothyroidism	ICD-9-CM	Diagnosis
244.9	Unspecified hypothyroidism	ICD-9-CM	Diagnosis
E01.8	Other iodine-deficiency related thyroid disorders and allied conditions	ICD-10-CM	Diagnosis
E02	Subclinical iodine-deficiency hypothyroidism	ICD-10-CM	Diagnosis
E03.2	Hypothyroidism due to medicaments and other exogenous substances	ICD-10-CM	Diagnosis
E03.3	Postinfectious hypothyroidism	ICD-10-CM	Diagnosis
E03.8	Other specified hypothyroidism	ICD-10-CM	Diagnosis
E03.9	Hypothyroidism, unspecified	ICD-10-CM	Diagnosis
E89.0	Postprocedural hypothyroidism	ICD-10-CM	Diagnosis
Acute Myocardial Infarction			
410.01	Acute myocardial infarction of anterolateral wall, initial episode of care	ICD-9-CM	Diagnosis
410.11	Acute myocardial infarction of other anterior wall, initial episode of care	ICD-9-CM	Diagnosis
410.21	Acute myocardial infarction of inferolateral wall, initial episode of care	ICD-9-CM	Diagnosis
410.31	Acute myocardial infarction of inferoposterior wall, initial episode of care	ICD-9-CM	Diagnosis
410.41	Acute myocardial infarction of other inferior wall, initial episode of care	ICD-9-CM	Diagnosis
410.51	Acute myocardial infarction of other lateral wall, initial episode of care	ICD-9-CM	Diagnosis
410.61	Acute myocardial infarction, true posterior wall infarction, initial episode of care	ICD-9-CM	Diagnosis
410.71	Acute myocardial infarction, subendocardial infarction, initial episode of care	ICD-9-CM	Diagnosis
410.81	Acute myocardial infarction of other specified sites, initial episode of care	ICD-9-CM	Diagnosis
410.91	Acute myocardial infarction, unspecified site, initial episode of care	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
I21.01	ST elevation (STEMI) myocardial infarction involving left main coronary artery	ICD-10-CM	Diagnosis
I21.02	ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery	ICD-10-CM	Diagnosis
I21.09	ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall	ICD-10-CM	Diagnosis
I21.11	ST elevation (STEMI) myocardial infarction involving right coronary artery	ICD-10-CM	Diagnosis
I21.19	ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall	ICD-10-CM	Diagnosis
I21.21	ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery	ICD-10-CM	Diagnosis
I21.29	ST elevation (STEMI) myocardial infarction involving other sites	ICD-10-CM	Diagnosis
I21.3	ST elevation (STEMI) myocardial infarction of unspecified site	ICD-10-CM	Diagnosis
I21.4	Non-ST elevation (NSTEMI) myocardial infarction	ICD-10-CM	Diagnosis
I21.9	Acute myocardial infarction, unspecified	ICD-10-CM	Diagnosis
I21.A1	Myocardial infarction type 2	ICD-10-CM	Diagnosis
I21.A9	Other myocardial infarction type	ICD-10-CM	Diagnosis
I22.0	Subsequent ST elevation (STEMI) myocardial infarction of anterior wall	ICD-10-CM	Diagnosis
I22.1	Subsequent ST elevation (STEMI) myocardial infarction of inferior wall	ICD-10-CM	Diagnosis
I22.2	Subsequent non-ST elevation (NSTEMI) myocardial infarction	ICD-10-CM	Diagnosis
I22.8	Subsequent ST elevation (STEMI) myocardial infarction of other sites	ICD-10-CM	Diagnosis
I22.9	Subsequent ST elevation (STEMI) myocardial infarction of unspecified site	ICD-10-CM	Diagnosis
Alzheimer's Disease and Related Disorders			
290.0	Senile dementia, uncomplicated	ICD-9-CM	Diagnosis
290.10	Presenile dementia, uncomplicated	ICD-9-CM	Diagnosis
290.11	Presenile dementia with delirium	ICD-9-CM	Diagnosis
290.12	Presenile dementia with delusional features	ICD-9-CM	Diagnosis
290.13	Presenile dementia with depressive features	ICD-9-CM	Diagnosis
290.20	Senile dementia with delusional features	ICD-9-CM	Diagnosis
290.21	Senile dementia with depressive features	ICD-9-CM	Diagnosis
290.3	Senile dementia with delirium	ICD-9-CM	Diagnosis
290.40	Vascular dementia, uncomplicated	ICD-9-CM	Diagnosis
290.41	Vascular dementia, with delirium	ICD-9-CM	Diagnosis
290.42	Vascular dementia, with delusions	ICD-9-CM	Diagnosis
290.43	Vascular dementia, with depressed mood	ICD-9-CM	Diagnosis
294.0	Amnestic disorder in conditions classified elsewhere	ICD-9-CM	Diagnosis
294.10	Dementia in conditions classified elsewhere without behavioral disturbance	ICD-9-CM	Diagnosis
294.11	Dementia in conditions classified elsewhere with behavioral disturbance	ICD-9-CM	Diagnosis
294.20	Dementia, unspecified, without behavioral disturbance	ICD-9-CM	Diagnosis
294.21	Dementia, unspecified, with behavioral disturbance	ICD-9-CM	Diagnosis
294.8	Other persistent mental disorders due to conditions classified elsewhere	ICD-9-CM	Diagnosis
331.0	Alzheimer's disease	ICD-9-CM	Diagnosis
331.11	Pick's disease	ICD-9-CM	Diagnosis
331.19	Other frontotemporal dementia	ICD-9-CM	Diagnosis
331.2	Senile degeneration of brain	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
331.7	Cerebral degeneration in diseases classified elsewhere	ICD-9-CM	Diagnosis
797	Senility without mention of psychosis	ICD-9-CM	Diagnosis
F01.50	Vascular dementia without behavioral disturbance	ICD-10-CM	Diagnosis
F01.51	Vascular dementia with behavioral disturbance	ICD-10-CM	Diagnosis
F02.80	Dementia in other diseases classified elsewhere without behavioral disturbance	ICD-10-CM	Diagnosis
F02.81	Dementia in other diseases classified elsewhere with behavioral disturbance	ICD-10-CM	Diagnosis
F03.90	Unspecified dementia without behavioral disturbance	ICD-10-CM	Diagnosis
F03.91	Unspecified dementia with behavioral disturbance	ICD-10-CM	Diagnosis
F04	Amnestic disorder due to known physiological condition	ICD-10-CM	Diagnosis
F05	Delirium due to known physiological condition	ICD-10-CM	Diagnosis
F06.1	Catatonic disorder due to known physiological condition	ICD-10-CM	Diagnosis
F06.8	Other specified mental disorders due to known physiological condition	ICD-10-CM	Diagnosis
G13.8	Systemic atrophy primarily affecting central nervous system in other diseases classified elsewhere	ICD-10-CM	Diagnosis
G30.0	Alzheimer's disease with early onset	ICD-10-CM	Diagnosis
G30.1	Alzheimer's disease with late onset	ICD-10-CM	Diagnosis
G30.8	Other Alzheimer's disease	ICD-10-CM	Diagnosis
G30.9	Alzheimer's disease, unspecified	ICD-10-CM	Diagnosis
G31.01	Pick's disease	ICD-10-CM	Diagnosis
G31.09	Other frontotemporal dementia	ICD-10-CM	Diagnosis
G31.1	Senile degeneration of brain, not elsewhere classified	ICD-10-CM	Diagnosis
G31.2	Degeneration of nervous system due to alcohol	ICD-10-CM	Diagnosis
G94	Other disorders of brain in diseases classified elsewhere	ICD-10-CM	Diagnosis
R41.81	Age-related cognitive decline	ICD-10-CM	Diagnosis
R54	Age-related physical debility	ICD-10-CM	Diagnosis
Anemia			
280.0	Iron deficiency anemia secondary to blood loss (chronic)	ICD-9-CM	Diagnosis
280.1	Iron deficiency anemia secondary to inadequate dietary iron intake	ICD-9-CM	Diagnosis
280.8	Other specified iron deficiency anemias	ICD-9-CM	Diagnosis
280.9	Unspecified iron deficiency anemia	ICD-9-CM	Diagnosis
281.0	Pernicious anemia	ICD-9-CM	Diagnosis
281.1	Other vitamin B12 deficiency anemia	ICD-9-CM	Diagnosis
281.2	Folate-deficiency anemia	ICD-9-CM	Diagnosis
281.3	Other specified megaloblastic anemias not elsewhere classified	ICD-9-CM	Diagnosis
281.4	Protein-deficiency anemia	ICD-9-CM	Diagnosis
281.8	Anemia associated with other specified nutritional deficiency	ICD-9-CM	Diagnosis
281.9	Unspecified deficiency anemia	ICD-9-CM	Diagnosis
282.0	Hereditary spherocytosis	ICD-9-CM	Diagnosis
282.1	Hereditary elliptocytosis	ICD-9-CM	Diagnosis
282.2	Anemias due to disorders of glutathione metabolism	ICD-9-CM	Diagnosis
282.3	Other hemolytic anemias due to enzyme deficiency	ICD-9-CM	Diagnosis
282.40	Thalassemia, unspecified	ICD-9-CM	Diagnosis
282.41	Sickle-cell thalassemia without crisis	ICD-9-CM	Diagnosis
282.42	Sickle-cell thalassemia with crisis	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
282.43	Alpha thalassemia	ICD-9-CM	Diagnosis
282.44	Beta thalassemia	ICD-9-CM	Diagnosis
282.45	Delta-beta thalassemia	ICD-9-CM	Diagnosis
282.46	Thalassemia minor	ICD-9-CM	Diagnosis
282.47	Hemoglobin E-beta thalassemia	ICD-9-CM	Diagnosis
282.49	Other thalassemia	ICD-9-CM	Diagnosis
282.5	Sickle-cell trait	ICD-9-CM	Diagnosis
282.60	Sickle-cell disease, unspecified	ICD-9-CM	Diagnosis
282.61	Hb-SS disease without crisis	ICD-9-CM	Diagnosis
282.62	Hb-SS disease with crisis	ICD-9-CM	Diagnosis
282.63	Sickle-cell/Hb-C disease without crisis	ICD-9-CM	Diagnosis
282.64	Sickle-cell/Hb-C disease with crisis	ICD-9-CM	Diagnosis
282.68	Other sickle-cell disease without crisis	ICD-9-CM	Diagnosis
282.69	Other sickle-cell disease with crisis	ICD-9-CM	Diagnosis
282.7	Other hemoglobinopathies	ICD-9-CM	Diagnosis
282.8	Other specified hereditary hemolytic anemias	ICD-9-CM	Diagnosis
282.9	Unspecified hereditary hemolytic anemia	ICD-9-CM	Diagnosis
283.0	Autoimmune hemolytic anemias	ICD-9-CM	Diagnosis
283.10	Unspecified non-autoimmune hemolytic anemia	ICD-9-CM	Diagnosis
283.11	Hemolytic-uremic syndrome	ICD-9-CM	Diagnosis
283.19	Other non-autoimmune hemolytic anemias	ICD-9-CM	Diagnosis
283.2	Hemoglobinuria due to hemolysis from external causes	ICD-9-CM	Diagnosis
283.9	Acquired hemolytic anemia, unspecified	ICD-9-CM	Diagnosis
284.01	Constitutional red blood cell aplasia	ICD-9-CM	Diagnosis
284.09	Other constitutional aplastic anemia	ICD-9-CM	Diagnosis
284.11	Antineoplastic chemotherapy induced pancytopenia	ICD-9-CM	Diagnosis
284.12	Other drug induced pancytopenia	ICD-9-CM	Diagnosis
284.19	Other pancytopenia	ICD-9-CM	Diagnosis
284.2	Myelophthisis	ICD-9-CM	Diagnosis
284.81	Red cell aplasia (acquired) (adult) (with thymoma)	ICD-9-CM	Diagnosis
284.89	Other specified aplastic anemias	ICD-9-CM	Diagnosis
284.9	Unspecified aplastic anemia	ICD-9-CM	Diagnosis
285.0	Sideroblastic anemia	ICD-9-CM	Diagnosis
285.1	Acute posthemorrhagic anemia	ICD-9-CM	Diagnosis
285.21	Anemia in chronic kidney disease	ICD-9-CM	Diagnosis
285.22	Anemia in neoplastic disease	ICD-9-CM	Diagnosis
285.29	Anemia of other chronic disease	ICD-9-CM	Diagnosis
285.3	Antineoplastic chemotherapy induced anemia	ICD-9-CM	Diagnosis
285.8	Other specified anemias	ICD-9-CM	Diagnosis
285.9	Unspecified anemia	ICD-9-CM	Diagnosis
D50.0	Iron deficiency anemia secondary to blood loss (chronic)	ICD-10-CM	Diagnosis
D50.1	Sideropenic dysphagia	ICD-10-CM	Diagnosis
D50.8	Other iron deficiency anemias	ICD-10-CM	Diagnosis
D50.9	Iron deficiency anemia, unspecified	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
D51.0	Vitamin B12 deficiency anemia due to intrinsic factor deficiency	ICD-10-CM	Diagnosis
D51.1	Vitamin B12 deficiency anemia due to selective vitamin B12 malabsorption with proteinuria	ICD-10-CM	Diagnosis
D51.2	Transcobalamin II deficiency	ICD-10-CM	Diagnosis
D51.3	Other dietary vitamin B12 deficiency anemia	ICD-10-CM	Diagnosis
D51.8	Other vitamin B12 deficiency anemias	ICD-10-CM	Diagnosis
D51.9	Vitamin B12 deficiency anemia, unspecified	ICD-10-CM	Diagnosis
D52.0	Dietary folate deficiency anemia	ICD-10-CM	Diagnosis
D52.1	Drug-induced folate deficiency anemia	ICD-10-CM	Diagnosis
D52.8	Other folate deficiency anemias	ICD-10-CM	Diagnosis
D52.9	Folate deficiency anemia, unspecified	ICD-10-CM	Diagnosis
D53.0	Protein deficiency anemia	ICD-10-CM	Diagnosis
D53.1	Other megaloblastic anemias, not elsewhere classified	ICD-10-CM	Diagnosis
D53.2	Scorbutic anemia	ICD-10-CM	Diagnosis
D53.8	Other specified nutritional anemias	ICD-10-CM	Diagnosis
D53.9	Nutritional anemia, unspecified	ICD-10-CM	Diagnosis
D55.0	Anemia due to glucose-6-phosphate dehydrogenase [G6PD] deficiency	ICD-10-CM	Diagnosis
D55.1	Anemia due to other disorders of glutathione metabolism	ICD-10-CM	Diagnosis
D55.2	Anemia due to disorders of glycolytic enzymes	ICD-10-CM	Diagnosis
D55.3	Anemia due to disorders of nucleotide metabolism	ICD-10-CM	Diagnosis
D55.8	Other anemias due to enzyme disorders	ICD-10-CM	Diagnosis
D55.9	Anemia due to enzyme disorder, unspecified	ICD-10-CM	Diagnosis
D56.0	Alpha thalassemia	ICD-10-CM	Diagnosis
D56.1	Beta thalassemia	ICD-10-CM	Diagnosis
D56.2	Delta-beta thalassemia	ICD-10-CM	Diagnosis
D56.3	Thalassemia minor	ICD-10-CM	Diagnosis
D56.4	Hereditary persistence of fetal hemoglobin [HPFH]	ICD-10-CM	Diagnosis
D56.5	Hemoglobin E-beta thalassemia	ICD-10-CM	Diagnosis
D56.8	Other thalassemias	ICD-10-CM	Diagnosis
D56.9	Thalassemia, unspecified	ICD-10-CM	Diagnosis
D57.00	Hb-SS disease with crisis, unspecified	ICD-10-CM	Diagnosis
D57.01	Hb-SS disease with acute chest syndrome	ICD-10-CM	Diagnosis
D57.02	Hb-SS disease with splenic sequestration	ICD-10-CM	Diagnosis
D57.03	Hb-SS disease with cerebral vascular involvement	ICD-10-CM	Diagnosis
D57.09	Hb-SS disease with crisis with other specified complication	ICD-10-CM	Diagnosis
D57.1	Sickle-cell disease without crisis	ICD-10-CM	Diagnosis
D57.20	Sickle-cell/Hb-C disease without crisis	ICD-10-CM	Diagnosis
D57.211	Sickle-cell/Hb-C disease with acute chest syndrome	ICD-10-CM	Diagnosis
D57.212	Sickle-cell/Hb-C disease with splenic sequestration	ICD-10-CM	Diagnosis
D57.213	Sickle-cell/Hb-C disease with cerebral vascular involvement	ICD-10-CM	Diagnosis
D57.218	Sickle-cell/Hb-C disease with crisis with other specified complication	ICD-10-CM	Diagnosis
D57.219	Sickle-cell/Hb-C disease with crisis, unspecified	ICD-10-CM	Diagnosis
D57.3	Sickle-cell trait	ICD-10-CM	Diagnosis
D57.40	Sickle-cell thalassemia without crisis	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
D57.411	Sickle-cell thalassemia, unspecified, with acute chest syndrome	ICD-10-CM	Diagnosis
D57.412	Sickle-cell thalassemia, unspecified, with splenic sequestration	ICD-10-CM	Diagnosis
D57.413	Sickle-cell thalassemia, unspecified, with cerebral vascular involvement	ICD-10-CM	Diagnosis
D57.418	Sickle-cell thalassemia, unspecified, with crisis with other specified complication	ICD-10-CM	Diagnosis
D57.419	Sickle-cell thalassemia, unspecified, with crisis	ICD-10-CM	Diagnosis
D57.42	Sickle-cell thalassemia beta zero without crisis	ICD-10-CM	Diagnosis
D57.431	Sickle-cell thalassemia beta zero with acute chest syndrome	ICD-10-CM	Diagnosis
D57.432	Sickle-cell thalassemia beta zero with splenic sequestration	ICD-10-CM	Diagnosis
D57.433	Sickle-cell thalassemia beta zero with cerebral vascular involvement	ICD-10-CM	Diagnosis
D57.438	Sickle-cell thalassemia beta zero with crisis with other specified complication	ICD-10-CM	Diagnosis
D57.439	Sickle-cell thalassemia beta zero with crisis, unspecified	ICD-10-CM	Diagnosis
D57.44	Sickle-cell thalassemia beta plus without crisis	ICD-10-CM	Diagnosis
D57.451	Sickle-cell thalassemia beta plus with acute chest syndrome	ICD-10-CM	Diagnosis
D57.452	Sickle-cell thalassemia beta plus with splenic sequestration	ICD-10-CM	Diagnosis
D57.453	Sickle-cell thalassemia beta plus with cerebral vascular involvement	ICD-10-CM	Diagnosis
D57.458	Sickle-cell thalassemia beta plus with crisis with other specified complication	ICD-10-CM	Diagnosis
D57.459	Sickle-cell thalassemia beta plus with crisis, unspecified	ICD-10-CM	Diagnosis
D57.80	Other sickle-cell disorders without crisis	ICD-10-CM	Diagnosis
D57.811	Other sickle-cell disorders with acute chest syndrome	ICD-10-CM	Diagnosis
D57.812	Other sickle-cell disorders with splenic sequestration	ICD-10-CM	Diagnosis
D57.813	Other sickle-cell disorders with cerebral vascular involvement	ICD-10-CM	Diagnosis
D57.818	Other sickle-cell disorders with crisis with other specified complication	ICD-10-CM	Diagnosis
D57.819	Other sickle-cell disorders with crisis, unspecified	ICD-10-CM	Diagnosis
D58.0	Hereditary spherocytosis	ICD-10-CM	Diagnosis
D58.1	Hereditary elliptocytosis	ICD-10-CM	Diagnosis
D58.2	Other hemoglobinopathies	ICD-10-CM	Diagnosis
D58.8	Other specified hereditary hemolytic anemias	ICD-10-CM	Diagnosis
D58.9	Hereditary hemolytic anemia, unspecified	ICD-10-CM	Diagnosis
D59.0	Drug-induced autoimmune hemolytic anemia	ICD-10-CM	Diagnosis
D59.1	Other autoimmune hemolytic anemias	ICD-10-CM	Diagnosis
D59.10	Autoimmune hemolytic anemia, unspecified	ICD-10-CM	Diagnosis
D59.11	Warm autoimmune hemolytic anemia	ICD-10-CM	Diagnosis
D59.12	Cold autoimmune hemolytic anemia	ICD-10-CM	Diagnosis
D59.13	Mixed type autoimmune hemolytic anemia	ICD-10-CM	Diagnosis
D59.19	Other autoimmune hemolytic anemia	ICD-10-CM	Diagnosis
D59.2	Drug-induced nonautoimmune hemolytic anemia	ICD-10-CM	Diagnosis
D59.3	Hemolytic-uremic syndrome	ICD-10-CM	Diagnosis
D59.4	Other nonautoimmune hemolytic anemias	ICD-10-CM	Diagnosis
D59.5	Paroxysmal nocturnal hemoglobinuria [Marchiafava-Micheli]	ICD-10-CM	Diagnosis
D59.6	Hemoglobinuria due to hemolysis from other external causes	ICD-10-CM	Diagnosis
D59.8	Other acquired hemolytic anemias	ICD-10-CM	Diagnosis
D59.9	Acquired hemolytic anemia, unspecified	ICD-10-CM	Diagnosis
D60.0	Chronic acquired pure red cell aplasia	ICD-10-CM	Diagnosis
D60.1	Transient acquired pure red cell aplasia	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
D60.8	Other acquired pure red cell aplasias	ICD-10-CM	Diagnosis
D60.9	Acquired pure red cell aplasia, unspecified	ICD-10-CM	Diagnosis
D61.01	Constitutional (pure) red blood cell aplasia	ICD-10-CM	Diagnosis
D61.09	Other constitutional aplastic anemia	ICD-10-CM	Diagnosis
D61.1	Drug-induced aplastic anemia	ICD-10-CM	Diagnosis
D61.2	Aplastic anemia due to other external agents	ICD-10-CM	Diagnosis
D61.3	Idiopathic aplastic anemia	ICD-10-CM	Diagnosis
D61.810	Antineoplastic chemotherapy induced pancytopenia	ICD-10-CM	Diagnosis
D61.811	Other drug-induced pancytopenia	ICD-10-CM	Diagnosis
D61.818	Other pancytopenia	ICD-10-CM	Diagnosis
D61.82	Myelophthisis	ICD-10-CM	Diagnosis
D61.89	Other specified aplastic anemias and other bone marrow failure syndromes	ICD-10-CM	Diagnosis
D61.9	Aplastic anemia, unspecified	ICD-10-CM	Diagnosis
D62	Acute posthemorrhagic anemia	ICD-10-CM	Diagnosis
D63.0	Anemia in neoplastic disease	ICD-10-CM	Diagnosis
D63.1	Anemia in chronic kidney disease	ICD-10-CM	Diagnosis
D63.8	Anemia in other chronic diseases classified elsewhere	ICD-10-CM	Diagnosis
D64.0	Hereditary sideroblastic anemia	ICD-10-CM	Diagnosis
D64.1	Secondary sideroblastic anemia due to disease	ICD-10-CM	Diagnosis
D64.2	Secondary sideroblastic anemia due to drugs and toxins	ICD-10-CM	Diagnosis
D64.3	Other sideroblastic anemias	ICD-10-CM	Diagnosis
D64.4	Congenital dyserythropoietic anemia	ICD-10-CM	Diagnosis
D64.81	Anemia due to antineoplastic chemotherapy	ICD-10-CM	Diagnosis
D64.89	Other specified anemias	ICD-10-CM	Diagnosis
D64.9	Anemia, unspecified	ICD-10-CM	Diagnosis
Asthma			
493.00	Extrinsic asthma, unspecified	ICD-9-CM	Diagnosis
493.01	Extrinsic asthma with status asthmaticus	ICD-9-CM	Diagnosis
493.02	Extrinsic asthma, with (acute) exacerbation	ICD-9-CM	Diagnosis
493.10	Intrinsic asthma, unspecified	ICD-9-CM	Diagnosis
493.11	Intrinsic asthma with status asthmaticus	ICD-9-CM	Diagnosis
493.12	Intrinsic asthma, with (acute) exacerbation	ICD-9-CM	Diagnosis
493.20	Chronic obstructive asthma, unspecified	ICD-9-CM	Diagnosis
493.21	Chronic obstructive asthma with status asthmaticus	ICD-9-CM	Diagnosis
493.22	Chronic obstructive asthma, with (acute) exacerbation	ICD-9-CM	Diagnosis
493.81	Exercise induced bronchospasm	ICD-9-CM	Diagnosis
493.82	Cough variant asthma	ICD-9-CM	Diagnosis
493.90	Asthma, unspecified, unspecified status	ICD-9-CM	Diagnosis
493.91	Asthma, unspecified with status asthmaticus	ICD-9-CM	Diagnosis
493.92	Asthma, unspecified, with (acute) exacerbation	ICD-9-CM	Diagnosis
J45.20	Mild intermittent asthma, uncomplicated	ICD-10-CM	Diagnosis
J45.21	Mild intermittent asthma with (acute) exacerbation	ICD-10-CM	Diagnosis
J45.22	Mild intermittent asthma with status asthmaticus	ICD-10-CM	Diagnosis
J45.30	Mild persistent asthma, uncomplicated	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
J45.31	Mild persistent asthma with (acute) exacerbation	ICD-10-CM	Diagnosis
J45.32	Mild persistent asthma with status asthmaticus	ICD-10-CM	Diagnosis
J45.40	Moderate persistent asthma, uncomplicated	ICD-10-CM	Diagnosis
J45.41	Moderate persistent asthma with (acute) exacerbation	ICD-10-CM	Diagnosis
J45.42	Moderate persistent asthma with status asthmaticus	ICD-10-CM	Diagnosis
J45.50	Severe persistent asthma, uncomplicated	ICD-10-CM	Diagnosis
J45.51	Severe persistent asthma with (acute) exacerbation	ICD-10-CM	Diagnosis
J45.52	Severe persistent asthma with status asthmaticus	ICD-10-CM	Diagnosis
J45.901	Unspecified asthma with (acute) exacerbation	ICD-10-CM	Diagnosis
J45.902	Unspecified asthma with status asthmaticus	ICD-10-CM	Diagnosis
J45.909	Unspecified asthma, uncomplicated	ICD-10-CM	Diagnosis
J45.990	Exercise induced bronchospasm	ICD-10-CM	Diagnosis
J45.991	Cough variant asthma	ICD-10-CM	Diagnosis
J45.998	Other asthma	ICD-10-CM	Diagnosis
Atrial Fibrillation			
427.31	Atrial fibrillation	ICD-9-CM	Diagnosis
I48.0	Paroxysmal atrial fibrillation	ICD-10-CM	Diagnosis
I48.1	Persistent atrial fibrillation	ICD-10-CM	Diagnosis
I48.2	Chronic atrial fibrillation	ICD-10-CM	Diagnosis
I48.91	Unspecified atrial fibrillation	ICD-10-CM	Diagnosis
I48.11	Longstanding persistent atrial fibrillation	ICD-10-CM	Diagnosis
I48.19	Other persistent atrial fibrillation	ICD-10-CM	Diagnosis
I48.20	Chronic atrial fibrillation, unspecified	ICD-10-CM	Diagnosis
I48.21	Permanent atrial fibrillation	ICD-10-CM	Diagnosis
Benign Prostatic Hyperplasia			
600.00	Hypertrophy (benign) of prostate without urinary obstruction and other lower urinary tract symptoms [LUTS]	ICD-9-CM	Diagnosis
600.01	Hypertrophy (benign) of prostate with urinary obstruction and other lower urinary tract symptoms [LUTS]	ICD-9-CM	Diagnosis
600.10	Nodular prostate without urinary obstruction	ICD-9-CM	Diagnosis
600.11	Nodular prostate with urinary obstruction	ICD-9-CM	Diagnosis
600.20	Benign localized hyperplasia of prostate without urinary obstruction and other lower urinary tract symptoms [LUTS]	ICD-9-CM	Diagnosis
600.21	Benign localized hyperplasia of prostate with urinary obstruction and other lower urinary tract symptoms [LUTS]	ICD-9-CM	Diagnosis
600.3	Cyst of prostate	ICD-9-CM	Diagnosis
600.90	Hyperplasia of prostate, unspecified, without urinary obstruction and other lower urinary tract symptoms [LUTS]	ICD-9-CM	Diagnosis
600.91	Hyperplasia of prostate, unspecified, with urinary obstruction and other lower urinary tract symptoms [LUTS]	ICD-9-CM	Diagnosis
N40.0	Benign prostatic hyperplasia without lower urinary tract symptoms	ICD-10-CM	Diagnosis
N40.1	Benign prostatic hyperplasia with lower urinary tract symptoms	ICD-10-CM	Diagnosis
N40.2	Nodular prostate without lower urinary tract symptoms	ICD-10-CM	Diagnosis
N40.3	Nodular prostate with lower urinary tract symptoms	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
N42.83	Cyst of prostate	ICD-10-CM	Diagnosis
Benign Prostatic Hyperplasia Exclusion			
222.2	Benign neoplasm of prostate	ICD-9-CM	Diagnosis
D29.1	Benign neoplasm of prostate	ICD-10-CM	Diagnosis
Breast Cancer			
174.0	Malignant neoplasm of nipple and areola of female breast	ICD-9-CM	Diagnosis
174.1	Malignant neoplasm of central portion of female breast	ICD-9-CM	Diagnosis
174.2	Malignant neoplasm of upper-inner quadrant of female breast	ICD-9-CM	Diagnosis
174.3	Malignant neoplasm of lower-inner quadrant of female breast	ICD-9-CM	Diagnosis
174.4	Malignant neoplasm of upper-outer quadrant of female breast	ICD-9-CM	Diagnosis
174.5	Malignant neoplasm of lower-outer quadrant of female breast	ICD-9-CM	Diagnosis
174.6	Malignant neoplasm of axillary tail of female breast	ICD-9-CM	Diagnosis
174.8	Malignant neoplasm of other specified sites of female breast	ICD-9-CM	Diagnosis
174.9	Malignant neoplasm of breast (female), unspecified site	ICD-9-CM	Diagnosis
175.0	Malignant neoplasm of nipple and areola of male breast	ICD-9-CM	Diagnosis
175.9	Malignant neoplasm of other and unspecified sites of male breast	ICD-9-CM	Diagnosis
233.0	Carcinoma in situ of breast	ICD-9-CM	Diagnosis
V10.3	Personal history of malignant neoplasm of breast	ICD-9-CM	Diagnosis
C50.011	Malignant neoplasm of nipple and areola, right female breast	ICD-10-CM	Diagnosis
C50.012	Malignant neoplasm of nipple and areola, left female breast	ICD-10-CM	Diagnosis
C50.019	Malignant neoplasm of nipple and areola, unspecified female breast	ICD-10-CM	Diagnosis
C50.021	Malignant neoplasm of nipple and areola, right male breast	ICD-10-CM	Diagnosis
C50.022	Malignant neoplasm of nipple and areola, left male breast	ICD-10-CM	Diagnosis
C50.029	Malignant neoplasm of nipple and areola, unspecified male breast	ICD-10-CM	Diagnosis
C50.111	Malignant neoplasm of central portion of right female breast	ICD-10-CM	Diagnosis
C50.112	Malignant neoplasm of central portion of left female breast	ICD-10-CM	Diagnosis
C50.119	Malignant neoplasm of central portion of unspecified female breast	ICD-10-CM	Diagnosis
C50.121	Malignant neoplasm of central portion of right male breast	ICD-10-CM	Diagnosis
C50.122	Malignant neoplasm of central portion of left male breast	ICD-10-CM	Diagnosis
C50.129	Malignant neoplasm of central portion of unspecified male breast	ICD-10-CM	Diagnosis
C50.211	Malignant neoplasm of upper-inner quadrant of right female breast	ICD-10-CM	Diagnosis
C50.212	Malignant neoplasm of upper-inner quadrant of left female breast	ICD-10-CM	Diagnosis
C50.219	Malignant neoplasm of upper-inner quadrant of unspecified female breast	ICD-10-CM	Diagnosis
C50.221	Malignant neoplasm of upper-inner quadrant of right male breast	ICD-10-CM	Diagnosis
C50.222	Malignant neoplasm of upper-inner quadrant of left male breast	ICD-10-CM	Diagnosis
C50.229	Malignant neoplasm of upper-inner quadrant of unspecified male breast	ICD-10-CM	Diagnosis
C50.311	Malignant neoplasm of lower-inner quadrant of right female breast	ICD-10-CM	Diagnosis
C50.312	Malignant neoplasm of lower-inner quadrant of left female breast	ICD-10-CM	Diagnosis
C50.319	Malignant neoplasm of lower-inner quadrant of unspecified female breast	ICD-10-CM	Diagnosis
C50.321	Malignant neoplasm of lower-inner quadrant of right male breast	ICD-10-CM	Diagnosis
C50.322	Malignant neoplasm of lower-inner quadrant of left male breast	ICD-10-CM	Diagnosis
C50.329	Malignant neoplasm of lower-inner quadrant of unspecified male breast	ICD-10-CM	Diagnosis
C50.411	Malignant neoplasm of upper-outer quadrant of right female breast	ICD-10-CM	Diagnosis
C50.412	Malignant neoplasm of upper-outer quadrant of left female breast	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
C50.419	Malignant neoplasm of upper-outer quadrant of unspecified female breast	ICD-10-CM	Diagnosis
C50.421	Malignant neoplasm of upper-outer quadrant of right male breast	ICD-10-CM	Diagnosis
C50.422	Malignant neoplasm of upper-outer quadrant of left male breast	ICD-10-CM	Diagnosis
C50.429	Malignant neoplasm of upper-outer quadrant of unspecified male breast	ICD-10-CM	Diagnosis
C50.511	Malignant neoplasm of lower-outer quadrant of right female breast	ICD-10-CM	Diagnosis
C50.512	Malignant neoplasm of lower-outer quadrant of left female breast	ICD-10-CM	Diagnosis
C50.519	Malignant neoplasm of lower-outer quadrant of unspecified female breast	ICD-10-CM	Diagnosis
C50.521	Malignant neoplasm of lower-outer quadrant of right male breast	ICD-10-CM	Diagnosis
C50.522	Malignant neoplasm of lower-outer quadrant of left male breast	ICD-10-CM	Diagnosis
C50.529	Malignant neoplasm of lower-outer quadrant of unspecified male breast	ICD-10-CM	Diagnosis
C50.611	Malignant neoplasm of axillary tail of right female breast	ICD-10-CM	Diagnosis
C50.612	Malignant neoplasm of axillary tail of left female breast	ICD-10-CM	Diagnosis
C50.619	Malignant neoplasm of axillary tail of unspecified female breast	ICD-10-CM	Diagnosis
C50.621	Malignant neoplasm of axillary tail of right male breast	ICD-10-CM	Diagnosis
C50.622	Malignant neoplasm of axillary tail of left male breast	ICD-10-CM	Diagnosis
C50.629	Malignant neoplasm of axillary tail of unspecified male breast	ICD-10-CM	Diagnosis
C50.811	Malignant neoplasm of overlapping sites of right female breast	ICD-10-CM	Diagnosis
C50.812	Malignant neoplasm of overlapping sites of left female breast	ICD-10-CM	Diagnosis
C50.819	Malignant neoplasm of overlapping sites of unspecified female breast	ICD-10-CM	Diagnosis
C50.821	Malignant neoplasm of overlapping sites of right male breast	ICD-10-CM	Diagnosis
C50.822	Malignant neoplasm of overlapping sites of left male breast	ICD-10-CM	Diagnosis
C50.829	Malignant neoplasm of overlapping sites of unspecified male breast	ICD-10-CM	Diagnosis
C50.911	Malignant neoplasm of unspecified site of right female breast	ICD-10-CM	Diagnosis
C50.912	Malignant neoplasm of unspecified site of left female breast	ICD-10-CM	Diagnosis
C50.919	Malignant neoplasm of unspecified site of unspecified female breast	ICD-10-CM	Diagnosis
C50.921	Malignant neoplasm of unspecified site of right male breast	ICD-10-CM	Diagnosis
C50.922	Malignant neoplasm of unspecified site of left male breast	ICD-10-CM	Diagnosis
C50.929	Malignant neoplasm of unspecified site of unspecified male breast	ICD-10-CM	Diagnosis
D05.00	Lobular carcinoma in situ of unspecified breast	ICD-10-CM	Diagnosis
D05.01	Lobular carcinoma in situ of right breast	ICD-10-CM	Diagnosis
D05.02	Lobular carcinoma in situ of left breast	ICD-10-CM	Diagnosis
D05.10	Intraductal carcinoma in situ of unspecified breast	ICD-10-CM	Diagnosis
D05.11	Intraductal carcinoma in situ of right breast	ICD-10-CM	Diagnosis
D05.12	Intraductal carcinoma in situ of left breast	ICD-10-CM	Diagnosis
D05.80	Other specified type of carcinoma in situ of unspecified breast	ICD-10-CM	Diagnosis
D05.81	Other specified type of carcinoma in situ of right breast	ICD-10-CM	Diagnosis
D05.82	Other specified type of carcinoma in situ of left breast	ICD-10-CM	Diagnosis
D05.90	Unspecified type of carcinoma in situ of unspecified breast	ICD-10-CM	Diagnosis
D05.91	Unspecified type of carcinoma in situ of right breast	ICD-10-CM	Diagnosis
D05.92	Unspecified type of carcinoma in situ of left breast	ICD-10-CM	Diagnosis
Z85.3	Personal history of malignant neoplasm of breast	ICD-10-CM	Diagnosis
Chronic Kidney Disease			
016.00	Tuberculosis of kidney, confirmation unspecified	ICD-9-CM	Diagnosis
016.01	Tuberculosis of kidney, bacteriological or histological examination not done	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
016.02	Tuberculosis of kidney, bacteriological or histological examination unknown (at present)	ICD-9-CM	Diagnosis
016.03	Tuberculosis of kidney, tubercle bacilli found (in sputum) by microscopy	ICD-9-CM	Diagnosis
016.04	Tuberculosis of kidney, tubercle bacilli not found (in sputum) by microscopy, but found by bacterial culture	ICD-9-CM	Diagnosis
016.05	Tuberculosis of kidney, tubercle bacilli not found by bacteriological examination, but tuberculosis confirmed histologically	ICD-9-CM	Diagnosis
016.06	Tuberculosis of kidney, tubercle bacilli not found by bacteriological or histological examination, but tuberculosis confirmed by other methods [inoculation of animals]	ICD-9-CM	Diagnosis
095.4	Syphilis of kidney	ICD-9-CM	Diagnosis
189.0	Malignant neoplasm of kidney, except pelvis	ICD-9-CM	Diagnosis
189.9	Malignant neoplasm of urinary organ, site unspecified	ICD-9-CM	Diagnosis
223.0	Benign neoplasm of kidney, except pelvis	ICD-9-CM	Diagnosis
236.91	Neoplasm of uncertain behavior of kidney and ureter	ICD-9-CM	Diagnosis
249.40	Secondary diabetes mellitus with renal manifestations, not stated as uncontrolled, or unspecified	ICD-9-CM	Diagnosis
249.41	Secondary diabetes mellitus with renal manifestations, uncontrolled	ICD-9-CM	Diagnosis
250.40	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.41	Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.42	Diabetes with renal manifestations, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.43	Diabetes with renal manifestations, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
271.4	Renal glycosuria	ICD-9-CM	Diagnosis
274.10	Gouty nephropathy, unspecified	ICD-9-CM	Diagnosis
283.11	Hemolytic-uremic syndrome	ICD-9-CM	Diagnosis
403.01	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
403.11	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
403.91	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.02	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.12	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.92	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
440.1	Atherosclerosis of renal artery	ICD-9-CM	Diagnosis
442.1	Aneurysm of renal artery	ICD-9-CM	Diagnosis
572.4	Hepatorenal syndrome	ICD-9-CM	Diagnosis
580.0	Acute glomerulonephritis with lesion of proliferative glomerulonephritis	ICD-9-CM	Diagnosis
580.4	Acute glomerulonephritis with lesion of rapidly progressive glomerulonephritis	ICD-9-CM	Diagnosis
580.81	Acute glomerulonephritis with other specified pathological lesion in kidney in disease classified elsewhere	ICD-9-CM	Diagnosis
580.89	Other acute glomerulonephritis with other specified pathological lesion in kidney	ICD-9-CM	Diagnosis
580.9	Acute glomerulonephritis with unspecified pathological lesion in kidney	ICD-9-CM	Diagnosis
581.0	Nephrotic syndrome with lesion of proliferative glomerulonephritis	ICD-9-CM	Diagnosis
581.1	Nephrotic syndrome with lesion of membranous glomerulonephritis	ICD-9-CM	Diagnosis
581.2	Nephrotic syndrome with lesion of membranoproliferative glomerulonephritis	ICD-9-CM	Diagnosis
581.3	Nephrotic syndrome with lesion of minimal change glomerulonephritis	ICD-9-CM	Diagnosis
581.81	Nephrotic syndrome with other specified pathological lesion in kidney in diseases classified elsewhere	ICD-9-CM	Diagnosis
581.89	Other nephrotic syndrome with specified pathological lesion in kidney	ICD-9-CM	Diagnosis
581.9	Nephrotic syndrome with unspecified pathological lesion in kidney	ICD-9-CM	Diagnosis
582.0	Chronic glomerulonephritis with lesion of proliferative glomerulonephritis	ICD-9-CM	Diagnosis
582.1	Chronic glomerulonephritis with lesion of membranous glomerulonephritis	ICD-9-CM	Diagnosis
582.2	Chronic glomerulonephritis with lesion of membranoproliferative glomerulonephritis	ICD-9-CM	Diagnosis
582.4	Chronic glomerulonephritis with lesion of rapidly progressive glomerulonephritis	ICD-9-CM	Diagnosis
582.81	Chronic glomerulonephritis with other specified pathological lesion in kidney in diseases classified elsewhere	ICD-9-CM	Diagnosis
582.89	Other chronic glomerulonephritis with specified pathological lesion in kidney	ICD-9-CM	Diagnosis
582.9	Chronic glomerulonephritis with unspecified pathological lesion in kidney	ICD-9-CM	Diagnosis
583.0	Nephritis and nephropathy, not specified as acute or chronic, with lesion of proliferative glomerulonephritis	ICD-9-CM	Diagnosis
583.1	Nephritis and nephropathy, not specified as acute or chronic, with lesion of membranous glomerulonephritis	ICD-9-CM	Diagnosis
583.2	Nephritis and nephropathy, not specified as acute or chronic, with lesion of membranoproliferative glomerulonephritis	ICD-9-CM	Diagnosis
583.4	Nephritis and nephropathy, not specified as acute or chronic, with lesion of rapidly progressive glomerulonephritis	ICD-9-CM	Diagnosis
583.6	Nephritis and nephropathy, not specified as acute or chronic, with lesion of renal cortical necrosis	ICD-9-CM	Diagnosis
583.7	Nephritis and nephropathy, not specified as acute or chronic, with lesion of renal medullary necrosis	ICD-9-CM	Diagnosis
583.81	Nephritis and nephropathy, not specified as acute or chronic, with other specified pathological lesion in kidney, in diseases classified elsewhere	ICD-9-CM	Diagnosis
583.89	Other nephritis and nephropathy, not specified as acute or chronic, with specified pathological lesion in kidney	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
583.9	Nephritis and nephropathy, not specified as acute or chronic, with unspecified pathological lesion in kidney	ICD-9-CM	Diagnosis
584.5	Acute kidney failure with lesion of tubular necrosis	ICD-9-CM	Diagnosis
584.6	Acute kidney failure with lesion of renal cortical necrosis	ICD-9-CM	Diagnosis
584.7	Acute kidney failure with lesion of medullary [papillary] necrosis	ICD-9-CM	Diagnosis
584.8	Acute kidney failure with other specified pathological lesion in kidney	ICD-9-CM	Diagnosis
584.9	Acute kidney failure, unspecified	ICD-9-CM	Diagnosis
585.1	Chronic kidney disease, Stage I	ICD-9-CM	Diagnosis
585.2	Chronic kidney disease, Stage II (mild)	ICD-9-CM	Diagnosis
585.3	Chronic kidney disease, Stage III (moderate)	ICD-9-CM	Diagnosis
585.4	Chronic kidney disease, Stage IV (severe)	ICD-9-CM	Diagnosis
585.5	Chronic kidney disease, Stage V	ICD-9-CM	Diagnosis
585.6	End stage renal disease	ICD-9-CM	Diagnosis
585.9	Chronic kidney disease, unspecified	ICD-9-CM	Diagnosis
586	Unspecified renal failure	ICD-9-CM	Diagnosis
587	Unspecified renal sclerosis	ICD-9-CM	Diagnosis
588.0	Renal osteodystrophy	ICD-9-CM	Diagnosis
588.1	Nephrogenic diabetes insipidus	ICD-9-CM	Diagnosis
588.81	Secondary hyperparathyroidism (of renal origin)	ICD-9-CM	Diagnosis
588.89	Other specified disorders resulting from impaired renal function	ICD-9-CM	Diagnosis
588.9	Unspecified disorder resulting from impaired renal function	ICD-9-CM	Diagnosis
591	Hydronephrosis	ICD-9-CM	Diagnosis
753.12	Congenital polycystic kidney, unspecified type	ICD-9-CM	Diagnosis
753.13	Congenital polycystic kidney, autosomal dominant	ICD-9-CM	Diagnosis
753.14	Congenital polycystic kidney, autosomal recessive	ICD-9-CM	Diagnosis
753.15	Congenital renal dysplasia	ICD-9-CM	Diagnosis
753.16	Congenital medullary cystic kidney	ICD-9-CM	Diagnosis
753.17	Congenital medullary sponge kidney	ICD-9-CM	Diagnosis
753.19	Other specified congenital cystic kidney disease	ICD-9-CM	Diagnosis
753.20	Unspecified obstructive defect of renal pelvis and ureter	ICD-9-CM	Diagnosis
753.21	Congenital obstruction of ureteropelvic junction	ICD-9-CM	Diagnosis
753.22	Congenital obstruction of ureterovesical junction	ICD-9-CM	Diagnosis
753.23	Congenital ureterocele	ICD-9-CM	Diagnosis
753.29	Other obstructive defect of renal pelvis and ureter	ICD-9-CM	Diagnosis
794.4	Nonspecific abnormal results of kidney function study	ICD-9-CM	Diagnosis
A18.11	Tuberculosis of kidney and ureter	ICD-10-CM	Diagnosis
A52.75	Syphilis of kidney and ureter	ICD-10-CM	Diagnosis
B52.0	Plasmodium malariae malaria with nephropathy	ICD-10-CM	Diagnosis
C64.1	Malignant neoplasm of right kidney, except renal pelvis	ICD-10-CM	Diagnosis
C64.2	Malignant neoplasm of left kidney, except renal pelvis	ICD-10-CM	Diagnosis
C64.9	Malignant neoplasm of unspecified kidney, except renal pelvis	ICD-10-CM	Diagnosis
C68.9	Malignant neoplasm of urinary organ, unspecified	ICD-10-CM	Diagnosis
D30.00	Benign neoplasm of unspecified kidney	ICD-10-CM	Diagnosis
D30.01	Benign neoplasm of right kidney	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
D30.02	Benign neoplasm of left kidney	ICD-10-CM	Diagnosis
D41.00	Neoplasm of uncertain behavior of unspecified kidney	ICD-10-CM	Diagnosis
D41.01	Neoplasm of uncertain behavior of right kidney	ICD-10-CM	Diagnosis
D41.02	Neoplasm of uncertain behavior of left kidney	ICD-10-CM	Diagnosis
D41.10	Neoplasm of uncertain behavior of unspecified renal pelvis	ICD-10-CM	Diagnosis
D41.11	Neoplasm of uncertain behavior of right renal pelvis	ICD-10-CM	Diagnosis
D41.12	Neoplasm of uncertain behavior of left renal pelvis	ICD-10-CM	Diagnosis
D41.20	Neoplasm of uncertain behavior of unspecified ureter	ICD-10-CM	Diagnosis
D41.21	Neoplasm of uncertain behavior of right ureter	ICD-10-CM	Diagnosis
D41.22	Neoplasm of uncertain behavior of left ureter	ICD-10-CM	Diagnosis
D59.3	Hemolytic-uremic syndrome	ICD-10-CM	Diagnosis
E08.21	Diabetes mellitus due to underlying condition with diabetic nephropathy	ICD-10-CM	Diagnosis
E08.22	Diabetes mellitus due to underlying condition with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E08.29	Diabetes mellitus due to underlying condition with other diabetic kidney complication	ICD-10-CM	Diagnosis
E08.65	Diabetes mellitus due to underlying condition with hyperglycemia	ICD-10-CM	Diagnosis
E09.21	Drug or chemical induced diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis
E09.22	Drug or chemical induced diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E09.29	Drug or chemical induced diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E10.21	Type 1 diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis
E10.22	Type 1 diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E10.29	Type 1 diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E10.65	Type 1 diabetes mellitus with hyperglycemia	ICD-10-CM	Diagnosis
E11.21	Type 2 diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis
E11.22	Type 2 diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E11.29	Type 2 diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E11.65	Type 2 diabetes mellitus with hyperglycemia	ICD-10-CM	Diagnosis
E13.21	Other specified diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis
E13.22	Other specified diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E13.29	Other specified diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E74.8	Other specified disorders of carbohydrate metabolism	ICD-10-CM	Diagnosis
I12.0	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease	ICD-10-CM	Diagnosis
I12.9	Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.0	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.10	Hypertensive heart and chronic kidney disease without heart failure, with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.11	Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
I13.2	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM	Diagnosis
I70.1	Atherosclerosis of renal artery	ICD-10-CM	Diagnosis
I72.2	Aneurysm of renal artery	ICD-10-CM	Diagnosis
K76.7	Hepatorenal syndrome	ICD-10-CM	Diagnosis
M10.30	Gout due to renal impairment, unspecified site	ICD-10-CM	Diagnosis
M10.311	Gout due to renal impairment, right shoulder	ICD-10-CM	Diagnosis
M10.312	Gout due to renal impairment, left shoulder	ICD-10-CM	Diagnosis
M10.319	Gout due to renal impairment, unspecified shoulder	ICD-10-CM	Diagnosis
M10.321	Gout due to renal impairment, right elbow	ICD-10-CM	Diagnosis
M10.322	Gout due to renal impairment, left elbow	ICD-10-CM	Diagnosis
M10.329	Gout due to renal impairment, unspecified elbow	ICD-10-CM	Diagnosis
M10.331	Gout due to renal impairment, right wrist	ICD-10-CM	Diagnosis
M10.332	Gout due to renal impairment, left wrist	ICD-10-CM	Diagnosis
M10.339	Gout due to renal impairment, unspecified wrist	ICD-10-CM	Diagnosis
M10.341	Gout due to renal impairment, right hand	ICD-10-CM	Diagnosis
M10.342	Gout due to renal impairment, left hand	ICD-10-CM	Diagnosis
M10.349	Gout due to renal impairment, unspecified hand	ICD-10-CM	Diagnosis
M10.351	Gout due to renal impairment, right hip	ICD-10-CM	Diagnosis
M10.352	Gout due to renal impairment, left hip	ICD-10-CM	Diagnosis
M10.359	Gout due to renal impairment, unspecified hip	ICD-10-CM	Diagnosis
M10.361	Gout due to renal impairment, right knee	ICD-10-CM	Diagnosis
M10.362	Gout due to renal impairment, left knee	ICD-10-CM	Diagnosis
M10.369	Gout due to renal impairment, unspecified knee	ICD-10-CM	Diagnosis
M10.371	Gout due to renal impairment, right ankle and foot	ICD-10-CM	Diagnosis
M10.372	Gout due to renal impairment, left ankle and foot	ICD-10-CM	Sentinel
M10.379	Gout due to renal impairment, unspecified ankle and foot	ICD-10-CM	Diagnosis
M10.38	Gout due to renal impairment, vertebrae	ICD-10-CM	Diagnosis
M10.39	Gout due to renal impairment, multiple sites	ICD-10-CM	Diagnosis
M32.14	Glomerular disease in systemic lupus erythematosus	ICD-10-CM	Diagnosis
M32.15	Tubulo-interstitial nephropathy in systemic lupus erythematosus	ICD-10-CM	Diagnosis
M35.04	Sicca syndrome with tubulo-interstitial nephropathy	ICD-10-CM	Diagnosis
N00.0	Acute nephritic syndrome with minor glomerular abnormality	ICD-10-CM	Diagnosis
N00.1	Acute nephritic syndrome with focal and segmental glomerular lesions	ICD-10-CM	Diagnosis
N00.2	Acute nephritic syndrome with diffuse membranous glomerulonephritis	ICD-10-CM	Diagnosis
N00.3	Acute nephritic syndrome with diffuse mesangial proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N00.4	Acute nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N00.5	Acute nephritic syndrome with diffuse mesangiocapillary glomerulonephritis	ICD-10-CM	Diagnosis
N00.6	Acute nephritic syndrome with dense deposit disease	ICD-10-CM	Diagnosis
N00.7	Acute nephritic syndrome with diffuse crescentic glomerulonephritis	ICD-10-CM	Diagnosis
N00.8	Acute nephritic syndrome with other morphologic changes	ICD-10-CM	Diagnosis
N00.9	Acute nephritic syndrome with unspecified morphologic changes	ICD-10-CM	Diagnosis

