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The following report(s) provides findings from an FDA-initiated query using Sentinel. While Sentinel queries may be undertaken to assess potential medical product safety risks, they may also be initiated for various other reasons. Some examples include determining a rate or count of an identified health outcome of interest, examining medical product use, exploring the feasibility of future, more detailed analyses within Sentinel, and seeking to better understand Sentinel capabilities.

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

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

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

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Overview for request: cder_mpl1r_wp190_nsdp_v01

Request ID: cder_mpl1r_wp190_nsdp_v01

Request Description: In this request, we examined counts of individuals with incident drug-device combination utilization in the Sentinel Distributed Database (SDD), and assessed baseline demographics, clinical characteristics, episode durations, and censorship information among these individuals.

Sentinel Routine Querying Module: Cohort Identification and Descriptive Analysis (CIDA) tool, version 10.1.1

Data Source: We distributed this request to 12 Sentinel Data Partners on January 27, 2021. The study period included data from January 1, 2018 through February 29, 2020. Please see Appendix A for a list of dates of available data for each Data Partner (DP).

Study Design: We identified individuals with incident drug-device combination utilization among a cohort who were under 25 years of age. For each cohort, we assessed a set of clinical characteristics in the 365 days prior to the drug-device exposure. We did not assess outcome events in this request. This is a Type 2 analysis as described in the Query Request Package (QRP) documentation.

Exposures of Interest: We defined the drug-device combinations of interest including, Humira, somatropin, short-acting insulin pens, intermediate-acting insulin pens, long-acting insulin pens, epinephrine (Epipen and Epipen Jr), inhaled corticosteroids, nasal corticosteroids, albuterol nebulizer, ophthalmic antibiotic drops, glucagon nasal spray, and leuprolide acetate, using outpatient dispensing data and National Drug Codes (NDCs). Only the first qualifying drug-device dispensing (index) for each member was included; cohort re-entry was not allowed. The drug-device exposures were defined as incident use with no evidence of the drug-device combination of interest in the 365 days prior to the index date. Please see Appendix B for a list of generic and brand names of medical products used to define drug-device exposures in this request.

Cohort Eligibility Criteria: We required members to be continuously enrolled in health plans with medical and drug coverage in the 365 days prior to their index date, during which gaps in coverage of up to 45 days were allowed. The following age groups were included in the cohort: 0-4, 5-7, 8-10, 11-13, 14-16, 17-19, and 20-25 years.

Follow-Up Time: We created exposure episodes based on the number of days of product supplied per dispensing in the outpatient pharmacy dispensing data. For cohorts Humira, somatropin, short-acting insulin pens, intermediate-acting insulin pens, long-acting insulin pens, and inhaled corticosteroids, we bridged together episodes less than 30 days apart and added 30 days to the end of each episode. Follow-up began on the day of the index dispensing and continued until the first occurrence of any of the following: 1) disenrollment; 2) death; 3) the end of the data provided by each Data Partner; or 4) the end of the query period.

Baseline Characteristics: For all cohorts, we considered the following demographic characteristics on the index date of dispensing: age, sex, race, ethnicity, and calendar year. In addition, we assessed a set of clinical characteristics including indications for the drug-device exposure of interest in the 365 days prior to the drug-device exposures. Please see the Table 1 series for a detailed list of clinical characteristics included for each cohort. Please see Appendix C for a list of International Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) diagnosis codes to define baseline characteristics in this request.

Limitations: Algorithms to define exposures, incidence criteria, and baseline characteristics are imperfect and may be misclassified. Therefore, data should be interpreted with this limitation in mind. Death data are incomplete at this time, limited mostly to in-hospital deaths, and restricted by a 2-4 year data lag and DP specific dependencies.

Please see Appendices D and E for the specifications of parameters used in this request.

Notes: Please contact the Sentinel Operations Center (info@sentinelssystem.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.sentinelssystem.org/projects/sentinel/repos/sentinel-routine-querying-tool-documentation/browse>).

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

Amount Supplied - number of units (pills, tablets, vials) dispensed. Net amount per NDC per dispensing.

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

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

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

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

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

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

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

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

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)

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

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

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

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

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

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.

*not all terms may be used in this report

Table 1a. Baseline Characteristics for Incident Humira Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Characteristic¹	Number	
Number of episodes	4,753	
Number of unique patients	4,753	
Demographics	Mean	Standard Deviation
Mean Age (Years)	19.1	4.9
Age (Years)	Number	Percent
0-4	52	1.1%
5-7	107	2.3%
8-10	167	3.5%
11-13	391	8.2%
14-16	729	15.3%
17-19	1,011	21.3%
20-25	2,296	48.3%
Sex:		
Female	2,744	57.7%
Male	2,009	42.3%
Race:		
Unknown	4,238	89.2%
American Indian or Alaska Native	8	0.2%
Asian	68	1.4%
Black or African American	47	1.0%
Native Hawaiian or Other Pacific Islander	4	0.1%
White	388	8.2%
Ethnicity:		
Hispanic Origin	83	1.7%
Year:		
2018	2,242	47.2%
2019	2,338	49.2%
2020	173	3.6%
Indicated Condition(s):	Number	Percent
Inflammatory bowel disease (IBD)	2,037	42.9%
Juvenile arthritis	822	17.3%
Other Conditions:	Number	Percent
ADHD, conduct disorders, and hyperkinetic syndrome	399	8.4%
Allergies (serious and ambulatory)	1,200	25.2%
Anaphylaxis	29	0.6%
Anxiety disorders	990	20.8%
Asthma	490	10.3%
Autism spectrum disorder	77	1.6%
Depressive disorders	634	13.3%
Diabetes	68	1.4%
Intellectual disabilities and related conditions	51	1.1%
Learning disabilities	62	1.3%
Obesity	450	9.5%
Other developmental delays	35	0.7%
Small for gestational age (SGA)	0	0.0%

Table 1a. Baseline Characteristics for Incident Humira Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Health Service Utilization Intensity:	Mean	Standard Deviation
Mean number of ambulatory encounters	16.5	13.9
Mean number of emergency room encounters	0.6	1.3
Mean number of inpatient hospital encounters	0.2	0.7
Mean number of non-acute institutional encounters	0.0	0.2
Mean number of other ambulatory encounters	4.3	9.6
Mean number of unique drug classes	7.5	4.5
Mean number of generics	8.1	5.1
Mean number of filled prescriptions	19.5	16.9

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

Table 1b. Baseline Characteristics for Incident Somatropin Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Characteristic¹	Number	
Number of episodes	3,206	
Number of unique patients	3,206	
Demographics	Mean	Standard Deviation
Mean Age (Years)	11.6	3.7
Age (Years)	Number	Percent
0-4	218	6.8%
5-7	276	8.6%
8-10	683	21.3%
11-13	1,244	38.8%
14-16	678	21.1%
17-19	57	1.8%
20-25	50	1.6%
Sex:		
Female	943	29.4%
Male	2,263	70.6%
Race:		
Unknown	2,891	90.2%
American Indian or Alaska Native	3	0.1%
Asian	69	2.2%
Black or African American	16	0.5%
Native Hawaiian or Other Pacific Islander	4	0.1%
White	223	7.0%
Ethnicity:		
Hispanic Origin	50	1.6%
Year:		
2018	1,582	49.3%
2019	1,527	47.6%
2020	97	3.0%
Other Conditions:	Number	Percent
ADHD, conduct disorders, and hyperkinetic syndrome	669	20.9%
Allergies (serious and ambulatory)	880	27.4%
Anaphylaxis	43	1.3%
Anxiety disorders	433	13.5%
Asthma	441	13.8%
Autism spectrum disorder	118	3.7%
Depressive disorders	113	3.5%
Diabetes	48	1.5%
Inflammatory bowel disease (IBD)	31	1.0%
Intellectual disabilities and related conditions	193	6.0%
Juvenile arthritis	11	0.3%
Learning disabilities	290	9.0%
Obesity	109	3.4%
Other developmental delays	183	5.7%
Small for gestational age (SGA)	69	2.2%

Table 1b. Baseline Characteristics for Incident Somatropin Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Health Service Utilization Intensity:	Mean	Standard Deviation
Mean number of ambulatory encounters	16.6	22.2
Mean number of emergency room encounters	0.3	1.0
Mean number of inpatient hospital encounters	0.1	0.5
Mean number of non-acute institutional encounters	0.0	0.3
Mean number of other ambulatory encounters	4.8	21.6
Mean number of unique drug classes	4.0	3.0
Mean number of generics	4.2	3.4
Mean number of filled prescriptions	11.0	15.8

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

Table 1c. Baseline Characteristics for Incident Short-Acting insulin Pens Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Characteristic¹	Number	
Number of episodes	9,252	
Number of unique patients	9,252	
Demographics	Mean	Standard Deviation
Mean Age (Years)	16.6	6.1
Age (Years)	Number	Percent
0-4	396	4.3%
5-7	562	6.1%
8-10	904	9.8%
11-13	1,253	13.5%
14-16	1,410	15.2%
17-19	1,509	16.3%
20-25	3,218	34.8%
Sex:		
Female	4,449	48.1%
Male	4,803	51.9%
Race:		
Unknown	8,257	89.2%
American Indian or Alaska Native	15	0.2%
Asian	108	1.2%
Black or African American	146	1.6%
Native Hawaiian or Other Pacific Islander	21	0.2%
White	705	7.6%
Ethnicity:		
Hispanic Origin	216	2.3%
Year:		
2018	4,820	52.1%
2019	4,161	45.0%
2020	271	2.9%
Indicated Condition(s):	Number	Percent
Diabetes	8,808	95.2%
Other Conditions:	Number	Percent
ADHD, conduct disorders, and hyperkinetic syndrome	730	7.9%
Allergies (serious and ambulatory)	1,849	20.0%
Anaphylaxis	32	0.3%
Anxiety disorders	1,314	14.2%
Asthma	881	9.5%
Autism spectrum disorder	176	1.9%
Depressive disorders	901	9.7%
Inflammatory bowel disease (IBD)	39	0.4%
Intellectual disabilities and related conditions	87	0.9%
Juvenile arthritis	22	0.2%
Learning disabilities	175	1.9%
Obesity	1,043	11.3%
Other developmental delays	86	0.9%
Small for gestational age (SGA)	0	0.0%

Table 1c. Baseline Characteristics for Incident Short-Acting insulin Pens Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Health Service Utilization Intensity:	Mean	Standard Deviation
Mean number of ambulatory encounters	9.9	13.2
Mean number of emergency room encounters	0.8	1.4
Mean number of inpatient hospital encounters	0.4	0.8
Mean number of non-acute institutional encounters	0.0	0.6
Mean number of other ambulatory encounters	3.9	9.0
Mean number of unique drug classes	4.9	3.7
Mean number of generics	6.0	4.2
Mean number of filled prescriptions	13.6	15.9