Appendix D. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
N00.A	Acute nephritic syndrome with C3 glomerulonephritis	ICD-10-CM	Diagnosis
N01.0	Rapidly progressive nephritic syndrome with minor glomerular abnormality	ICD-10-CM	Diagnosis
N01.1	Rapidly progressive nephritic syndrome with focal and segmental glomerular lesions	ICD-10-CM	Diagnosis
N01.2	Rapidly progressive nephritic syndrome with diffuse membranous glomerulonephritis	ICD-10-CM	Diagnosis
N01.3	Rapidly progressive nephritic syndrome with diffuse mesangial proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N01.4	Rapidly progressive nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N01.5	Rapidly progressive nephritic syndrome with diffuse mesangiocapillary glomerulonephritis	ICD-10-CM	Diagnosis
N01.6	Rapidly progressive nephritic syndrome with dense deposit disease	ICD-10-CM	Diagnosis
N01.7	Rapidly progressive nephritic syndrome with diffuse crescentic glomerulonephritis	ICD-10-CM	Diagnosis
N01.8	Rapidly progressive nephritic syndrome with other morphologic changes	ICD-10-CM	Diagnosis
N01.9	Rapidly progressive nephritic syndrome with unspecified morphologic changes	ICD-10-CM	Diagnosis
N01.A	Rapidly progressive nephritic syndrome with C3 glomerulonephritis	ICD-10-CM	Diagnosis
N02.0	Recurrent and persistent hematuria with minor glomerular abnormality	ICD-10-CM	Diagnosis
N02.1	Recurrent and persistent hematuria with focal and segmental glomerular lesions	ICD-10-CM	Diagnosis
N02.2	Recurrent and persistent hematuria with diffuse membranous glomerulonephritis	ICD-10-CM	Diagnosis
N02.3	Recurrent and persistent hematuria with diffuse mesangial proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N02.4	Recurrent and persistent hematuria with diffuse endocapillary proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N02.5	Recurrent and persistent hematuria with diffuse mesangiocapillary glomerulonephritis	ICD-10-CM	Diagnosis
N02.6	Recurrent and persistent hematuria with dense deposit disease	ICD-10-CM	Diagnosis
N02.7	Recurrent and persistent hematuria with diffuse crescentic glomerulonephritis	ICD-10-CM	Diagnosis
N02.8	Recurrent and persistent hematuria with other morphologic changes	ICD-10-CM	Diagnosis
N02.9	Recurrent and persistent hematuria with unspecified morphologic changes	ICD-10-CM	Diagnosis
N02.A	Recurrent and persistent hematuria with C3 glomerulonephritis	ICD-10-CM	Diagnosis
N03.0	Chronic nephritic syndrome with minor glomerular abnormality	ICD-10-CM	Diagnosis
N03.1	Chronic nephritic syndrome with focal and segmental glomerular lesions	ICD-10-CM	Diagnosis
N03.2	Chronic nephritic syndrome with diffuse membranous glomerulonephritis	ICD-10-CM	Diagnosis
N03.3	Chronic nephritic syndrome with diffuse mesangial proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N03.4	Chronic nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N03.5	Chronic nephritic syndrome with diffuse mesangiocapillary glomerulonephritis	ICD-10-CM	Diagnosis
N03.6	Chronic nephritic syndrome with dense deposit disease	ICD-10-CM	Diagnosis
N03.7	Chronic nephritic syndrome with diffuse crescentic glomerulonephritis	ICD-10-CM	Diagnosis
N03.8	Chronic nephritic syndrome with other morphologic changes	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
N03.9	Chronic nephritic syndrome with unspecified morphologic changes	ICD-10-CM	Diagnosis
N03.A	Chronic nephritic syndrome with C3 glomerulonephritis	ICD-10-CM	Diagnosis
N04.0	Nephrotic syndrome with minor glomerular abnormality	ICD-10-CM	Diagnosis
N04.1	Nephrotic syndrome with focal and segmental glomerular lesions	ICD-10-CM	Diagnosis
N04.2	Nephrotic syndrome with diffuse membranous glomerulonephritis	ICD-10-CM	Diagnosis
N04.3	Nephrotic syndrome with diffuse mesangial proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N04.4	Nephrotic syndrome with diffuse endocapillary proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N04.5	Nephrotic syndrome with diffuse mesangiocapillary glomerulonephritis	ICD-10-CM	Diagnosis
N04.6	Nephrotic syndrome with dense deposit disease	ICD-10-CM	Diagnosis
N04.7	Nephrotic syndrome with diffuse crescentic glomerulonephritis	ICD-10-CM	Diagnosis
N04.8	Nephrotic syndrome with other morphologic changes	ICD-10-CM	Diagnosis
N04.9	Nephrotic syndrome with unspecified morphologic changes	ICD-10-CM	Diagnosis
N04.A	Nephrotic syndrome with C3 glomerulonephritis	ICD-10-CM	Diagnosis
N05.0	Unspecified nephritic syndrome with minor glomerular abnormality	ICD-10-CM	Diagnosis
N05.1	Unspecified nephritic syndrome with focal and segmental glomerular lesions	ICD-10-CM	Diagnosis
N05.2	Unspecified nephritic syndrome with diffuse membranous glomerulonephritis	ICD-10-CM	Diagnosis
N05.3	Unspecified nephritic syndrome with diffuse mesangial proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N05.4	Unspecified nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N05.5	Unspecified nephritic syndrome with diffuse mesangiocapillary glomerulonephritis	ICD-10-CM	Diagnosis
N05.6	Unspecified nephritic syndrome with dense deposit disease	ICD-10-CM	Diagnosis
N05.7	Unspecified nephritic syndrome with diffuse crescentic glomerulonephritis	ICD-10-CM	Diagnosis
N05.8	Unspecified nephritic syndrome with other morphologic changes	ICD-10-CM	Diagnosis
N05.9	Unspecified nephritic syndrome with unspecified morphologic changes	ICD-10-CM	Sentinel
N05.A	Unspecified nephritic syndrome with C3 glomerulonephritis	ICD-10-CM	Diagnosis
N06.0	Isolated proteinuria with minor glomerular abnormality	ICD-10-CM	Diagnosis
N06.1	Isolated proteinuria with focal and segmental glomerular lesions	ICD-10-CM	Diagnosis
N06.2	Isolated proteinuria with diffuse membranous glomerulonephritis	ICD-10-CM	Diagnosis
N06.3	Isolated proteinuria with diffuse mesangial proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N06.4	Isolated proteinuria with diffuse endocapillary proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N06.5	Isolated proteinuria with diffuse mesangiocapillary glomerulonephritis	ICD-10-CM	Diagnosis
N06.6	Isolated proteinuria with dense deposit disease	ICD-10-CM	Diagnosis
N06.7	Isolated proteinuria with diffuse crescentic glomerulonephritis	ICD-10-CM	Diagnosis
N06.8	Isolated proteinuria with other morphologic lesion	ICD-10-CM	Diagnosis
N06.9	Isolated proteinuria with unspecified morphologic lesion	ICD-10-CM	Diagnosis
N06.A	Isolated proteinuria with C3 glomerulonephritis	ICD-10-CM	Diagnosis
N07.0	Hereditary nephropathy, not elsewhere classified with minor glomerular abnormality	ICD-10-CM	Diagnosis
N07.1	Hereditary nephropathy, not elsewhere classified with focal and segmental glomerular lesions	ICD-10-CM	Diagnosis
N07.2	Hereditary nephropathy, not elsewhere classified with diffuse membranous glomerulonephritis	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
N07.3	Hereditary nephropathy, not elsewhere classified with diffuse mesangial proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N07.4	Hereditary nephropathy, not elsewhere classified with diffuse endocapillary proliferative glomerulonephritis	ICD-10-CM	Diagnosis
N07.5	Hereditary nephropathy, not elsewhere classified with diffuse mesangiocapillary glomerulonephritis	ICD-10-CM	Diagnosis
N07.6	Hereditary nephropathy, not elsewhere classified with dense deposit disease	ICD-10-CM	Diagnosis
N07.7	Hereditary nephropathy, not elsewhere classified with diffuse crescentic glomerulonephritis	ICD-10-CM	Diagnosis
N07.8	Hereditary nephropathy, not elsewhere classified with other morphologic lesions	ICD-10-CM	Diagnosis
N07.9	Hereditary nephropathy, not elsewhere classified with unspecified morphologic lesions	ICD-10-CM	Diagnosis
N07.A	Hereditary nephropathy, not elsewhere classified with C3 glomerulonephritis	ICD-10-CM	Diagnosis
N08	Glomerular disorders in diseases classified elsewhere	ICD-10-CM	Diagnosis
N13.1	Hydronephrosis with ureteral stricture, not elsewhere classified	ICD-10-CM	Diagnosis
N13.2	Hydronephrosis with renal and ureteral calculous obstruction	ICD-10-CM	Diagnosis
N13.30	Unspecified hydronephrosis	ICD-10-CM	Diagnosis
N13.39	Other hydronephrosis	ICD-10-CM	Diagnosis
N14.0	Analgesic nephropathy	ICD-10-CM	Diagnosis
N14.1	Nephropathy induced by other drugs, medicaments and biological substances	ICD-10-CM	Diagnosis
N14.2	Nephropathy induced by unspecified drug, medicament or biological substance	ICD-10-CM	Diagnosis
N14.3	Nephropathy induced by heavy metals	ICD-10-CM	Diagnosis
N14.4	Toxic nephropathy, not elsewhere classified	ICD-10-CM	Diagnosis
N15.0	Balkan nephropathy	ICD-10-CM	Diagnosis
N15.8	Other specified renal tubulo-interstitial diseases	ICD-10-CM	Diagnosis
N15.9	Renal tubulo-interstitial disease, unspecified	ICD-10-CM	Diagnosis
N16	Renal tubulo-interstitial disorders in diseases classified elsewhere	ICD-10-CM	Diagnosis
N17.0	Acute kidney failure with tubular necrosis	ICD-10-CM	Diagnosis
N17.1	Acute kidney failure with acute cortical necrosis	ICD-10-CM	Diagnosis
N17.2	Acute kidney failure with medullary necrosis	ICD-10-CM	Diagnosis
N17.8	Other acute kidney failure	ICD-10-CM	Diagnosis
N17.9	Acute kidney failure, unspecified	ICD-10-CM	Diagnosis
N18.1	Chronic kidney disease, stage 1	ICD-10-CM	Diagnosis
N18.2	Chronic kidney disease, stage 2 (mild)	ICD-10-CM	Diagnosis
N18.3	Chronic kidney disease, stage 3 (moderate)	ICD-10-CM	Diagnosis
N18.30	Chronic kidney disease, stage 3 unspecified	ICD-10-CM	Diagnosis
N18.31	Chronic kidney disease, stage 3a	ICD-10-CM	Diagnosis
N18.32	Chronic kidney disease, stage 3b	ICD-10-CM	Diagnosis
N18.4	Chronic kidney disease, stage 4 (severe)	ICD-10-CM	Diagnosis
N18.5	Chronic kidney disease, stage 5	ICD-10-CM	Diagnosis
N18.6	End stage renal disease	ICD-10-CM	Diagnosis
N18.9	Chronic kidney disease, unspecified	ICD-10-CM	Diagnosis
N19	Unspecified kidney failure	ICD-10-CM	Diagnosis
N25.0	Renal osteodystrophy	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
N25.1	Nephrogenic diabetes insipidus	ICD-10-CM	Diagnosis
N25.81	Secondary hyperparathyroidism of renal origin	ICD-10-CM	Diagnosis
N25.89	Other disorders resulting from impaired renal tubular function	ICD-10-CM	Diagnosis
N25.9	Disorder resulting from impaired renal tubular function, unspecified	ICD-10-CM	Diagnosis
N26.1	Atrophy of kidney (terminal)	ICD-10-CM	Diagnosis
N26.9	Renal sclerosis, unspecified	ICD-10-CM	Diagnosis
Q61.02	Congenital multiple renal cysts	ICD-10-CM	Diagnosis
Q61.11	Cystic dilatation of collecting ducts	ICD-10-CM	Diagnosis
Q61.19	Other polycystic kidney, infantile type	ICD-10-CM	Diagnosis
Q61.2	Polycystic kidney, adult type	ICD-10-CM	Diagnosis
Q61.3	Polycystic kidney, unspecified	ICD-10-CM	Diagnosis
Q61.4	Renal dysplasia	ICD-10-CM	Diagnosis
Q61.5	Medullary cystic kidney	ICD-10-CM	Diagnosis
Q61.8	Other cystic kidney diseases	ICD-10-CM	Diagnosis
Q62.0	Congenital hydronephrosis	ICD-10-CM	Diagnosis
Q62.10	Congenital occlusion of ureter, unspecified	ICD-10-CM	Diagnosis
Q62.11	Congenital occlusion of ureteropelvic junction	ICD-10-CM	Diagnosis
Q62.12	Congenital occlusion of ureterovesical orifice	ICD-10-CM	Diagnosis
Q62.2	Congenital megaureter	ICD-10-CM	Diagnosis
Q62.31	Congenital ureterocele, orthotopic	ICD-10-CM	Diagnosis
Q62.32	Cecoureterocele	ICD-10-CM	Diagnosis
Q62.39	Other obstructive defects of renal pelvis and ureter	ICD-10-CM	Diagnosis
R94.4	Abnormal results of kidney function studies	ICD-10-CM	Diagnosis
Colorectal Cancer			
153.0	Malignant neoplasm of hepatic flexure	ICD-9-CM	Diagnosis
153.1	Malignant neoplasm of transverse colon	ICD-9-CM	Diagnosis
153.2	Malignant neoplasm of descending colon	ICD-9-CM	Diagnosis
153.3	Malignant neoplasm of sigmoid colon	ICD-9-CM	Diagnosis
153.4	Malignant neoplasm of cecum	ICD-9-CM	Diagnosis
153.5	Malignant neoplasm of appendix	ICD-9-CM	Diagnosis
153.6	Malignant neoplasm of ascending colon	ICD-9-CM	Diagnosis
153.7	Malignant neoplasm of splenic flexure	ICD-9-CM	Diagnosis
153.8	Malignant neoplasm of other specified sites of large intestine	ICD-9-CM	Diagnosis
153.9	Malignant neoplasm of colon, unspecified site	ICD-9-CM	Diagnosis
154.0	Malignant neoplasm of rectosigmoid junction	ICD-9-CM	Diagnosis
154.1	Malignant neoplasm of rectum	ICD-9-CM	Diagnosis
230.3	Carcinoma in situ of colon	ICD-9-CM	Diagnosis
230.4	Carcinoma in situ of rectum	ICD-9-CM	Diagnosis
V10.05	Personal history of malignant neoplasm of large intestine	ICD-9-CM	Diagnosis
V10.06	Personal history of malignant neoplasm of rectum, rectosigmoid junction, and anus	ICD-9-CM	Diagnosis
C18.0	Malignant neoplasm of cecum	ICD-10-CM	Diagnosis
C18.1	Malignant neoplasm of appendix	ICD-10-CM	Diagnosis
C18.2	Malignant neoplasm of ascending colon	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
C18.3	Malignant neoplasm of hepatic flexure	ICD-10-CM	Diagnosis
C18.4	Malignant neoplasm of transverse colon	ICD-10-CM	Diagnosis
C18.5	Malignant neoplasm of splenic flexure	ICD-10-CM	Diagnosis
C18.6	Malignant neoplasm of descending colon	ICD-10-CM	Diagnosis
C18.7	Malignant neoplasm of sigmoid colon	ICD-10-CM	Diagnosis
C18.8	Malignant neoplasm of overlapping sites of colon	ICD-10-CM	Diagnosis
C18.9	Malignant neoplasm of colon, unspecified	ICD-10-CM	Diagnosis
C19	Malignant neoplasm of rectosigmoid junction	ICD-10-CM	Diagnosis
C20	Malignant neoplasm of rectum	ICD-10-CM	Diagnosis
D01.0	Carcinoma in situ of colon	ICD-10-CM	Diagnosis
D01.1	Carcinoma in situ of rectosigmoid junction	ICD-10-CM	Diagnosis
D01.2	Carcinoma in situ of rectum	ICD-10-CM	Diagnosis
Z85.038	Personal history of other malignant neoplasm of large intestine	ICD-10-CM	Diagnosis
Z85.040	Personal history of malignant carcinoid tumor of rectum	ICD-10-CM	Diagnosis
Z85.048	Personal history of other malignant neoplasm of rectum, rectosigmoid junction, and anus	ICD-10-CM	Diagnosis
Chronic Obstructive Pulmonary Disease (COPD) and Bronchiectasis			
490	Bronchitis, not specified as acute or chronic	ICD-9-CM	Diagnosis
491.0	Simple chronic bronchitis	ICD-9-CM	Diagnosis
491.1	Mucopurulent chronic bronchitis	ICD-9-CM	Diagnosis
491.20	Obstructive chronic bronchitis, without exacerbation	ICD-9-CM	Diagnosis
491.21	Obstructive chronic bronchitis, with (acute) exacerbation	ICD-9-CM	Diagnosis
491.22	Obstructive chronic bronchitis with acute bronchitis	ICD-9-CM	Diagnosis
491.8	Other chronic bronchitis	ICD-9-CM	Diagnosis
491.9	Unspecified chronic bronchitis	ICD-9-CM	Diagnosis
492.0	Emphysematous bleb	ICD-9-CM	Diagnosis
492.8	Other emphysema	ICD-9-CM	Diagnosis
494.0	Bronchiectasis without acute exacerbation	ICD-9-CM	Diagnosis
494.1	Bronchiectasis with acute exacerbation	ICD-9-CM	Diagnosis
496	Chronic airway obstruction, not elsewhere classified	ICD-9-CM	Diagnosis
J40	Bronchitis, not specified as acute or chronic	ICD-10-CM	Diagnosis
J41.0	Simple chronic bronchitis	ICD-10-CM	Diagnosis
J41.1	Mucopurulent chronic bronchitis	ICD-10-CM	Diagnosis
J41.8	Mixed simple and mucopurulent chronic bronchitis	ICD-10-CM	Diagnosis
J42	Unspecified chronic bronchitis	ICD-10-CM	Diagnosis
J43.0	Unilateral pulmonary emphysema [MacLeod's syndrome]	ICD-10-CM	Diagnosis
J43.1	Panlobular emphysema	ICD-10-CM	Diagnosis
J43.2	Centrilobular emphysema	ICD-10-CM	Diagnosis
J43.8	Other emphysema	ICD-10-CM	Diagnosis
J43.9	Emphysema, unspecified	ICD-10-CM	Diagnosis
J44.0	Chronic obstructive pulmonary disease with acute lower respiratory infection	ICD-10-CM	Diagnosis
J44.1	Chronic obstructive pulmonary disease with (acute) exacerbation	ICD-10-CM	Diagnosis
J44.9	Chronic obstructive pulmonary disease, unspecified	ICD-10-CM	Diagnosis
J47.0	Bronchiectasis with acute lower respiratory infection	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
J47.1	Bronchiectasis with (acute) exacerbation	ICD-10-CM	Diagnosis
J47.9	Bronchiectasis, uncomplicated	ICD-10-CM	Diagnosis
Depression			
296.20	Major depressive disorder, single episode, unspecified	ICD-9-CM	Diagnosis
296.21	Major depressive disorder, single episode, mild	ICD-9-CM	Diagnosis
296.22	Major depressive disorder, single episode, moderate	ICD-9-CM	Diagnosis
296.23	Major depressive disorder, single episode, severe, without mention of psychotic behavior	ICD-9-CM	Diagnosis
296.24	Major depressive disorder, single episode, severe, specified as with psychotic behavior	ICD-9-CM	Diagnosis
296.25	Major depressive disorder, single episode, in partial or unspecified remission	ICD-9-CM	Diagnosis
296.26	Major depressive disorder, single episode in full remission	ICD-9-CM	Diagnosis
296.30	Major depressive disorder, recurrent episode, unspecified	ICD-9-CM	Diagnosis
296.31	Major depressive disorder, recurrent episode, mild	ICD-9-CM	Diagnosis
296.32	Major depressive disorder, recurrent episode, moderate	ICD-9-CM	Diagnosis
296.33	Major depressive disorder, recurrent episode, severe, without mention of psychotic behavior	ICD-9-CM	Diagnosis
296.34	Major depressive disorder, recurrent episode, severe, specified as with psychotic behavior	ICD-9-CM	Diagnosis
296.35	Major depressive disorder, recurrent episode, in partial or unspecified remission	ICD-9-CM	Diagnosis
296.36	Major depressive disorder, recurrent episode, in full remission	ICD-9-CM	Diagnosis
296.51	Bipolar I disorder, most recent episode (or current) depressed, mild	ICD-9-CM	Diagnosis
296.52	Bipolar I disorder, most recent episode (or current) depressed, moderate	ICD-9-CM	Diagnosis
296.53	Bipolar I disorder, most recent episode (or current) depressed, severe, without mention of psychotic behavior	ICD-9-CM	Diagnosis
296.54	Bipolar I disorder, most recent episode (or current) depressed, severe, specified as with psychotic behavior	ICD-9-CM	Diagnosis
296.55	Bipolar I disorder, most recent episode (or current) depressed, in partial or unspecified remission	ICD-9-CM	Diagnosis
296.56	Bipolar I disorder, most recent episode (or current) depressed, in full remission	ICD-9-CM	Diagnosis
296.60	Bipolar I disorder, most recent episode (or current) mixed, unspecified	ICD-9-CM	Diagnosis
296.61	Bipolar I disorder, most recent episode (or current) mixed, mild	ICD-9-CM	Diagnosis
296.62	Bipolar I disorder, most recent episode (or current) mixed, moderate	ICD-9-CM	Diagnosis
296.63	Bipolar I disorder, most recent episode (or current) mixed, severe, without mention of psychotic behavior	ICD-9-CM	Diagnosis
296.64	Bipolar I disorder, most recent episode (or current) mixed, severe, specified as with psychotic behavior	ICD-9-CM	Diagnosis
296.65	Bipolar I disorder, most recent episode (or current) mixed, in partial or unspecified remission	ICD-9-CM	Diagnosis
296.66	Bipolar I disorder, most recent episode (or current) mixed, in full remission	ICD-9-CM	Diagnosis
296.89	Other and unspecified bipolar disorders	ICD-9-CM	Diagnosis
298.0	Depressive type psychosis	ICD-9-CM	Diagnosis
300.4	Dysthymic disorder	ICD-9-CM	Diagnosis
309.1	Prolonged depressive reaction as adjustment reaction	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
311	Depressive disorder, not elsewhere classified	ICD-9-CM	Diagnosis
F31.30	Bipolar disorder, current episode depressed, mild or moderate severity, unspecified	ICD-10-CM	Diagnosis
F31.31	Bipolar disorder, current episode depressed, mild	ICD-10-CM	Diagnosis
F31.32	Bipolar disorder, current episode depressed, moderate	ICD-10-CM	Diagnosis
F31.4	Bipolar disorder, current episode depressed, severe, without psychotic features	ICD-10-CM	Diagnosis
F31.5	Bipolar disorder, current episode depressed, severe, with psychotic features	ICD-10-CM	Diagnosis
F31.60	Bipolar disorder, current episode mixed, unspecified	ICD-10-CM	Diagnosis
F31.61	Bipolar disorder, current episode mixed, mild	ICD-10-CM	Diagnosis
F31.62	Bipolar disorder, current episode mixed, moderate	ICD-10-CM	Diagnosis
F31.63	Bipolar disorder, current episode mixed, severe, without psychotic features	ICD-10-CM	Diagnosis
F31.64	Bipolar disorder, current episode mixed, severe, with psychotic features	ICD-10-CM	Diagnosis
F31.75	Bipolar disorder, in partial remission, most recent episode depressed	ICD-10-CM	Diagnosis
F31.76	Bipolar disorder, in full remission, most recent episode depressed	ICD-10-CM	Diagnosis
F31.77	Bipolar disorder, in partial remission, most recent episode mixed	ICD-10-CM	Diagnosis
F31.78	Bipolar disorder, in full remission, most recent episode mixed	ICD-10-CM	Diagnosis
F31.81	Bipolar II disorder	ICD-10-CM	Diagnosis
F32.0	Major depressive disorder, single episode, mild	ICD-10-CM	Diagnosis
F32.1	Major depressive disorder, single episode, moderate	ICD-10-CM	Diagnosis
F32.2	Major depressive disorder, single episode, severe without psychotic features	ICD-10-CM	Diagnosis
F32.3	Major depressive disorder, single episode, severe with psychotic features	ICD-10-CM	Diagnosis
F32.4	Major depressive disorder, single episode, in partial remission	ICD-10-CM	Diagnosis
F32.5	Major depressive disorder, single episode, in full remission	ICD-10-CM	Diagnosis
F32.9	Major depressive disorder, single episode, unspecified	ICD-10-CM	Diagnosis
F33.0	Major depressive disorder, recurrent, mild	ICD-10-CM	Diagnosis
F33.1	Major depressive disorder, recurrent, moderate	ICD-10-CM	Diagnosis
F33.2	Major depressive disorder, recurrent severe without psychotic features	ICD-10-CM	Diagnosis
F33.3	Major depressive disorder, recurrent, severe with psychotic symptoms	ICD-10-CM	Diagnosis
F33.40	Major depressive disorder, recurrent, in remission, unspecified	ICD-10-CM	Diagnosis
F33.41	Major depressive disorder, recurrent, in partial remission	ICD-10-CM	Diagnosis
F33.42	Major depressive disorder, recurrent, in full remission	ICD-10-CM	Diagnosis
F33.8	Other recurrent depressive disorders	ICD-10-CM	Diagnosis
F33.9	Major depressive disorder, recurrent, unspecified	ICD-10-CM	Diagnosis
F34.1	Dysthymic disorder	ICD-10-CM	Diagnosis
F43.21	Adjustment disorder with depressed mood	ICD-10-CM	Diagnosis
F43.23	Adjustment disorder with mixed anxiety and depressed mood	ICD-10-CM	Diagnosis
Diabetes			
249.00	Secondary diabetes mellitus without mention of complication, not stated as uncontrolled, or unspecified	ICD-9-CM	Diagnosis
249.01	Secondary diabetes mellitus without mention of complication, uncontrolled	ICD-9-CM	Diagnosis
249.10	Secondary diabetes mellitus with ketoacidosis, not stated as uncontrolled, or unspecified	ICD-9-CM	Diagnosis
249.11	Secondary diabetes mellitus with ketoacidosis, uncontrolled	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
249.20	Secondary diabetes mellitus with hyperosmolarity, not stated as uncontrolled, or unspecified	ICD-9-CM	Diagnosis
249.21	Secondary diabetes mellitus with hyperosmolarity, uncontrolled	ICD-9-CM	Diagnosis
249.30	Secondary diabetes mellitus with other coma, not stated as uncontrolled, or unspecified	ICD-9-CM	Diagnosis
249.31	Secondary diabetes mellitus with other coma, uncontrolled	ICD-9-CM	Diagnosis
249.40	Secondary diabetes mellitus with renal manifestations, not stated as uncontrolled, or unspecified	ICD-9-CM	Diagnosis
249.41	Secondary diabetes mellitus with renal manifestations, uncontrolled	ICD-9-CM	Diagnosis
249.50	Secondary diabetes mellitus with ophthalmic manifestations, not stated as uncontrolled, or unspecified	ICD-9-CM	Diagnosis
249.51	Secondary diabetes mellitus with ophthalmic manifestations, uncontrolled	ICD-9-CM	Diagnosis
249.60	Secondary diabetes mellitus with neurological manifestations, not stated as uncontrolled, or unspecified	ICD-9-CM	Diagnosis
249.61	Secondary diabetes mellitus with neurological manifestations, uncontrolled	ICD-9-CM	Diagnosis
249.70	Secondary diabetes mellitus with peripheral circulatory disorders, not stated as uncontrolled, or unspecified	ICD-9-CM	Diagnosis
249.71	Secondary diabetes mellitus with peripheral circulatory disorders, uncontrolled	ICD-9-CM	Diagnosis
249.80	Secondary diabetes mellitus with other specified manifestations, not stated as uncontrolled, or unspecified	ICD-9-CM	Diagnosis
249.81	Secondary diabetes mellitus with other specified manifestations, uncontrolled	ICD-9-CM	Diagnosis
249.90	Secondary diabetes mellitus with unspecified complication, not stated as uncontrolled, or unspecified	ICD-9-CM	Diagnosis
249.91	Secondary diabetes mellitus with unspecified complication, uncontrolled	ICD-9-CM	Diagnosis
250.00	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.01	Diabetes mellitus without mention of complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.02	Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.03	Diabetes mellitus without mention of complication, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.10	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.11	Diabetes with ketoacidosis, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.12	Diabetes with ketoacidosis, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.13	Diabetes with ketoacidosis, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.20	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.21	Diabetes with hyperosmolarity, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.22	Diabetes with hyperosmolarity, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.23	Diabetes with hyperosmolarity, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.30	Diabetes with other coma, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.31	Diabetes with other coma, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
250.32	Diabetes with other coma, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.33	Diabetes with other coma, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.40	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.41	Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.42	Diabetes with renal manifestations, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.43	Diabetes with renal manifestations, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.50	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.60	Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.61	Diabetes with neurological manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.62	Diabetes with neurological manifestations, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.63	Diabetes with neurological manifestations, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.70	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.71	Diabetes with peripheral circulatory disorders, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.72	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.73	Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.82	Diabetes with other specified manifestations, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.83	Diabetes with other specified manifestations, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.90	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.91	Diabetes with unspecified complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.92	Diabetes with unspecified complication, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.93	Diabetes with unspecified complication, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
357.2	Polyneuropathy in diabetes	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
362.01	Background diabetic retinopathy	ICD-9-CM	Diagnosis
362.02	Proliferative diabetic retinopathy	ICD-9-CM	Diagnosis
362.03	Nonproliferative diabetic retinopathy NOS	ICD-9-CM	Diagnosis
362.04	Mild nonproliferative diabetic retinopathy	ICD-9-CM	Diagnosis
362.05	Moderate nonproliferative diabetic retinopathy	ICD-9-CM	Diagnosis
362.06	Severe nonproliferative diabetic retinopathy	ICD-9-CM	Diagnosis
366.41	Diabetic cataract	ICD-9-CM	Diagnosis
E08.00	Diabetes mellitus due to underlying condition with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	ICD-10-CM	Diagnosis
E08.01	Diabetes mellitus due to underlying condition with hyperosmolarity with coma	ICD-10-CM	Diagnosis
E08.10	Diabetes mellitus due to underlying condition with ketoacidosis without coma	ICD-10-CM	Diagnosis
E08.11	Diabetes mellitus due to underlying condition with ketoacidosis with coma	ICD-10-CM	Diagnosis
E08.21	Diabetes mellitus due to underlying condition with diabetic nephropathy	ICD-10-CM	Diagnosis
E08.22	Diabetes mellitus due to underlying condition with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E08.29	Diabetes mellitus due to underlying condition with other diabetic kidney complication	ICD-10-CM	Diagnosis
E08.311	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E08.319	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E08.321	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E08.3211	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E08.3212	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E08.3213	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E08.3219	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E08.329	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E08.3291	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E08.3292	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E08.3293	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E08.3299	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E08.331	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E08.3311	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E08.3312	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E08.3313	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E08.3319	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E08.339	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E08.3391	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E08.3392	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E08.3393	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E08.3399	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E08.341	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E08.3411	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E08.3412	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E08.3413	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E08.3419	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E08.349	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E08.3491	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E08.3492	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E08.3493	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E08.3499	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E08.351	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E08.3511	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E08.3512	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E08.3513	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E08.3519	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E08.3521	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM	Diagnosis
E08.3522	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM	Diagnosis
E08.3523	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM	Diagnosis
E08.3529	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E08.3531	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM	Diagnosis
E08.3532	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM	Diagnosis
E08.3533	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM	Diagnosis
E08.3539	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E08.3541	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM	Diagnosis
E08.3542	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM	Diagnosis
E08.3543	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM	Diagnosis
E08.3549	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM	Diagnosis
E08.3551	Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, right eye	ICD-10-CM	Diagnosis
E08.3552	Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, left eye	ICD-10-CM	Diagnosis
E08.3553	Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM	Diagnosis
E08.3559	Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM	Diagnosis
E08.359	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E08.3591	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E08.3592	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E08.3593	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E08.3599	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E08.36	Diabetes mellitus due to underlying condition with diabetic cataract	ICD-10-CM	Diagnosis
E08.37X1	Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM	Diagnosis
E08.37X2	Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM	Diagnosis
E08.37X3	Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM	Diagnosis
E08.37X9	Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM	Diagnosis
E08.39	Diabetes mellitus due to underlying condition with other diabetic ophthalmic complication	ICD-10-CM	Diagnosis
E08.40	Diabetes mellitus due to underlying condition with diabetic neuropathy, unspecified	ICD-10-CM	Diagnosis
E08.41	Diabetes mellitus due to underlying condition with diabetic mononeuropathy	ICD-10-CM	Diagnosis
E08.42	Diabetes mellitus due to underlying condition with diabetic polyneuropathy	ICD-10-CM	Diagnosis
E08.43	Diabetes mellitus due to underlying condition with diabetic autonomic (poly)neuropathy	ICD-10-CM	Diagnosis
E08.44	Diabetes mellitus due to underlying condition with diabetic amyotrophy	ICD-10-CM	Diagnosis
E08.49	Diabetes mellitus due to underlying condition with other diabetic neurological complication	ICD-10-CM	Diagnosis
E08.51	Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy without gangrene	ICD-10-CM	Diagnosis
E08.52	Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy with gangrene	ICD-10-CM	Diagnosis
E08.59	Diabetes mellitus due to underlying condition with other circulatory complications	ICD-10-CM	Diagnosis
E08.610	Diabetes mellitus due to underlying condition with diabetic neuropathic arthropathy	ICD-10-CM	Diagnosis
E08.618	Diabetes mellitus due to underlying condition with other diabetic arthropathy	ICD-10-CM	Diagnosis
E08.620	Diabetes mellitus due to underlying condition with diabetic dermatitis	ICD-10-CM	Diagnosis
E08.621	Diabetes mellitus due to underlying condition with foot ulcer	ICD-10-CM	Diagnosis
E08.622	Diabetes mellitus due to underlying condition with other skin ulcer	ICD-10-CM	Diagnosis
E08.628	Diabetes mellitus due to underlying condition with other skin complications	ICD-10-CM	Diagnosis
E08.630	Diabetes mellitus due to underlying condition with periodontal disease	ICD-10-CM	Diagnosis
E08.638	Diabetes mellitus due to underlying condition with other oral complications	ICD-10-CM	Diagnosis
E08.641	Diabetes mellitus due to underlying condition with hypoglycemia with coma	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E08.649	Diabetes mellitus due to underlying condition with hypoglycemia without coma	ICD-10-CM	Diagnosis
E08.65	Diabetes mellitus due to underlying condition with hyperglycemia	ICD-10-CM	Diagnosis
E08.69	Diabetes mellitus due to underlying condition with other specified complication	ICD-10-CM	Diagnosis
E08.8	Diabetes mellitus due to underlying condition with unspecified complications	ICD-10-CM	Diagnosis
E08.9	Diabetes mellitus due to underlying condition without complications	ICD-10-CM	Diagnosis
E09.00	Drug or chemical induced diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	ICD-10-CM	Diagnosis
E09.01	Drug or chemical induced diabetes mellitus with hyperosmolarity with coma	ICD-10-CM	Diagnosis
E09.10	Drug or chemical induced diabetes mellitus with ketoacidosis without coma	ICD-10-CM	Diagnosis
E09.11	Drug or chemical induced diabetes mellitus with ketoacidosis with coma	ICD-10-CM	Diagnosis
E09.21	Drug or chemical induced diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis
E09.22	Drug or chemical induced diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E09.29	Drug or chemical induced diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E09.311	Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E09.319	Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E09.321	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E09.3211	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E09.3212	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E09.3213	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E09.3219	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E09.329	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E09.3291	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E09.3292	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E09.3293	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E09.3299	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E09.331	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E09.3311	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E09.3312	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E09.3313	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E09.3319	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E09.339	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E09.3391	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E09.3392	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E09.3393	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E09.3399	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E09.341	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E09.3411	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E09.3412	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E09.3413	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E09.3419	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E09.349	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E09.3491	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E09.3492	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E09.3493	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E09.3499	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E09.351	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E09.3511	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E09.3512	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E09.3513	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E09.3519	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E09.3521	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM	Diagnosis
E09.3522	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM	Diagnosis
E09.3523	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM	Diagnosis
E09.3529	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E09.3531	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM	Diagnosis
E09.3532	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM	Diagnosis
E09.3533	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM	Diagnosis
E09.3539	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E09.3541	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM	Diagnosis
E09.3542	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM	Diagnosis
E09.3543	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM	Diagnosis
E09.3549	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM	Diagnosis
E09.3551	Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM	Diagnosis
E09.3552	Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM	Diagnosis
E09.3553	Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM	Diagnosis
E09.3559	Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM	Diagnosis
E09.359	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E09.3591	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E09.3592	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E09.3593	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E09.3599	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E09.36	Drug or chemical induced diabetes mellitus with diabetic cataract	ICD-10-CM	Diagnosis
E09.37X1	Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM	Diagnosis
E09.37X2	Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM	Diagnosis
E09.37X3	Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM	Diagnosis
E09.37X9	Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM	Diagnosis
E09.39	Drug or chemical induced diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM	Diagnosis
E09.40	Drug or chemical induced diabetes mellitus with neurological complications with diabetic neuropathy, unspecified	ICD-10-CM	Diagnosis
E09.41	Drug or chemical induced diabetes mellitus with neurological complications with diabetic mononeuropathy	ICD-10-CM	Diagnosis
E09.42	Drug or chemical induced diabetes mellitus with neurological complications with diabetic polyneuropathy	ICD-10-CM	Diagnosis
E09.43	Drug or chemical induced diabetes mellitus with neurological complications with diabetic autonomic (poly)neuropathy	ICD-10-CM	Diagnosis
E09.44	Drug or chemical induced diabetes mellitus with neurological complications with diabetic amyotrophy	ICD-10-CM	Diagnosis
E09.49	Drug or chemical induced diabetes mellitus with neurological complications with other diabetic neurological complication	ICD-10-CM	Diagnosis
E09.51	Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM	Diagnosis
E09.52	Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy with gangrene	ICD-10-CM	Diagnosis
E09.59	Drug or chemical induced diabetes mellitus with other circulatory complications	ICD-10-CM	Diagnosis
E09.610	Drug or chemical induced diabetes mellitus with diabetic neuropathic arthropathy	ICD-10-CM	Diagnosis
E09.618	Drug or chemical induced diabetes mellitus with other diabetic arthropathy	ICD-10-CM	Diagnosis
E09.620	Drug or chemical induced diabetes mellitus with diabetic dermatitis	ICD-10-CM	Diagnosis
E09.621	Drug or chemical induced diabetes mellitus with foot ulcer	ICD-10-CM	Diagnosis
E09.622	Drug or chemical induced diabetes mellitus with other skin ulcer	ICD-10-CM	Diagnosis
E09.628	Drug or chemical induced diabetes mellitus with other skin complications	ICD-10-CM	Diagnosis
E09.630	Drug or chemical induced diabetes mellitus with periodontal disease	ICD-10-CM	Diagnosis
E09.638	Drug or chemical induced diabetes mellitus with other oral complications	ICD-10-CM	Diagnosis
E09.641	Drug or chemical induced diabetes mellitus with hypoglycemia with coma	ICD-10-CM	Diagnosis
E09.649	Drug or chemical induced diabetes mellitus with hypoglycemia without coma	ICD-10-CM	Diagnosis
E09.65	Drug or chemical induced diabetes mellitus with hyperglycemia	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E09.69	Drug or chemical induced diabetes mellitus with other specified complication	ICD-10-CM	Diagnosis
E09.8	Drug or chemical induced diabetes mellitus with unspecified complications	ICD-10-CM	Diagnosis
E09.9	Drug or chemical induced diabetes mellitus without complications	ICD-10-CM	Diagnosis
E10.10	Type 1 diabetes mellitus with ketoacidosis without coma	ICD-10-CM	Diagnosis
E10.11	Type 1 diabetes mellitus with ketoacidosis with coma	ICD-10-CM	Diagnosis
E10.21	Type 1 diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis
E10.22	Type 1 diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E10.29	Type 1 diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E10.311	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E10.319	Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E10.321	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E10.3211	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E10.3212	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E10.3213	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3219	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.329	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E10.3291	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E10.3292	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E10.3293	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3299	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.331	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E10.3311	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E10.3312	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E10.3313	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3319	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.339	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E10.3391	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E10.3392	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E10.3393	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3399	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.341	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E10.3411	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E10.3412	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E10.3413	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3419	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.349	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E10.3491	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E10.3492	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E10.3493	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3499	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.351	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E10.3511	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E10.3512	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E10.3513	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3519	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3521	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM	Diagnosis
E10.3522	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM	Diagnosis
E10.3523	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM	Diagnosis

Appendix D. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
E10.3529	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E10.3531	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM	Diagnosis
E10.3532	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM	Diagnosis
E10.3533	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM	Diagnosis
E10.3539	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E10.3541	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM	Diagnosis
E10.3542	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM	Diagnosis
E10.3543	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM	Diagnosis
E10.3549	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM	Diagnosis
E10.3551	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM	Diagnosis
E10.3552	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM	Diagnosis
E10.3553	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM	Diagnosis
E10.3559	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM	Diagnosis
E10.359	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E10.3591	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E10.3592	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E10.3593	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3599	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.36	Type 1 diabetes mellitus with diabetic cataract	ICD-10-CM	Diagnosis
E10.37X1	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM	Diagnosis
E10.37X2	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM	Diagnosis
E10.37X3	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM	Diagnosis
E10.37X9	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM	Diagnosis
E10.39	Type 1 diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E10.40	Type 1 diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM	Diagnosis
E10.41	Type 1 diabetes mellitus with diabetic mononeuropathy	ICD-10-CM	Diagnosis
E10.42	Type 1 diabetes mellitus with diabetic polyneuropathy	ICD-10-CM	Diagnosis
E10.43	Type 1 diabetes mellitus with diabetic autonomic (poly)neuropathy	ICD-10-CM	Diagnosis
E10.44	Type 1 diabetes mellitus with diabetic amyotrophy	ICD-10-CM	Diagnosis
E10.49	Type 1 diabetes mellitus with other diabetic neurological complication	ICD-10-CM	Diagnosis
E10.51	Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM	Diagnosis
E10.52	Type 1 diabetes mellitus with diabetic peripheral angiopathy with gangrene	ICD-10-CM	Diagnosis
E10.59	Type 1 diabetes mellitus with other circulatory complications	ICD-10-CM	Diagnosis
E10.610	Type 1 diabetes mellitus with diabetic neuropathic arthropathy	ICD-10-CM	Diagnosis
E10.618	Type 1 diabetes mellitus with other diabetic arthropathy	ICD-10-CM	Diagnosis
E10.620	Type 1 diabetes mellitus with diabetic dermatitis	ICD-10-CM	Diagnosis
E10.621	Type 1 diabetes mellitus with foot ulcer	ICD-10-CM	Diagnosis
E10.622	Type 1 diabetes mellitus with other skin ulcer	ICD-10-CM	Diagnosis
E10.628	Type 1 diabetes mellitus with other skin complications	ICD-10-CM	Diagnosis
E10.630	Type 1 diabetes mellitus with periodontal disease	ICD-10-CM	Diagnosis
E10.638	Type 1 diabetes mellitus with other oral complications	ICD-10-CM	Diagnosis
E10.641	Type 1 diabetes mellitus with hypoglycemia with coma	ICD-10-CM	Diagnosis
E10.649	Type 1 diabetes mellitus with hypoglycemia without coma	ICD-10-CM	Diagnosis
E10.65	Type 1 diabetes mellitus with hyperglycemia	ICD-10-CM	Diagnosis
E10.69	Type 1 diabetes mellitus with other specified complication	ICD-10-CM	Diagnosis
E10.8	Type 1 diabetes mellitus with unspecified complications	ICD-10-CM	Diagnosis
E10.9	Type 1 diabetes mellitus without complications	ICD-10-CM	Diagnosis
E11.00	Type 2 diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	ICD-10-CM	Diagnosis
E11.01	Type 2 diabetes mellitus with hyperosmolarity with coma	ICD-10-CM	Diagnosis
E11.10	Type 2 diabetes mellitus with ketoacidosis without coma	ICD-10-CM	Diagnosis
E11.11	Type 2 diabetes mellitus with ketoacidosis with coma	ICD-10-CM	Diagnosis
E11.21	Type 2 diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis
E11.22	Type 2 diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E11.29	Type 2 diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E11.311	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E11.319	Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E11.321	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E11.3211	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E11.3212	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E11.3213	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E11.3219	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.329	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E11.3291	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E11.3292	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E11.3293	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3299	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.331	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E11.3311	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E11.3312	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E11.3313	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3319	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.339	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E11.3391	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E11.3392	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E11.3393	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3399	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.341	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E11.3411	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E11.3412	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E11.3413	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3419	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.349	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E11.3491	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E11.3492	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E11.3493	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3499	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.351	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E11.3511	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E11.3512	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E11.3513	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3519	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3521	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM	Diagnosis
E11.3522	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM	Diagnosis
E11.3523	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM	Diagnosis
E11.3529	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E11.3531	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM	Diagnosis
E11.3532	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM	Diagnosis
E11.3533	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM	Diagnosis
E11.3539	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E11.3541	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM	Diagnosis
E11.3542	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM	Diagnosis
E11.3543	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM	Diagnosis
E11.3549	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM	Diagnosis
E11.3551	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E11.3552	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM	Diagnosis
E11.3553	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM	Diagnosis
E11.3559	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM	Diagnosis
E11.359	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E11.3591	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E11.3592	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E11.3593	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3599	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.36	Type 2 diabetes mellitus with diabetic cataract	ICD-10-CM	Diagnosis
E11.37X1	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM	Diagnosis
E11.37X2	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM	Diagnosis
E11.37X3	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM	Diagnosis
E11.37X9	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM	Diagnosis
E11.39	Type 2 diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM	Diagnosis
E11.40	Type 2 diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM	Diagnosis
E11.41	Type 2 diabetes mellitus with diabetic mononeuropathy	ICD-10-CM	Diagnosis
E11.42	Type 2 diabetes mellitus with diabetic polyneuropathy	ICD-10-CM	Diagnosis
E11.43	Type 2 diabetes mellitus with diabetic autonomic (poly)neuropathy	ICD-10-CM	Diagnosis
E11.44	Type 2 diabetes mellitus with diabetic amyotrophy	ICD-10-CM	Diagnosis
E11.49	Type 2 diabetes mellitus with other diabetic neurological complication	ICD-10-CM	Diagnosis
E11.51	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM	Diagnosis
E11.52	Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene	ICD-10-CM	Diagnosis
E11.59	Type 2 diabetes mellitus with other circulatory complications	ICD-10-CM	Diagnosis
E11.610	Type 2 diabetes mellitus with diabetic neuropathic arthropathy	ICD-10-CM	Diagnosis
E11.618	Type 2 diabetes mellitus with other diabetic arthropathy	ICD-10-CM	Diagnosis
E11.620	Type 2 diabetes mellitus with diabetic dermatitis	ICD-10-CM	Diagnosis
E11.621	Type 2 diabetes mellitus with foot ulcer	ICD-10-CM	Diagnosis
E11.622	Type 2 diabetes mellitus with other skin ulcer	ICD-10-CM	Diagnosis
E11.628	Type 2 diabetes mellitus with other skin complications	ICD-10-CM	Diagnosis
E11.630	Type 2 diabetes mellitus with periodontal disease	ICD-10-CM	Diagnosis
E11.638	Type 2 diabetes mellitus with other oral complications	ICD-10-CM	Diagnosis
E11.641	Type 2 diabetes mellitus with hypoglycemia with coma	ICD-10-CM	Diagnosis
E11.649	Type 2 diabetes mellitus with hypoglycemia without coma	ICD-10-CM	Diagnosis
E11.65	Type 2 diabetes mellitus with hyperglycemia	ICD-10-CM	Diagnosis