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

Table 1d. Baseline Characteristics for Incident Intermediate-Acting insulin Pens Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Characteristic¹	Number	
Number of episodes	442	
Number of unique patients	442	
Demographics	Mean	Standard Deviation
Mean Age (Years)	21.1	4.7
Age (Years)	Number	Percent
0-4	2	0.5%
5-7	7	1.6%
8-10	14	3.2%
11-13	18	4.1%
14-16	35	7.9%
17-19	59	13.3%
20-25	307	69.5%
Sex:		
Female	320	72.4%
Male	122	27.6%
Race:		
Unknown	380	86.0%
American Indian or Alaska Native	1	0.2%
Asian	10	2.3%
Black or African American	19	4.3%
Native Hawaiian or Other Pacific Islander	5	1.1%
White	27	6.1%
Ethnicity:		
Hispanic Origin	20	4.5%
Year:		
2018	221	50.0%
2019	212	48.0%
2020	9	2.0%
Indicated Condition(s):	Number	Percent
Diabetes	296	67.0%
Other Conditions:	Number	Percent
ADHD, conduct disorders, and hyperkinetic syndrome	25	5.7%
Allergies (serious and ambulatory)	95	21.5%
Anaphylaxis	0	0.0%
Anxiety disorders	79	17.9%
Asthma	57	12.9%
Autism spectrum disorder	6	1.4%
Depressive disorders	67	15.2%
Inflammatory bowel disease (IBD)	4	0.9%
Intellectual disabilities and related conditions	6	1.4%
Juvenile arthritis	1	0.2%
Learning disabilities	4	0.9%
Obesity	131	29.6%
Other developmental delays	1	0.2%
Small for gestational age (SGA)	0	0.0%

Table 1d. Baseline Characteristics for Incident Intermediate-Acting insulin Pens Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Health Service Utilization Intensity:	Mean	Standard Deviation
Mean number of ambulatory encounters	12.2	10.2
Mean number of emergency room encounters	1.1	2.0
Mean number of inpatient hospital encounters	0.5	1.3
Mean number of non-acute institutional encounters	0.0	0.2
Mean number of other ambulatory encounters	4.8	9.2
Mean number of unique drug classes	6.1	4.7
Mean number of generics	7.5	5.5
Mean number of filled prescriptions	16.1	17.2

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

Table 1e. Baseline Characteristics for Incident Long-Acting insulin Pens Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Characteristic¹	Number	
Number of episodes	11,525	
Number of unique patients	11,525	
Demographics	Mean	Standard Deviation
Mean Age (Years)	17.0	5.8
Age (Years)	Number	Percent
0-4	346	3.0%
5-7	554	4.8%
8-10	1,067	9.3%
11-13	1,495	13.0%
14-16	1,876	16.3%
17-19	2,077	18.0%
20-25	4,110	35.7%
Sex:		
Female	5,547	48.1%
Male	5,978	51.9%
Race:		
Unknown	10,509	91.2%
American Indian or Alaska Native	16	0.1%
Asian	85	0.7%
Black or African American	149	1.3%
Native Hawaiian or Other Pacific Islander	11	0.1%
White	755	6.6%
Ethnicity:		
Hispanic Origin	203	1.8%
Year:		
2018	5,983	51.9%
2019	5,224	45.3%
2020	318	2.8%
Indicated Condition(s):	Number	Percent
Diabetes	11,018	95.6%
Other Conditions:	Number	Percent
ADHD, conduct disorders, and hyperkinetic syndrome	918	8.0%
Allergies (serious and ambulatory)	2,110	18.3%
Anaphylaxis	38	0.3%
Anxiety disorders	1,660	14.4%
Asthma	1,039	9.0%
Autism spectrum disorder	210	1.8%
Depressive disorders	1,207	10.5%
Inflammatory bowel disease (IBD)	37	0.3%
Intellectual disabilities and related conditions	98	0.9%
Juvenile arthritis	26	0.2%
Learning disabilities	180	1.6%
Obesity	1,353	11.7%
Other developmental delays	87	0.8%
Small for gestational age (SGA)	0	0.0%

Table 1e. Baseline Characteristics for Incident Long-Acting insulin Pens Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Health Service Utilization Intensity:	Mean	Standard Deviation
Mean number of ambulatory encounters	10.0	12.8
Mean number of emergency room encounters	0.7	1.4
Mean number of inpatient hospital encounters	0.4	0.8
Mean number of non-acute institutional encounters	0.0	0.5
Mean number of other ambulatory encounters	4.0	9.7
Mean number of unique drug classes	4.9	3.5
Mean number of generics	6.1	4.0
Mean number of filled prescriptions	14.4	15.0

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

Table 1f. Baseline Characteristics for Incident Epinephrine - Epipen and Epipen Jr Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Characteristic¹	Number	
Number of episodes	101,378	
Number of unique patients	101,378	
Demographics	Mean	Standard Deviation
Mean Age (Years)	12.2	6.5
Age (Years)	Number	Percent
0-4	16,878	16.6%
5-7	13,286	13.1%
8-10	14,826	14.6%
11-13	16,207	16.0%
14-16	14,438	14.2%
17-19	11,519	11.4%
20-25	14,224	14.0%
Sex:		
Female	46,137	45.5%
Male	55,241	54.5%
Race:		
Unknown	94,125	92.8%
American Indian or Alaska Native	76	0.1%
Asian	1,814	1.8%
Black or African American	1,048	1.0%
Native Hawaiian or Other Pacific Islander	102	0.1%
White	4,213	4.2%
Ethnicity:		
Hispanic Origin	979	1.0%
Year:		
2018	57,632	56.8%
2019	42,535	42.0%
2020	1,211	1.2%
Indicated Condition(s):	Number	Percent
Allergies (serious and ambulatory)	68,302	67.4%
Anaphylaxis	14,243	14.0%
Other Conditions:	Number	Percent
ADHD, conduct disorders, and hyperkinetic syndrome	7,684	7.6%
Anxiety disorders	9,999	9.9%
Asthma	28,220	27.8%
Autism spectrum disorder	1,940	1.9%
Depressive disorders	4,944	4.9%
Diabetes	554	0.5%
Inflammatory bowel disease (IBD)	416	0.4%
Intellectual disabilities and related conditions	533	0.5%
Juvenile arthritis	120	0.1%
Learning disabilities	3,637	3.6%
Obesity	2,859	2.8%
Other developmental delays	1,500	1.5%
Small for gestational age (SGA)	17	0.0%

Table 1f. Baseline Characteristics for Incident Epinephrine - EpiPen and EpiPen Jr Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Health Service Utilization Intensity:	Mean	Standard Deviation
Mean number of ambulatory encounters	10.6	14.3
Mean number of emergency room encounters	0.4	1.0
Mean number of inpatient hospital encounters	0.0	0.3
Mean number of non-acute institutional encounters	0.0	0.2
Mean number of other ambulatory encounters	1.5	9.1
Mean number of unique drug classes	4.3	3.2
Mean number of generics	4.7	3.7
Mean number of filled prescriptions	9.2	11.9

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

Table 1g. Baseline Characteristics for Incident Inhaled Corticosteroids Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Characteristic¹	Number	
Number of episodes	240,114	
Number of unique patients	240,114	
Demographics	Mean	Standard Deviation
Mean Age (Years)	12.3	7.0
Age (Years)	Number	Percent
0-4	47,075	19.6%
5-7	32,815	13.7%
8-10	31,540	13.1%
11-13	29,729	12.4%
14-16	29,017	12.1%
17-19	26,573	11.1%
20-25	43,365	18.1%
Sex:		
Female	112,254	46.8%
Male	127,860	53.2%
Race:		
Unknown	195,480	81.4%
American Indian or Alaska Native	489	0.2%
Asian	10,621	4.4%
Black or African American	6,506	2.7%
Native Hawaiian or Other Pacific Islander	2,070	0.9%
White	24,948	10.4%
Ethnicity:		
Hispanic Origin	14,563	6.1%
Year:		
2018	135,615	56.5%
2019	98,285	40.9%
2020	6,214	2.6%
Indicated Condition(s):	Number	Percent
Asthma	159,486	66.4%
Other Conditions:	Number	Percent
ADHD, conduct disorders, and hyperkinetic syndrome	17,043	7.1%
Allergies (serious and ambulatory)	108,050	45.0%
Anaphylaxis	4,999	2.1%
Anxiety disorders	24,772	10.3%
Autism spectrum disorder	3,580	1.5%
Depressive disorders	13,827	5.8%
Diabetes	1,404	0.6%
Inflammatory bowel disease (IBD)	689	0.3%
Intellectual disabilities and related conditions	1,597	0.7%
Juvenile arthritis	264	0.1%
Learning disabilities	9,072	3.8%
Obesity	10,365	4.3%
Other developmental delays	3,552	1.5%
Small for gestational age (SGA)	53	0.0%

Table 1g. Baseline Characteristics for Incident Inhaled Corticosteroids Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Health Service Utilization Intensity:	Mean	Standard Deviation
Mean number of ambulatory encounters	10.0	13.1
Mean number of emergency room encounters	0.4	1.1
Mean number of inpatient hospital encounters	0.1	0.3
Mean number of non-acute institutional encounters	0.0	0.1
Mean number of other ambulatory encounters	1.9	8.6
Mean number of unique drug classes	5.2	3.0
Mean number of generics	5.5	3.4
Mean number of filled prescriptions	9.8	10.3

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

Table 1h. Baseline Characteristics for Incident Nasal Corticosteroids Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Characteristic¹	Number	
Number of episodes	355,722	
Number of unique patients	355,722	
Demographics	Mean	Standard Deviation
Mean Age (Years)	15.7	6.5
Age (Years)	Number	Percent
0-4	24,025	6.8%
5-7	32,798	9.2%
8-10	37,132	10.4%
11-13	43,649	12.3%
14-16	49,791	14.0%
17-19	57,974	16.3%
20-25	110,353	31.0%
Sex:		
Female	190,987	53.7%
Male	164,735	46.3%
Race:		
Unknown	310,849	87.4%
American Indian or Alaska Native	526	0.1%
Asian	10,230	2.9%
Black or African American	6,972	2.0%
Native Hawaiian or Other Pacific Islander	908	0.3%
White	26,237	7.4%
Ethnicity:		
Hispanic Origin	17,654	5.0%
Year:		
2018	182,948	51.4%
2019	164,026	46.1%
2020	8,748	2.5%
Indicated Condition(s):	Number	Percent
Allergies (serious and ambulatory)	181,801	51.1%
Other Conditions:	Number	Percent
ADHD, conduct disorders, and hyperkinetic syndrome	28,453	8.0%
Anaphylaxis	3,231	0.9%
Anxiety disorders	45,953	12.9%
Asthma	63,173	17.8%
Autism spectrum disorder	4,940	1.4%
Depressive disorders	26,850	7.5%
Diabetes	2,970	0.8%
Inflammatory bowel disease (IBD)	1,157	0.3%
Intellectual disabilities and related conditions	2,128	0.6%
Juvenile arthritis	374	0.1%
Learning disabilities	8,743	2.5%
Obesity	21,289	6.0%
Other developmental delays	3,447	1.0%
Small for gestational age (SGA)	44	0.0%

Table 1h. Baseline Characteristics for Incident Nasal Corticosteroids Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Health Service Utilization Intensity:	Mean	Standard Deviation
Mean number of ambulatory encounters	8.9	12.3
Mean number of emergency room encounters	0.3	1.0
Mean number of inpatient hospital encounters	0.0	0.3
Mean number of non-acute institutional encounters	0.0	0.2
Mean number of other ambulatory encounters	1.5	7.4
Mean number of unique drug classes	4.9	3.2
Mean number of generics	5.3	3.6
Mean number of filled prescriptions	9.5	10.8

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

Table 1i. Baseline Characteristics for Incident Albuterol Nebulizer Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Characteristic¹	Number	
Number of episodes	883,533	
Number of unique patients	883,533	
Demographics	Mean	Standard Deviation
Mean Age (Years)	13.1	7.2
Age (Years)	Number	Percent
0-4	155,212	17.6%
5-7	104,309	11.8%
8-10	102,924	11.6%
11-13	108,715	12.3%
14-16	114,265	12.9%
17-19	108,755	12.3%
20-25	189,353	21.4%
Sex:		
Female	443,073	50.1%
Male	440,460	49.9%
Race:		
Unknown	760,413	86.1%
American Indian or Alaska Native	1,444	0.2%
Asian	25,570	2.9%
Black or African American	17,028	1.9%
Native Hawaiian or Other Pacific Islander	4,692	0.5%
White	74,386	8.4%
Ethnicity:		
Hispanic Origin	37,470	4.2%
Year:		
2018	467,719	52.9%
2019	390,351	44.2%
2020	25,463	2.9%
Indicated Condition(s):	Number	Percent
Asthma	329,836	37.3%
Other Conditions:	Number	Percent
ADHD, conduct disorders, and hyperkinetic syndrome	61,558	7.0%
Allergies (serious and ambulatory)	283,632	32.1%
Anaphylaxis	10,590	1.2%
Anxiety disorders	92,692	10.5%
Autism spectrum disorder	10,460	1.2%
Depressive disorders	54,258	6.1%
Diabetes	5,358	0.6%
Inflammatory bowel disease (IBD)	2,171	0.2%
Intellectual disabilities and related conditions	4,339	0.5%
Juvenile arthritis	797	0.1%
Learning disabilities	26,550	3.0%
Obesity	36,886	4.2%
Other developmental delays	9,962	1.1%
Small for gestational age (SGA)	153	0.0%

Table 1i. Baseline Characteristics for Incident Albuterol Nebulizer Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Health Service Utilization Intensity:	Mean	Standard Deviation
Mean number of ambulatory encounters	8.5	11.7
Mean number of emergency room encounters	0.3	0.9
Mean number of inpatient hospital encounters	0.0	0.3
Mean number of non-acute institutional encounters	0.0	0.2
Mean number of other ambulatory encounters	1.4	7.1
Mean number of unique drug classes	4.2	2.8
Mean number of generics	4.5	3.1
Mean number of filled prescriptions	7.7	9.3

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

Table 1j. Baseline Characteristics for Incident Ophthalmic Antibiotic Drops Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Characteristic¹	Number	
Number of episodes	622,693	
Number of unique patients	622,693	
Demographics	Mean	Standard Deviation
Mean Age (Years)	10.3	7.5
Age (Years)	Number	Percent
0-4	211,645	34.0%
5-7	101,002	16.2%
8-10	62,106	10.0%
11-13	47,367	7.6%
14-16	47,802	7.7%
17-19	56,261	9.0%
20-25	96,510	15.5%
Sex:		
Female	319,962	51.4%
Male	302,731	48.6%
Race:		
Unknown	555,033	89.1%
American Indian or Alaska Native	633	0.1%
Asian	11,808	1.9%
Black or African American	7,019	1.1%
Native Hawaiian or Other Pacific Islander	1,864	0.3%
White	46,336	7.4%
Ethnicity:		
Hispanic Origin	18,665	3.0%
Year:		
2018	318,145	51.1%
2019	285,910	45.9%
2020	18,638	3.0%
Other Conditions:	Number	Percent
ADHD, conduct disorders, and hyperkinetic syndrome	30,975	5.0%
Allergies (serious and ambulatory)	153,645	24.7%
Anaphylaxis	4,365	0.7%
Anxiety disorders	40,173	6.5%
Asthma	53,288	8.6%
Autism spectrum disorder	7,581	1.2%
Depressive disorders	20,935	3.4%
Diabetes	2,814	0.5%
Inflammatory bowel disease (IBD)	1,246	0.2%
Intellectual disabilities and related conditions	4,170	0.7%
Juvenile arthritis	524	0.1%
Learning disabilities	26,657	4.3%
Obesity	13,342	2.1%
Other developmental delays	8,809	1.4%
Small for gestational age (SGA)	170	0.0%

Table 1j. Baseline Characteristics for Incident Ophthalmic Antibiotic Drops Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Health Service Utilization Intensity:	Mean	Standard Deviation
Mean number of ambulatory encounters	8.5	11.7
Mean number of emergency room encounters	0.3	0.8
Mean number of inpatient hospital encounters	0.0	0.2
Mean number of non-acute institutional encounters	0.0	0.1
Mean number of other ambulatory encounters	1.3	7.5
Mean number of unique drug classes	3.5	2.6
Mean number of generics	3.8	2.9
Mean number of filled prescriptions	6.4	8.4

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

Table 1k. Baseline Characteristics for Incident Glucagon Nasal Spray Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Characteristic¹	Number	
Number of episodes	1,713	
Number of unique patients	1,713	
Demographics	Mean	Standard Deviation
Mean Age (Years)	15.4	5.1
Age (Years)	Number	Percent
0-4	35	2.0%
5-7	118	6.9%
8-10	209	12.2%
11-13	292	17.0%
14-16	375	21.9%
17-19	345	20.1%
20-25	339	19.8%
Sex:		
Female	775	45.2%
Male	938	54.8%
Race:		
Unknown	1,629	95.1%
American Indian or Alaska Native	0	0.0%
Asian	0	0.0%
Black or African American	1	0.1%
Native Hawaiian or Other Pacific Islander	0	0.0%
White	83	4.8%
Ethnicity:		
Hispanic Origin	5	0.3%
Year:		
2018	0	0.0%
2019	1,437	83.9%
2020	276	16.1%
Indicated Condition(s):	Number	Percent
Diabetes	1,692	98.8%
Other Conditions:	Number	Percent
ADHD, conduct disorders, and hyperkinetic syndrome	148	8.6%
Allergies (serious and ambulatory)	316	18.4%
Anaphylaxis	12	0.7%
Anxiety disorders	237	13.8%
Asthma	118	6.9%
Autism spectrum disorder	33	1.9%
Depressive disorders	141	8.2%
Inflammatory bowel disease (IBD)	4	0.2%
Intellectual disabilities and related conditions	9	0.5%
Juvenile arthritis	2	0.1%
Learning disabilities	26	1.5%
Obesity	75	4.4%
Other developmental delays	12	0.7%
Small for gestational age (SGA)	0	0.0%

Table 1k. Baseline Characteristics for Incident Glucagon Nasal Spray Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Health Service Utilization Intensity:	Mean	Standard Deviation
Mean number of ambulatory encounters	12.7	12.1
Mean number of emergency room encounters	0.4	1.5
Mean number of inpatient hospital encounters	0.2	0.5
Mean number of non-acute institutional encounters	0.0	0.1
Mean number of other ambulatory encounters	6.9	5.5
Mean number of unique drug classes	5.3	3.0
Mean number of generics	6.9	3.5
Mean number of filled prescriptions	18.9	13.5

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

Table 11. Baseline Characteristics for Incident Leuprolide Acetate Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Characteristic¹	Number	
Number of episodes	703	
Number of unique patients	703	
Demographics	Mean	Standard Deviation
Mean Age (Years)	16.5	6.5
Age (Years)	Number	Percent
0-4	8	1.1%
5-7	50	7.1%
8-10	155	22.0%
11-13	70	10.0%
14-16	79	11.2%
17-19	70	10.0%
20-25	271	38.5%
Sex:		
Female	579	82.4%
Male	124	17.6%
Race:		
Unknown	663	94.3%
American Indian or Alaska Native	0	0.0%
Asian	3	0.4%
Black or African American	1	0.1%
Native Hawaiian or Other Pacific Islander	0	0.0%
White	36	5.1%
Ethnicity:		
Hispanic Origin	3	0.4%
Year:		
2018	381	54.2%
2019	300	42.7%
2020	22	3.1%
Other Conditions:	Number	Percent
ADHD, conduct disorders, and hyperkinetic syndrome	85	12.1%
Allergies (serious and ambulatory)	179	25.5%
Anaphylaxis	9	1.3%
Anxiety disorders	215	30.6%
Asthma	95	13.5%
Autism spectrum disorder	21	3.0%
Depressive disorders	153	21.8%
Diabetes	17	2.4%
Inflammatory bowel disease (IBD)	1	0.1%
Intellectual disabilities and related conditions	12	1.7%
Juvenile arthritis	3	0.4%
Learning disabilities	29	4.1%
Obesity	75	10.7%
Other developmental delays	20	2.8%
Small for gestational age (SGA)	1	0.1%

Table 1I. Baseline Characteristics for Incident Leuprolide Acetate Users in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

Health Service Utilization Intensity:	Mean	Standard Deviation
Mean number of ambulatory encounters	19.2	17.7
Mean number of emergency room encounters	0.8	2.2
Mean number of inpatient hospital encounters	0.2	0.6
Mean number of non-acute institutional encounters	0.1	0.6
Mean number of other ambulatory encounters	3.8	16.0
Mean number of unique drug classes	6.7	5.3
Mean number of generics	7.6	6.3
Mean number of filled prescriptions	16.3	17.7

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

Table 2. Summary of Drug-Device Combination Utilization in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020, Overall