Appendix D. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
E11.69	Type 2 diabetes mellitus with other specified complication	ICD-10-CM	Diagnosis
E11.8	Type 2 diabetes mellitus with unspecified complications	ICD-10-CM	Diagnosis
E11.9	Type 2 diabetes mellitus without complications	ICD-10-CM	Diagnosis
E13.00	Other specified diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	ICD-10-CM	Diagnosis
E13.01	Other specified diabetes mellitus with hyperosmolarity with coma	ICD-10-CM	Diagnosis
E13.10	Other specified diabetes mellitus with ketoacidosis without coma	ICD-10-CM	Diagnosis
E13.11	Other specified diabetes mellitus with ketoacidosis with coma	ICD-10-CM	Diagnosis
E13.21	Other specified diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis
E13.22	Other specified diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E13.29	Other specified diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E13.311	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E13.319	Other specified diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E13.321	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E13.3211	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E13.3212	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E13.3213	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3219	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.329	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E13.3291	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E13.3292	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E13.3293	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3299	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.331	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E13.3311	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E13.3312	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E13.3313	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E13.3319	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.339	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E13.3391	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E13.3392	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E13.3393	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3399	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.341	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E13.3411	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E13.3412	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E13.3413	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3419	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.349	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E13.3491	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E13.3492	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E13.3493	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3499	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.351	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E13.3511	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E13.3512	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E13.3513	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3519	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3521	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E13.3522	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM	Diagnosis
E13.3523	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM	Diagnosis
E13.3529	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E13.3531	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM	Diagnosis
E13.3532	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM	Diagnosis
E13.3533	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM	Diagnosis
E13.3539	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E13.3541	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM	Diagnosis
E13.3542	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM	Diagnosis
E13.3543	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM	Diagnosis
E13.3549	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM	Diagnosis
E13.3551	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM	Diagnosis
E13.3552	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM	Diagnosis
E13.3553	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM	Diagnosis
E13.3559	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM	Diagnosis
E13.359	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E13.3591	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E13.3592	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E13.3593	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3599	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
E13.36	Other specified diabetes mellitus with diabetic cataract	ICD-10-CM	Diagnosis
E13.39	Other specified diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM	Diagnosis
E13.40	Other specified diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM	Diagnosis
E13.41	Other specified diabetes mellitus with diabetic mononeuropathy	ICD-10-CM	Diagnosis
E13.42	Other specified diabetes mellitus with diabetic polyneuropathy	ICD-10-CM	Diagnosis
E13.43	Other specified diabetes mellitus with diabetic autonomic (poly)neuropathy	ICD-10-CM	Diagnosis
E13.44	Other specified diabetes mellitus with diabetic amyotrophy	ICD-10-CM	Diagnosis
E13.49	Other specified diabetes mellitus with other diabetic neurological complication	ICD-10-CM	Diagnosis
E13.51	Other specified diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM	Diagnosis
E13.52	Other specified diabetes mellitus with diabetic peripheral angiopathy with gangrene	ICD-10-CM	Diagnosis
E13.59	Other specified diabetes mellitus with other circulatory complications	ICD-10-CM	Diagnosis
E13.610	Other specified diabetes mellitus with diabetic neuropathic arthropathy	ICD-10-CM	Diagnosis
E13.618	Other specified diabetes mellitus with other diabetic arthropathy	ICD-10-CM	Diagnosis
E13.620	Other specified diabetes mellitus with diabetic dermatitis	ICD-10-CM	Diagnosis
E13.621	Other specified diabetes mellitus with foot ulcer	ICD-10-CM	Diagnosis
E13.622	Other specified diabetes mellitus with other skin ulcer	ICD-10-CM	Diagnosis
E13.628	Other specified diabetes mellitus with other skin complications	ICD-10-CM	Diagnosis
E13.630	Other specified diabetes mellitus with periodontal disease	ICD-10-CM	Diagnosis
E13.638	Other specified diabetes mellitus with other oral complications	ICD-10-CM	Diagnosis
E13.641	Other specified diabetes mellitus with hypoglycemia with coma	ICD-10-CM	Diagnosis
E13.649	Other specified diabetes mellitus with hypoglycemia without coma	ICD-10-CM	Diagnosis
E13.65	Other specified diabetes mellitus with hyperglycemia	ICD-10-CM	Diagnosis
E13.69	Other specified diabetes mellitus with other specified complication	ICD-10-CM	Diagnosis
E13.8	Other specified diabetes mellitus with unspecified complications	ICD-10-CM	Diagnosis
E13.9	Other specified diabetes mellitus without complications	ICD-10-CM	Diagnosis
Endometrial Cancer			
182.0	Malignant neoplasm of corpus uteri, except isthmus	ICD-9-CM	Diagnosis
233.2	Carcinoma in situ of other and unspecified parts of uterus	ICD-9-CM	Diagnosis
V10.42	Personal history of malignant neoplasm of other parts of uterus	ICD-9-CM	Diagnosis
C54.1	Malignant neoplasm of endometrium	ICD-10-CM	Diagnosis
C54.2	Malignant neoplasm of myometrium	ICD-10-CM	Diagnosis
C54.3	Malignant neoplasm of fundus uteri	ICD-10-CM	Diagnosis
C54.8	Malignant neoplasm of overlapping sites of corpus uteri	ICD-10-CM	Diagnosis
C54.9	Malignant neoplasm of corpus uteri, unspecified	ICD-10-CM	Diagnosis
D07.0	Carcinoma in situ of endometrium	ICD-10-CM	Diagnosis
Z85.42	Personal history of malignant neoplasm of other parts of uterus	ICD-10-CM	Diagnosis
Glaucoma			
182.0	Malignant neoplasm of corpus uteri, except isthmus	ICD-9-CM	Diagnosis
233.2	Carcinoma in situ of other and unspecified parts of uterus	ICD-9-CM	Diagnosis
V10.42	Personal history of malignant neoplasm of other parts of uterus	ICD-9-CM	Diagnosis
C54.1	Malignant neoplasm of endometrium	ICD-10-CM	Diagnosis
C54.2	Malignant neoplasm of myometrium	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
C54.3	Malignant neoplasm of fundus uteri	ICD-10-CM	Diagnosis
C54.8	Malignant neoplasm of overlapping sites of corpus uteri	ICD-10-CM	Diagnosis
C54.9	Malignant neoplasm of corpus uteri, unspecified	ICD-10-CM	Diagnosis
D07.0	Carcinoma in situ of endometrium	ICD-10-CM	Diagnosis
Z85.42	Personal history of malignant neoplasm of other parts of uterus	ICD-10-CM	Diagnosis
Glaucoma			
362.85	Retinal nerve fiber bundle defects	ICD-9-CM	Diagnosis
365.00	Unspecified preglaucoma	ICD-9-CM	Diagnosis
365.01	Borderline glaucoma, open angle with borderline findings, low risk	ICD-9-CM	Diagnosis
365.02	Borderline glaucoma with anatomical narrow angle	ICD-9-CM	Diagnosis
365.03	Borderline glaucoma with steroid responders	ICD-9-CM	Diagnosis
365.04	Borderline glaucoma with ocular hypertension	ICD-9-CM	Diagnosis
365.10	Unspecified open-angle glaucoma	ICD-9-CM	Diagnosis
365.11	Primary open-angle glaucoma	ICD-9-CM	Diagnosis
365.12	Low tension open-angle glaucoma	ICD-9-CM	Diagnosis
365.13	Pigmentary open-angle glaucoma	ICD-9-CM	Diagnosis
365.15	Residual stage of open angle glaucoma	ICD-9-CM	Diagnosis
365.20	Unspecified primary angle-closure glaucoma	ICD-9-CM	Diagnosis
365.21	Intermittent angle-closure glaucoma	ICD-9-CM	Diagnosis
365.22	Acute angle-closure glaucoma	ICD-9-CM	Diagnosis
365.23	Chronic angle-closure glaucoma	ICD-9-CM	Diagnosis
365.24	Residual stage of angle-closure glaucoma	ICD-9-CM	Diagnosis
365.31	Corticosteroid-induced glaucoma, glaucomatous stage	ICD-9-CM	Diagnosis
365.32	Corticosteroid-induced glaucoma, residual stage	ICD-9-CM	Diagnosis
365.41	Glaucoma associated with chamber angle anomalies	ICD-9-CM	Diagnosis
365.42	Glaucoma associated with anomalies of iris	ICD-9-CM	Diagnosis
365.43	Glaucoma associated with other anterior segment anomalies	ICD-9-CM	Diagnosis
365.51	Phacolytic glaucoma	ICD-9-CM	Diagnosis
365.52	Pseudoexfoliation glaucoma	ICD-9-CM	Diagnosis
365.59	Glaucoma associated with other lens disorders	ICD-9-CM	Diagnosis
365.60	Glaucoma associated with unspecified ocular disorder	ICD-9-CM	Diagnosis
365.61	Glaucoma associated with pupillary block	ICD-9-CM	Diagnosis
365.62	Glaucoma associated with ocular inflammations	ICD-9-CM	Diagnosis
365.63	Glaucoma associated with vascular disorders of eye	ICD-9-CM	Diagnosis
365.64	Glaucoma associated with tumors or cysts	ICD-9-CM	Diagnosis
365.65	Glaucoma associated with ocular trauma	ICD-9-CM	Diagnosis
365.81	Hypersecretion glaucoma	ICD-9-CM	Diagnosis
365.82	Glaucoma with increased episcleral venous pressure	ICD-9-CM	Diagnosis
365.83	Aqueous misdirection	ICD-9-CM	Diagnosis
365.89	Other specified glaucoma	ICD-9-CM	Diagnosis
365.9	Unspecified glaucoma	ICD-9-CM	Diagnosis
377.14	Glaucomatous atrophy (cupping) of optic disc	ICD-9-CM	Diagnosis
H40.001	Preglaucoma, unspecified, right eye	ICD-10-CM	Diagnosis
H40.002	Preglaucoma, unspecified, left eye	ICD-10-CM	Diagnosis

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

Code	Description	Code Type	Code Category
H40.11X1	Primary open-angle glaucoma, mild stage	ICD-10-CM	Diagnosis
H40.11X2	Primary open-angle glaucoma, moderate stage	ICD-10-CM	Diagnosis
H40.11X3	Primary open-angle glaucoma, severe stage	ICD-10-CM	Diagnosis
H40.11X4	Primary open-angle glaucoma, indeterminate stage	ICD-10-CM	Diagnosis
H40.1210	Low-tension glaucoma, right eye, stage unspecified	ICD-10-CM	Diagnosis
H40.1211	Low-tension glaucoma, right eye, mild stage	ICD-10-CM	Diagnosis
H40.1212	Low-tension glaucoma, right eye, moderate stage	ICD-10-CM	Diagnosis
H40.1213	Low-tension glaucoma, right eye, severe stage	ICD-10-CM	Diagnosis
H40.1214	Low-tension glaucoma, right eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.1220	Low-tension glaucoma, left eye, stage unspecified	ICD-10-CM	Diagnosis
H40.1221	Low-tension glaucoma, left eye, mild stage	ICD-10-CM	Diagnosis
H40.1222	Low-tension glaucoma, left eye, moderate stage	ICD-10-CM	Diagnosis
H40.1223	Low-tension glaucoma, left eye, severe stage	ICD-10-CM	Diagnosis
H40.1224	Low-tension glaucoma, left eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.1230	Low-tension glaucoma, bilateral, stage unspecified	ICD-10-CM	Diagnosis
H40.1231	Low-tension glaucoma, bilateral, mild stage	ICD-10-CM	Diagnosis
H40.1232	Low-tension glaucoma, bilateral, moderate stage	ICD-10-CM	Diagnosis
H40.1233	Low-tension glaucoma, bilateral, severe stage	ICD-10-CM	Diagnosis
H40.1234	Low-tension glaucoma, bilateral, indeterminate stage	ICD-10-CM	Diagnosis
H40.1290	Low-tension glaucoma, unspecified eye, stage unspecified	ICD-10-CM	Diagnosis
H40.1291	Low-tension glaucoma, unspecified eye, mild stage	ICD-10-CM	Diagnosis
H40.1292	Low-tension glaucoma, unspecified eye, moderate stage	ICD-10-CM	Diagnosis
H40.1293	Low-tension glaucoma, unspecified eye, severe stage	ICD-10-CM	Diagnosis
H40.1294	Low-tension glaucoma, unspecified eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.1310	Pigmentary glaucoma, right eye, stage unspecified	ICD-10-CM	Diagnosis
H40.1311	Pigmentary glaucoma, right eye, mild stage	ICD-10-CM	Sentinel
H40.1312	Pigmentary glaucoma, right eye, moderate stage	ICD-10-CM	Diagnosis
H40.1313	Pigmentary glaucoma, right eye, severe stage	ICD-10-CM	Diagnosis
H40.1314	Pigmentary glaucoma, right eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.1320	Pigmentary glaucoma, left eye, stage unspecified	ICD-10-CM	Diagnosis
H40.1321	Pigmentary glaucoma, left eye, mild stage	ICD-10-CM	Diagnosis
H40.1322	Pigmentary glaucoma, left eye, moderate stage	ICD-10-CM	Diagnosis
H40.1323	Pigmentary glaucoma, left eye, severe stage	ICD-10-CM	Diagnosis
H40.1324	Pigmentary glaucoma, left eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.1330	Pigmentary glaucoma, bilateral, stage unspecified	ICD-10-CM	Diagnosis
H40.1331	Pigmentary glaucoma, bilateral, mild stage	ICD-10-CM	Diagnosis
H40.1332	Pigmentary glaucoma, bilateral, moderate stage	ICD-10-CM	Diagnosis
H40.1333	Pigmentary glaucoma, bilateral, severe stage	ICD-10-CM	Diagnosis
H40.1334	Pigmentary glaucoma, bilateral, indeterminate stage	ICD-10-CM	Diagnosis
H40.1390	Pigmentary glaucoma, unspecified eye, stage unspecified	ICD-10-CM	Diagnosis
H40.1391	Pigmentary glaucoma, unspecified eye, mild stage	ICD-10-CM	Diagnosis
H40.1392	Pigmentary glaucoma, unspecified eye, moderate stage	ICD-10-CM	Diagnosis
H40.1393	Pigmentary glaucoma, unspecified eye, severe stage	ICD-10-CM	Diagnosis
H40.1394	Pigmentary glaucoma, unspecified eye, indeterminate stage	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
H40.1410	Capsular glaucoma with pseudoexfoliation of lens, right eye, stage unspecified	ICD-10-CM	Diagnosis
H40.1411	Capsular glaucoma with pseudoexfoliation of lens, right eye, mild stage	ICD-10-CM	Diagnosis
H40.1412	Capsular glaucoma with pseudoexfoliation of lens, right eye, moderate stage	ICD-10-CM	Diagnosis
H40.1413	Capsular glaucoma with pseudoexfoliation of lens, right eye, severe stage	ICD-10-CM	Diagnosis
H40.1414	Capsular glaucoma with pseudoexfoliation of lens, right eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.1420	Capsular glaucoma with pseudoexfoliation of lens, left eye, stage unspecified	ICD-10-CM	Diagnosis
H40.1421	Capsular glaucoma with pseudoexfoliation of lens, left eye, mild stage	ICD-10-CM	Diagnosis
H40.1422	Capsular glaucoma with pseudoexfoliation of lens, left eye, moderate stage	ICD-10-CM	Diagnosis
H40.1423	Capsular glaucoma with pseudoexfoliation of lens, left eye, severe stage	ICD-10-CM	Diagnosis
H40.1424	Capsular glaucoma with pseudoexfoliation of lens, left eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.1430	Capsular glaucoma with pseudoexfoliation of lens, bilateral, stage unspecified	ICD-10-CM	Diagnosis
H40.1431	Capsular glaucoma with pseudoexfoliation of lens, bilateral, mild stage	ICD-10-CM	Diagnosis
H40.1432	Capsular glaucoma with pseudoexfoliation of lens, bilateral, moderate stage	ICD-10-CM	Diagnosis
H40.1433	Capsular glaucoma with pseudoexfoliation of lens, bilateral, severe stage	ICD-10-CM	Diagnosis
H40.1434	Capsular glaucoma with pseudoexfoliation of lens, bilateral, indeterminate stage	ICD-10-CM	Diagnosis
H40.1490	Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, stage unspecified	ICD-10-CM	Diagnosis
H40.1491	Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, mild stage	ICD-10-CM	Diagnosis
H40.1492	Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, moderate stage	ICD-10-CM	Diagnosis
H40.1493	Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, severe stage	ICD-10-CM	Diagnosis
H40.1494	Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.151	Residual stage of open-angle glaucoma, right eye	ICD-10-CM	Diagnosis
H40.152	Residual stage of open-angle glaucoma, left eye	ICD-10-CM	Diagnosis
H40.153	Residual stage of open-angle glaucoma, bilateral	ICD-10-CM	Diagnosis
H40.159	Residual stage of open-angle glaucoma, unspecified eye	ICD-10-CM	Diagnosis
H40.20X0	Unspecified primary angle-closure glaucoma, stage unspecified	ICD-10-CM	Diagnosis
H40.20X1	Unspecified primary angle-closure glaucoma, mild stage	ICD-10-CM	Diagnosis
H40.20X2	Unspecified primary angle-closure glaucoma, moderate stage	ICD-10-CM	Diagnosis
H40.20X3	Unspecified primary angle-closure glaucoma, severe stage	ICD-10-CM	Diagnosis
H40.20X4	Unspecified primary angle-closure glaucoma, indeterminate stage	ICD-10-CM	Diagnosis
H40.211	Acute angle-closure glaucoma, right eye	ICD-10-CM	Diagnosis
H40.212	Acute angle-closure glaucoma, left eye	ICD-10-CM	Diagnosis
H40.213	Acute angle-closure glaucoma, bilateral	ICD-10-CM	Diagnosis
H40.219	Acute angle-closure glaucoma, unspecified eye	ICD-10-CM	Diagnosis
H40.2210	Chronic angle-closure glaucoma, right eye, stage unspecified	ICD-10-CM	Diagnosis
H40.2211	Chronic angle-closure glaucoma, right eye, mild stage	ICD-10-CM	Diagnosis
H40.2212	Chronic angle-closure glaucoma, right eye, moderate stage	ICD-10-CM	Diagnosis
H40.2213	Chronic angle-closure glaucoma, right eye, severe stage	ICD-10-CM	Diagnosis
H40.2214	Chronic angle-closure glaucoma, right eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.2220	Chronic angle-closure glaucoma, left eye, stage unspecified	ICD-10-CM	Diagnosis
H40.2221	Chronic angle-closure glaucoma, left eye, mild stage	ICD-10-CM	Diagnosis
H40.2222	Chronic angle-closure glaucoma, left eye, moderate stage	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
H40.2223	Chronic angle-closure glaucoma, left eye, severe stage	ICD-10-CM	Diagnosis
H40.2224	Chronic angle-closure glaucoma, left eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.2230	Chronic angle-closure glaucoma, bilateral, stage unspecified	ICD-10-CM	Diagnosis
H40.2231	Chronic angle-closure glaucoma, bilateral, mild stage	ICD-10-CM	Diagnosis
H40.2232	Chronic angle-closure glaucoma, bilateral, moderate stage	ICD-10-CM	Diagnosis
H40.2233	Chronic angle-closure glaucoma, bilateral, severe stage	ICD-10-CM	Diagnosis
H40.2234	Chronic angle-closure glaucoma, bilateral, indeterminate stage	ICD-10-CM	Diagnosis
H40.2290	Chronic angle-closure glaucoma, unspecified eye, stage unspecified	ICD-10-CM	Diagnosis
H40.2291	Chronic angle-closure glaucoma, unspecified eye, mild stage	ICD-10-CM	Diagnosis
H40.2292	Chronic angle-closure glaucoma, unspecified eye, moderate stage	ICD-10-CM	Diagnosis
H40.2293	Chronic angle-closure glaucoma, unspecified eye, severe stage	ICD-10-CM	Diagnosis
H40.2294	Chronic angle-closure glaucoma, unspecified eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.231	Intermittent angle-closure glaucoma, right eye	ICD-10-CM	Diagnosis
H40.232	Intermittent angle-closure glaucoma, left eye	ICD-10-CM	Diagnosis
H40.233	Intermittent angle-closure glaucoma, bilateral	ICD-10-CM	Diagnosis
H40.239	Intermittent angle-closure glaucoma, unspecified eye	ICD-10-CM	Diagnosis
H40.241	Residual stage of angle-closure glaucoma, right eye	ICD-10-CM	Diagnosis
H40.242	Residual stage of angle-closure glaucoma, left eye	ICD-10-CM	Diagnosis
H40.243	Residual stage of angle-closure glaucoma, bilateral	ICD-10-CM	Diagnosis
H40.249	Residual stage of angle-closure glaucoma, unspecified eye	ICD-10-CM	Diagnosis
H40.30X0	Glaucoma secondary to eye trauma, unspecified eye, stage unspecified	ICD-10-CM	Diagnosis
H40.30X1	Glaucoma secondary to eye trauma, unspecified eye, mild stage	ICD-10-CM	Diagnosis
H40.30X2	Glaucoma secondary to eye trauma, unspecified eye, moderate stage	ICD-10-CM	Diagnosis
H40.30X3	Glaucoma secondary to eye trauma, unspecified eye, severe stage	ICD-10-CM	Diagnosis
H40.30X4	Glaucoma secondary to eye trauma, unspecified eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.31X0	Glaucoma secondary to eye trauma, right eye, stage unspecified	ICD-10-CM	Sentinel
H40.31X1	Glaucoma secondary to eye trauma, right eye, mild stage	ICD-10-CM	Diagnosis
H40.31X2	Glaucoma secondary to eye trauma, right eye, moderate stage	ICD-10-CM	Diagnosis
H40.31X3	Glaucoma secondary to eye trauma, right eye, severe stage	ICD-10-CM	Diagnosis
H40.31X4	Glaucoma secondary to eye trauma, right eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.32X0	Glaucoma secondary to eye trauma, left eye, stage unspecified	ICD-10-CM	Diagnosis
H40.32X1	Glaucoma secondary to eye trauma, left eye, mild stage	ICD-10-CM	Diagnosis
H40.32X2	Glaucoma secondary to eye trauma, left eye, moderate stage	ICD-10-CM	Diagnosis
H40.32X3	Glaucoma secondary to eye trauma, left eye, severe stage	ICD-10-CM	Diagnosis
H40.33X0	Glaucoma secondary to eye trauma, bilateral, stage unspecified	ICD-10-CM	Diagnosis
H40.33X1	Glaucoma secondary to eye trauma, bilateral, mild stage	ICD-10-CM	Diagnosis
H40.33X2	Glaucoma secondary to eye trauma, bilateral, moderate stage	ICD-10-CM	Diagnosis
H40.33X3	Glaucoma secondary to eye trauma, bilateral, severe stage	ICD-10-CM	Diagnosis
H40.33X4	Glaucoma secondary to eye trauma, bilateral, indeterminate stage	ICD-10-CM	Diagnosis
H40.40X0	Glaucoma secondary to eye inflammation, unspecified eye, stage unspecified	ICD-10-CM	Diagnosis
H40.40X1	Glaucoma secondary to eye inflammation, unspecified eye, mild stage	ICD-10-CM	Diagnosis
H40.40X2	Glaucoma secondary to eye inflammation, unspecified eye, moderate stage	ICD-10-CM	Diagnosis
H40.40X3	Glaucoma secondary to eye inflammation, unspecified eye, severe stage	ICD-10-CM	Diagnosis
H40.40X4	Glaucoma secondary to eye inflammation, unspecified eye, indeterminate stage	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
H40.41X0	Glaucoma secondary to eye inflammation, right eye, stage unspecified	ICD-10-CM	Diagnosis
H40.41X1	Glaucoma secondary to eye inflammation, right eye, mild stage	ICD-10-CM	Diagnosis
H40.41X2	Glaucoma secondary to eye inflammation, right eye, moderate stage	ICD-10-CM	Diagnosis
H40.41X3	Glaucoma secondary to eye inflammation, right eye, severe stage	ICD-10-CM	Diagnosis
H40.41X4	Glaucoma secondary to eye inflammation, right eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.42X0	Glaucoma secondary to eye inflammation, left eye, stage unspecified	ICD-10-CM	Diagnosis
H40.42X1	Glaucoma secondary to eye inflammation, left eye, mild stage	ICD-10-CM	Diagnosis
H40.42X2	Glaucoma secondary to eye inflammation, left eye, moderate stage	ICD-10-CM	Diagnosis
H40.42X3	Glaucoma secondary to eye inflammation, left eye, severe stage	ICD-10-CM	Diagnosis
H40.42X4	Glaucoma secondary to eye inflammation, left eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.43X0	Glaucoma secondary to eye inflammation, bilateral, stage unspecified	ICD-10-CM	Diagnosis
H40.43X1	Glaucoma secondary to eye inflammation, bilateral, mild stage	ICD-10-CM	Diagnosis
H40.43X2	Glaucoma secondary to eye inflammation, bilateral, moderate stage	ICD-10-CM	Diagnosis
H40.43X3	Glaucoma secondary to eye inflammation, bilateral, severe stage	ICD-10-CM	Diagnosis
H40.43X4	Glaucoma secondary to eye inflammation, bilateral, indeterminate stage	ICD-10-CM	Diagnosis
H40.50X0	Glaucoma secondary to other eye disorders, unspecified eye, stage unspecified	ICD-10-CM	Diagnosis
H40.50X1	Glaucoma secondary to other eye disorders, unspecified eye, mild stage	ICD-10-CM	Diagnosis
H40.50X2	Glaucoma secondary to other eye disorders, unspecified eye, moderate stage	ICD-10-CM	Diagnosis
H40.50X3	Glaucoma secondary to other eye disorders, unspecified eye, severe stage	ICD-10-CM	Diagnosis
H40.50X4	Glaucoma secondary to other eye disorders, unspecified eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.51X0	Glaucoma secondary to other eye disorders, right eye, stage unspecified	ICD-10-CM	Diagnosis
H40.51X1	Glaucoma secondary to other eye disorders, right eye, mild stage	ICD-10-CM	Diagnosis
H40.51X2	Glaucoma secondary to other eye disorders, right eye, moderate stage	ICD-10-CM	Diagnosis
H40.51X3	Glaucoma secondary to other eye disorders, right eye, severe stage	ICD-10-CM	Diagnosis
H40.51X4	Glaucoma secondary to other eye disorders, right eye, indeterminate stage	ICD-10-CM	Sentinel
H40.52X0	Glaucoma secondary to other eye disorders, left eye, stage unspecified	ICD-10-CM	Diagnosis
H40.52X1	Glaucoma secondary to other eye disorders, left eye, mild stage	ICD-10-CM	Diagnosis
H40.52X2	Glaucoma secondary to other eye disorders, left eye, moderate stage	ICD-10-CM	Diagnosis
H40.52X3	Glaucoma secondary to other eye disorders, left eye, severe stage	ICD-10-CM	Diagnosis
H40.52X4	Glaucoma secondary to other eye disorders, left eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.53X0	Glaucoma secondary to other eye disorders, bilateral, stage unspecified	ICD-10-CM	Diagnosis
H40.53X1	Glaucoma secondary to other eye disorders, bilateral, mild stage	ICD-10-CM	Diagnosis
H40.53X2	Glaucoma secondary to other eye disorders, bilateral, moderate stage	ICD-10-CM	Diagnosis
H40.53X3	Glaucoma secondary to other eye disorders, bilateral, severe stage	ICD-10-CM	Diagnosis
H40.53X4	Glaucoma secondary to other eye disorders, bilateral, indeterminate stage	ICD-10-CM	Diagnosis
H40.60X0	Glaucoma secondary to drugs, unspecified eye, stage unspecified	ICD-10-CM	Diagnosis
H40.60X1	Glaucoma secondary to drugs, unspecified eye, mild stage	ICD-10-CM	Diagnosis
H40.60X2	Glaucoma secondary to drugs, unspecified eye, moderate stage	ICD-10-CM	Diagnosis
H40.60X3	Glaucoma secondary to drugs, unspecified eye, severe stage	ICD-10-CM	Diagnosis
H40.60X4	Glaucoma secondary to drugs, unspecified eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.61X0	Glaucoma secondary to drugs, right eye, stage unspecified	ICD-10-CM	Diagnosis
H40.61X1	Glaucoma secondary to drugs, right eye, mild stage	ICD-10-CM	Diagnosis
H40.61X2	Glaucoma secondary to drugs, right eye, moderate stage	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
H40.61X3	Glaucoma secondary to drugs, right eye, severe stage	ICD-10-CM	Diagnosis
H40.61X4	Glaucoma secondary to drugs, right eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.62X0	Glaucoma secondary to drugs, left eye, stage unspecified	ICD-10-CM	Diagnosis
H40.62X1	Glaucoma secondary to drugs, left eye, mild stage	ICD-10-CM	Diagnosis
H40.62X2	Glaucoma secondary to drugs, left eye, moderate stage	ICD-10-CM	Diagnosis
H40.62X3	Glaucoma secondary to drugs, left eye, severe stage	ICD-10-CM	Diagnosis
H40.62X4	Glaucoma secondary to drugs, left eye, indeterminate stage	ICD-10-CM	Diagnosis
H40.63X0	Glaucoma secondary to drugs, bilateral, stage unspecified	ICD-10-CM	Diagnosis
H40.63X1	Glaucoma secondary to drugs, bilateral, mild stage	ICD-10-CM	Diagnosis
H40.63X2	Glaucoma secondary to drugs, bilateral, moderate stage	ICD-10-CM	Diagnosis
H40.63X3	Glaucoma secondary to drugs, bilateral, severe stage	ICD-10-CM	Diagnosis
H40.63X4	Glaucoma secondary to drugs, bilateral, indeterminate stage	ICD-10-CM	Diagnosis
H40.811	Glaucoma with increased episcleral venous pressure, right eye	ICD-10-CM	Diagnosis
H40.812	Glaucoma with increased episcleral venous pressure, left eye	ICD-10-CM	Diagnosis
H40.813	Glaucoma with increased episcleral venous pressure, bilateral	ICD-10-CM	Diagnosis
H40.819	Glaucoma with increased episcleral venous pressure, unspecified eye	ICD-10-CM	Diagnosis
H40.821	Hypersecretion glaucoma, right eye	ICD-10-CM	Diagnosis
H40.822	Hypersecretion glaucoma, left eye	ICD-10-CM	Diagnosis
H40.823	Hypersecretion glaucoma, bilateral	ICD-10-CM	Diagnosis
H40.829	Hypersecretion glaucoma, unspecified eye	ICD-10-CM	Diagnosis
H40.831	Aqueous misdirection, right eye	ICD-10-CM	Diagnosis
H40.832	Aqueous misdirection, left eye	ICD-10-CM	Diagnosis
H40.833	Aqueous misdirection, bilateral	ICD-10-CM	Diagnosis
H40.839	Aqueous misdirection, unspecified eye	ICD-10-CM	Diagnosis
H40.89	Other specified glaucoma	ICD-10-CM	Diagnosis
H40.9	Unspecified glaucoma	ICD-10-CM	Diagnosis
H42	Glaucoma in diseases classified elsewhere	ICD-10-CM	Diagnosis
H44.511	Absolute glaucoma, right eye	ICD-10-CM	Diagnosis
H44.512	Absolute glaucoma, left eye	ICD-10-CM	Diagnosis
H44.513	Absolute glaucoma, bilateral	ICD-10-CM	Diagnosis
H44.519	Absolute glaucoma, unspecified eye	ICD-10-CM	Diagnosis
H47.231	Glaucomatous optic atrophy, right eye	ICD-10-CM	Diagnosis
H47.232	Glaucomatous optic atrophy, left eye	ICD-10-CM	Diagnosis
H47.233	Glaucomatous optic atrophy, bilateral	ICD-10-CM	Diagnosis
H47.239	Glaucomatous optic atrophy, unspecified eye	ICD-10-CM	Diagnosis
Q15.0	Congenital glaucoma	ICD-10-CM	Diagnosis
Heart Failure			
398.91	Rheumatic heart failure (congestive)	ICD-9-CM	Diagnosis
402.01	Malignant hypertensive heart disease with heart failure	ICD-9-CM	Diagnosis
402.11	Benign hypertensive heart disease with heart failure	ICD-9-CM	Diagnosis
402.91	Hypertensive heart disease, unspecified, with heart failure	ICD-9-CM	Diagnosis
404.01	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.11	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.91	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
428.0	Congestive heart failure, unspecified	ICD-9-CM	Diagnosis
428.1	Left heart failure	ICD-9-CM	Diagnosis
428.20	Unspecified systolic heart failure	ICD-9-CM	Diagnosis
428.21	Acute systolic heart failure	ICD-9-CM	Diagnosis
428.22	Chronic systolic heart failure	ICD-9-CM	Diagnosis
428.23	Acute on chronic systolic heart failure	ICD-9-CM	Diagnosis
428.30	Unspecified diastolic heart failure	ICD-9-CM	Diagnosis
428.31	Acute diastolic heart failure	ICD-9-CM	Diagnosis
428.32	Chronic diastolic heart failure	ICD-9-CM	Diagnosis
428.33	Acute on chronic diastolic heart failure	ICD-9-CM	Diagnosis
428.40	Unspecified combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.41	Acute combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.42	Chronic combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.43	Acute on chronic combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.9	Unspecified heart failure	ICD-9-CM	Diagnosis
I09.81	Rheumatic heart failure	ICD-10-CM	Diagnosis
I11.0	Hypertensive heart disease with heart failure	ICD-10-CM	Diagnosis
I13.0	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.2	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM	Diagnosis
I50.1	Left ventricular failure, unspecified	ICD-10-CM	Diagnosis
I50.20	Unspecified systolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.21	Acute systolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.22	Chronic systolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.23	Acute on chronic systolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.30	Unspecified diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.31	Acute diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.32	Chronic diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.33	Acute on chronic diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.40	Unspecified combined systolic (congestive) and diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.41	Acute combined systolic (congestive) and diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.42	Chronic combined systolic (congestive) and diastolic (congestive) heart failure	ICD-10-CM	Diagnosis