Overall	New Users	Eligible Members¹	New Users per 10,000 Eligible Members	New Episodes	New Dispensings²
Humira	4,753	14,381,442	3.3	4,753	33,971
Somatropin	3,206	14,379,085	2.2	3,206	27,920
Short-acting insulin pens	9,252	14,368,579	6.4	9,252	24,913
Intermediate-acting insulin pens	442	14,387,187	0.3	442	995
Long-acting insulin pens	11,525	14,370,420	8.0	11,525	29,473
Epinephrine - EpiPen and EpiPen Jr	101,378	14,342,904	70.7	101,378	110,868
Inhaled corticosteroids	240,114	14,187,410	169.2	240,114	371,944
Nasal corticosteroids	355,722	14,277,221	249.2	355,722	382,035
Albuterol nebulizer	883,533	13,946,613	633.5	883,533	964,579
Ophthalmic antibiotic drops	622,693	14,238,312	437.3	622,693	647,967
Glucagon nasal spray	1,713	14,387,370	1.2	1,713	1,834
Leuprolide acetate	703	14,387,022	0.5	703	1,126

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

²New dispensings are the number of dispensings used to define index-defining records; when multiple dispensings of the same medical product occur on the same day, each dispensing will be counted

Table 3. Summary of Drug-Device Combination Utilization in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020, by Year

Year	New Users	Eligible Members ¹	New Users per 10,000 Eligible Members	New Episodes	New Dispensings ²
Humira					
2018	2,242	11,318,161	2.0	2,242	21,147
2019	2,338	10,779,046	2.2	2,338	12,606
2020	173	4,434,684	0.4	173	218
Somatropin					
2018	1,582	11,315,628	1.4	1,582	18,508
2019	1,527	10,776,955	1.4	1,527	9,293
2020	97	4,434,065	0.2	97	119
Short-Acting Insulin Pens					
2018	4,820	11,306,955	4.3	4,820	14,793
2019	4,161	10,767,580	3.9	4,161	9,814
2020	271	4,429,108	0.6	271	306
Intermediate-Acting Insulin Pens					
2018	221	11,323,050	0.2	221	512
2019	212	10,784,537	0.2	212	473
2020	9	4,437,896	0.0	9	10
Long-Acting Insulin Pens					
2018	5,983	11,308,657	5.3	5,983	17,479
2019	5,224	10,768,146	4.9	5,224	11,644
2020	318	4,428,701	0.7	318	350
Epinephrine - EpiPen And EpiPen Jr					
2018	57,632	11,271,763	51.1	57,632	63,128
2019	42,535	10,713,415	39.7	42,535	46,519
2020	1,211	4,386,971	2.8	1,211	1,221
Inhaled Corticosteroids					
2018	135,615	11,116,878	122.0	135,615	214,518
2019	98,285	10,536,027	93.3	98,285	150,779
2020	6,214	4,308,384	14.4	6,214	6,647

Table 3. Summary of Drug-Device Combination Utilization in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020, by Year

Year	New Users	Eligible Members ¹	New Users per 10,000 Eligible Members	New Episodes	New Dispensings ²
Nasal Corticosteroids					
2018	182,948	11,201,033	163.3	182,948	196,458
2019	164,026	10,573,346	155.1	164,026	176,710
2020	8,748	4,311,182	20.3	8,748	8,867
Albuterol Nebulizer					
2018	467,719	10,878,609	429.9	467,719	507,922
2019	390,351	10,126,136	385.5	390,351	429,768
2020	25,463	4,013,730	63.4	25,463	26,889
Ophthalmic Antibiotic Drops					
2018	318,145	11,182,682	284.5	318,145	331,523
2019	285,910	10,445,646	273.7	285,910	297,448
2020	18,638	4,172,260	44.7	18,638	18,996
Glucagon Nasal Spray					
2018	0	11,323,353	0.0	0	0
2019	1,437	10,784,829	1.3	1,437	1,556
2020	276	4,436,829	0.6	276	278
Leuprolide Acetate					
2018	381	11,322,820	0.3	381	649
2019	300	10,784,269	0.3	300	455
2020	22	4,437,548	0.0	22	22

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

²New dispensings are the number of dispensings used to define index-defining records; when multiple dispensings of the same medical product occur on the same day, each dispensing will be counted

Table 4. Summary of Drug-Device Combination Utilization in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020, by Sex

Sex	New Users	Eligible Members ¹	New Users per 10,000 Eligible Members	New Episodes	New Dispensings ²
Humira					
Female	2,744	7,041,774	3.9	2,744	19,094
Male	2,009	7,339,668	2.7	2,009	14,877
Somatropin					
Female	943	7,042,297	1.3	943	8,083
Male	2,263	7,336,788	3.1	2,263	19,837
Short-Acting Insulin Pens					
Female	4,449	7,036,403	6.3	4,449	11,828
Male	4,803	7,332,176	6.6	4,803	13,085
Intermediate-Acting Insulin Pens					
Female	320	7,044,605	0.5	320	690
Male	122	7,342,582	0.2	122	305
Long-Acting Insulin Pens					
Female	5,547	7,037,055	7.9	5,547	13,648
Male	5,978	7,333,365	8.2	5,978	15,825
Epinephrine - EpiPen And EpiPen Jr					
Female	46,137	7,025,595	65.7	46,137	50,302
Male	55,241	7,317,309	75.5	55,241	60,566
Inhaled Corticosteroids					
Female	112,254	6,959,185	161.3	112,254	173,547
Male	127,860	7,228,225	176.9	127,860	198,397
Nasal Corticosteroids					
Female	190,987	6,987,773	273.3	190,987	204,510
Male	164,735	7,289,448	226.0	164,735	177,525
Albuterol Nebulizer					
Female	443,073	6,842,659	647.5	443,073	480,859
Male	440,460	7,103,954	620.0	440,460	483,720
Ophthalmic Antibiotic Drops					
Female	319,962	6,970,564	459.0	319,962	332,836
Male	302,731	7,267,748	416.5	302,731	315,131

Table 4. Summary of Drug-Device Combination Utilization in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020, by Sex

Sex	New Users	Eligible Members ¹	New Users per 10,000 Eligible Members	New Episodes	New Dispensings ²
Glucagon Nasal Spray					
Female	775	7,044,713	1.1	775	815
Male	938	7,342,657	1.3	938	1,019
Leuprolide Acetate					
Female	579	7,044,388	0.8	579	932
Male	124	7,342,634	0.2	124	194

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

²New dispensings are the number of dispensings used to define index-defining records; when multiple dispensings of the same medical product occur on the same day, each dispensing will be counted

Table 5. Summary of Drug-Device Combination Utilization in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020, by Age Group

Age Group	New Users	Eligible Members¹	New Users per 10,000 Eligible Members	New Episodes	New Dispensings²
Humira					
0-4 years	52	2,277,444	0.2	52	346
5-7 years	107	1,992,763	0.5	107	818
8-10 years	167	2,132,016	0.8	167	1,297
11-13 years	391	2,271,760	1.7	391	3,266
14-16 years	729	2,413,820	3.0	729	5,842
17-19 years	1,011	2,588,965	3.9	1,011	7,474
20-25 years	2,296	4,923,583	4.7	2,296	14,928
Somatropin					
0-4 years	218	2,277,053	1.0	218	1,917
5-7 years	276	1,991,931	1.4	276	2,622
8-10 years	683	2,130,368	3.2	683	6,062
11-13 years	1,244	2,268,404	5.5	1,244	11,394
14-16 years	678	2,410,139	2.8	678	5,365
17-19 years	57	2,589,340	0.2	57	311
20-25 years	50	4,927,767	0.1	50	249
Short-Acting Insulin Pens					
0-4 years	396	2,277,172	1.7	396	1,138
5-7 years	562	1,991,812	2.8	562	1,556
8-10 years	904	2,130,300	4.2	904	2,967
11-13 years	1,253	2,269,063	5.5	1,253	4,056
14-16 years	1,410	2,410,139	5.9	1,410	3,965
17-19 years	1,509	2,584,934	5.8	1,509	3,675
20-25 years	3,218	4,918,393	6.5	3,218	7,556

Table 5. Summary of Drug-Device Combination Utilization in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020, by Age Group

Age Group	New Users	Eligible Members ¹	New Users per 10,000 Eligible Members	New Episodes	New Dispensings ²
Intermediate-Acting Insulin Pens					
0-4 years	2	2,277,475	0.0	2	3
5-7 years	7	1,992,853	0.0	7	24
8-10 years	14	2,132,272	0.1	14	33
11-13 years	18	2,272,271	0.1	18	63
14-16 years	35	2,414,793	0.1	35	87
17-19 years	59	2,590,737	0.2	59	104
20-25 years	307	4,927,758	0.6	307	681
Long-Acting Insulin Pens					
0-4 years	346	2,277,264	1.5	346	844
5-7 years	554	1,992,132	2.8	554	1,257
8-10 years	1,067	2,130,792	5.0	1,067	2,569
11-13 years	1,495	2,269,496	6.6	1,495	4,139
14-16 years	1,876	2,410,592	7.8	1,876	4,982
17-19 years	2,077	2,585,233	8.0	2,077	5,257
20-25 years	4,110	4,918,401	8.4	4,110	10,425
Epinephrine - EpiPen And EpiPen Jr					
0-4 years	16,878	2,264,262	74.5	16,878	19,139
5-7 years	13,286	1,975,339	67.3	13,286	14,857
8-10 years	14,826	2,113,637	70.1	14,826	16,227
11-13 years	16,207	2,254,750	71.9	16,207	17,705
14-16 years	14,438	2,400,538	60.1	14,438	15,561
17-19 years	11,519	2,580,383	44.6	11,519	12,330
20-25 years	14,224	4,920,094	28.9	14,224	15,049

Table 5. Summary of Drug-Device Combination Utilization in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020, by Age Group

Age Group	New Users	Eligible Members ¹	New Users per 10,000 Eligible Members	New Episodes	New Dispensings ²
Inhaled Corticosteroids					
0-4 years	47,075	2,232,294	210.9	47,075	82,271
5-7 years	32,815	1,933,513	169.7	32,815	50,740
8-10 years	31,540	2,073,856	152.1	31,540	47,176
11-13 years	29,729	2,218,116	134.0	29,729	43,421
14-16 years	29,017	2,370,193	122.4	29,017	43,523
17-19 years	26,573	2,551,949	104.1	26,573	39,698
20-25 years	43,365	4,880,995	88.8	43,365	65,115
Nasal Corticosteroids					
0-4 years	24,025	2,266,667	106.0	24,025	26,305
5-7 years	32,798	1,966,256	166.8	32,798	35,687
8-10 years	37,132	2,098,426	177.0	37,132	40,240
11-13 years	43,649	2,235,266	195.3	43,649	46,907
14-16 years	49,791	2,376,497	209.5	49,791	53,263
17-19 years	57,974	2,549,819	227.4	57,974	61,890
20-25 years	110,353	4,869,912	226.6	110,353	117,743
Albuterol Nebulizer					
0-4 years	155,212	2,159,143	718.9	155,212	167,235
5-7 years	104,309	1,875,458	556.2	104,309	115,922
8-10 years	102,924	2,015,131	510.8	102,924	116,181
11-13 years	108,715	2,149,390	505.8	108,715	120,692
14-16 years	114,265	2,297,182	497.4	114,265	124,900
17-19 years	108,755	2,484,770	437.7	108,755	117,611
20-25 years	189,353	4,801,362	394.4	189,353	202,038