Appendix D. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
I50.43	Acute on chronic combined systolic (congestive) and diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.810	Right heart failure, unspecified	ICD-10-CM	Diagnosis
I50.811	Acute right heart failure	ICD-10-CM	Diagnosis
I50.812	Chronic right heart failure	ICD-10-CM	Diagnosis
I50.813	Acute on chronic right heart failure	ICD-10-CM	Diagnosis
I50.814	Right heart failure due to left heart failure	ICD-10-CM	Diagnosis
I50.82	Biventricular heart failure	ICD-10-CM	Diagnosis
I50.83	High output heart failure	ICD-10-CM	Diagnosis
I50.84	End stage heart failure	ICD-10-CM	Diagnosis
I50.89	Other heart failure	ICD-10-CM	Diagnosis
I50.9	Heart failure, unspecified	ICD-10-CM	Diagnosis
Hyperlipidemia			
272.0	Pure hypercholesterolemia	ICD-9-CM	Diagnosis
272.1	Pure hyperglyceridemia	ICD-9-CM	Diagnosis
272.2	Mixed hyperlipidemia	ICD-9-CM	Diagnosis
272.3	Hyperchylomicronemia	ICD-9-CM	Diagnosis
272.4	Other and unspecified hyperlipidemia	ICD-9-CM	Diagnosis
E78.0	Pure hypercholesterolemia	ICD-10-CM	Diagnosis
E78.00	Pure hypercholesterolemia, unspecified	ICD-10-CM	Diagnosis
E78.01	Familial hypercholesterolemia	ICD-10-CM	Diagnosis
E78.1	Pure hyperglyceridemia	ICD-10-CM	Diagnosis
E78.2	Mixed hyperlipidemia	ICD-10-CM	Diagnosis
E78.3	Hyperchylomicronemia	ICD-10-CM	Diagnosis
E78.4	Other hyperlipidemia	ICD-10-CM	Diagnosis
E78.41	Elevated Lipoprotein(a)	ICD-10-CM	Diagnosis
E78.49	Other hyperlipidemia	ICD-10-CM	Diagnosis
E78.5	Hyperlipidemia, unspecified	ICD-10-CM	Diagnosis
Hypertension			
362.11	Hypertensive retinopathy	ICD-9-CM	Diagnosis
401.0	Essential hypertension, malignant	ICD-9-CM	Diagnosis
401.1	Essential hypertension, benign	ICD-9-CM	Diagnosis
401.9	Unspecified essential hypertension	ICD-9-CM	Diagnosis
402.00	Malignant hypertensive heart disease without heart failure	ICD-9-CM	Diagnosis
402.01	Malignant hypertensive heart disease with heart failure	ICD-9-CM	Diagnosis
402.10	Benign hypertensive heart disease without heart failure	ICD-9-CM	Diagnosis
402.11	Benign hypertensive heart disease with heart failure	ICD-9-CM	Diagnosis
402.90	Unspecified hypertensive heart disease without heart failure	ICD-9-CM	Diagnosis
402.91	Hypertensive heart disease, unspecified, with heart failure	ICD-9-CM	Diagnosis
403.00	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
403.01	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis

Appendix D. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
403.10	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
403.11	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
403.90	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
403.91	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.00	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.01	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.02	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.10	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.11	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.12	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.90	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.91	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.92	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
405.01	Secondary renovascular hypertension, malignant	ICD-9-CM	Diagnosis
405.09	Other secondary hypertension, malignant	ICD-9-CM	Diagnosis
405.11	Secondary renovascular hypertension, benign	ICD-9-CM	Diagnosis
405.19	Other secondary hypertension, benign	ICD-9-CM	Diagnosis
405.91	Secondary renovascular hypertension, unspecified	ICD-9-CM	Diagnosis
405.99	Other secondary hypertension, unspecified	ICD-9-CM	Diagnosis
437.2	Hypertensive encephalopathy	ICD-9-CM	Diagnosis
H35.031	Hypertensive retinopathy, right eye	ICD-10-CM	Diagnosis
H35.032	Hypertensive retinopathy, left eye	ICD-10-CM	Diagnosis
H35.033	Hypertensive retinopathy, bilateral	ICD-10-CM	Diagnosis
H35.039	Hypertensive retinopathy, unspecified eye	ICD-10-CM	Diagnosis
I10	Essential (primary) hypertension	ICD-10-CM	Diagnosis

Appendix D. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
I11.0	Hypertensive heart disease with heart failure	ICD-10-CM	Diagnosis
I11.9	Hypertensive heart disease without heart failure	ICD-10-CM	Diagnosis
I12.0	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease	ICD-10-CM	Diagnosis
I12.9	Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.0	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.10	Hypertensive heart and chronic kidney disease without heart failure, with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.11	Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM	Diagnosis
I13.2	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM	Diagnosis
I15.0	Renovascular hypertension	ICD-10-CM	Diagnosis
I15.1	Hypertension secondary to other renal disorders	ICD-10-CM	Diagnosis
I15.2	Hypertension secondary to endocrine disorders	ICD-10-CM	Diagnosis
I15.8	Other secondary hypertension	ICD-10-CM	Diagnosis
I15.9	Secondary hypertension, unspecified	ICD-10-CM	Diagnosis
I67.4	Hypertensive encephalopathy	ICD-10-CM	Diagnosis
N26.2	Page kidney	ICD-10-CM	Diagnosis
Ischemic Heart Disease			
410.00	Acute myocardial infarction of anterolateral wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.01	Acute myocardial infarction of anterolateral wall, initial episode of care	ICD-9-CM	Diagnosis
410.02	Acute myocardial infarction of anterolateral wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.10	Acute myocardial infarction of other anterior wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.11	Acute myocardial infarction of other anterior wall, initial episode of care	ICD-9-CM	Diagnosis
410.12	Acute myocardial infarction of other anterior wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.20	Acute myocardial infarction of inferolateral wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.21	Acute myocardial infarction of inferolateral wall, initial episode of care	ICD-9-CM	Diagnosis
410.22	Acute myocardial infarction of inferolateral wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.30	Acute myocardial infarction of inferoposterior wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.31	Acute myocardial infarction of inferoposterior wall, initial episode of care	ICD-9-CM	Diagnosis
410.32	Acute myocardial infarction of inferoposterior wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.40	Acute myocardial infarction of other inferior wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.41	Acute myocardial infarction of other inferior wall, initial episode of care	ICD-9-CM	Diagnosis
410.42	Acute myocardial infarction of other inferior wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.50	Acute myocardial infarction of other lateral wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.51	Acute myocardial infarction of other lateral wall, initial episode of care	ICD-9-CM	Diagnosis
410.52	Acute myocardial infarction of other lateral wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.60	Acute myocardial infarction, true posterior wall infarction, episode of care unspecified	ICD-9-CM	Diagnosis
410.61	Acute myocardial infarction, true posterior wall infarction, initial episode of care	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
410.62	Acute myocardial infarction, true posterior wall infarction, subsequent episode of care	ICD-9-CM	Diagnosis
410.70	Acute myocardial infarction, subendocardial infarction, episode of care unspecified	ICD-9-CM	Diagnosis
410.71	Acute myocardial infarction, subendocardial infarction, initial episode of care	ICD-9-CM	Diagnosis
410.72	Acute myocardial infarction, subendocardial infarction, subsequent episode of care	ICD-9-CM	Diagnosis
410.80	Acute myocardial infarction of other specified sites, episode of care unspecified	ICD-9-CM	Diagnosis
410.81	Acute myocardial infarction of other specified sites, initial episode of care	ICD-9-CM	Diagnosis
410.82	Acute myocardial infarction of other specified sites, subsequent episode of care	ICD-9-CM	Diagnosis
410.90	Acute myocardial infarction, unspecified site, episode of care unspecified	ICD-9-CM	Diagnosis
410.91	Acute myocardial infarction, unspecified site, initial episode of care	ICD-9-CM	Diagnosis
410.92	Acute myocardial infarction, unspecified site, subsequent episode of care	ICD-9-CM	Diagnosis
411.0	Postmyocardial infarction syndrome	ICD-9-CM	Diagnosis
411.1	Intermediate coronary syndrome	ICD-9-CM	Diagnosis
411.81	Acute coronary occlusion without myocardial infarction	ICD-9-CM	Diagnosis
411.89	Other acute and subacute form of ischemic heart disease	ICD-9-CM	Diagnosis
412	Old myocardial infarction	ICD-9-CM	Diagnosis
413.0	Angina decubitus	ICD-9-CM	Diagnosis
413.1	Prinzmetal angina	ICD-9-CM	Diagnosis
413.9	Other and unspecified angina pectoris	ICD-9-CM	Diagnosis
414.00	Coronary atherosclerosis of unspecified type of vessel, native or graft	ICD-9-CM	Diagnosis
414.01	Coronary atherosclerosis of native coronary artery	ICD-9-CM	Diagnosis
414.02	Coronary atherosclerosis of autologous vein bypass graft	ICD-9-CM	Diagnosis
414.03	Coronary atherosclerosis of nonautologous biological bypass graft	ICD-9-CM	Diagnosis
414.04	Coronary atherosclerosis of artery bypass graft	ICD-9-CM	Sentinel
414.05	Coronary atherosclerosis of unspecified type of bypass graft	ICD-9-CM	Diagnosis
414.06	Coronary atherosclerosis, of native coronary artery of transplanted heart	ICD-9-CM	Diagnosis
414.07	Coronary atherosclerosis, of bypass graft (artery) (vein) of transplanted heart	ICD-9-CM	Diagnosis
414.12	Dissection of coronary artery	ICD-9-CM	Diagnosis
414.2	Chronic total occlusion of coronary artery	ICD-9-CM	Diagnosis
414.3	Coronary atherosclerosis due to lipid rich plaque	ICD-9-CM	Diagnosis
414.4	Coronary atherosclerosis due to calcified coronary lesion	ICD-9-CM	Diagnosis
414.8	Other specified forms of chronic ischemic heart disease	ICD-9-CM	Diagnosis
414.9	Unspecified chronic ischemic heart disease	ICD-9-CM	Diagnosis
I20.0	Unstable angina	ICD-10-CM	Diagnosis
I20.1	Angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I20.8	Other forms of angina pectoris	ICD-10-CM	Diagnosis
I20.9	Angina pectoris, unspecified	ICD-10-CM	Diagnosis
I21.01	ST elevation (STEMI) myocardial infarction involving left main coronary artery	ICD-10-CM	Diagnosis
I21.02	ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery	ICD-10-CM	Diagnosis
I21.09	ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
I21.11	ST elevation (STEMI) myocardial infarction involving right coronary artery	ICD-10-CM	Diagnosis
I21.19	ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall	ICD-10-CM	Diagnosis
I21.21	ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery	ICD-10-CM	Diagnosis
I21.29	ST elevation (STEMI) myocardial infarction involving other sites	ICD-10-CM	Diagnosis
I21.3	ST elevation (STEMI) myocardial infarction of unspecified site	ICD-10-CM	Diagnosis
I21.4	Non-ST elevation (NSTEMI) myocardial infarction	ICD-10-CM	Diagnosis
I21.A1	Myocardial infarction type 2	ICD-10-CM	Diagnosis
I21.A9	Other myocardial infarction type	ICD-10-CM	Diagnosis
I22.0	Subsequent ST elevation (STEMI) myocardial infarction of anterior wall	ICD-10-CM	Diagnosis
I22.1	Subsequent ST elevation (STEMI) myocardial infarction of inferior wall	ICD-10-CM	Diagnosis
I22.2	Subsequent non-ST elevation (NSTEMI) myocardial infarction	ICD-10-CM	Diagnosis
I22.8	Subsequent ST elevation (STEMI) myocardial infarction of other sites	ICD-10-CM	Diagnosis
I22.9	Subsequent ST elevation (STEMI) myocardial infarction of unspecified site	ICD-10-CM	Diagnosis
I23.0	Hemopericardium as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.1	Atrial septal defect as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.2	Ventricular septal defect as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.3	Rupture of cardiac wall without hemopericardium as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.4	Rupture of chordae tendineae as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.5	Rupture of papillary muscle as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.6	Thrombosis of atrium, auricular appendage, and ventricle as current complications following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.7	Postinfarction angina	ICD-10-CM	Diagnosis
I23.8	Other current complications following acute myocardial infarction	ICD-10-CM	Diagnosis
I24.0	Acute coronary thrombosis not resulting in myocardial infarction	ICD-10-CM	Diagnosis
I24.1	Dressler's syndrome	ICD-10-CM	Diagnosis
I24.8	Other forms of acute ischemic heart disease	ICD-10-CM	Diagnosis
I24.9	Acute ischemic heart disease, unspecified	ICD-10-CM	Diagnosis
I25.10	Atherosclerotic heart disease of native coronary artery without angina pectoris	ICD-10-CM	Diagnosis
I25.110	Atherosclerotic heart disease of native coronary artery with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.111	Atherosclerotic heart disease of native coronary artery with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.118	Atherosclerotic heart disease of native coronary artery with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.119	Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.2	Old myocardial infarction	ICD-10-CM	Diagnosis
I25.3	Aneurysm of heart	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
I25.41	Coronary artery aneurysm	ICD-10-CM	Diagnosis
I25.42	Coronary artery dissection	ICD-10-CM	Diagnosis
I25.5	Ischemic cardiomyopathy	ICD-10-CM	Diagnosis
I25.6	Silent myocardial ischemia	ICD-10-CM	Diagnosis
I25.700	Atherosclerosis of coronary artery bypass graft(s), unspecified, with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.701	Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.708	Atherosclerosis of coronary artery bypass graft(s), unspecified, with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.709	Atherosclerosis of coronary artery bypass graft(s), unspecified, with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.710	Atherosclerosis of autologous vein coronary artery bypass graft(s) with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.711	Atherosclerosis of autologous vein coronary artery bypass graft(s) with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.718	Atherosclerosis of autologous vein coronary artery bypass graft(s) with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.719	Atherosclerosis of autologous vein coronary artery bypass graft(s) with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.720	Atherosclerosis of autologous artery coronary artery bypass graft(s) with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.721	Atherosclerosis of autologous artery coronary artery bypass graft(s) with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.728	Atherosclerosis of autologous artery coronary artery bypass graft(s) with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.729	Atherosclerosis of autologous artery coronary artery bypass graft(s) with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.730	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.731	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.738	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.739	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.750	Atherosclerosis of native coronary artery of transplanted heart with unstable angina	ICD-10-CM	Diagnosis
I25.751	Atherosclerosis of native coronary artery of transplanted heart with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.758	Atherosclerosis of native coronary artery of transplanted heart with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.759	Atherosclerosis of native coronary artery of transplanted heart with unspecified angina pectoris	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
I25.760	Atherosclerosis of bypass graft of coronary artery of transplanted heart with unstable angina	ICD-10-CM	Diagnosis
I25.761	Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.768	Atherosclerosis of bypass graft of coronary artery of transplanted heart with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.769	Atherosclerosis of bypass graft of coronary artery of transplanted heart with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.790	Atherosclerosis of other coronary artery bypass graft(s) with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.791	Atherosclerosis of other coronary artery bypass graft(s) with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.798	Atherosclerosis of other coronary artery bypass graft(s) with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.799	Atherosclerosis of other coronary artery bypass graft(s) with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.810	Atherosclerosis of coronary artery bypass graft(s) without angina pectoris	ICD-10-CM	Diagnosis
I25.811	Atherosclerosis of native coronary artery of transplanted heart without angina pectoris	ICD-10-CM	Diagnosis
I25.812	Atherosclerosis of bypass graft of coronary artery of transplanted heart without angina pectoris	ICD-10-CM	Diagnosis
I25.82	Chronic total occlusion of coronary artery	ICD-10-CM	Diagnosis
I25.83	Coronary atherosclerosis due to lipid rich plaque	ICD-10-CM	Diagnosis
I25.84	Coronary atherosclerosis due to calcified coronary lesion	ICD-10-CM	Diagnosis
I25.89	Other forms of chronic ischemic heart disease	ICD-10-CM	Diagnosis
I25.9	Chronic ischemic heart disease, unspecified	ICD-10-CM	Diagnosis
Lung Cancer			
162.2	Malignant neoplasm of main bronchus	ICD-9-CM	Diagnosis
162.3	Malignant neoplasm of upper lobe, bronchus, or lung	ICD-9-CM	Diagnosis
162.4	Malignant neoplasm of middle lobe, bronchus, or lung	ICD-9-CM	Diagnosis
162.5	Malignant neoplasm of lower lobe, bronchus, or lung	ICD-9-CM	Diagnosis
162.8	Malignant neoplasm of other parts of bronchus or lung	ICD-9-CM	Diagnosis
162.9	Malignant neoplasm of bronchus and lung, unspecified site	ICD-9-CM	Diagnosis
231.2	Carcinoma in situ of bronchus and lung	ICD-9-CM	Diagnosis
V10.11	Personal history of malignant neoplasm of bronchus and lung	ICD-9-CM	Diagnosis
C34.00	Malignant neoplasm of unspecified main bronchus	ICD-10-CM	Diagnosis
C34.01	Malignant neoplasm of right main bronchus	ICD-10-CM	Diagnosis
C34.02	Malignant neoplasm of left main bronchus	ICD-10-CM	Diagnosis
C34.10	Malignant neoplasm of upper lobe, unspecified bronchus or lung	ICD-10-CM	Diagnosis
C34.11	Malignant neoplasm of upper lobe, right bronchus or lung	ICD-10-CM	Diagnosis
C34.12	Malignant neoplasm of upper lobe, left bronchus or lung	ICD-10-CM	Diagnosis
C34.2	Malignant neoplasm of middle lobe, bronchus or lung	ICD-10-CM	Diagnosis
C34.30	Malignant neoplasm of lower lobe, unspecified bronchus or lung	ICD-10-CM	Diagnosis
C34.31	Malignant neoplasm of lower lobe, right bronchus or lung	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
C34.32	Malignant neoplasm of lower lobe, left bronchus or lung	ICD-10-CM	Diagnosis
C34.80	Malignant neoplasm of overlapping sites of unspecified bronchus and lung	ICD-10-CM	Diagnosis
C34.81	Malignant neoplasm of overlapping sites of right bronchus and lung	ICD-10-CM	Diagnosis
C34.82	Malignant neoplasm of overlapping sites of left bronchus and lung	ICD-10-CM	Diagnosis
C34.90	Malignant neoplasm of unspecified part of unspecified bronchus or lung	ICD-10-CM	Diagnosis
C34.91	Malignant neoplasm of unspecified part of right bronchus or lung	ICD-10-CM	Diagnosis
C34.92	Malignant neoplasm of unspecified part of left bronchus or lung	ICD-10-CM	Diagnosis
D02.20	Carcinoma in situ of unspecified bronchus and lung	ICD-10-CM	Diagnosis
D02.21	Carcinoma in situ of right bronchus and lung	ICD-10-CM	Diagnosis
D02.22	Carcinoma in situ of left bronchus and lung	ICD-10-CM	Diagnosis
Z85.110	Personal history of malignant carcinoid tumor of bronchus and lung	ICD-10-CM	Diagnosis
Z85.118	Personal history of other malignant neoplasm of bronchus and lung	ICD-10-CM	Diagnosis
Osteoporosis			
733.00	Unspecified osteoporosis	ICD-9-CM	Diagnosis
733.01	Senile osteoporosis	ICD-9-CM	Diagnosis
733.02	Idiopathic osteoporosis	ICD-9-CM	Diagnosis
733.03	Disuse osteoporosis	ICD-9-CM	Diagnosis
733.09	Other osteoporosis	ICD-9-CM	Diagnosis
M81.0	Age-related osteoporosis without current pathological fracture	ICD-10-CM	Diagnosis
M81.6	Localized osteoporosis [Lequesne]	ICD-10-CM	Diagnosis
M81.8	Other osteoporosis without current pathological fracture	ICD-10-CM	Diagnosis
Prostate Cancer			
185	Malignant neoplasm of prostate	ICD-9-CM	Diagnosis
233.4	Carcinoma in situ of prostate	ICD-9-CM	Diagnosis
V10.46	Personal history of malignant neoplasm of prostate	ICD-9-CM	Diagnosis
C61	Malignant neoplasm of prostate	ICD-10-CM	Diagnosis
D07.5	Carcinoma in situ of prostate	ICD-10-CM	Diagnosis
Z85.46	Personal history of malignant neoplasm of prostate	ICD-10-CM	Diagnosis
Rheumatoid Arthritis or Osteoarthritis			
714.0	Rheumatoid arthritis	ICD-9-CM	Diagnosis
714.1	Felty's syndrome	ICD-9-CM	Diagnosis
714.2	Other rheumatoid arthritis with visceral or systemic involvement	ICD-9-CM	Diagnosis
714.30	Polyarticular juvenile rheumatoid arthritis, chronic or unspecified	ICD-9-CM	Diagnosis
714.31	Polyarticular juvenile rheumatoid arthritis, acute	ICD-9-CM	Diagnosis
714.32	Pauciarticular juvenile rheumatoid arthritis	ICD-9-CM	Diagnosis
714.33	Monoarticular juvenile rheumatoid arthritis	ICD-9-CM	Diagnosis
715.00	Generalized osteoarthrosis, unspecified site	ICD-9-CM	Diagnosis
715.04	Generalized osteoarthrosis, involving hand	ICD-9-CM	Diagnosis
715.09	Generalized osteoarthrosis, involving multiple sites	ICD-9-CM	Diagnosis
715.10	Primary localized osteoarthrosis, unspecified site	ICD-9-CM	Diagnosis
715.11	Primary localized osteoarthrosis, shoulder region	ICD-9-CM	Diagnosis
715.12	Primary localized osteoarthrosis, upper arm	ICD-9-CM	Diagnosis
715.13	Primary localized osteoarthrosis, forearm	ICD-9-CM	Diagnosis
715.14	Primary localized osteoarthrosis, hand	ICD-9-CM	Diagnosis

Code	Description	Code Type	Code Category
715.15	Primary localized osteoarthrosis, pelvic region and thigh	ICD-9-CM	Diagnosis
715.16	Primary localized osteoarthrosis, lower leg	ICD-9-CM	Diagnosis
715.17	Primary localized osteoarthrosis, ankle and foot	ICD-9-CM	Diagnosis
715.18	Primary localized osteoarthrosis, other specified sites	ICD-9-CM	Diagnosis
715.20	Secondary localized osteoarthrosis, unspecified site	ICD-9-CM	Diagnosis
715.21	Secondary localized osteoarthrosis, shoulder region	ICD-9-CM	Diagnosis
715.22	Secondary localized osteoarthrosis, upper arm	ICD-9-CM	Diagnosis
715.23	Secondary localized osteoarthrosis, forearm	ICD-9-CM	Diagnosis
715.24	Secondary localized osteoarthrosis, involving hand	ICD-9-CM	Diagnosis
715.25	Secondary localized osteoarthrosis, pelvic region and thigh	ICD-9-CM	Diagnosis
715.26	Secondary localized osteoarthrosis, lower leg	ICD-9-CM	Diagnosis
715.27	Secondary localized osteoarthrosis, ankle and foot	ICD-9-CM	Diagnosis
715.28	Secondary localized osteoarthrosis, other specified site	ICD-9-CM	Diagnosis
715.30	Localized osteoarthrosis not specified whether primary or secondary, unspecified site	ICD-9-CM	Diagnosis
715.31	Localized osteoarthrosis not specified whether primary or secondary, shoulder region	ICD-9-CM	Diagnosis
715.32	Localized osteoarthrosis not specified whether primary or secondary, upper arm	ICD-9-CM	Diagnosis
715.33	Localized osteoarthrosis not specified whether primary or secondary, forearm	ICD-9-CM	Diagnosis
715.34	Localized osteoarthrosis not specified whether primary or secondary, hand	ICD-9-CM	Diagnosis
715.35	Localized osteoarthrosis not specified whether primary or secondary, pelvic region and thigh	ICD-9-CM	Diagnosis
715.36	Localized osteoarthrosis not specified whether primary or secondary, lower leg	ICD-9-CM	Diagnosis
715.37	Localized osteoarthrosis not specified whether primary or secondary, ankle and foot	ICD-9-CM	Diagnosis
715.38	Localized osteoarthrosis not specified whether primary or secondary, other specified sites	ICD-9-CM	Diagnosis
715.80	Osteoarthrosis involving more than one site, but not specified as generalized, unspecified site	ICD-9-CM	Diagnosis
715.89	Osteoarthrosis involving multiple sites, but not specified as generalized	ICD-9-CM	Diagnosis
715.90	Osteoarthrosis, unspecified whether generalized or localized, unspecified site	ICD-9-CM	Diagnosis
715.91	Osteoarthrosis, unspecified whether generalized or localized, shoulder region	ICD-9-CM	Diagnosis
715.92	Osteoarthrosis, unspecified whether generalized or localized, upper arm	ICD-9-CM	Diagnosis
715.93	Osteoarthrosis, unspecified whether generalized or localized, forearm	ICD-9-CM	Diagnosis
715.94	Osteoarthrosis, unspecified whether generalized or localized, hand	ICD-9-CM	Diagnosis
715.95	Osteoarthrosis, unspecified whether generalized or localized, pelvic region and thigh	ICD-9-CM	Diagnosis
715.96	Osteoarthrosis, unspecified whether generalized or localized, lower leg	ICD-9-CM	Diagnosis
715.97	Osteoarthrosis, unspecified whether generalized or localized, ankle and foot	ICD-9-CM	Diagnosis
715.98	Osteoarthrosis, unspecified whether generalized or localized, other specified sites	ICD-9-CM	Diagnosis
720.0	Ankylosing spondylitis	ICD-9-CM	Diagnosis
721.0	Cervical spondylosis without myelopathy	ICD-9-CM	Diagnosis
721.1	Cervical spondylosis with myelopathy	ICD-9-CM	Diagnosis