Table 5. Summary of Drug-Device Combination Utilization in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020, by Age Group

Age Group	New Users	Eligible Members ¹	New Users per 10,000 Eligible Members	New Episodes	New Dispensings ²
Ophthalmic Antibiotic Drops					
0-4 years	211,645	2,182,731	969.6	211,645	219,189
5-7 years	101,002	1,922,516	525.4	101,002	104,652
8-10 years	62,106	2,089,358	297.2	62,106	64,476
11-13 years	47,367	2,242,386	211.2	47,367	49,172
14-16 years	47,802	2,388,963	200.1	47,802	49,812
17-19 years	56,261	2,560,558	219.7	56,261	58,843
20-25 years	96,510	4,887,939	197.4	96,510	101,823
Glucagon Nasal Spray					
0-4 years	35	2,277,473	0.2	35	37
5-7 years	118	1,992,833	0.6	118	125
8-10 years	209	2,132,252	1.0	209	224
11-13 years	292	2,272,251	1.3	292	323
14-16 years	375	2,414,777	1.6	375	406
17-19 years	345	2,590,762	1.3	345	368
20-25 years	339	4,927,981	0.7	339	351
Leuprolide Acetate					
0-4 years	8	2,277,474	0.0	8	19
5-7 years	50	1,992,810	0.3	50	87
8-10 years	155	2,132,021	0.7	155	302
11-13 years	70	2,272,090	0.3	70	111
14-16 years	79	2,414,741	0.3	79	102
17-19 years	70	2,590,734	0.3	70	102
20-25 years	271	4,927,850	0.5	271	403

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

²New dispensings are the number of dispensings used to define index-defining records; when multiple dispensings of the same medical product occur on the same day, each dispensing will be counted

Table 6. Summary of Episode Duration for Drug-Device Combination Utilization in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

	Number of Episodes by Length of Episode Duration									Distribution of Length of Episode Duration in Days, by Episode						
	Total Number of Episodes	< 1 Year		1 Year		2 Years		3+ Years		Minimum	Q1	Median	Q3	Maximum	Mean	Standard Deviation
		Number of Episodes	% Total Episodes	Number of Episodes	% Total Episodes	Number of Episodes	% Total Episodes	Number of Episodes	% Total Episodes							
Humira	4,753	3,866	81.3%	868	18.3%	19	0.4%	0	0.0%	1	86	172	319	774	220	169
Somatropin	3,206	2,311	72.1%	865	27.0%	30	0.9%	0	0.0%	1	104	222	388	783	264	192
Short-acting insulin pens	9,252	8,741	94.5%	502	5.4%	9	0.1%	0	0.0%	1	60	88	150	774	127	117
Intermediate-acting insulin pens	442	438	99.1%	4	0.9%	0	0.0%	0	0.0%	2	60	80	120	601	103	75
Long-acting insulin pens	11,525	10,951	95.0%	559	4.9%	15	0.1%	0	0.0%	1	60	90	148	761	126	114
Epinephrine - EpiPen and EpiPen Jr	101,378	101,378	100.0%	0	0.0%	0	0.0%	0	0.0%	1	2	2	14	338	10	17
Inhaled corticosteroids	240,114	238,089	99.2%	1,990	0.8%	35	0.0%	0	0.0%	1	60	60	90	787	79	59
Nasal corticosteroids	355,722	355,618	100.0%	102	0.0%	2	0.0%	0	0.0%	1	30	30	30	758	35	21
Albuterol nebulizer	883,533	883,489	100.0%	44	0.0%	0	0.0%	0	0.0%	1	16	18	30	691	22	14
Ophthalmic antibiotic drops	622,693	622,691	100.0%	2	0.0%	0	0.0%	0	0.0%	1	7	11	22	536	15	9
Glucagon nasal spray	1,713	1,713	100.0%	0	0.0%	0	0.0%	0	0.0%	1	2	2	30	180	14	20
Leuprolide acetate	703	686	97.6%	17	2.4%	0	0.0%	0	0.0%	1	28	54	90	681	79	93

Table 7. Summary of Reasons for Censoring Drug-Device Combination Utilization in the Sentinel Distributed Database (SDD) between January 1, 2018 and February 29, 2020

	Disenrollment			Death ²		Data Partner End Date		Query End Date ³		Episode End Date	
	Total Number of Episodes ¹	Number of Episodes	% Total Episodes	Number of Episodes	% Total Episodes	Number of Episodes	% Total Episodes	Number of Episodes	% Total Episodes	Number of Episodes	% Total Episodes
Humira	4,753	2,745	57.8%	1	0.0%	2,335	49.1%	0	0.0%	1,642	34.5%
Somatropin	3,206	1,983	61.9%	1	0.0%	1,887	58.9%	0	0.0%	785	24.5%
Short-acting insulin pens	9,252	2,537	27.4%	6	0.1%	1,977	21.4%	0	0.0%	6,385	69.0%
Intermediate-acting insulin pens	442	114	25.8%	0	0.0%	80	18.1%	0	0.0%	322	72.9%
Long-acting insulin pens	11,525	3,062	26.6%	7	0.1%	2,294	19.9%	0	0.0%	8,061	69.9%
Epinephrine - EpiPen and EpiPen Jr	101,378	1,266	1.2%	1	0.0%	863	0.9%	0	0.0%	101,100	99.7%
Inhaled corticosteroids	240,114	34,526	14.4%	17	0.0%	27,079	11.3%	0	0.0%	199,981	83.3%
Nasal corticosteroids	355,722	21,830	6.1%	3	0.0%	17,028	4.8%	0	0.0%	353,256	99.3%
Albuterol nebulizer	883,533	34,908	4.0%	12	0.0%	27,620	3.1%	0	0.0%	877,702	99.3%
Ophthalmic antibiotic drops	622,693	15,188	2.4%	3	0.0%	12,296	2.0%	0	0.0%	620,147	99.6%
Glucagon nasal spray	1,713	150	8.8%	0	0.0%	149	8.7%	0	0.0%	1,690	98.7%
Leuprolide acetate	703	81	11.5%	1	0.1%	59	8.4%	0	0.0%	681	96.9%

¹An 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 episodes

²Death data are available for all Data Partners (DPs) in this query except for one DP.

³By definition, the maximum Data Partner End Date (2/29/2020) precedes Query End Date (2/28/2021), therefore, no episodes should be censored at Query End Date

Appendix A. Start and End Dates for Each Data Partner as of Request Distribution Date (January 27, 2021)

DP ID	Start Date¹	End Date¹
DP01	1/1/2000	7/31/2019
DP02	1/1/2000	4/30/2019
DP03	1/1/2008	2/29/2020
DP04	1/1/2000	4/30/2018
DP05	1/1/2000	3/31/2019
DP06	1/1/2008	12/31/2019
DP07	1/1/2005	7/31/2018
DP08	1/1/2000	1/31/2019
DP09	1/1/2004	8/31/2019
DP10	6/1/2007	10/31/2019
DP11	1/1/2000	2/28/2019
DP12	1/1/2006	1/31/2020

¹The 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 and Incidence Criteria in this Request

Generic Name	Brand Name
Humira	
adalimumab	Humira(CF) Pedi Crohns Starter
adalimumab	Humira(CF) Pen Crohns-UC-HS
adalimumab	Humira(CF) Pen
adalimumab	Humira(CF)
adalimumab	Humira(CF) Pen Psor-Uv-Adol HS
adalimumab	Humira
adalimumab	Humira Pediatric Crohns Start
adalimumab	Humira Pen
adalimumab	Humira Pen Crohns-UC-HS Start
adalimumab	Humira Pen Psor-Uveits-Adol HS
Somatropin	
somatropin	Norditropin FlexPro
somatropin	Humatrope
somatropin	Genotropin
somatropin	Genotropin MiniQuick
somatropin	Omnitrope
somatropin	Serostim
somatropin	Saizen saizenprep
somatropin	Saizen
somatropin	Saizen click.easy
somatropin	Zorbtive
somatropin	Nutropin AQ
somatropin	Nutropin AQ Nuspin
somatropin	Zomacton
Short-Acting Insulin Pens	
insulin aspart	insulin aspart U-100
insulin aspart	Novolog PenFill U-100 Insulin
insulin aspart	Novolog Flexpen U-100 Insulin
insulin aspart (niacinamide)	Fiasp FlexTouch U-100 Insulin
insulin aspart (niacinamide)	Fiasp Penfill U-100 Insulin
insulin aspart protamine human/insulin aspart	Novolog Mix 70-30FlexPen U-100
insulin aspart protamine human/insulin aspart	insulin asp prt-insulin aspart
insulin glulisine	Apidra SoloStar U-100 Insulin
insulin lispro	Humalog U-100 Insulin
insulin lispro	Humalog KwikPen Insulin
insulin lispro	insulin lispro
insulin lispro	Admelog SoloStar U-100 Insulin
insulin lispro	Humalog Junior KwikPen U-100
insulin lispro-aabc	Lyumjev KwikPen U-100 Insulin
insulin lispro-aabc	Lyumjev KwikPen U-200 Insulin
insulin regular, human	Novolin R Flexpen
insulin regular, human	Afrezza
insulin regular, human	Humulin R U-500 (Conc) Kwikpen

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

Generic Name	Brand Name
Intermediate-Acting Insulin Pens	
insulin lispro protamine and insulin lispro	Humalog Mix 75-25(U-100)Insuln
insulin lispro protamine and insulin lispro	Humalog Mix 50-50 Insuln U-100
insulin lispro protamine and insulin lispro	insulin lispro protamin-lispro
insulin NPH human isophane	Humulin N NPH U-100 Insulin
insulin NPH human isophane/insulin regular, human	Humulin 70/30 U-100 Insulin
insulin lispro protamine and insulin lispro	Humalog Mix 75-25 KwikPen
insulin lispro protamine and insulin lispro	Humalog Mix 50-50 KwikPen
insulin NPH human isophane/insulin regular, human	Humulin 70/30 U-100 KwikPen
insulin NPH human isophane	Humulin N NPH Insulin KwikPen
insulin NPH human isophane	Novolin N NPH U-100 Insulin
insulin NPH human isophane/insulin regular, human	Novolin 70/30 U-100 Insulin
insulin NPH human isophane	Novolin N Flexpen
insulin NPH human isophane/insulin regular, human	Novolin 70-30 FlexPen U-100
Long-Acting Insulin Pens	
insulin glargine,human recombinant analog	Basaglar KwikPen U-100 Insulin
insulin glargine,human recombinant analog/lixisenatide	Soliqua 100/33
insulin glargine,human recombinant analog	Toujeo SoloStar U-300 Insulin
insulin glargine,human recombinant analog	Toujeo Max U-300 SoloStar
insulin glargine,human recombinant analog	Lantus Solostar U-100 Insulin
insulin degludec	Tresiba FlexTouch U-200
insulin degludec	Tresiba FlexTouch U-100
insulin degludec/liraglutide	Xultophy 100/3.6
insulin detemir	Levemir FlexTouch U-100 Insuln
Epinephrine - EpiPen and EpiPen Jr	
epinephrine	epinephrine
epinephrine	EpiPen
epinephrine	EpiPen 2-Pak
epinephrine	EpiPen Jr
epinephrine	EpiPen Jr 2-Pak
epinephrine	Auvi-Q
Inhaled Corticosteroids	
mometasone furoate	Asmanex Twisthaler
mometasone furoate	Asmanex HFA
mometasone furoate/formoterol fumarate	Dulera
fluticasone propionate/salmeterol xinafoate	fluticasone propion-salmeterol
budesonide	budesonide
fluticasone propionate	Flovent Diskus
fluticasone propionate/salmeterol xinafoate	Advair Diskus
fluticasone propionate/salmeterol xinafoate	Advair HFA
fluticasone propionate	Flovent HFA
fluticasone furoate/vilanterol trifenate	Breo Ellipta
fluticasone furoate	Arnuity Ellipta
fluticasone furoate/umeclidinium bromide/vilanterol trifenate	Trelegy Ellipta
budesonide/formoterol fumarate	Symbicort

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

Generic Name	Brand Name
budesonide	Pulmicort Flexhaler
budesonide	Pulmicort
budesonide/glycopyrrolate/formoterol fumarate	Breztri Aerosphere
budesonide/formoterol fumarate	budesonide-formoterol
fluticasone propionate/salmeterol xinafoate	Wixela Inhub
beclomethasone dipropionate	Qvar
beclomethasone dipropionate	Qvar RediHaler
fluticasone propionate	ArmonAir RespiClick
fluticasone propionate/salmeterol xinafoate	AirDuo RespiClick
Nasal Corticosteroids	
azelastine HCl/fluticasone propionate	Dymista
fluticasone propionate	fluticasone propionate
mometasone furoate	Nasonex
fluticasone propionate	Flonase Allergy Relief
fluticasone propionate	Children's Flonase Allergy Rlf
fluticasone furoate	Flonase Sensimist
fluticasone furoate	Children's Flonase Sensimist
beclomethasone dipropionate	Beconase AQ
fluticasone furoate	Veramyst
fluticasone propionate	ClariSpray
azelastine HCl/fluticasone propionate	azelastine-fluticasone
budesonide	Rhinocort Allergy
mometasone furoate	mometasone
fluticasone propionate	Allergy Relief (fluticasone)
fluticasone propionate	Childrens 24 Hr Allergy Relief
fluticasone propionate/sodium chloride/sodium bicarbonate	Ticanase
beclomethasone dipropionate	QNASL
fluticasone propionate	Aller-Flo
fluticasone propionate/sodium chloride/sodium bicarbonate	Ticaspray
azelastine/fluticasone/sodium chloride/sodium bicarbonate	Ticalast
fluticasone propionate	Xhance
fluticasone propionate	24 Hour Allergy Relief
Albuterol Nebulizer	
albuterol sulfate	Proventil HFA
albuterol sulfate	albuterol sulfate
levalbuterol HCl	levalbuterol HCl
albuterol sulfate	Ventolin HFA
levalbuterol tartrate	levalbuterol tartrate
levalbuterol HCl	Xopenex Concentrate
levalbuterol HCl	Xopenex
albuterol sulfate	ProAir HFA
levalbuterol tartrate	Xopenex HFA
albuterol sulfate	Proair Digihaler
albuterol sulfate	ProAir RespiClick

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

Generic Name	Brand Name
Ophthalmic Antibiotic Drops	
gentamicin sulfate/prednisolone acetate	Pred-G S.O.P.
gentamicin sulfate/prednisolone acetate	Pred-G
polymyxin B sulfate/trimethoprim	Polytrim
moxifloxacin HCl	Moxeza
tobramycin	Tobrex
tobramycin/dexamethasone	TobraDex
tobramycin/dexamethasone	Tobradex ST
ciprofloxacin HCl	Ciloxan
moxifloxacin HCl	Vigamox
moxifloxacin HCl	moxifloxacin
gentamicin sulfate	gentamicin
ofloxacin	Ocuflox
ciprofloxacin HCl	ciprofloxacin HCl
levofloxacin	levofloxacin
gentamicin sulfate	Gentak
tobramycin	tobramycin
polymyxin B sulfate/trimethoprim	polymyxin B sulf-trimethoprim
ofloxacin	ofloxacin
tobramycin/dexamethasone	tobramycin-dexamethasone
tobramycin/loteprednol etabonate	Zylet
prednisolone acetate/moxifloxacin HCl	prednisolone-moxifloxacin HCl
prednisolone acetate/moxifloxacin HCl/bromfenac sodium	prednisolone-moxiflox-bromfen
prednisolone acetate/moxifloxacin HCl/nepafenac	prednisolone-moxiflo-nepafenac
prednisolone sodium phosphate/moxifloxacin HCl	prednisolone sod ph-moxiflox
prednisolone sodium phosphate/moxifloxacin HCl/bromfenac sod	prednisoln sp-moxiflox-bromfen
Glucagon Nasal Spray	
glucagon	Baqsimi
Leuprolide Acetate	
leuprolide acetate	Lupron Depot-Ped
leuprolide acetate	Lupron Depot (3 month)
leuprolide acetate	Lupron Depot (6 Month)
leuprolide acetate	Lupron Depot
leuprolide acetate	Lupron Depot (4 month)
leuprolide acetate	Lupron Depot-Ped (3 month)
leuprolide acetate	leuprolide
leuprolide acetate	Fensolvi
leuprolide acetate	Eligard (3 month)
leuprolide acetate	Eligard (4 month)
leuprolide acetate	Eligard (6 month)
leuprolide acetate	Eligard

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
Attention Deficit Hyperactivity Disorder (ADHD), Conduct Disorders, and Hyperkinetic Syndrome			
F63.0	Pathological gambling	ICD-10-CM	Diagnosis
F63.1	Pyromania	ICD-10-CM	Diagnosis
F63.2	Kleptomania	ICD-10-CM	Diagnosis
F63.3	Trichotillomania	ICD-10-CM	Diagnosis
F63.81	Intermittent explosive disorder	ICD-10-CM	Diagnosis
F63.89	Other impulse disorders	ICD-10-CM	Diagnosis
F63.9	Impulse disorder, unspecified	ICD-10-CM	Diagnosis
F90.0	Attention-deficit hyperactivity disorder, predominantly inattentive type	ICD-10-CM	Diagnosis
F90.1	Attention-deficit hyperactivity disorder, predominantly hyperactive type	ICD-10-CM	Diagnosis
F90.2	Attention-deficit hyperactivity disorder, combined type	ICD-10-CM	Diagnosis
F90.8	Attention-deficit hyperactivity disorder, other type	ICD-10-CM	Diagnosis
F90.9	Attention-deficit hyperactivity disorder, unspecified type	ICD-10-CM	Diagnosis
F91.0	Conduct disorder confined to family context	ICD-10-CM	Diagnosis
F91.1	Conduct disorder, childhood-onset type	ICD-10-CM	Diagnosis
F91.2	Conduct disorder, adolescent-onset type	ICD-10-CM	Diagnosis
F91.3	Oppositional defiant disorder	ICD-10-CM	Diagnosis
F91.8	Other conduct disorders	ICD-10-CM	Diagnosis
F91.9	Conduct disorder, unspecified	ICD-10-CM	Diagnosis
Allergies (Serious and Ambulatory)			
J30.0	Vasomotor rhinitis	ICD-10-CM	Diagnosis
J30.1	Allergic rhinitis due to pollen	ICD-10-CM	Diagnosis
J30.2	Other seasonal allergic rhinitis	ICD-10-CM	Diagnosis
J30.5	Allergic rhinitis due to food	ICD-10-CM	Diagnosis
J30.81	Allergic rhinitis due to animal (cat) (dog) hair and dander	ICD-10-CM	Diagnosis
J30.89	Other allergic rhinitis	ICD-10-CM	Diagnosis
J30.9	Allergic rhinitis, unspecified	ICD-10-CM	Diagnosis
J31.0	Chronic rhinitis	ICD-10-CM	Diagnosis
J39.3	Upper respiratory tract hypersensitivity reaction, site unspecified	ICD-10-CM	Diagnosis
K52.21	Food protein-induced enterocolitis syndrome	ICD-10-CM	Diagnosis
K52.22	Food protein-induced enteropathy	ICD-10-CM	Diagnosis
K52.29	Other allergic and dietetic gastroenteritis and colitis	ICD-10-CM	Diagnosis
L20.0	Besnier's prurigo	ICD-10-CM	Diagnosis
L20.81	Atopic neurodermatitis	ICD-10-CM	Diagnosis
L20.82	Flexural eczema	ICD-10-CM	Diagnosis
L20.84	Intrinsic (allergic) eczema	ICD-10-CM	Diagnosis
L20.89	Other atopic dermatitis	ICD-10-CM	Diagnosis
L20.9	Atopic dermatitis, unspecified	ICD-10-CM	Diagnosis
L22	Diaper dermatitis	ICD-10-CM	Diagnosis
L23.0	Allergic contact dermatitis due to metals	ICD-10-CM	Diagnosis
L23.1	Allergic contact dermatitis due to adhesives	ICD-10-CM	Diagnosis
L23.2	Allergic contact dermatitis due to cosmetics	ICD-10-CM	Diagnosis
L23.3	Allergic contact dermatitis due to drugs in contact with skin	ICD-10-CM	Diagnosis
L23.4	Allergic contact dermatitis due to dyes	ICD-10-CM	Diagnosis