Appendix D. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
721.2	Thoracic spondylosis without myelopathy	ICD-9-CM	Diagnosis
721.3	Lumbosacral spondylosis without myelopathy	ICD-9-CM	Diagnosis
721.90	Spondylosis of unspecified site without mention of myelopathy	ICD-9-CM	Diagnosis
721.91	Spondylosis of unspecified site with myelopathy	ICD-9-CM	Diagnosis
M05.00	Felty's syndrome, unspecified site	ICD-10-CM	Diagnosis
M05.011	Felty's syndrome, right shoulder	ICD-10-CM	Diagnosis
M05.012	Felty's syndrome, left shoulder	ICD-10-CM	Diagnosis
M05.019	Felty's syndrome, unspecified shoulder	ICD-10-CM	Diagnosis
M05.021	Felty's syndrome, right elbow	ICD-10-CM	Diagnosis
M05.022	Felty's syndrome, left elbow	ICD-10-CM	Diagnosis
M05.029	Felty's syndrome, unspecified elbow	ICD-10-CM	Diagnosis
M05.031	Felty's syndrome, right wrist	ICD-10-CM	Diagnosis
M05.032	Felty's syndrome, left wrist	ICD-10-CM	Diagnosis
M05.039	Felty's syndrome, unspecified wrist	ICD-10-CM	Diagnosis
M05.041	Felty's syndrome, right hand	ICD-10-CM	Diagnosis
M05.042	Felty's syndrome, left hand	ICD-10-CM	Diagnosis
M05.049	Felty's syndrome, unspecified hand	ICD-10-CM	Diagnosis
M05.051	Felty's syndrome, right hip	ICD-10-CM	Diagnosis
M05.052	Felty's syndrome, left hip	ICD-10-CM	Diagnosis
M05.059	Felty's syndrome, unspecified hip	ICD-10-CM	Diagnosis
M05.061	Felty's syndrome, right knee	ICD-10-CM	Diagnosis
M05.062	Felty's syndrome, left knee	ICD-10-CM	Diagnosis
M05.069	Felty's syndrome, unspecified knee	ICD-10-CM	Diagnosis
M05.071	Felty's syndrome, right ankle and foot	ICD-10-CM	Diagnosis
M05.072	Felty's syndrome, left ankle and foot	ICD-10-CM	Diagnosis
M05.079	Felty's syndrome, unspecified ankle and foot	ICD-10-CM	Diagnosis
M05.09	Felty's syndrome, multiple sites	ICD-10-CM	Diagnosis
M05.20	Rheumatoid vasculitis with rheumatoid arthritis of unspecified site	ICD-10-CM	Diagnosis
M05.211	Rheumatoid vasculitis with rheumatoid arthritis of right shoulder	ICD-10-CM	Diagnosis
M05.212	Rheumatoid vasculitis with rheumatoid arthritis of left shoulder	ICD-10-CM	Diagnosis
M05.219	Rheumatoid vasculitis with rheumatoid arthritis of unspecified shoulder	ICD-10-CM	Diagnosis
M05.221	Rheumatoid vasculitis with rheumatoid arthritis of right elbow	ICD-10-CM	Diagnosis
M05.222	Rheumatoid vasculitis with rheumatoid arthritis of left elbow	ICD-10-CM	Diagnosis
M05.229	Rheumatoid vasculitis with rheumatoid arthritis of unspecified elbow	ICD-10-CM	Diagnosis
M05.231	Rheumatoid vasculitis with rheumatoid arthritis of right wrist	ICD-10-CM	Diagnosis
M05.232	Rheumatoid vasculitis with rheumatoid arthritis of left wrist	ICD-10-CM	Diagnosis
M05.239	Rheumatoid vasculitis with rheumatoid arthritis of unspecified wrist	ICD-10-CM	Diagnosis
M05.241	Rheumatoid vasculitis with rheumatoid arthritis of right hand	ICD-10-CM	Diagnosis
M05.242	Rheumatoid vasculitis with rheumatoid arthritis of left hand	ICD-10-CM	Diagnosis
M05.249	Rheumatoid vasculitis with rheumatoid arthritis of unspecified hand	ICD-10-CM	Diagnosis
M05.251	Rheumatoid vasculitis with rheumatoid arthritis of right hip	ICD-10-CM	Diagnosis
M05.252	Rheumatoid vasculitis with rheumatoid arthritis of left hip	ICD-10-CM	Diagnosis
M05.259	Rheumatoid vasculitis with rheumatoid arthritis of unspecified hip	ICD-10-CM	Diagnosis
M05.261	Rheumatoid vasculitis with rheumatoid arthritis of right knee	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
M05.262	Rheumatoid vasculitis with rheumatoid arthritis of left knee	ICD-10-CM	Diagnosis
M05.269	Rheumatoid vasculitis with rheumatoid arthritis of unspecified knee	ICD-10-CM	Diagnosis
M05.271	Rheumatoid vasculitis with rheumatoid arthritis of right ankle and foot	ICD-10-CM	Diagnosis
M05.272	Rheumatoid vasculitis with rheumatoid arthritis of left ankle and foot	ICD-10-CM	Diagnosis
M05.279	Rheumatoid vasculitis with rheumatoid arthritis of unspecified ankle and foot	ICD-10-CM	Diagnosis
M05.29	Rheumatoid vasculitis with rheumatoid arthritis of multiple sites	ICD-10-CM	Diagnosis
M05.30	Rheumatoid heart disease with rheumatoid arthritis of unspecified site	ICD-10-CM	Diagnosis
M05.311	Rheumatoid heart disease with rheumatoid arthritis of right shoulder	ICD-10-CM	Diagnosis
M05.312	Rheumatoid heart disease with rheumatoid arthritis of left shoulder	ICD-10-CM	Diagnosis
M05.319	Rheumatoid heart disease with rheumatoid arthritis of unspecified shoulder	ICD-10-CM	Diagnosis
M05.321	Rheumatoid heart disease with rheumatoid arthritis of right elbow	ICD-10-CM	Diagnosis
M05.322	Rheumatoid heart disease with rheumatoid arthritis of left elbow	ICD-10-CM	Diagnosis
M05.329	Rheumatoid heart disease with rheumatoid arthritis of unspecified elbow	ICD-10-CM	Diagnosis
M05.331	Rheumatoid heart disease with rheumatoid arthritis of right wrist	ICD-10-CM	Diagnosis
M05.332	Rheumatoid heart disease with rheumatoid arthritis of left wrist	ICD-10-CM	Diagnosis
M05.339	Rheumatoid heart disease with rheumatoid arthritis of unspecified wrist	ICD-10-CM	Diagnosis
M05.341	Rheumatoid heart disease with rheumatoid arthritis of right hand	ICD-10-CM	Diagnosis
M05.342	Rheumatoid heart disease with rheumatoid arthritis of left hand	ICD-10-CM	Diagnosis
M05.349	Rheumatoid heart disease with rheumatoid arthritis of unspecified hand	ICD-10-CM	Diagnosis
M05.351	Rheumatoid heart disease with rheumatoid arthritis of right hip	ICD-10-CM	Diagnosis
M05.352	Rheumatoid heart disease with rheumatoid arthritis of left hip	ICD-10-CM	Diagnosis
M05.359	Rheumatoid heart disease with rheumatoid arthritis of unspecified hip	ICD-10-CM	Diagnosis
M05.361	Rheumatoid heart disease with rheumatoid arthritis of right knee	ICD-10-CM	Diagnosis
M05.362	Rheumatoid heart disease with rheumatoid arthritis of left knee	ICD-10-CM	Diagnosis
M05.369	Rheumatoid heart disease with rheumatoid arthritis of unspecified knee	ICD-10-CM	Diagnosis
M05.371	Rheumatoid heart disease with rheumatoid arthritis of right ankle and foot	ICD-10-CM	Sentinel
M05.372	Rheumatoid heart disease with rheumatoid arthritis of left ankle and foot	ICD-10-CM	Diagnosis
M05.379	Rheumatoid heart disease with rheumatoid arthritis of unspecified ankle and foot	ICD-10-CM	Diagnosis
M05.39	Rheumatoid heart disease with rheumatoid arthritis of multiple sites	ICD-10-CM	Diagnosis
M05.40	Rheumatoid myopathy with rheumatoid arthritis of unspecified site	ICD-10-CM	Diagnosis
M05.411	Rheumatoid myopathy with rheumatoid arthritis of right shoulder	ICD-10-CM	Diagnosis
M05.412	Rheumatoid myopathy with rheumatoid arthritis of left shoulder	ICD-10-CM	Diagnosis
M05.419	Rheumatoid myopathy with rheumatoid arthritis of unspecified shoulder	ICD-10-CM	Diagnosis
M05.421	Rheumatoid myopathy with rheumatoid arthritis of right elbow	ICD-10-CM	Diagnosis
M05.422	Rheumatoid myopathy with rheumatoid arthritis of left elbow	ICD-10-CM	Diagnosis
M05.429	Rheumatoid myopathy with rheumatoid arthritis of unspecified elbow	ICD-10-CM	Diagnosis
M05.431	Rheumatoid myopathy with rheumatoid arthritis of right wrist	ICD-10-CM	Diagnosis
M05.432	Rheumatoid myopathy with rheumatoid arthritis of left wrist	ICD-10-CM	Diagnosis
M05.439	Rheumatoid myopathy with rheumatoid arthritis of unspecified wrist	ICD-10-CM	Diagnosis
M05.441	Rheumatoid myopathy with rheumatoid arthritis of right hand	ICD-10-CM	Diagnosis
M05.442	Rheumatoid myopathy with rheumatoid arthritis of left hand	ICD-10-CM	Diagnosis
M05.449	Rheumatoid myopathy with rheumatoid arthritis of unspecified hand	ICD-10-CM	Diagnosis
M05.451	Rheumatoid myopathy with rheumatoid arthritis of right hip	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
M05.452	Rheumatoid myopathy with rheumatoid arthritis of left hip	ICD-10-CM	Diagnosis
M05.459	Rheumatoid myopathy with rheumatoid arthritis of unspecified hip	ICD-10-CM	Diagnosis
M05.461	Rheumatoid myopathy with rheumatoid arthritis of right knee	ICD-10-CM	Diagnosis
M05.462	Rheumatoid myopathy with rheumatoid arthritis of left knee	ICD-10-CM	Diagnosis
M05.469	Rheumatoid myopathy with rheumatoid arthritis of unspecified knee	ICD-10-CM	Diagnosis
M05.471	Rheumatoid myopathy with rheumatoid arthritis of right ankle and foot	ICD-10-CM	Diagnosis
M05.472	Rheumatoid myopathy with rheumatoid arthritis of left ankle and foot	ICD-10-CM	Diagnosis
M05.479	Rheumatoid myopathy with rheumatoid arthritis of unspecified ankle and foot	ICD-10-CM	Diagnosis
M05.49	Rheumatoid myopathy with rheumatoid arthritis of multiple sites	ICD-10-CM	Diagnosis
M05.50	Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified site	ICD-10-CM	Diagnosis
M05.511	Rheumatoid polyneuropathy with rheumatoid arthritis of right shoulder	ICD-10-CM	Diagnosis
M05.512	Rheumatoid polyneuropathy with rheumatoid arthritis of left shoulder	ICD-10-CM	Diagnosis
M05.519	Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified shoulder	ICD-10-CM	Diagnosis
M05.521	Rheumatoid polyneuropathy with rheumatoid arthritis of right elbow	ICD-10-CM	Diagnosis
M05.522	Rheumatoid polyneuropathy with rheumatoid arthritis of left elbow	ICD-10-CM	Diagnosis
M05.529	Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified elbow	ICD-10-CM	Diagnosis
M05.531	Rheumatoid polyneuropathy with rheumatoid arthritis of right wrist	ICD-10-CM	Diagnosis
M05.532	Rheumatoid polyneuropathy with rheumatoid arthritis of left wrist	ICD-10-CM	Diagnosis
M05.539	Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified wrist	ICD-10-CM	Diagnosis
M05.541	Rheumatoid polyneuropathy with rheumatoid arthritis of right hand	ICD-10-CM	Diagnosis
M05.542	Rheumatoid polyneuropathy with rheumatoid arthritis of left hand	ICD-10-CM	Diagnosis
M05.549	Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified hand	ICD-10-CM	Diagnosis
M05.551	Rheumatoid polyneuropathy with rheumatoid arthritis of right hip	ICD-10-CM	Diagnosis
M05.552	Rheumatoid polyneuropathy with rheumatoid arthritis of left hip	ICD-10-CM	Diagnosis
M05.559	Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified hip	ICD-10-CM	Diagnosis
M05.561	Rheumatoid polyneuropathy with rheumatoid arthritis of right knee	ICD-10-CM	Sentinel
M05.562	Rheumatoid polyneuropathy with rheumatoid arthritis of left knee	ICD-10-CM	Diagnosis
M05.569	Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified knee	ICD-10-CM	Diagnosis
M05.571	Rheumatoid polyneuropathy with rheumatoid arthritis of right ankle and foot	ICD-10-CM	Diagnosis
M05.572	Rheumatoid polyneuropathy with rheumatoid arthritis of left ankle and foot	ICD-10-CM	Diagnosis
M05.579	Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified ankle and foot	ICD-10-CM	Diagnosis
M05.59	Rheumatoid polyneuropathy with rheumatoid arthritis of multiple sites	ICD-10-CM	Diagnosis
M05.60	Rheumatoid arthritis of unspecified site with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.611	Rheumatoid arthritis of right shoulder with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.612	Rheumatoid arthritis of left shoulder with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.619	Rheumatoid arthritis of unspecified shoulder with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.621	Rheumatoid arthritis of right elbow with involvement of other organs and systems	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
M05.622	Rheumatoid arthritis of left elbow with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.629	Rheumatoid arthritis of unspecified elbow with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.631	Rheumatoid arthritis of right wrist with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.632	Rheumatoid arthritis of left wrist with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.639	Rheumatoid arthritis of unspecified wrist with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.641	Rheumatoid arthritis of right hand with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.642	Rheumatoid arthritis of left hand with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.649	Rheumatoid arthritis of unspecified hand with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.651	Rheumatoid arthritis of right hip with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.652	Rheumatoid arthritis of left hip with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.659	Rheumatoid arthritis of unspecified hip with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.661	Rheumatoid arthritis of right knee with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.662	Rheumatoid arthritis of left knee with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.669	Rheumatoid arthritis of unspecified knee with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.671	Rheumatoid arthritis of right ankle and foot with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.672	Rheumatoid arthritis of left ankle and foot with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.679	Rheumatoid arthritis of unspecified ankle and foot with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.69	Rheumatoid arthritis of multiple sites with involvement of other organs and systems	ICD-10-CM	Diagnosis
M05.70	Rheumatoid arthritis with rheumatoid factor of unspecified site without organ or systems involvement	ICD-10-CM	Diagnosis
M05.711	Rheumatoid arthritis with rheumatoid factor of right shoulder without organ or systems involvement	ICD-10-CM	Diagnosis
M05.712	Rheumatoid arthritis with rheumatoid factor of left shoulder without organ or systems involvement	ICD-10-CM	Diagnosis
M05.719	Rheumatoid arthritis with rheumatoid factor of unspecified shoulder without organ or systems involvement	ICD-10-CM	Diagnosis
M05.721	Rheumatoid arthritis with rheumatoid factor of right elbow without organ or systems involvement	ICD-10-CM	Diagnosis
M05.722	Rheumatoid arthritis with rheumatoid factor of left elbow without organ or systems involvement	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
M05.729	Rheumatoid arthritis with rheumatoid factor of unspecified elbow without organ or systems involvement	ICD-10-CM	Diagnosis
M05.731	Rheumatoid arthritis with rheumatoid factor of right wrist without organ or systems involvement	ICD-10-CM	Diagnosis
M05.732	Rheumatoid arthritis with rheumatoid factor of left wrist without organ or systems involvement	ICD-10-CM	Diagnosis
M05.739	Rheumatoid arthritis with rheumatoid factor of unspecified wrist without organ or systems involvement	ICD-10-CM	Diagnosis
M05.741	Rheumatoid arthritis with rheumatoid factor of right hand without organ or systems involvement	ICD-10-CM	Diagnosis
M05.742	Rheumatoid arthritis with rheumatoid factor of left hand without organ or systems involvement	ICD-10-CM	Diagnosis
M05.749	Rheumatoid arthritis with rheumatoid factor of unspecified hand without organ or systems involvement	ICD-10-CM	Diagnosis
M05.751	Rheumatoid arthritis with rheumatoid factor of right hip without organ or systems involvement	ICD-10-CM	Diagnosis
M05.752	Rheumatoid arthritis with rheumatoid factor of left hip without organ or systems involvement	ICD-10-CM	Diagnosis
M05.759	Rheumatoid arthritis with rheumatoid factor of unspecified hip without organ or systems involvement	ICD-10-CM	Diagnosis
M05.761	Rheumatoid arthritis with rheumatoid factor of right knee without organ or systems involvement	ICD-10-CM	Diagnosis
M05.762	Rheumatoid arthritis with rheumatoid factor of left knee without organ or systems involvement	ICD-10-CM	Diagnosis
M05.769	Rheumatoid arthritis with rheumatoid factor of unspecified knee without organ or systems involvement	ICD-10-CM	Diagnosis
M05.771	Rheumatoid arthritis with rheumatoid factor of right ankle and foot without organ or systems involvement	ICD-10-CM	Diagnosis
M05.772	Rheumatoid arthritis with rheumatoid factor of left ankle and foot without organ or systems involvement	ICD-10-CM	Diagnosis
M05.779	Rheumatoid arthritis with rheumatoid factor of unspecified ankle and foot without organ or systems involvement	ICD-10-CM	Diagnosis
M05.79	Rheumatoid arthritis with rheumatoid factor of multiple sites without organ or systems involvement	ICD-10-CM	Diagnosis
M05.7A	Rheumatoid arthritis with rheumatoid factor of other specified site without organ or systems involvement	ICD-10-CM	Diagnosis
M05.80	Other rheumatoid arthritis with rheumatoid factor of unspecified site	ICD-10-CM	Diagnosis
M05.811	Other rheumatoid arthritis with rheumatoid factor of right shoulder	ICD-10-CM	Diagnosis
M05.812	Other rheumatoid arthritis with rheumatoid factor of left shoulder	ICD-10-CM	Diagnosis
M05.819	Other rheumatoid arthritis with rheumatoid factor of unspecified shoulder	ICD-10-CM	Diagnosis
M05.821	Other rheumatoid arthritis with rheumatoid factor of right elbow	ICD-10-CM	Diagnosis
M05.822	Other rheumatoid arthritis with rheumatoid factor of left elbow	ICD-10-CM	Diagnosis
M05.829	Other rheumatoid arthritis with rheumatoid factor of unspecified elbow	ICD-10-CM	Diagnosis
M05.831	Other rheumatoid arthritis with rheumatoid factor of right wrist	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
M05.832	Other rheumatoid arthritis with rheumatoid factor of left wrist	ICD-10-CM	Diagnosis
M05.839	Other rheumatoid arthritis with rheumatoid factor of unspecified wrist	ICD-10-CM	Diagnosis
M05.841	Other rheumatoid arthritis with rheumatoid factor of right hand	ICD-10-CM	Diagnosis
M05.842	Other rheumatoid arthritis with rheumatoid factor of left hand	ICD-10-CM	Diagnosis
M05.849	Other rheumatoid arthritis with rheumatoid factor of unspecified hand	ICD-10-CM	Diagnosis
M05.851	Other rheumatoid arthritis with rheumatoid factor of right hip	ICD-10-CM	Diagnosis
M05.852	Other rheumatoid arthritis with rheumatoid factor of left hip	ICD-10-CM	Diagnosis
M05.859	Other rheumatoid arthritis with rheumatoid factor of unspecified hip	ICD-10-CM	Diagnosis
M05.861	Other rheumatoid arthritis with rheumatoid factor of right knee	ICD-10-CM	Diagnosis
M05.862	Other rheumatoid arthritis with rheumatoid factor of left knee	ICD-10-CM	Diagnosis
M05.869	Other rheumatoid arthritis with rheumatoid factor of unspecified knee	ICD-10-CM	Diagnosis
M05.871	Other rheumatoid arthritis with rheumatoid factor of right ankle and foot	ICD-10-CM	Diagnosis
M05.872	Other rheumatoid arthritis with rheumatoid factor of left ankle and foot	ICD-10-CM	Diagnosis
M05.879	Other rheumatoid arthritis with rheumatoid factor of unspecified ankle and foot	ICD-10-CM	Diagnosis
M05.89	Other rheumatoid arthritis with rheumatoid factor of multiple sites	ICD-10-CM	Diagnosis
M05.8A	Other rheumatoid arthritis with rheumatoid factor of other specified site	ICD-10-CM	Diagnosis
M05.9	Rheumatoid arthritis with rheumatoid factor, unspecified	ICD-10-CM	Diagnosis
M06.00	Rheumatoid arthritis without rheumatoid factor, unspecified site	ICD-10-CM	Diagnosis
M06.011	Rheumatoid arthritis without rheumatoid factor, right shoulder	ICD-10-CM	Diagnosis
M06.012	Rheumatoid arthritis without rheumatoid factor, left shoulder	ICD-10-CM	Diagnosis
M06.019	Rheumatoid arthritis without rheumatoid factor, unspecified shoulder	ICD-10-CM	Diagnosis
M06.021	Rheumatoid arthritis without rheumatoid factor, right elbow	ICD-10-CM	Diagnosis
M06.022	Rheumatoid arthritis without rheumatoid factor, left elbow	ICD-10-CM	Diagnosis
M06.029	Rheumatoid arthritis without rheumatoid factor, unspecified elbow	ICD-10-CM	Diagnosis
M06.031	Rheumatoid arthritis without rheumatoid factor, right wrist	ICD-10-CM	Diagnosis
M06.032	Rheumatoid arthritis without rheumatoid factor, left wrist	ICD-10-CM	Sentinel
M06.039	Rheumatoid arthritis without rheumatoid factor, unspecified wrist	ICD-10-CM	Diagnosis
M06.041	Rheumatoid arthritis without rheumatoid factor, right hand	ICD-10-CM	Diagnosis
M06.042	Rheumatoid arthritis without rheumatoid factor, left hand	ICD-10-CM	Diagnosis
M06.049	Rheumatoid arthritis without rheumatoid factor, unspecified hand	ICD-10-CM	Diagnosis
M06.051	Rheumatoid arthritis without rheumatoid factor, right hip	ICD-10-CM	Diagnosis
M06.052	Rheumatoid arthritis without rheumatoid factor, left hip	ICD-10-CM	Diagnosis
M06.059	Rheumatoid arthritis without rheumatoid factor, unspecified hip	ICD-10-CM	Diagnosis
M06.061	Rheumatoid arthritis without rheumatoid factor, right knee	ICD-10-CM	Diagnosis
M06.062	Rheumatoid arthritis without rheumatoid factor, left knee	ICD-10-CM	Diagnosis
M06.069	Rheumatoid arthritis without rheumatoid factor, unspecified knee	ICD-10-CM	Diagnosis
M06.071	Rheumatoid arthritis without rheumatoid factor, right ankle and foot	ICD-10-CM	Diagnosis
M06.072	Rheumatoid arthritis without rheumatoid factor, left ankle and foot	ICD-10-CM	Diagnosis
M06.079	Rheumatoid arthritis without rheumatoid factor, unspecified ankle and foot	ICD-10-CM	Diagnosis
M06.08	Rheumatoid arthritis without rheumatoid factor, vertebrae	ICD-10-CM	Diagnosis
M06.09	Rheumatoid arthritis without rheumatoid factor, multiple sites	ICD-10-CM	Diagnosis
M06.0A	Rheumatoid arthritis without rheumatoid factor, other specified site	ICD-10-CM	Diagnosis
M06.1	Adult-onset Still's disease	ICD-10-CM	Diagnosis
M06.20	Rheumatoid bursitis, unspecified site	ICD-10-CM	Diagnosis

Appendix D. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
M06.211	Rheumatoid bursitis, right shoulder	ICD-10-CM	Diagnosis
M06.212	Rheumatoid bursitis, left shoulder	ICD-10-CM	Diagnosis
M06.219	Rheumatoid bursitis, unspecified shoulder	ICD-10-CM	Diagnosis
M06.221	Rheumatoid bursitis, right elbow	ICD-10-CM	Diagnosis
M06.222	Rheumatoid bursitis, left elbow	ICD-10-CM	Diagnosis
M06.229	Rheumatoid bursitis, unspecified elbow	ICD-10-CM	Diagnosis
M06.231	Rheumatoid bursitis, right wrist	ICD-10-CM	Diagnosis
M06.232	Rheumatoid bursitis, left wrist	ICD-10-CM	Diagnosis
M06.239	Rheumatoid bursitis, unspecified wrist	ICD-10-CM	Diagnosis
M06.241	Rheumatoid bursitis, right hand	ICD-10-CM	Diagnosis
M06.242	Rheumatoid bursitis, left hand	ICD-10-CM	Diagnosis
M06.249	Rheumatoid bursitis, unspecified hand	ICD-10-CM	Diagnosis
M06.251	Rheumatoid bursitis, right hip	ICD-10-CM	Diagnosis
M06.252	Rheumatoid bursitis, left hip	ICD-10-CM	Diagnosis
M06.259	Rheumatoid bursitis, unspecified hip	ICD-10-CM	Diagnosis
M06.261	Rheumatoid bursitis, right knee	ICD-10-CM	Diagnosis
M06.262	Rheumatoid bursitis, left knee	ICD-10-CM	Diagnosis
M06.269	Rheumatoid bursitis, unspecified knee	ICD-10-CM	Diagnosis
M06.271	Rheumatoid bursitis, right ankle and foot	ICD-10-CM	Diagnosis
M06.272	Rheumatoid bursitis, left ankle and foot	ICD-10-CM	Diagnosis
M06.279	Rheumatoid bursitis, unspecified ankle and foot	ICD-10-CM	Diagnosis
M06.28	Rheumatoid bursitis, vertebrae	ICD-10-CM	Diagnosis
M06.29	Rheumatoid bursitis, multiple sites	ICD-10-CM	Diagnosis
M06.30	Rheumatoid nodule, unspecified site	ICD-10-CM	Diagnosis
M06.311	Rheumatoid nodule, right shoulder	ICD-10-CM	Diagnosis
M06.312	Rheumatoid nodule, left shoulder	ICD-10-CM	Sentinel
M06.319	Rheumatoid nodule, unspecified shoulder	ICD-10-CM	Diagnosis
M06.321	Rheumatoid nodule, right elbow	ICD-10-CM	Diagnosis
M06.322	Rheumatoid nodule, left elbow	ICD-10-CM	Diagnosis
M06.329	Rheumatoid nodule, unspecified elbow	ICD-10-CM	Diagnosis
M06.331	Rheumatoid nodule, right wrist	ICD-10-CM	Diagnosis
M06.332	Rheumatoid nodule, left wrist	ICD-10-CM	Diagnosis
M06.339	Rheumatoid nodule, unspecified wrist	ICD-10-CM	Diagnosis
M06.341	Rheumatoid nodule, right hand	ICD-10-CM	Diagnosis
M06.342	Rheumatoid nodule, left hand	ICD-10-CM	Diagnosis
M06.349	Rheumatoid nodule, unspecified hand	ICD-10-CM	Diagnosis
M06.351	Rheumatoid nodule, right hip	ICD-10-CM	Diagnosis
M06.352	Rheumatoid nodule, left hip	ICD-10-CM	Diagnosis
M06.359	Rheumatoid nodule, unspecified hip	ICD-10-CM	Diagnosis
M06.361	Rheumatoid nodule, right knee	ICD-10-CM	Diagnosis
M06.362	Rheumatoid nodule, left knee	ICD-10-CM	Diagnosis
M06.369	Rheumatoid nodule, unspecified knee	ICD-10-CM	Diagnosis
M06.371	Rheumatoid nodule, right ankle and foot	ICD-10-CM	Diagnosis
M06.372	Rheumatoid nodule, left ankle and foot	ICD-10-CM	Diagnosis

Appendix D. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
M06.379	Rheumatoid nodule, unspecified ankle and foot	ICD-10-CM	Diagnosis
M06.38	Rheumatoid nodule, vertebrae	ICD-10-CM	Diagnosis
M06.39	Rheumatoid nodule, multiple sites	ICD-10-CM	Diagnosis
M06.80	Other specified rheumatoid arthritis, unspecified site	ICD-10-CM	Diagnosis
M06.811	Other specified rheumatoid arthritis, right shoulder	ICD-10-CM	Diagnosis
M06.812	Other specified rheumatoid arthritis, left shoulder	ICD-10-CM	Diagnosis
M06.819	Other specified rheumatoid arthritis, unspecified shoulder	ICD-10-CM	Diagnosis
M06.821	Other specified rheumatoid arthritis, right elbow	ICD-10-CM	Diagnosis
M06.822	Other specified rheumatoid arthritis, left elbow	ICD-10-CM	Diagnosis
M06.829	Other specified rheumatoid arthritis, unspecified elbow	ICD-10-CM	Diagnosis
M06.831	Other specified rheumatoid arthritis, right wrist	ICD-10-CM	Diagnosis
M06.832	Other specified rheumatoid arthritis, left wrist	ICD-10-CM	Diagnosis
M06.839	Other specified rheumatoid arthritis, unspecified wrist	ICD-10-CM	Diagnosis
M06.841	Other specified rheumatoid arthritis, right hand	ICD-10-CM	Diagnosis
M06.842	Other specified rheumatoid arthritis, left hand	ICD-10-CM	Diagnosis
M06.849	Other specified rheumatoid arthritis, unspecified hand	ICD-10-CM	Diagnosis
M06.851	Other specified rheumatoid arthritis, right hip	ICD-10-CM	Diagnosis
M06.852	Other specified rheumatoid arthritis, left hip	ICD-10-CM	Diagnosis
M06.859	Other specified rheumatoid arthritis, unspecified hip	ICD-10-CM	Diagnosis
M06.861	Other specified rheumatoid arthritis, right knee	ICD-10-CM	Diagnosis
M06.862	Other specified rheumatoid arthritis, left knee	ICD-10-CM	Diagnosis
M06.869	Other specified rheumatoid arthritis, unspecified knee	ICD-10-CM	Diagnosis
M06.871	Other specified rheumatoid arthritis, right ankle and foot	ICD-10-CM	Diagnosis
M06.872	Other specified rheumatoid arthritis, left ankle and foot	ICD-10-CM	Diagnosis
M06.879	Other specified rheumatoid arthritis, unspecified ankle and foot	ICD-10-CM	Diagnosis
M06.88	Other specified rheumatoid arthritis, vertebrae	ICD-10-CM	Diagnosis
M06.89	Other specified rheumatoid arthritis, multiple sites	ICD-10-CM	Diagnosis
M06.8A	Other specified rheumatoid arthritis, other specified site	ICD-10-CM	Diagnosis
M06.9	Rheumatoid arthritis, unspecified	ICD-10-CM	Diagnosis
M08.00	Unspecified juvenile rheumatoid arthritis of unspecified site	ICD-10-CM	Diagnosis
M08.011	Unspecified juvenile rheumatoid arthritis, right shoulder	ICD-10-CM	Diagnosis
M08.012	Unspecified juvenile rheumatoid arthritis, left shoulder	ICD-10-CM	Diagnosis
M08.019	Unspecified juvenile rheumatoid arthritis, unspecified shoulder	ICD-10-CM	Diagnosis
M08.021	Unspecified juvenile rheumatoid arthritis, right elbow	ICD-10-CM	Diagnosis
M08.022	Unspecified juvenile rheumatoid arthritis, left elbow	ICD-10-CM	Diagnosis
M08.029	Unspecified juvenile rheumatoid arthritis, unspecified elbow	ICD-10-CM	Diagnosis
M08.031	Unspecified juvenile rheumatoid arthritis, right wrist	ICD-10-CM	Diagnosis
M08.032	Unspecified juvenile rheumatoid arthritis, left wrist	ICD-10-CM	Diagnosis
M08.039	Unspecified juvenile rheumatoid arthritis, unspecified wrist	ICD-10-CM	Diagnosis
M08.041	Unspecified juvenile rheumatoid arthritis, right hand	ICD-10-CM	Diagnosis
M08.042	Unspecified juvenile rheumatoid arthritis, left hand	ICD-10-CM	Diagnosis
M08.049	Unspecified juvenile rheumatoid arthritis, unspecified hand	ICD-10-CM	Diagnosis
M08.051	Unspecified juvenile rheumatoid arthritis, right hip	ICD-10-CM	Diagnosis
M08.052	Unspecified juvenile rheumatoid arthritis, left hip	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
M08.059	Unspecified juvenile rheumatoid arthritis, unspecified hip	ICD-10-CM	Diagnosis
M08.061	Unspecified juvenile rheumatoid arthritis, right knee	ICD-10-CM	Diagnosis
M08.062	Unspecified juvenile rheumatoid arthritis, left knee	ICD-10-CM	Diagnosis
M08.069	Unspecified juvenile rheumatoid arthritis, unspecified knee	ICD-10-CM	Diagnosis
M08.071	Unspecified juvenile rheumatoid arthritis, right ankle and foot	ICD-10-CM	Diagnosis
M08.072	Unspecified juvenile rheumatoid arthritis, left ankle and foot	ICD-10-CM	Diagnosis
M08.079	Unspecified juvenile rheumatoid arthritis, unspecified ankle and foot	ICD-10-CM	Diagnosis
M08.08	Unspecified juvenile rheumatoid arthritis, vertebrae	ICD-10-CM	Diagnosis
M08.09	Unspecified juvenile rheumatoid arthritis, multiple sites	ICD-10-CM	Diagnosis
M08.0A	Unspecified juvenile rheumatoid arthritis, other specified site	ICD-10-CM	Diagnosis
M08.1	Juvenile ankylosing spondylitis	ICD-10-CM	Diagnosis
M08.20	Juvenile rheumatoid arthritis with systemic onset, unspecified site	ICD-10-CM	Diagnosis
M08.211	Juvenile rheumatoid arthritis with systemic onset, right shoulder	ICD-10-CM	Diagnosis
M08.212	Juvenile rheumatoid arthritis with systemic onset, left shoulder	ICD-10-CM	Diagnosis
M08.219	Juvenile rheumatoid arthritis with systemic onset, unspecified shoulder	ICD-10-CM	Diagnosis
M08.221	Juvenile rheumatoid arthritis with systemic onset, right elbow	ICD-10-CM	Diagnosis
M08.222	Juvenile rheumatoid arthritis with systemic onset, left elbow	ICD-10-CM	Diagnosis
M08.229	Juvenile rheumatoid arthritis with systemic onset, unspecified elbow	ICD-10-CM	Diagnosis
M08.231	Juvenile rheumatoid arthritis with systemic onset, right wrist	ICD-10-CM	Diagnosis
M08.232	Juvenile rheumatoid arthritis with systemic onset, left wrist	ICD-10-CM	Diagnosis
M08.239	Juvenile rheumatoid arthritis with systemic onset, unspecified wrist	ICD-10-CM	Diagnosis
M08.241	Juvenile rheumatoid arthritis with systemic onset, right hand	ICD-10-CM	Diagnosis
M08.242	Juvenile rheumatoid arthritis with systemic onset, left hand	ICD-10-CM	Diagnosis
M08.249	Juvenile rheumatoid arthritis with systemic onset, unspecified hand	ICD-10-CM	Diagnosis
M08.251	Juvenile rheumatoid arthritis with systemic onset, right hip	ICD-10-CM	Diagnosis
M08.252	Juvenile rheumatoid arthritis with systemic onset, left hip	ICD-10-CM	Diagnosis
M08.259	Juvenile rheumatoid arthritis with systemic onset, unspecified hip	ICD-10-CM	Diagnosis
M08.261	Juvenile rheumatoid arthritis with systemic onset, right knee	ICD-10-CM	Diagnosis
M08.262	Juvenile rheumatoid arthritis with systemic onset, left knee	ICD-10-CM	Diagnosis
M08.269	Juvenile rheumatoid arthritis with systemic onset, unspecified knee	ICD-10-CM	Diagnosis
M08.271	Juvenile rheumatoid arthritis with systemic onset, right ankle and foot	ICD-10-CM	Diagnosis
M08.272	Juvenile rheumatoid arthritis with systemic onset, left ankle and foot	ICD-10-CM	Diagnosis
M08.279	Juvenile rheumatoid arthritis with systemic onset, unspecified ankle and foot	ICD-10-CM	Diagnosis
M08.28	Juvenile rheumatoid arthritis with systemic onset, vertebrae	ICD-10-CM	Diagnosis
M08.29	Juvenile rheumatoid arthritis with systemic onset, multiple sites	ICD-10-CM	Diagnosis
M08.2A	Juvenile rheumatoid arthritis with systemic onset, other specified site	ICD-10-CM	Diagnosis
M08.3	Juvenile rheumatoid polyarthritis (seronegative)	ICD-10-CM	Diagnosis
M08.40	Pauciarticular juvenile rheumatoid arthritis, unspecified site	ICD-10-CM	Diagnosis
M08.411	Pauciarticular juvenile rheumatoid arthritis, right shoulder	ICD-10-CM	Diagnosis
M08.412	Pauciarticular juvenile rheumatoid arthritis, left shoulder	ICD-10-CM	Diagnosis
M08.419	Pauciarticular juvenile rheumatoid arthritis, unspecified shoulder	ICD-10-CM	Diagnosis
M08.421	Pauciarticular juvenile rheumatoid arthritis, right elbow	ICD-10-CM	Diagnosis
M08.422	Pauciarticular juvenile rheumatoid arthritis, left elbow	ICD-10-CM	Diagnosis
M08.429	Pauciarticular juvenile rheumatoid arthritis, unspecified elbow	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
M08.431	Pauciarticular juvenile rheumatoid arthritis, right wrist	ICD-10-CM	Diagnosis
M08.432	Pauciarticular juvenile rheumatoid arthritis, left wrist	ICD-10-CM	Diagnosis
M08.439	Pauciarticular juvenile rheumatoid arthritis, unspecified wrist	ICD-10-CM	Diagnosis
M08.441	Pauciarticular juvenile rheumatoid arthritis, right hand	ICD-10-CM	Diagnosis
M08.442	Pauciarticular juvenile rheumatoid arthritis, left hand	ICD-10-CM	Diagnosis
M08.449	Pauciarticular juvenile rheumatoid arthritis, unspecified hand	ICD-10-CM	Diagnosis
M08.451	Pauciarticular juvenile rheumatoid arthritis, right hip	ICD-10-CM	Diagnosis
M08.452	Pauciarticular juvenile rheumatoid arthritis, left hip	ICD-10-CM	Diagnosis
M08.459	Pauciarticular juvenile rheumatoid arthritis, unspecified hip	ICD-10-CM	Diagnosis
M08.461	Pauciarticular juvenile rheumatoid arthritis, right knee	ICD-10-CM	Diagnosis
M08.462	Pauciarticular juvenile rheumatoid arthritis, left knee	ICD-10-CM	Diagnosis
M08.469	Pauciarticular juvenile rheumatoid arthritis, unspecified knee	ICD-10-CM	Diagnosis
M08.471	Pauciarticular juvenile rheumatoid arthritis, right ankle and foot	ICD-10-CM	Diagnosis
M08.472	Pauciarticular juvenile rheumatoid arthritis, left ankle and foot	ICD-10-CM	Diagnosis
M08.479	Pauciarticular juvenile rheumatoid arthritis, unspecified ankle and foot	ICD-10-CM	Diagnosis
M08.48	Pauciarticular juvenile rheumatoid arthritis, vertebrae	ICD-10-CM	Diagnosis
M08.4A	Pauciarticular juvenile rheumatoid arthritis, other specified site	ICD-10-CM	Diagnosis
M08.80	Other juvenile arthritis, unspecified site	ICD-10-CM	Diagnosis
M08.811	Other juvenile arthritis, right shoulder	ICD-10-CM	Diagnosis
M08.812	Other juvenile arthritis, left shoulder	ICD-10-CM	Diagnosis
M08.819	Other juvenile arthritis, unspecified shoulder	ICD-10-CM	Diagnosis
M08.821	Other juvenile arthritis, right elbow	ICD-10-CM	Diagnosis
M08.822	Other juvenile arthritis, left elbow	ICD-10-CM	Diagnosis
M08.829	Other juvenile arthritis, unspecified elbow	ICD-10-CM	Diagnosis
M08.831	Other juvenile arthritis, right wrist	ICD-10-CM	Diagnosis
M08.832	Other juvenile arthritis, left wrist	ICD-10-CM	Sentinel
M08.839	Other juvenile arthritis, unspecified wrist	ICD-10-CM	Diagnosis
M08.841	Other juvenile arthritis, right hand	ICD-10-CM	Diagnosis
M08.842	Other juvenile arthritis, left hand	ICD-10-CM	Diagnosis
M08.849	Other juvenile arthritis, unspecified hand	ICD-10-CM	Diagnosis
M08.851	Other juvenile arthritis, right hip	ICD-10-CM	Diagnosis
M08.852	Other juvenile arthritis, left hip	ICD-10-CM	Diagnosis
M08.859	Other juvenile arthritis, unspecified hip	ICD-10-CM	Diagnosis
M08.861	Other juvenile arthritis, right knee	ICD-10-CM	Diagnosis
M08.862	Other juvenile arthritis, left knee	ICD-10-CM	Diagnosis
M08.869	Other juvenile arthritis, unspecified knee	ICD-10-CM	Diagnosis
M08.871	Other juvenile arthritis, right ankle and foot	ICD-10-CM	Diagnosis
M08.872	Other juvenile arthritis, left ankle and foot	ICD-10-CM	Diagnosis
M08.879	Other juvenile arthritis, unspecified ankle and foot	ICD-10-CM	Diagnosis
M08.88	Other juvenile arthritis, other specified site	ICD-10-CM	Diagnosis
M08.89	Other juvenile arthritis, multiple sites	ICD-10-CM	Diagnosis
M08.90	Juvenile arthritis, unspecified, unspecified site	ICD-10-CM	Diagnosis
M08.911	Juvenile arthritis, unspecified, right shoulder	ICD-10-CM	Diagnosis
M08.912	Juvenile arthritis, unspecified, left shoulder	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
M08.919	Juvenile arthritis, unspecified, unspecified shoulder	ICD-10-CM	Diagnosis
M08.921	Juvenile arthritis, unspecified, right elbow	ICD-10-CM	Diagnosis
M08.922	Juvenile arthritis, unspecified, left elbow	ICD-10-CM	Diagnosis
M08.929	Juvenile arthritis, unspecified, unspecified elbow	ICD-10-CM	Diagnosis
M08.931	Juvenile arthritis, unspecified, right wrist	ICD-10-CM	Diagnosis
M08.932	Juvenile arthritis, unspecified, left wrist	ICD-10-CM	Diagnosis
M08.939	Juvenile arthritis, unspecified, unspecified wrist	ICD-10-CM	Diagnosis
M08.941	Juvenile arthritis, unspecified, right hand	ICD-10-CM	Diagnosis
M08.942	Juvenile arthritis, unspecified, left hand	ICD-10-CM	Diagnosis
M08.949	Juvenile arthritis, unspecified, unspecified hand	ICD-10-CM	Diagnosis
M08.951	Juvenile arthritis, unspecified, right hip	ICD-10-CM	Diagnosis
M08.952	Juvenile arthritis, unspecified, left hip	ICD-10-CM	Diagnosis
M08.959	Juvenile arthritis, unspecified, unspecified hip	ICD-10-CM	Diagnosis
M08.961	Juvenile arthritis, unspecified, right knee	ICD-10-CM	Diagnosis
M08.962	Juvenile arthritis, unspecified, left knee	ICD-10-CM	Diagnosis
M08.969	Juvenile arthritis, unspecified, unspecified knee	ICD-10-CM	Diagnosis
M08.971	Juvenile arthritis, unspecified, right ankle and foot	ICD-10-CM	Diagnosis
M08.972	Juvenile arthritis, unspecified, left ankle and foot	ICD-10-CM	Diagnosis
M08.979	Juvenile arthritis, unspecified, unspecified ankle and foot	ICD-10-CM	Diagnosis
M08.98	Juvenile arthritis, unspecified, vertebrae	ICD-10-CM	Diagnosis
M08.99	Juvenile arthritis, unspecified, multiple sites	ICD-10-CM	Diagnosis
M08.9A	Juvenile arthritis, unspecified, other specified site	ICD-10-CM	Diagnosis
M15.0	Primary generalized (osteo)arthritis	ICD-10-CM	Diagnosis
M15.1	Heberden's nodes (with arthropathy)	ICD-10-CM	Diagnosis
M15.2	Bouchard's nodes (with arthropathy)	ICD-10-CM	Diagnosis
M15.3	Secondary multiple arthritis	ICD-10-CM	Diagnosis
M15.4	Erosive (osteo)arthritis	ICD-10-CM	Diagnosis
M15.8	Other polyosteoarthritis	ICD-10-CM	Diagnosis
M15.9	Polyosteoarthritis, unspecified	ICD-10-CM	Diagnosis
M16.0	Bilateral primary osteoarthritis of hip	ICD-10-CM	Diagnosis
M16.10	Unilateral primary osteoarthritis, unspecified hip	ICD-10-CM	Diagnosis
M16.11	Unilateral primary osteoarthritis, right hip	ICD-10-CM	Diagnosis
M16.12	Unilateral primary osteoarthritis, left hip	ICD-10-CM	Diagnosis
M16.2	Bilateral osteoarthritis resulting from hip dysplasia	ICD-10-CM	Diagnosis
M16.30	Unilateral osteoarthritis resulting from hip dysplasia, unspecified hip	ICD-10-CM	Diagnosis
M16.31	Unilateral osteoarthritis resulting from hip dysplasia, right hip	ICD-10-CM	Diagnosis
M16.32	Unilateral osteoarthritis resulting from hip dysplasia, left hip	ICD-10-CM	Diagnosis
M16.4	Bilateral post-traumatic osteoarthritis of hip	ICD-10-CM	Diagnosis
M16.50	Unilateral post-traumatic osteoarthritis, unspecified hip	ICD-10-CM	Diagnosis
M16.51	Unilateral post-traumatic osteoarthritis, right hip	ICD-10-CM	Diagnosis
M16.52	Unilateral post-traumatic osteoarthritis, left hip	ICD-10-CM	Diagnosis
M16.6	Other bilateral secondary osteoarthritis of hip	ICD-10-CM	Diagnosis
M16.7	Other unilateral secondary osteoarthritis of hip	ICD-10-CM	Diagnosis
M16.9	Osteoarthritis of hip, unspecified	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
M17.0	Bilateral primary osteoarthritis of knee	ICD-10-CM	Diagnosis
M17.10	Unilateral primary osteoarthritis, unspecified knee	ICD-10-CM	Diagnosis
M17.11	Unilateral primary osteoarthritis, right knee	ICD-10-CM	Diagnosis
M17.12	Unilateral primary osteoarthritis, left knee	ICD-10-CM	Diagnosis
M17.2	Bilateral post-traumatic osteoarthritis of knee	ICD-10-CM	Diagnosis
M17.30	Unilateral post-traumatic osteoarthritis, unspecified knee	ICD-10-CM	Diagnosis
M17.31	Unilateral post-traumatic osteoarthritis, right knee	ICD-10-CM	Diagnosis
M17.32	Unilateral post-traumatic osteoarthritis, left knee	ICD-10-CM	Diagnosis
M17.4	Other bilateral secondary osteoarthritis of knee	ICD-10-CM	Diagnosis
M17.5	Other unilateral secondary osteoarthritis of knee	ICD-10-CM	Diagnosis
M17.9	Osteoarthritis of knee, unspecified	ICD-10-CM	Diagnosis
M18.0	Bilateral primary osteoarthritis of first carpometacarpal joints	ICD-10-CM	Diagnosis
M18.10	Unilateral primary osteoarthritis of first carpometacarpal joint, unspecified hand	ICD-10-CM	Diagnosis
M18.11	Unilateral primary osteoarthritis of first carpometacarpal joint, right hand	ICD-10-CM	Diagnosis
M18.12	Unilateral primary osteoarthritis of first carpometacarpal joint, left hand	ICD-10-CM	Diagnosis
M18.2	Bilateral post-traumatic osteoarthritis of first carpometacarpal joints	ICD-10-CM	Diagnosis
M18.30	Unilateral post-traumatic osteoarthritis of first carpometacarpal joint, unspecified hand	ICD-10-CM	Diagnosis
M18.31	Unilateral post-traumatic osteoarthritis of first carpometacarpal joint, right hand	ICD-10-CM	Diagnosis
M18.32	Unilateral post-traumatic osteoarthritis of first carpometacarpal joint, left hand	ICD-10-CM	Diagnosis
M18.4	Other bilateral secondary osteoarthritis of first carpometacarpal joints	ICD-10-CM	Diagnosis
M18.50	Other unilateral secondary osteoarthritis of first carpometacarpal joint, unspecified hand	ICD-10-CM	Diagnosis
M18.51	Other unilateral secondary osteoarthritis of first carpometacarpal joint, right hand	ICD-10-CM	Diagnosis
M18.52	Other unilateral secondary osteoarthritis of first carpometacarpal joint, left hand	ICD-10-CM	Diagnosis
M18.9	Osteoarthritis of first carpometacarpal joint, unspecified	ICD-10-CM	Diagnosis
M19.011	Primary osteoarthritis, right shoulder	ICD-10-CM	Diagnosis
M19.012	Primary osteoarthritis, left shoulder	ICD-10-CM	Diagnosis
M19.019	Primary osteoarthritis, unspecified shoulder	ICD-10-CM	Diagnosis
M19.021	Primary osteoarthritis, right elbow	ICD-10-CM	Diagnosis
M19.022	Primary osteoarthritis, left elbow	ICD-10-CM	Diagnosis
M19.029	Primary osteoarthritis, unspecified elbow	ICD-10-CM	Diagnosis
M19.031	Primary osteoarthritis, right wrist	ICD-10-CM	Diagnosis
M19.032	Primary osteoarthritis, left wrist	ICD-10-CM	Diagnosis
M19.039	Primary osteoarthritis, unspecified wrist	ICD-10-CM	Diagnosis
M19.041	Primary osteoarthritis, right hand	ICD-10-CM	Diagnosis
M19.042	Primary osteoarthritis, left hand	ICD-10-CM	Diagnosis
M19.049	Primary osteoarthritis, unspecified hand	ICD-10-CM	Diagnosis
M19.071	Primary osteoarthritis, right ankle and foot	ICD-10-CM	Diagnosis
M19.072	Primary osteoarthritis, left ankle and foot	ICD-10-CM	Diagnosis
M19.079	Primary osteoarthritis, unspecified ankle and foot	ICD-10-CM	Diagnosis
M19.09	Primary osteoarthritis, other specified site	ICD-10-CM	Diagnosis
M19.111	Post-traumatic osteoarthritis, right shoulder	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
M19.112	Post-traumatic osteoarthritis, left shoulder	ICD-10-CM	Diagnosis
M19.119	Post-traumatic osteoarthritis, unspecified shoulder	ICD-10-CM	Diagnosis
M19.121	Post-traumatic osteoarthritis, right elbow	ICD-10-CM	Diagnosis
M19.122	Post-traumatic osteoarthritis, left elbow	ICD-10-CM	Diagnosis
M19.129	Post-traumatic osteoarthritis, unspecified elbow	ICD-10-CM	Diagnosis
M19.131	Post-traumatic osteoarthritis, right wrist	ICD-10-CM	Diagnosis
M19.132	Post-traumatic osteoarthritis, left wrist	ICD-10-CM	Diagnosis
M19.139	Post-traumatic osteoarthritis, unspecified wrist	ICD-10-CM	Diagnosis
M19.141	Post-traumatic osteoarthritis, right hand	ICD-10-CM	Diagnosis
M19.142	Post-traumatic osteoarthritis, left hand	ICD-10-CM	Diagnosis
M19.149	Post-traumatic osteoarthritis, unspecified hand	ICD-10-CM	Diagnosis
M19.171	Post-traumatic osteoarthritis, right ankle and foot	ICD-10-CM	Diagnosis
M19.172	Post-traumatic osteoarthritis, left ankle and foot	ICD-10-CM	Diagnosis
M19.179	Post-traumatic osteoarthritis, unspecified ankle and foot	ICD-10-CM	Diagnosis
M19.19	Post-traumatic osteoarthritis, other specified site	ICD-10-CM	Diagnosis
M19.211	Secondary osteoarthritis, right shoulder	ICD-10-CM	Diagnosis
M19.212	Secondary osteoarthritis, left shoulder	ICD-10-CM	Diagnosis
M19.219	Secondary osteoarthritis, unspecified shoulder	ICD-10-CM	Diagnosis
M19.221	Secondary osteoarthritis, right elbow	ICD-10-CM	Diagnosis
M19.222	Secondary osteoarthritis, left elbow	ICD-10-CM	Diagnosis
M19.229	Secondary osteoarthritis, unspecified elbow	ICD-10-CM	Diagnosis
M19.231	Secondary osteoarthritis, right wrist	ICD-10-CM	Diagnosis
M19.232	Secondary osteoarthritis, left wrist	ICD-10-CM	Diagnosis
M19.239	Secondary osteoarthritis, unspecified wrist	ICD-10-CM	Diagnosis
M19.241	Secondary osteoarthritis, right hand	ICD-10-CM	Diagnosis
M19.242	Secondary osteoarthritis, left hand	ICD-10-CM	Sentinel
M19.249	Secondary osteoarthritis, unspecified hand	ICD-10-CM	Diagnosis
M19.271	Secondary osteoarthritis, right ankle and foot	ICD-10-CM	Diagnosis
M19.272	Secondary osteoarthritis, left ankle and foot	ICD-10-CM	Diagnosis
M19.279	Secondary osteoarthritis, unspecified ankle and foot	ICD-10-CM	Diagnosis
M19.29	Secondary osteoarthritis, other specified site	ICD-10-CM	Diagnosis
M19.90	Unspecified osteoarthritis, unspecified site	ICD-10-CM	Diagnosis
M19.91	Primary osteoarthritis, unspecified site	ICD-10-CM	Diagnosis
M19.92	Post-traumatic osteoarthritis, unspecified site	ICD-10-CM	Diagnosis
M19.93	Secondary osteoarthritis, unspecified site	ICD-10-CM	Diagnosis
M45.0	Ankylosing spondylitis of multiple sites in spine	ICD-10-CM	Diagnosis
M45.1	Ankylosing spondylitis of occipito-atlanto-axial region	ICD-10-CM	Diagnosis
M45.2	Ankylosing spondylitis of cervical region	ICD-10-CM	Diagnosis
M45.3	Ankylosing spondylitis of cervicothoracic region	ICD-10-CM	Diagnosis
M45.4	Ankylosing spondylitis of thoracic region	ICD-10-CM	Diagnosis
M45.5	Ankylosing spondylitis of thoracolumbar region	ICD-10-CM	Diagnosis
M45.6	Ankylosing spondylitis lumbar region	ICD-10-CM	Diagnosis
M45.7	Ankylosing spondylitis of lumbosacral region	ICD-10-CM	Diagnosis
M45.8	Ankylosing spondylitis sacral and sacrococcygeal region	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
M45.9	Ankylosing spondylitis of unspecified sites in spine	ICD-10-CM	Diagnosis
M47.011	Anterior spinal artery compression syndromes, occipito-atlanto-axial region	ICD-10-CM	Diagnosis
M47.012	Anterior spinal artery compression syndromes, cervical region	ICD-10-CM	Diagnosis
M47.013	Anterior spinal artery compression syndromes, cervicothoracic region	ICD-10-CM	Diagnosis
M47.014	Anterior spinal artery compression syndromes, thoracic region	ICD-10-CM	Diagnosis
M47.015	Anterior spinal artery compression syndromes, thoracolumbar region	ICD-10-CM	Diagnosis
M47.016	Anterior spinal artery compression syndromes, lumbar region	ICD-10-CM	Diagnosis
M47.019	Anterior spinal artery compression syndromes, site unspecified	ICD-10-CM	Diagnosis
M47.021	Vertebral artery compression syndromes, occipito-atlanto-axial region	ICD-10-CM	Diagnosis
M47.022	Vertebral artery compression syndromes, cervical region	ICD-10-CM	Diagnosis
M47.029	Vertebral artery compression syndromes, site unspecified	ICD-10-CM	Diagnosis
M47.10	Other spondylosis with myelopathy, site unspecified	ICD-10-CM	Diagnosis
M47.11	Other spondylosis with myelopathy, occipito-atlanto-axial region	ICD-10-CM	Diagnosis
M47.12	Other spondylosis with myelopathy, cervical region	ICD-10-CM	Diagnosis
M47.13	Other spondylosis with myelopathy, cervicothoracic region	ICD-10-CM	Diagnosis
M47.20	Other spondylosis with radiculopathy, site unspecified	ICD-10-CM	Diagnosis
M47.21	Other spondylosis with radiculopathy, occipito-atlanto-axial region	ICD-10-CM	Diagnosis
M47.22	Other spondylosis with radiculopathy, cervical region	ICD-10-CM	Diagnosis
M47.23	Other spondylosis with radiculopathy, cervicothoracic region	ICD-10-CM	Diagnosis
M47.24	Other spondylosis with radiculopathy, thoracic region	ICD-10-CM	Diagnosis
M47.25	Other spondylosis with radiculopathy, thoracolumbar region	ICD-10-CM	Diagnosis
M47.26	Other spondylosis with radiculopathy, lumbar region	ICD-10-CM	Diagnosis
M47.27	Other spondylosis with radiculopathy, lumbosacral region	ICD-10-CM	Diagnosis
M47.28	Other spondylosis with radiculopathy, sacral and sacrococcygeal region	ICD-10-CM	Diagnosis
M47.811	Spondylosis without myelopathy or radiculopathy, occipito-atlanto-axial region	ICD-10-CM	Diagnosis
M47.812	Spondylosis without myelopathy or radiculopathy, cervical region	ICD-10-CM	Diagnosis
M47.813	Spondylosis without myelopathy or radiculopathy, cervicothoracic region	ICD-10-CM	Diagnosis
M47.814	Spondylosis without myelopathy or radiculopathy, thoracic region	ICD-10-CM	Diagnosis
M47.815	Spondylosis without myelopathy or radiculopathy, thoracolumbar region	ICD-10-CM	Diagnosis
M47.816	Spondylosis without myelopathy or radiculopathy, lumbar region	ICD-10-CM	Diagnosis
M47.817	Spondylosis without myelopathy or radiculopathy, lumbosacral region	ICD-10-CM	Diagnosis
M47.818	Spondylosis without myelopathy or radiculopathy, sacral and sacrococcygeal region	ICD-10-CM	Diagnosis
M47.819	Spondylosis without myelopathy or radiculopathy, site unspecified	ICD-10-CM	Diagnosis
M47.891	Other spondylosis, occipito-atlanto-axial region	ICD-10-CM	Diagnosis
M47.892	Other spondylosis, cervical region	ICD-10-CM	Diagnosis
M47.893	Other spondylosis, cervicothoracic region	ICD-10-CM	Diagnosis
M47.894	Other spondylosis, thoracic region	ICD-10-CM	Diagnosis
M47.895	Other spondylosis, thoracolumbar region	ICD-10-CM	Diagnosis
M47.896	Other spondylosis, lumbar region	ICD-10-CM	Diagnosis
M47.897	Other spondylosis, lumbosacral region	ICD-10-CM	Diagnosis
M47.898	Other spondylosis, sacral and sacrococcygeal region	ICD-10-CM	Diagnosis
M47.899	Other spondylosis, site unspecified	ICD-10-CM	Diagnosis
M47.9	Spondylosis, unspecified	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
M48.8X1	Other specified spondylopathies, occipito-atlanto-axial region	ICD-10-CM	Diagnosis
M48.8X2	Other specified spondylopathies, cervical region	ICD-10-CM	Diagnosis
M48.8X3	Other specified spondylopathies, cervicothoracic region	ICD-10-CM	Diagnosis
M48.8X4	Other specified spondylopathies, thoracic region	ICD-10-CM	Diagnosis
M48.8X5	Other specified spondylopathies, thoracolumbar region	ICD-10-CM	Diagnosis
M48.8X6	Other specified spondylopathies, lumbar region	ICD-10-CM	Diagnosis
M48.8X7	Other specified spondylopathies, lumbosacral region	ICD-10-CM	Diagnosis
M48.8X8	Other specified spondylopathies, sacral and sacrococcygeal region	ICD-10-CM	Diagnosis
M48.8X9	Other specified spondylopathies, site unspecified	ICD-10-CM	Diagnosis
Stroke or Transient Ischemic Attack			
433.11	Occlusion and stenosis of carotid artery with cerebral infarction	ICD-9-CM	Diagnosis
434.91	Unspecified cerebral artery occlusion with cerebral infarction	ICD-9-CM	Diagnosis
435.3	Vertebrobasilar artery syndrome	ICD-9-CM	Diagnosis
435.0	Basilar artery syndrome	ICD-9-CM	Diagnosis
435.1	Vertebral artery syndrome	ICD-9-CM	Diagnosis
430	Subarachnoid hemorrhage	ICD-9-CM	Diagnosis
434.11	Cerebral embolism with cerebral infarction	ICD-9-CM	Diagnosis
434.00	Cerebral thrombosis without mention of cerebral infarction	ICD-9-CM	Diagnosis
433.01	Occlusion and stenosis of basilar artery with cerebral infarction	ICD-9-CM	Diagnosis
435.8	Other specified transient cerebral ischemias	ICD-9-CM	Diagnosis
433.81	Occlusion and stenosis of other specified precerebral artery with cerebral infarction	ICD-9-CM	Diagnosis
435.9	Unspecified transient cerebral ischemia	ICD-9-CM	Diagnosis
433.21	Occlusion and stenosis of vertebral artery with cerebral infarction	ICD-9-CM	Diagnosis
434.90	Unspecified cerebral artery occlusion without mention of cerebral infarction	ICD-9-CM	Diagnosis
434.10	Cerebral embolism without mention of cerebral infarction	ICD-9-CM	Diagnosis
433.91	Occlusion and stenosis of unspecified precerebral artery with cerebral infarction	ICD-9-CM	Diagnosis
434.01	Cerebral thrombosis with cerebral infarction	ICD-9-CM	Diagnosis
433.31	Occlusion and stenosis of multiple and bilateral precerebral arteries with cerebral infarction	ICD-9-CM	Diagnosis
431	Intracerebral hemorrhage	ICD-9-CM	Diagnosis
997.02	Iatrogenic cerebrovascular infarction or hemorrhage	ICD-9-CM	Diagnosis
436	Acute, but ill-defined, cerebrovascular disease	ICD-9-CM	Diagnosis
G45.0	Vertebro-basilar artery syndrome	ICD-10-CM	Diagnosis
G45.1	Carotid artery syndrome (hemispheric)	ICD-10-CM	Diagnosis
G45.2	Multiple and bilateral precerebral artery syndromes	ICD-10-CM	Diagnosis
G45.8	Other transient cerebral ischemic attacks and related syndromes	ICD-10-CM	Diagnosis
G45.9	Transient cerebral ischemic attack, unspecified	ICD-10-CM	Diagnosis
G46.0	Middle cerebral artery syndrome	ICD-10-CM	Diagnosis
G46.1	Anterior cerebral artery syndrome	ICD-10-CM	Diagnosis
G46.2	Posterior cerebral artery syndrome	ICD-10-CM	Diagnosis
G46.3	Brain stem stroke syndrome	ICD-10-CM	Diagnosis
G46.4	Cerebellar stroke syndrome	ICD-10-CM	Diagnosis
G46.5	Pure motor lacunar syndrome	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
G46.6	Pure sensory lacunar syndrome	ICD-10-CM	Diagnosis
G46.7	Other lacunar syndromes	ICD-10-CM	Diagnosis
G46.8	Other vascular syndromes of brain in cerebrovascular diseases	ICD-10-CM	Diagnosis
G97.31	Intraoperative hemorrhage and hematoma of a nervous system organ or structure complicating a nervous system procedure	ICD-10-CM	Diagnosis
G97.32	Intraoperative hemorrhage and hematoma of a nervous system organ or structure complicating other procedure	ICD-10-CM	Diagnosis
I60.00	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.01	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.02	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.10	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I60.11	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery	ICD-10-CM	Diagnosis
I60.12	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery	ICD-10-CM	Diagnosis
I60.20	Nontraumatic subarachnoid hemorrhage from unspecified anterior communicating artery	ICD-10-CM	Diagnosis
I60.21	Nontraumatic subarachnoid hemorrhage from right anterior communicating artery	ICD-10-CM	Diagnosis
I60.22	Nontraumatic subarachnoid hemorrhage from left anterior communicating artery	ICD-10-CM	Diagnosis
I60.30	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery	ICD-10-CM	Diagnosis
I60.31	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery	ICD-10-CM	Diagnosis
I60.32	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery	ICD-10-CM	Diagnosis
I60.4	Nontraumatic subarachnoid hemorrhage from basilar artery	ICD-10-CM	Diagnosis
I60.50	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery	ICD-10-CM	Diagnosis
I60.51	Nontraumatic subarachnoid hemorrhage from right vertebral artery	ICD-10-CM	Diagnosis
I60.52	Nontraumatic subarachnoid hemorrhage from left vertebral artery	ICD-10-CM	Diagnosis
I60.6	Nontraumatic subarachnoid hemorrhage from other intracranial arteries	ICD-10-CM	Diagnosis
I60.7	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery	ICD-10-CM	Diagnosis
I60.8	Other nontraumatic subarachnoid hemorrhage	ICD-10-CM	Diagnosis
I60.9	Nontraumatic subarachnoid hemorrhage, unspecified	ICD-10-CM	Diagnosis
I61.0	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical	ICD-10-CM	Diagnosis
I61.1	Nontraumatic intracerebral hemorrhage in hemisphere, cortical	ICD-10-CM	Diagnosis
I61.2	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified	ICD-10-CM	Diagnosis
I61.3	Nontraumatic intracerebral hemorrhage in brain stem	ICD-10-CM	Diagnosis
I61.4	Nontraumatic intracerebral hemorrhage in cerebellum	ICD-10-CM	Diagnosis
I61.5	Nontraumatic intracerebral hemorrhage, intraventricular	ICD-10-CM	Diagnosis
I61.6	Nontraumatic intracerebral hemorrhage, multiple localized	ICD-10-CM	Diagnosis
I61.8	Other nontraumatic intracerebral hemorrhage	ICD-10-CM	Diagnosis
I61.9	Nontraumatic intracerebral hemorrhage, unspecified	ICD-10-CM	Diagnosis