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
L23.5	Allergic contact dermatitis due to other chemical products	ICD-10-CM	Diagnosis
L23.6	Allergic contact dermatitis due to food in contact with the skin	ICD-10-CM	Diagnosis
L23.7	Allergic contact dermatitis due to plants, except food	ICD-10-CM	Diagnosis
L23.81	Allergic contact dermatitis due to animal (cat) (dog) dander	ICD-10-CM	Diagnosis
L23.89	Allergic contact dermatitis due to other agents	ICD-10-CM	Diagnosis
L23.9	Allergic contact dermatitis, unspecified cause	ICD-10-CM	Diagnosis
L24.0	Irritant contact dermatitis due to detergents	ICD-10-CM	Diagnosis
L24.1	Irritant contact dermatitis due to oils and greases	ICD-10-CM	Diagnosis
L24.2	Irritant contact dermatitis due to solvents	ICD-10-CM	Diagnosis
L24.3	Irritant contact dermatitis due to cosmetics	ICD-10-CM	Diagnosis
L24.4	Irritant contact dermatitis due to drugs in contact with skin	ICD-10-CM	Diagnosis
L24.5	Irritant contact dermatitis due to other chemical products	ICD-10-CM	Diagnosis
L24.6	Irritant contact dermatitis due to food in contact with skin	ICD-10-CM	Diagnosis
L24.7	Irritant contact dermatitis due to plants, except food	ICD-10-CM	Diagnosis
L24.81	Irritant contact dermatitis due to metals	ICD-10-CM	Diagnosis
L24.89	Irritant contact dermatitis due to other agents	ICD-10-CM	Diagnosis
L24.9	Irritant contact dermatitis, unspecified cause	ICD-10-CM	Diagnosis
L25.0	Unspecified contact dermatitis due to cosmetics	ICD-10-CM	Diagnosis
L25.1	Unspecified contact dermatitis due to drugs in contact with skin	ICD-10-CM	Diagnosis
L25.2	Unspecified contact dermatitis due to dyes	ICD-10-CM	Diagnosis
L25.3	Unspecified contact dermatitis due to other chemical products	ICD-10-CM	Diagnosis
L25.4	Unspecified contact dermatitis due to food in contact with skin	ICD-10-CM	Diagnosis
L25.5	Unspecified contact dermatitis due to plants, except food	ICD-10-CM	Diagnosis
L25.8	Unspecified contact dermatitis due to other agents	ICD-10-CM	Diagnosis
L25.9	Unspecified contact dermatitis, unspecified cause	ICD-10-CM	Diagnosis
L27.0	Generalized skin eruption due to drugs and medicaments taken internally	ICD-10-CM	Diagnosis
L27.1	Localized skin eruption due to drugs and medicaments taken internally	ICD-10-CM	Diagnosis
L27.2	Dermatitis due to ingested food	ICD-10-CM	Diagnosis
L27.8	Dermatitis due to other substances taken internally	ICD-10-CM	Diagnosis
L27.9	Dermatitis due to unspecified substance taken internally	ICD-10-CM	Diagnosis
L50.0	Allergic urticaria	ICD-10-CM	Diagnosis
L50.1	Idiopathic urticaria	ICD-10-CM	Diagnosis
L50.2	Urticaria due to cold and heat	ICD-10-CM	Diagnosis
L50.3	Dermatographic urticaria	ICD-10-CM	Diagnosis
L50.4	Vibratory urticaria	ICD-10-CM	Diagnosis
L50.5	Cholinergic urticaria	ICD-10-CM	Diagnosis
L50.6	Contact urticaria	ICD-10-CM	Diagnosis
L50.8	Other urticaria	ICD-10-CM	Diagnosis
L50.9	Urticaria, unspecified	ICD-10-CM	Diagnosis
L56.0	Drug phototoxic response	ICD-10-CM	Diagnosis
L56.1	Drug photoallergic response	ICD-10-CM	Diagnosis
L56.2	Photocontact dermatitis [berloque dermatitis]	ICD-10-CM	Diagnosis
L56.3	Solar urticaria	ICD-10-CM	Diagnosis
L56.4	Polymorphous light eruption	ICD-10-CM	Diagnosis

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
L56.5	Disseminated superficial actinic porokeratosis (DSAP)	ICD-10-CM	Diagnosis
L56.9	Acute skin change due to ultraviolet radiation, unspecified	ICD-10-CM	Diagnosis
L57.1	Actinic reticuloid	ICD-10-CM	Diagnosis
L57.5	Actinic granuloma	ICD-10-CM	Diagnosis
T50.995A	Adverse effect of other drugs, medicaments and biological substances, initial encounter	ICD-10-CM	Diagnosis
Z01.82	Encounter for allergy testing	ICD-10-CM	Diagnosis
Z01.89	Encounter for other specified special examinations	ICD-10-CM	Diagnosis
Z51.6	Encounter for desensitization to allergens	ICD-10-CM	Diagnosis
Z88.0	Allergy status to penicillin	ICD-10-CM	Diagnosis
Z88.1	Allergy status to other antibiotic agents status	ICD-10-CM	Diagnosis
Z88.2	Allergy status to sulfonamides status	ICD-10-CM	Diagnosis
Z88.3	Allergy status to other anti-infective agents status	ICD-10-CM	Diagnosis
Z88.4	Allergy status to anesthetic agent status	ICD-10-CM	Diagnosis
Z88.5	Allergy status to narcotic agent status	ICD-10-CM	Diagnosis
Z88.6	Allergy status to analgesic agent status	ICD-10-CM	Diagnosis
Z88.7	Allergy status to serum and vaccine status	ICD-10-CM	Diagnosis
Z88.8	Allergy status to other drugs, medicaments and biological substances status	ICD-10-CM	Diagnosis
Z88.9	Allergy status to unspecified drugs, medicaments and biological substances status	ICD-10-CM	Diagnosis
Z91.0	Allergy status, other than to drugs and biological substances	ICD-10-CM	Diagnosis
Z91.01	Food allergy status	ICD-10-CM	Diagnosis
Z91.010	Allergy to peanuts	ICD-10-CM	Diagnosis
Z91.011	Allergy to milk products	ICD-10-CM	Diagnosis
Z91.012	Allergy to eggs	ICD-10-CM	Diagnosis
Z91.013	Allergy to seafood	ICD-10-CM	Diagnosis
Z91.018	Allergy to other foods	ICD-10-CM	Diagnosis
Z91.02	Food additives allergy status	ICD-10-CM	Diagnosis
Z91.03	Insect allergy status	ICD-10-CM	Diagnosis
Z91.030	Bee allergy status	ICD-10-CM	Diagnosis
Z91.038	Other insect allergy status	ICD-10-CM	Diagnosis
Z91.04	Nonmedicinal substance allergy status	ICD-10-CM	Diagnosis
Z91.040	Latex allergy status	ICD-10-CM	Diagnosis
Z91.041	Radiographic dye allergy status	ICD-10-CM	Diagnosis
Z91.048	Other nonmedicinal substance allergy status	ICD-10-CM	Diagnosis
Z91.09	Other allergy status, other than to drugs and biological substances	ICD-10-CM	Diagnosis
Anaphylaxis			
T78.0	Anaphylactic reaction due to food	ICD-10-CM	Diagnosis
T78.00	Anaphylactic reaction due to unspecified food	ICD-10-CM	Diagnosis
T78.00XA	Anaphylactic reaction due to unspecified food, initial encounter	ICD-10-CM	Diagnosis
T78.00XD	Anaphylactic reaction due to unspecified food, subsequent encounter	ICD-10-CM	Diagnosis
T78.00XS	Anaphylactic reaction due to unspecified food, sequela	ICD-10-CM	Diagnosis
T78.01	Anaphylactic reaction due to peanuts	ICD-10-CM	Diagnosis
T78.01XA	Anaphylactic reaction due to peanuts, initial encounter	ICD-10-CM	Diagnosis
T78.01XD	Anaphylactic reaction due to peanuts, subsequent encounter	ICD-10-CM	Diagnosis

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
T78.01XS	Anaphylactic reaction due to peanuts, sequela	ICD-10-CM	Diagnosis
T78.02	Anaphylactic reaction due to shellfish (crustaceans)	ICD-10-CM	Diagnosis
T78.02XA	Anaphylactic reaction due to shellfish (crustaceans), initial encounter	ICD-10-CM	Diagnosis
T78.02XD	Anaphylactic reaction due to shellfish (crustaceans), subsequent encounter	ICD-10-CM	Diagnosis
T78.02XS	Anaphylactic reaction due to shellfish (crustaceans), sequela	ICD-10-CM	Diagnosis
T78.03	Anaphylactic reaction due to other fish	ICD-10-CM	Diagnosis
T78.03XA	Anaphylactic reaction due to other fish, initial encounter	ICD-10-CM	Diagnosis
T78.03XD	Anaphylactic reaction due to other fish, subsequent encounter	ICD-10-CM	Diagnosis
T78.03XS	Anaphylactic reaction due to other fish, sequela	ICD-10-CM	Diagnosis
T78.04	Anaphylactic reaction due to fruits and vegetables	ICD-10-CM	Diagnosis
T78.04XA	Anaphylactic reaction due to fruits and vegetables, initial encounter	ICD-10-CM	Diagnosis
T78.04XD	Anaphylactic reaction due to fruits and vegetables, subsequent encounter	ICD-10-CM	Diagnosis
T78.04XS	Anaphylactic reaction due to fruits and vegetables, sequela	ICD-10-CM	Diagnosis
T78.05	Anaphylactic reaction due to tree nuts and seeds	ICD-10-CM	Diagnosis
T78.05XA	Anaphylactic reaction due to tree nuts and seeds, initial encounter	ICD-10-CM	Diagnosis
T78.05XD	Anaphylactic reaction due to tree nuts and seeds, subsequent encounter	ICD-10-CM	Diagnosis
T78.05XS	Anaphylactic reaction due to tree nuts and seeds, sequela	ICD-10-CM	Diagnosis
T78.06	Anaphylactic reaction due to food additives	ICD-10-CM	Diagnosis
T78.06XA	Anaphylactic reaction due to food additives, initial encounter	ICD-10-CM	Diagnosis
T78.06XD	Anaphylactic reaction due to food additives, subsequent encounter	ICD-10-CM	Diagnosis
T78.06XS	Anaphylactic reaction due to food additives, sequela	ICD-10-CM	Diagnosis
T78.07	Anaphylactic reaction due to milk and dairy products	ICD-10-CM	Diagnosis
T78.07XA	Anaphylactic reaction due to milk and dairy products, initial encounter	ICD-10-CM	Diagnosis
T78.07XD	Anaphylactic reaction due to milk and dairy products, subsequent encounter	ICD-10-CM	Diagnosis
T78.07XS	Anaphylactic reaction due to milk and dairy products, sequela	ICD-10-CM	Diagnosis
T78.08	Anaphylactic reaction due to eggs	ICD-10-CM	Diagnosis
T78.08XA	Anaphylactic reaction due to eggs, initial encounter	ICD-10-CM	Diagnosis
T78.08XD	Anaphylactic reaction due to eggs, subsequent encounter	ICD-10-CM	Diagnosis
T78.08XS	Anaphylactic reaction due to eggs, sequela	ICD-10-CM	Diagnosis
T78.09	Anaphylactic reaction due to other food products	ICD-10-CM	Diagnosis
T78.09XA	Anaphylactic reaction due to other food products, initial encounter	ICD-10-CM	Diagnosis
T78.09XD	Anaphylactic reaction due to other food products, subsequent encounter	ICD-10-CM	Diagnosis
T78.09XS	Anaphylactic reaction due to other food products, sequela	ICD-10-CM	Diagnosis
T78.2	Anaphylactic shock, unspecified	ICD-10-CM	Diagnosis
T78.2XXA	Anaphylactic shock, unspecified, initial encounter	ICD-10-CM	Diagnosis
T78.2XXD	Anaphylactic shock, unspecified, subsequent encounter	ICD-10-CM	Diagnosis
T78.2XXS	Anaphylactic shock, unspecified, sequela	ICD-10-CM	Diagnosis
T80.5	Anaphylactic reaction due to serum	ICD-10-CM	Diagnosis
T80.51	Anaphylactic reaction due to administration of blood and blood products	ICD-10-CM	Diagnosis
T80.51XA	Anaphylactic reaction due to administration of blood and blood products, initial encounter	ICD-10-CM	Diagnosis
T80.51XD	Anaphylactic reaction due to administration of blood and blood products, subsequent encounter	ICD-10-CM	Diagnosis