Appendix D. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
I63.00	Cerebral infarction due to thrombosis of unspecified precerebral artery	ICD-10-CM	Diagnosis
I63.011	Cerebral infarction due to thrombosis of right vertebral artery	ICD-10-CM	Diagnosis
I63.012	Cerebral infarction due to thrombosis of left vertebral artery	ICD-10-CM	Diagnosis
I63.013	Cerebral infarction due to thrombosis of bilateral vertebral arteries	ICD-10-CM	Diagnosis
I63.019	Cerebral infarction due to thrombosis of unspecified vertebral artery	ICD-10-CM	Diagnosis
I63.02	Cerebral infarction due to thrombosis of basilar artery	ICD-10-CM	Diagnosis
I63.031	Cerebral infarction due to thrombosis of right carotid artery	ICD-10-CM	Diagnosis
I63.032	Cerebral infarction due to thrombosis of left carotid artery	ICD-10-CM	Diagnosis
I63.039	Cerebral infarction due to thrombosis of unspecified carotid artery	ICD-10-CM	Diagnosis
I63.09	Cerebral infarction due to thrombosis of other precerebral artery	ICD-10-CM	Diagnosis
I63.10	Cerebral infarction due to embolism of unspecified precerebral artery	ICD-10-CM	Diagnosis
I63.111	Cerebral infarction due to embolism of right vertebral artery	ICD-10-CM	Diagnosis
I63.112	Cerebral infarction due to embolism of left vertebral artery	ICD-10-CM	Diagnosis
I63.119	Cerebral infarction due to embolism of unspecified vertebral artery	ICD-10-CM	Diagnosis
I63.12	Cerebral infarction due to embolism of basilar artery	ICD-10-CM	Diagnosis
I63.131	Cerebral infarction due to embolism of right carotid artery	ICD-10-CM	Diagnosis
I63.132	Cerebral infarction due to embolism of left carotid artery	ICD-10-CM	Diagnosis
I63.139	Cerebral infarction due to embolism of unspecified carotid artery	ICD-10-CM	Diagnosis
I63.19	Cerebral infarction due to embolism of other precerebral artery	ICD-10-CM	Diagnosis
I63.20	Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries	ICD-10-CM	Diagnosis
I63.211	Cerebral infarction due to unspecified occlusion or stenosis of right vertebral artery	ICD-10-CM	Diagnosis
I63.212	Cerebral infarction due to unspecified occlusion or stenosis of left vertebral artery	ICD-10-CM	Diagnosis
I63.213	Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral arteries	ICD-10-CM	Diagnosis
I63.219	Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral artery	ICD-10-CM	Diagnosis
I63.22	Cerebral infarction due to unspecified occlusion or stenosis of basilar artery	ICD-10-CM	Diagnosis
I63.231	Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries	ICD-10-CM	Diagnosis
I63.232	Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries	ICD-10-CM	Diagnosis
I63.233	Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries	ICD-10-CM	Diagnosis
I63.239	Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid artery	ICD-10-CM	Diagnosis
I63.29	Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries	ICD-10-CM	Diagnosis
I63.30	Cerebral infarction due to thrombosis of unspecified cerebral artery	ICD-10-CM	Diagnosis
I63.311	Cerebral infarction due to thrombosis of right middle cerebral artery	ICD-10-CM	Diagnosis
I63.312	Cerebral infarction due to thrombosis of left middle cerebral artery	ICD-10-CM	Diagnosis
I63.313	Cerebral infarction due to thrombosis of bilateral middle cerebral arteries	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
I63.319	Cerebral infarction due to thrombosis of unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I63.321	Cerebral infarction due to thrombosis of right anterior cerebral artery	ICD-10-CM	Diagnosis
I63.322	Cerebral infarction due to thrombosis of left anterior cerebral artery	ICD-10-CM	Diagnosis
I63.323	Cerebral infarction due to thrombosis of bilateral anterior cerebral arteries	ICD-10-CM	Diagnosis
I63.329	Cerebral infarction due to thrombosis of unspecified anterior cerebral artery	ICD-10-CM	Diagnosis
I63.331	Cerebral infarction due to thrombosis of right posterior cerebral artery	ICD-10-CM	Diagnosis
I63.332	Cerebral infarction due to thrombosis of left posterior cerebral artery	ICD-10-CM	Diagnosis
I63.333	Cerebral infarction due to thrombosis of bilateral posterior cerebral arteries	ICD-10-CM	Diagnosis
I63.339	Cerebral infarction due to thrombosis of unspecified posterior cerebral artery	ICD-10-CM	Diagnosis
I63.341	Cerebral infarction due to thrombosis of right cerebellar artery	ICD-10-CM	Diagnosis
I63.342	Cerebral infarction due to thrombosis of left cerebellar artery	ICD-10-CM	Diagnosis
I63.343	Cerebral infarction due to thrombosis of bilateral cerebellar arteries	ICD-10-CM	Diagnosis
I63.349	Cerebral infarction due to thrombosis of unspecified cerebellar artery	ICD-10-CM	Diagnosis
I63.39	Cerebral infarction due to thrombosis of other cerebral artery	ICD-10-CM	Diagnosis
I63.40	Cerebral infarction due to embolism of unspecified cerebral artery	ICD-10-CM	Diagnosis
I63.411	Cerebral infarction due to embolism of right middle cerebral artery	ICD-10-CM	Diagnosis
I63.412	Cerebral infarction due to embolism of left middle cerebral artery	ICD-10-CM	Diagnosis
I63.413	Cerebral infarction due to embolism of bilateral middle cerebral arteries	ICD-10-CM	Diagnosis
I63.419	Cerebral infarction due to embolism of unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I63.421	Cerebral infarction due to embolism of right anterior cerebral artery	ICD-10-CM	Diagnosis
I63.422	Cerebral infarction due to embolism of left anterior cerebral artery	ICD-10-CM	Diagnosis
I63.423	Cerebral infarction due to embolism of bilateral anterior cerebral arteries	ICD-10-CM	Diagnosis
I63.429	Cerebral infarction due to embolism of unspecified anterior cerebral artery	ICD-10-CM	Diagnosis
I63.431	Cerebral infarction due to embolism of right posterior cerebral artery	ICD-10-CM	Diagnosis
I63.432	Cerebral infarction due to embolism of left posterior cerebral artery	ICD-10-CM	Diagnosis
I63.433	Cerebral infarction due to embolism of bilateral posterior cerebral arteries	ICD-10-CM	Sentinel
I63.439	Cerebral infarction due to embolism of unspecified posterior cerebral artery	ICD-10-CM	Diagnosis
I63.441	Cerebral infarction due to embolism of right cerebellar artery	ICD-10-CM	Diagnosis
I63.442	Cerebral infarction due to embolism of left cerebellar artery	ICD-10-CM	Diagnosis
I63.443	Cerebral infarction due to embolism of bilateral cerebellar arteries	ICD-10-CM	Diagnosis
I63.449	Cerebral infarction due to embolism of unspecified cerebellar artery	ICD-10-CM	Diagnosis
I63.49	Cerebral infarction due to embolism of other cerebral artery	ICD-10-CM	Diagnosis
I63.50	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery	ICD-10-CM	Diagnosis
I63.511	Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery	ICD-10-CM	Diagnosis
I63.512	Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral artery	ICD-10-CM	Diagnosis
I63.513	Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle cerebral arteries	ICD-10-CM	Diagnosis
I63.519	Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I63.521	Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral artery	ICD-10-CM	Diagnosis

Code	Description	Code Type	Code Category
I63.522	Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral artery	ICD-10-CM	Diagnosis
I63.523	Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior cerebral arteries	ICD-10-CM	Diagnosis
I63.529	Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior cerebral artery	ICD-10-CM	Diagnosis
I63.531	Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral artery	ICD-10-CM	Diagnosis
I63.532	Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral artery	ICD-10-CM	Diagnosis
I63.533	Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior cerebral arteries	ICD-10-CM	Diagnosis
I63.539	Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior cerebral artery	ICD-10-CM	Diagnosis
I63.541	Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery	ICD-10-CM	Diagnosis
I63.542	Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery	ICD-10-CM	Diagnosis
I63.543	Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar arteries	ICD-10-CM	Diagnosis
I63.549	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar artery	ICD-10-CM	Diagnosis
I63.59	Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery	ICD-10-CM	Diagnosis
I63.6	Cerebral infarction due to cerebral venous thrombosis, nonpyogenic	ICD-10-CM	Diagnosis
I63.8	Other cerebral infarction	ICD-10-CM	Diagnosis
I63.9	Cerebral infarction, unspecified	ICD-10-CM	Diagnosis
I66.01	Occlusion and stenosis of right middle cerebral artery	ICD-10-CM	Diagnosis
I66.02	Occlusion and stenosis of left middle cerebral artery	ICD-10-CM	Diagnosis
I66.03	Occlusion and stenosis of bilateral middle cerebral arteries	ICD-10-CM	Diagnosis
I66.09	Occlusion and stenosis of unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I66.11	Occlusion and stenosis of right anterior cerebral artery	ICD-10-CM	Diagnosis
I66.12	Occlusion and stenosis of left anterior cerebral artery	ICD-10-CM	Diagnosis
I66.13	Occlusion and stenosis of bilateral anterior cerebral arteries	ICD-10-CM	Diagnosis
I66.19	Occlusion and stenosis of unspecified anterior cerebral artery	ICD-10-CM	Diagnosis
I66.21	Occlusion and stenosis of right posterior cerebral artery	ICD-10-CM	Diagnosis
I66.22	Occlusion and stenosis of left posterior cerebral artery	ICD-10-CM	Diagnosis
I66.23	Occlusion and stenosis of bilateral posterior cerebral arteries	ICD-10-CM	Diagnosis
I66.29	Occlusion and stenosis of unspecified posterior cerebral artery	ICD-10-CM	Diagnosis
I66.3	Occlusion and stenosis of cerebellar arteries	ICD-10-CM	Diagnosis
I66.8	Occlusion and stenosis of other cerebral arteries	ICD-10-CM	Diagnosis
I66.9	Occlusion and stenosis of unspecified cerebral artery	ICD-10-CM	Diagnosis
I67.841	Reversible cerebrovascular vasoconstriction syndrome	ICD-10-CM	Diagnosis
I67.848	Other cerebrovascular vasospasm and vasoconstriction	ICD-10-CM	Diagnosis

Appendix D. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
I67.89	Other cerebrovascular disease	ICD-10-CM	Diagnosis
I97.810	Intraoperative cerebrovascular infarction during cardiac surgery	ICD-10-CM	Diagnosis
I97.811	Intraoperative cerebrovascular infarction during other surgery	ICD-10-CM	Diagnosis
I97.820	Postprocedural cerebrovascular infarction following cardiac surgery	ICD-10-CM	Diagnosis
I97.821	Postprocedural cerebrovascular infarction following other surgery	ICD-10-CM	Diagnosis

Appendix E. List of Generic and Brand Names of Medical Products Used to Define Baseline Characteristics in this Request

Generic Name	Brand Name
Voxelotor	
voxelotor	Oxbryta
Crizanlizumab	
crizanlizumab-tmca	Adakveo
Gabapentin	
gabapentin	gabapentin
gabapentin	Neurontin
gabapentin	Gralise
gabapentin	Gabarone
gabapentin	Gralise 30-Day Starter Pack
gabapentin	Fanatrex
gabapentin enacarbil	Horizant
gabapentin/dietary supplement, misc combo no.11	Therapentin-60
gabapentin/dietary supplement, misc combo no.11	Therapentin-90
Pregabalin	
pregabalin	Lyrica
pregabalin	Lyrica CR
pregabalin	pregabalin
Endari	
glutamine	Endari
Any Glutamine	
glutamine	Sympt-X
glutamine	Sympt-X Powder
glutamine	Sympt-X G.I.
glutamine	Sympt-X Pure
glutamine	glutamine
glutamine	GlutImmune
glutamine	glutamine (bulk)
glutamine	L-Glutamine
glutamine	Nutrestore
glutamine	Endari
glutamine	Glutasolve
glutamine	GlutaMent
Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)	
aspirin	Analgesic
aspirin	Arthritis Pain Relief (ASA)
aspirin	aspirin
aspirin	Aspirin Extra Strength
aspirin	Aspirin Lite-Coat
aspirin	Aspirin Maximum Strength
aspirin	Aspirina
aspirin	Aspir-Trin
aspirin	Bayer 8-Hour
aspirin	Bayer Advanced
aspirin	Bayer Arthritis Pain Regimen

Appendix E. List of Generic and Brand Names of Medical Products Used to Define Baseline Characteristics in this Request

Generic Name	Brand Name
aspirin	Bayer Aspirin
aspirin	Coprin
aspirin	Durlaza
aspirin	E.C. Prin
aspirin	Easprin
aspirin	EC Aspirin
aspirin	Eco-10
aspirin	Eco-5
aspirin	Ecotrin
aspirin	Ecotrin Maximum Strength
aspirin	Empirin
aspirin	Encoprin
aspirin	Encoprin Extra Strength
aspirin	Entercote
aspirin	Enteric Coated Aspirin
aspirin	Extra Strength Bayer
aspirin	Genacote
aspirin	Genprin
aspirin	Halfprin
aspirin	Lite Coat Aspirin
aspirin	Norwich Aspirin
aspirin	Quality Aspirin
aspirin	Ridiprin
aspirin	Sloprin
aspirin	St. Joseph Aspirin
aspirin	Tasprin
aspirin	Uni-Tren
aspirin	Zero-Order Release Aspirin
aspirin	Zorprin
celecoxib	Celebrex
celecoxib	celecoxib
diclofenac potassium	Cambia
diclofenac potassium	Cataflam
diclofenac potassium	diclofenac potassium
diclofenac potassium	Zipsor
diclofenac sodium	diclofenac sodium
diclofenac sodium	Voltaren
diclofenac sodium	Voltaren-XR
diclofenac sodium/misoprostol	Arthrotec 50
diclofenac sodium/misoprostol	Arthrotec 75
diclofenac sodium/misoprostol	diclofenac-misoprostol
diclofenac submicronized	diclofenac submicronized
diclofenac submicronized	Zorvolex
diflunisal	diflunisal
diflunisal	Dolobid

Generic Name	Brand Name
etodolac	etodolac
etodolac	Lodine
etodolac	Lodine XL
fenoprofen calcium	fenoprofen
fenoprofen calcium	Fenortho
fenoprofen calcium	Nalfon
fenoprofen calcium	ProFeno
flurbiprofen	Ansaid
flurbiprofen	flurbiprofen
ibuprofen	Addaprin
ibuprofen	Advanced Pain Relief
ibuprofen	Advil
ibuprofen	Advil Junior Strength
ibuprofen	Advil Liqui-Gel
ibuprofen	Advil Migraine
ibuprofen	A-G Profen
ibuprofen	Backache
ibuprofen	Bupranol FP
ibuprofen	Caldolor
ibuprofen	Cap-Profen
ibuprofen	Child Ibuprofen
ibuprofen	Children's Advil
ibuprofen	Children's Ibu-Drops
ibuprofen	Children's Ibuprofen
ibuprofen	Children's Medi-Profen
ibuprofen	Children's Motrin
ibuprofen	Children's Motrin Jr Strength
ibuprofen	Children's Profen IB
ibuprofen	Childs Ibuprofen
ibuprofen	ElixSure IB Suspension
ibuprofen	Genpril
ibuprofen	IBU
ibuprofen	IBU-200
ibuprofen	Ibu-Drops
ibuprofen	Ibupain-200
ibuprofen	Ibuprin
ibuprofen	ibuprofen
ibuprofen	Ibuprofen IB
ibuprofen	Ibuprofen Jr Strength
ibuprofen	Ibuprofen M
ibuprofen	Ibuprofen PMR
ibuprofen	Ibutab
ibuprofen	IBU-Tab
ibuprofen	Infant's Advil
ibuprofen	Infants Ibu-Drops

Appendix E. List of Generic and Brand Names of Medical Products Used to Define Baseline Characteristics in this Request

Generic Name	Brand Name
ibuprofen	Infant's Ibuprofen
ibuprofen	Infant's Medi-Profen
ibuprofen	Infant's Motrin
ibuprofen	Infants ProfenIB
ibuprofen	I-Prin
ibuprofen	Medi-Profen
ibuprofen	Menadol
ibuprofen	Midol Max St Cramp Formula
ibuprofen	Motrin
ibuprofen	Motrin IB
ibuprofen	Motrin Junior Strength
ibuprofen	Motrin Migraine
ibuprofen	Nuprin
ibuprofen	Nuprin Menstrual Relief
ibuprofen	PediaCare Fever
ibuprofen	Profen IB
ibuprofen	Provil
ibuprofen	Q-Profen
ibuprofen	Tab-Profen
ibuprofen	Uni-Pro
ibuprofen	Wal-Profen
ibuprofen	Yaprofen
indomethacin	Indocin
indomethacin	Indocin SR
indomethacin	indomethacin
indomethacin sodium	Indocin I.V.
indomethacin sodium	indomethacin sodium
indomethacin, submicronized	indomethacin submicronized
indomethacin, submicronized	Tivorbex
ketoprofen	Actron
ketoprofen	ketoprofen
ketoprofen	Orudis
ketoprofen	Orudis KT
ketoprofen	Oruvail
meclofenamate sodium	meclofenamate
mefenamic acid	mefenamic acid
mefenamic acid	Ponstel
nabumetone	nabumetone
nabumetone	Relafen
nabumetone	Relafen DS
naproxen	EC-Naprosyn
naproxen	EC-Naproxen
naproxen	Naprosyn
naproxen	naproxen
naproxen	Romixen 500

Appendix E. List of Generic and Brand Names of Medical Products Used to Define Baseline Characteristics in this Request

Generic Name	Brand Name
naproxen sodium	Aleve
naproxen sodium	All Day Pain Relief
naproxen sodium	All Day Relief
naproxen sodium	Anaprox
naproxen sodium	Anaprox DS
naproxen sodium	Flanax (naproxen)
naproxen sodium	Mediproxen
naproxen sodium	Midol (naproxen)
naproxen sodium	Naprelan
naproxen sodium	Naprelan CR
naproxen sodium	Naprelan CR Dose Card
naproxen sodium	naproxen sodium
naproxen sodium	Wal-Proxen
naproxen/dietary supplement,misc. cb.11	Theraproxen
naproxen/dietary supplement,misc. cb.11	Theraproxen-90
oxaprozin	Daypro
oxaprozin	oxaprozin
piroxicam	Feldene
piroxicam	piroxicam
piroxicam/dietary supplement,misc. cb.11	Therafeldamine
rofecoxib	Vioxx
salsalate	Amigesic
salsalate	Argesic-Sa
salsalate	Disalcid
salsalate	Marthritic
salsalate	Mono-Gesic
salsalate	Salflex
salsalate	salsalate
sulindac	Clinoril
sulindac	sulindac
tolmetin sodium	Tolectin
tolmetin sodium	Tolectin DS
tolmetin sodium	tolmetin
valdecoxib	Bextra

Appendix F. List of Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
	Crizanlizumab		
C9053	Injection, crizanlizumab-tmca, 1 mg	HCPCS	Procedure
J0791	Injection, crizanlizumab-tmca, 5 mg	HCPCS	Procedure
	Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)		
J1130	Injection, diclofenac sodium, 0.5 mg	HCPCS	Procedure
C9279	Injection, ibuprofen, 100 mg	HCPCS	Procedure
J1741	Injection, ibuprofen, 100 mg	HCPCS	Procedure

Appendix G. Specifications Defining Parameters for this Request

This report executed the Cohort Identification and Descriptive Analysis (CIDA) tool, version 10.3.0, to examine the use of hydroxyurea among patients with sickle cell disease in the Sentinel Distributed Database (SDD).

Query period:	January 1, 2000 - September 30, 2020
Coverage requirement:	Medical & Drug Coverage
Pre-index enrollment requirement:	183 days
Post-index enrollment requirement:	0 days
Post-episode enrollment requirement for Type 2 analyses:	0 days
Enrollment gap:	45 days
Age groups:	0-5, 6-11, 12-17, 18-49, 50-59, 60+; collapsed 0-17, 50+ years
Stratifications:	Age group, Calendar year, Race, Age x Year
Envelope macro:	No reclassification on inpatient admission date

Scenario	Function	Multiple events episode	Baseline Table?	Index Exposure	Cohort definition	Incident exposure washout period	Point exposure?	Risk window start	Maximum episode duration	Care setting	Principal diagnosis position	Censor treatment episode at evidence of:
						Exposure						
1	All sickle cell disease (SCD) patients (cancer excluded); described in Table 1a "All SCD" table indexing on first valid SCD	Primary	**Yes**	Sickle Cell Disease	01 - First valid exposure episode during query period	0 days	Yes	Day 0	N/A	Any care setting	Any	Death; Data Partner (DP) end date; Query end date; **Cancer Diagnosis (Dx)**
2	Unexposed cohort: unexposed person-time prior to hydroxyurea (HU) dispensing	Primary	No	Sickle Cell Disease	01 - First valid exposure episode during query period	0 days	Yes	Day 0	N/A	Any care setting	Any	Death; DP end date; Query end date; **HU dispensing ≥ 30 days; Cancer Dx**
3	Exposed cohort: HU users with an SCD diagnosis	Primary	No	Hydroxyurea ≥ 30 days (See Appendix I)	01 - First valid exposure episode during query period	0 days	Yes	Day 1	N/A	N/A	N/A	Death; DP end date; Query end date; **Cancer Dx**

Appendix G. Specifications Defining Parameters for this Request

Scenario	Function	Multiple events episode	Baseline Table?	Index Exposure	Cohort definition	Incident exposure washout period	Point exposure?	Risk window start	Maximum episode duration	Care setting	Principal diagnosis position	Censor treatment episode at evidence of:
				Exposure								
4	Emergency department (ED) visits for multiple events tool	Secondary	No	ED encounter	02 - All valid exposure episodes during query period	0 days	Yes	Day 0	1	Emergency department encounter	N/A	N/A
5	Inpatient (IP) visits for multiple events tool	Secondary	No	IP encounter	02 - All valid exposure episodes during query period	0 days	Yes	Day 0	1	Inpatient hospital stay	N/A	N/A
6	Both ED and IP visits for multiple events tool	Secondary	No	ED and IP encounter	02 - All valid exposure episodes during query period	0 days	Yes	Day 0	1	Inpatient hospital stay; Emergency department encounter	N/A	N/A
7	Characterization of patients with specified cancers who may be using HU for a non-SCD indication.[1] (Table 1e)	N/A	**Yes**	Sickle Cell Disease	01 - First valid exposure episode during query period	0 days	Yes	Day 0	N/A	Any care setting	Any	Death; DP end date; Query end date
8	Characterization of SCD patients who are not using HU at first valid SCD (Table 1b)	N/A	**Yes**	Sickle Cell Disease	01 - First valid exposure episode during query period	0 days	Yes	Day 0	N/A	N/A	N/A	Death; DP end date; Query end date

Appendix G. Specifications Defining Parameters for this Request

Scenario	Function	Multiple events episode	Baseline Table?	Index Exposure	Cohort definition	Exposure Incident exposure washout period	Point exposure?	Risk window start	Maximum episode duration	Care setting	Principal diagnosis position	Censor treatment episode at evidence of:
9	Characterization of SCD patients who never used HU; index on first valid SCD (Table 1c)	N/A	**Yes**	Sickle Cell Disease	01 - First valid exposure episode during query period	0 days	Yes	Day 0	N/A	N/A	N/A	Death; DP end date; Query end date
10	Characterization of SCD patients who never used HU; index on first valid SCD (Table 1c)	N/A	**Yes**	Sickle Cell Disease	01 - First valid exposure episode during query period	0 days	Yes	Day 0	N/A	N/A	N/A	Death; DP end date; Query end date
11	Dummy outcome to get multiple events baseline tables for scenarios 8-10	Secondary	No	Dummy	02 - All valid exposure episodes during query period	0 days	Yes	Day 0	1	Any care setting	N/A	N/A

[1]See Appendix C for a list of codes used to define specified cancers for which hydroxyurea may have been used to treat.

International Classification of Diseases, Ninth Revision (ICD-9), International Classification of Diseases, Tenth Revision (ICD-10), Healthcare Common Procedure Coding System (HCPCS), and Current Procedural Terminology, Fourth Edition (CPT-4) codes are provided by Optum360. National Drug Codes (NDC) codes are checked against First Data Bank's "FDB MedKnowledge®."

		Inclusion/Exclusion Criteria							Multiple Events Assessment		
Scenario	Function	Inclusion and Exclusion group	Criteria	Care setting	Principal diagnosis position	Evaluation period start (days)	Evaluation period end (days)	Number of instances the criteria should be found in evaluation period	Secondary episode	Observation anchor	Observation window
1	All sickle cell disease (SCD) patients (cancer excluded); described in Table 1a "All SCD" table indexing on first valid SCD	Cancer	Exclusion	Any care setting	Any	-183	0	1	1.Emergency department (ED) encounter 2. Inpatient (IP) encounter 3. ED and IP encounters	Primary episode index date	0 to all enrollment
2	Unexposed cohort: unexposed person-time prior to hydroxyurea (HU) dispensing	Cancer	Exclusion	Any care setting	Any	-183	0	1	1. ED encounter 2. IP encounter 3. ED and IP encounters	From: Primary episode index date To: Primary episode end date	Index date to end of episode
3	Exposed cohort: HU users with an SCD diagnosis	Sickle cell disease **AND**	Inclusion	Any care setting	Any	Entire patient history	0	1	1. ED encounter 2. IP encounter 3. ED and IP encounters	From: Primary episode index date To: Primary episode end date	Index date to end of episode
		Cancer	Exclusion	Any care setting	Any	-183	0	1			
4	ED visits for multiple events tool	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Appendix G. Specifications Defining Parameters for this Request (Continued)

| Scenario | Function | Inclusion/Exclusion Criteria | | | | | | | Multiple Events Assessment | | |
		Inclusion and Exclusion group	Criteria	Care setting	Principal diagnosis position	Evaluation period start (days)	Evaluation period end (days)	Number of instances the criteria should be found in evaluation period	Secondary episode	Observation anchor	Observation window
5	IP visits for multiple events tool	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Both ED and IP visits for multiple events tool	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	Characterization of patients with specified cancers who may be using HU for a non-SCD indication.[1] (Table 1e)	Cancer	**Inclusion**	Any care setting	Any	-183	0	1	N/A	N/A	N/A
8	Characterization of SCD patients who are not using HU at first valid SCD (Table 1b)	Any hydroxyurea	Exclusion	Any care setting	Any	-183	0	1	N/A	N/A	N/A
		Cancer	Exclusion	Any care setting	Any	-183	0	1			

Scenario	Function	Inclusion and Exclusion group	Criteria	Care setting	Principal diagnosis position	Evaluation period start (days)	Evaluation period end (days)	Number of instances the criteria should be found in evaluation period	Secondary episode	Observation anchor	Observation window
							Inclusion/Exclusion Criteria		**Multiple Events Assessment**		
9	Characterization of SCD patients who never used HU; index on first valid SCD (Table 1c)	Any hydroxyurea	Exclusion	Any care setting	Any	-183	Entire enrollment	1	N/A	N/A	N/A
		Cancer	Exclusion	Any care setting	Any	-183	0	1			
10	Characterization of SCD patients who ever used HU; index on first valid SCD (Table 1d)	Any hydroxyurea	Inclusion	Any care setting	Any	-183	Entire enrollment	1	N/A	N/A	N/A
		Cancer	Exclusion	Any care setting	Any	-183	0	1			
11	Dummy outcome to get multiple events baseline tables for scenarios 8-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[1]See Appendix C for a list of codes used to define specified cancers for which hydroxyurea may have been used to treat.

International Classification of Diseases, Ninth Revision (ICD-9), International Classification of Diseases, Tenth Revision (ICD-10), Healthcare Common Procedure Coding System (HCPCS), and Current Procedural Terminology, Fourth Edition (CPT-4) codes are provided by Optum360. National Drug Codes (NDC) codes are checked against First Data Bank's "FDB MedKnowledge®."

Appendix H. Specifications for Baseline Characteristics

	Baseline Characteristics				
Characteristic	Care setting	Principal diagnosis position	Evaluation period start (days)	Evaluation period end (days)	Number of instances the covariate should be found in evaluation period
Demographics					
Age group	N/A	N/A	0	0	N/A
Sex	N/A	N/A	0	0	N/A
Race	N/A	N/A	0	0	N/A
Year	N/A	N/A	0	0	N/A
Chronic Condition Warehouse Comorbidities					
Acquired hypothyroidism	Any care setting	Any	-183	0	1
Acute myocardial infarction	Any care setting	Any	-183	0	1
Alzheimer's disease and related disorders	Any care setting	Any	-183	0	1
Anemia	Any care setting	Any	-183	0	1
Asthma	Any care setting	Any	-183	0	1
Atrial fibrillation	Any care setting	Any	-183	0	1
Benign prostatic hyperplasia	Any care setting	Any	-183	0	1
Breast cancer	Any care setting	Any	-183	0	1
Chronic kidney disease	Any care setting	Any	-183	0	1
Colorectal cancer	Any care setting	Any	-183	0	1
COPD and bronchiectasis	Any care setting	Any	-183	0	1
Depression	Any care setting	Any	-183	0	1
Diabetes	Any care setting	Any	-183	0	1
Endometrial cancer	Any care setting	Any	-183	0	1
Glaucoma	Any care setting	Any	-183	0	1
Heart failure	Any care setting	Any	-183	0	1
Hyperlipidemia	Any care setting	Any	-183	0	1
Hypertension	Any care setting	Any	-183	0	1
Ischemic heart disease	Any care setting	Any	-183	0	1
Lung cancer	Any care setting	Any	-183	0	1
Osteoporosis	Any care setting	Any	-183	0	1
Prostate cancer	Any care setting	Any	-183	0	1
Rheumatoid arthritis/osteoarthritis	Any care setting	Any	-183	0	1
Stroke/transient ischemic attack	Any care setting	Any	-183	0	1
Other comorbidities					
Acute myeloid leukemia	Any care setting	Any	-183	0	1
Acute chest syndrome	Any care setting	Any	-183	0	1

	Baseline Characteristics				
Characteristic	**Care setting**	**Principal diagnosis position**	**Evaluation period start (days)**	**Evaluation period end (days)**	**Number of instances the covariate should be found in evaluation period**
Medical product use					
Crizanlizumab	N/A	N/A	-183	0	1
Gabapentin	N/A	N/A	-183	0	1
Non-steroidal anti-inflammatory drugs	N/A	N/A	-183	0	1
Pregabalin	N/A	N/A	-183	0	1
Voxelotor	N/A	N/A	-183	0	1
Endari (ever)	N/A	N/A	-183	0	1
All glutamine (ever)	N/A	N/A	-183	0	1
Crizanlizumab	N/A	N/A	-30	60	1
Voxelotor	N/A	N/A	-30	60	1
Endari (ever)	N/A	N/A	-30	60	1
All glutamine (ever)	N/A	N/A	-30	60	1
Crizanlizumab (ever)	N/A	N/A	.	.	1
Voxelotor (ever)	N/A	N/A	.	.	1
Endari (ever)	N/A	N/A	.	.	1
All glutamine (ever)	N/A	N/A	.	.	1

		Stockpiling				
Group	**Stockpiling group**	**Same day dispensing processing for days supplied**	**Same day dispensing processing for amount supplied**	**Range of allowable days supplied values**	**Range of allowable amount supplied values**	**Overlap percentage***
unexposed_scd	hydroxyurea	Default	Default	>=30 days supply	Default	Default
exposed_hu	hydroxyurea	Default	Default	>=30 days supply	Default	Default
never_hu, ever_hu, non_hu	Default: stockpiling by generic name	Default: Adds all days supplied values for dispensings in the same stockgroup on the same day	Default: Adds all amount values for dispensings in the same stockgroup on the same day	Default: Does not consider days supplied values of 0 or less	Default: Does not consider days supplied values of 0 or less	Default: No truncation will occur and any overlap of supply between dispensing will be corrected by pushing overlapping days supplied forward
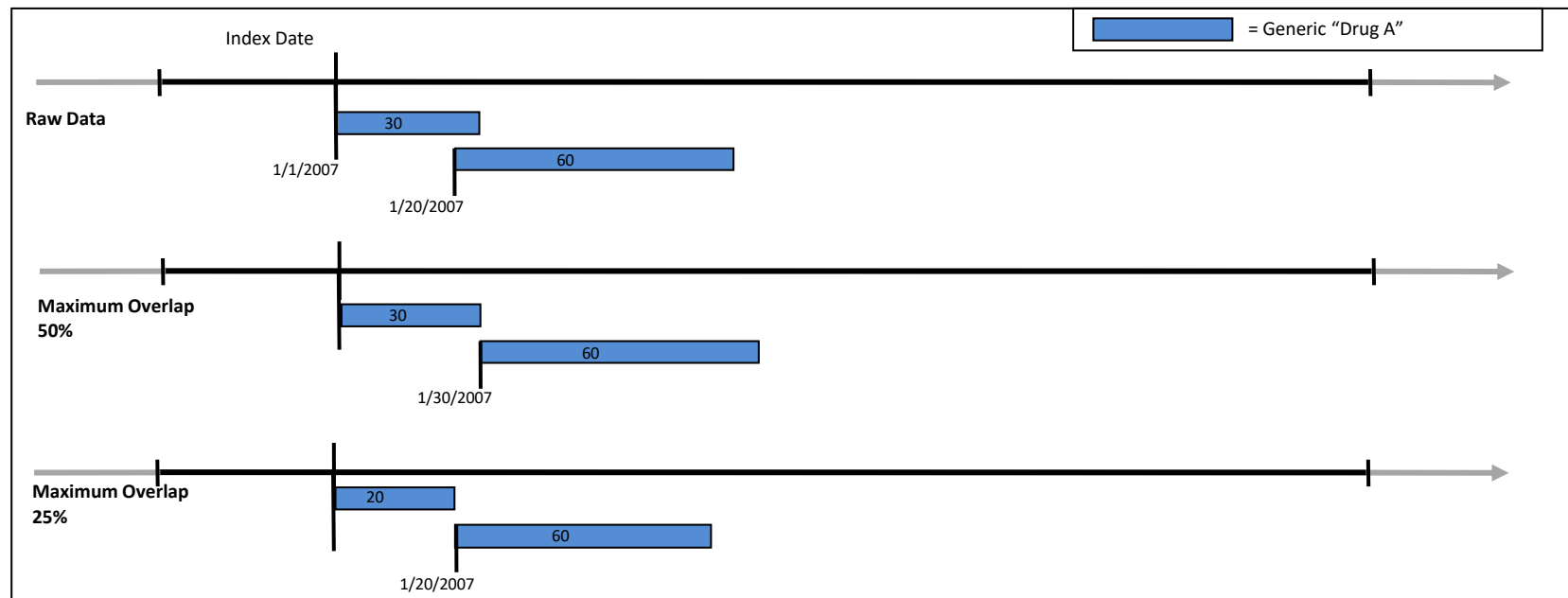
Comorbidity Score

Evaluation period start (days)	Evaluation period end (days)
-183	0

		Utilization		
Medical utilization evaluation period start (days)	**Medical utilization evaluation period end (days)**	**Medical visit care settings**	**Drug utilization evaluation period start (days)**	**Drug utilization evaluation period end (days)**
-183	0	*Inpatient hospital stay; *Non-acute institutional stay; *Emergency department encounter; *Ambulatory visit; *Other ambulatory visit; *Any care setting	-183	0

Type 2 Design

Sickle Cell Disease

**Index for non-users
Day 0**

*Hydroxyurea Dispensing
≥ 30 DS*
**Index for users
Day T**

Enrollment requirement
Medical & drug coverage

[-183, 0]

Allowed coverage gap

45 days

Exclusion criteria for everyone
- Chronic myeloid leukemia
- Advanced squamous cell carcinoma of the head and neck

[-183, 0]

[-183, T]

Inclusion criteria for users
- Sickle cell disease

[Ever, T]

Non-users Episode length
Censored at earliest of:
- Disenrollment
- Data completeness date
- Death
- Cancers from exclusions
- Hydroxyurea dispensing ≥ 30-day supply

[0, Censor]

Users Episode length
Censored at earliest of:
- Disenrollment
- Data completeness date
- Death
- Cancers from exclusions

[T, Censor]

Only one exposed episode per patient; continues until censor regardless of dispensings

Time

DX = sickle cell diagnosis
IP/ED = hospitalization or ED visit
RX = hydroxyurea

**Query Start Date
01/01/00**

DX

IP/ED

IP/ED

RX

IP/ED

**Query End Date
Maximum date**