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
T80.51XS	Anaphylactic reaction due to administration of blood and blood products, sequela	ICD-10-CM	Diagnosis
T80.52	Anaphylactic reaction due to vaccination	ICD-10-CM	Diagnosis
T80.52XA	Anaphylactic reaction due to vaccination, initial encounter	ICD-10-CM	Diagnosis
T80.52XD	Anaphylactic reaction due to vaccination, subsequent encounter	ICD-10-CM	Diagnosis
T80.52XS	Anaphylactic reaction due to vaccination, sequela	ICD-10-CM	Diagnosis
T80.59	Anaphylactic reaction due to other serum	ICD-10-CM	Diagnosis
T80.59XA	Anaphylactic reaction due to other serum, initial encounter	ICD-10-CM	Diagnosis
T80.59XD	Anaphylactic reaction due to other serum, subsequent encounter	ICD-10-CM	Diagnosis
T80.59XS	Anaphylactic reaction due to other serum, sequela	ICD-10-CM	Diagnosis
T88.6	Anaphylactic reaction due to adverse effect of correct drug or medication properly administered	ICD-10-CM	Diagnosis
T88.6XXA	Anaphylactic reaction due to adverse effect of correct drug or medication properly administered, initial encounter	ICD-10-CM	Diagnosis
T88.6XXD	Anaphylactic reaction due to adverse effect of correct drug or medication properly administered, subsequent encounter	ICD-10-CM	Diagnosis
T88.6XXS	Anaphylactic reaction due to adverse effect of correct drug or medication properly administered, sequela	ICD-10-CM	Diagnosis
Z87.892	Personal history of anaphylaxis	ICD-10-CM	Diagnosis
Anxiety Disorders			
F06.4	Anxiety disorder due to known physiological condition	ICD-10-CM	Diagnosis
F40.00	Agoraphobia, unspecified	ICD-10-CM	Diagnosis
F40.01	Agoraphobia with panic disorder	ICD-10-CM	Diagnosis
F40.02	Agoraphobia without panic disorder	ICD-10-CM	Diagnosis
F40.10	Social phobia, unspecified	ICD-10-CM	Diagnosis
F40.11	Social phobia, generalized	ICD-10-CM	Diagnosis
F40.210	Arachnophobia	ICD-10-CM	Diagnosis
F40.218	Other animal type phobia	ICD-10-CM	Diagnosis
F40.220	Fear of thunderstorms	ICD-10-CM	Diagnosis
F40.228	Other natural environment type phobia	ICD-10-CM	Diagnosis
F40.230	Fear of blood	ICD-10-CM	Diagnosis
F40.231	Fear of injections and transfusions	ICD-10-CM	Diagnosis
F40.232	Fear of other medical care	ICD-10-CM	Diagnosis
F40.233	Fear of injury	ICD-10-CM	Diagnosis
F40.240	Claustrophobia	ICD-10-CM	Diagnosis
F40.241	Acrophobia	ICD-10-CM	Diagnosis
F40.242	Fear of bridges	ICD-10-CM	Diagnosis
F40.243	Fear of flying	ICD-10-CM	Diagnosis
F40.248	Other situational type phobia	ICD-10-CM	Diagnosis
F40.290	Androphobia	ICD-10-CM	Diagnosis
F40.291	Gynephobia	ICD-10-CM	Diagnosis
F40.298	Other specified phobia	ICD-10-CM	Diagnosis
F40.8	Other phobic anxiety disorders	ICD-10-CM	Diagnosis
F40.9	Phobic anxiety disorder, unspecified	ICD-10-CM	Diagnosis

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
F41.0	Panic disorder [episodic paroxysmal anxiety]	ICD-10-CM	Diagnosis
F41.1	Generalized anxiety disorder	ICD-10-CM	Diagnosis
F41.3	Other mixed anxiety disorders	ICD-10-CM	Diagnosis
F41.8	Other specified anxiety disorders	ICD-10-CM	Diagnosis
F41.9	Anxiety disorder, unspecified	ICD-10-CM	Diagnosis
F42	Obsessive-compulsive disorder	ICD-10-CM	Diagnosis
F42.2	Mixed obsessional thoughts and acts	ICD-10-CM	Diagnosis
F42.3	Hoarding disorder	ICD-10-CM	Diagnosis
F42.4	Excoriation (skin-picking) disorder	ICD-10-CM	Diagnosis
F42.8	Other obsessive-compulsive disorder	ICD-10-CM	Diagnosis
F42.9	Obsessive-compulsive disorder, unspecified	ICD-10-CM	Diagnosis
F43.0	Acute stress reaction	ICD-10-CM	Diagnosis
F43.10	Post-traumatic stress disorder, unspecified	ICD-10-CM	Diagnosis
F43.11	Post-traumatic stress disorder, acute	ICD-10-CM	Diagnosis
F43.12	Post-traumatic stress disorder, chronic	ICD-10-CM	Diagnosis
F44.9	Dissociative and conversion disorder, unspecified	ICD-10-CM	Diagnosis
F45.8	Other somatoform disorders	ICD-10-CM	Diagnosis
F48.8	Other specified nonpsychotic mental disorders	ICD-10-CM	Diagnosis
F48.9	Nonpsychotic mental disorder, unspecified	ICD-10-CM	Diagnosis
F93.8	Other childhood emotional disorders	ICD-10-CM	Diagnosis
F99	Mental disorder, not otherwise specified	ICD-10-CM	Diagnosis
R45.2	Unhappiness	ICD-10-CM	Diagnosis
R45.5	Hostility	ICD-10-CM	Diagnosis
R45.6	Violent behavior	ICD-10-CM	Diagnosis
R45.7	State of emotional shock and stress, unspecified	ICD-10-CM	Diagnosis
Asthma			
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
Autism Spectrum Disorder			
F84.0	Autistic disorder	ICD-10-CM	Diagnosis
F84.3	Other childhood disintegrative disorder	ICD-10-CM	Diagnosis
F84.5	Asperger's syndrome	ICD-10-CM	Diagnosis
F84.8	Other pervasive developmental disorders	ICD-10-CM	Diagnosis
F84.9	Pervasive developmental disorder, unspecified	ICD-10-CM	Diagnosis
Depressive Disorders			
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
F32.89	Other specified depressive episodes	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
Diabetes			
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
E10.359	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E10.36	Type 1 diabetes mellitus with diabetic cataract	ICD-10-CM	Diagnosis
E10.37X1	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM	Diagnosis
E10.37X2	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM	Diagnosis
E10.37X3	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM	Diagnosis
E10.37X9	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM	Diagnosis

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
E10.39	Type 1 diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM	Diagnosis
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
E11.3213	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3219	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.329	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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
E11.3542	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM	Diagnosis
E11.3543	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM	Diagnosis
E11.3549	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM	Diagnosis
E11.3551	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM	Diagnosis
E11.3552	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM	Diagnosis
E11.3553	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM	Diagnosis
E11.3559	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM	Diagnosis
E11.359	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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
E13.36	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
Inflammatory Bowel Disease (IBD)			
K50.00	Crohn's disease of small intestine without complications	ICD-10-CM	Diagnosis
K50.011	Crohn's disease of small intestine with rectal bleeding	ICD-10-CM	Diagnosis
K50.012	Crohn's disease of small intestine with intestinal obstruction	ICD-10-CM	Diagnosis
K50.013	Crohn's disease of small intestine with fistula	ICD-10-CM	Diagnosis

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
K50.014	Crohn's disease of small intestine with abscess	ICD-10-CM	Diagnosis
K50.018	Crohn's disease of small intestine with other complication	ICD-10-CM	Diagnosis
K50.019	Crohn's disease of small intestine with unspecified complications	ICD-10-CM	Diagnosis
K50.10	Crohn's disease of large intestine without complications	ICD-10-CM	Diagnosis
K50.111	Crohn's disease of large intestine with rectal bleeding	ICD-10-CM	Diagnosis
K50.112	Crohn's disease of large intestine with intestinal obstruction	ICD-10-CM	Diagnosis
K50.113	Crohn's disease of large intestine with fistula	ICD-10-CM	Diagnosis
K50.114	Crohn's disease of large intestine with abscess	ICD-10-CM	Diagnosis
K50.118	Crohn's disease of large intestine with other complication	ICD-10-CM	Diagnosis
K50.119	Crohn's disease of large intestine with unspecified complications	ICD-10-CM	Diagnosis
K50.80	Crohn's disease of both small and large intestine without complications	ICD-10-CM	Diagnosis
K50.811	Crohn's disease of both small and large intestine with rectal bleeding	ICD-10-CM	Diagnosis
K50.812	Crohn's disease of both small and large intestine with intestinal obstruction	ICD-10-CM	Diagnosis
K50.813	Crohn's disease of both small and large intestine with fistula	ICD-10-CM	Diagnosis
K50.814	Crohn's disease of both small and large intestine with abscess	ICD-10-CM	Diagnosis
K50.818	Crohn's disease of both small and large intestine with other complication	ICD-10-CM	Diagnosis
K50.819	Crohn's disease of both small and large intestine with unspecified complications	ICD-10-CM	Diagnosis
K50.90	Crohn's disease, unspecified, without complications	ICD-10-CM	Diagnosis
K50.911	Crohn's disease, unspecified, with rectal bleeding	ICD-10-CM	Diagnosis
K50.912	Crohn's disease, unspecified, with intestinal obstruction	ICD-10-CM	Diagnosis
K50.913	Crohn's disease, unspecified, with fistula	ICD-10-CM	Diagnosis
K50.914	Crohn's disease, unspecified, with abscess	ICD-10-CM	Diagnosis
K50.918	Crohn's disease, unspecified, with other complication	ICD-10-CM	Diagnosis
K50.919	Crohn's disease, unspecified, with unspecified complications	ICD-10-CM	Diagnosis
K51.00	Ulcerative (chronic) pancolitis without complications	ICD-10-CM	Diagnosis
K51.011	Ulcerative (chronic) pancolitis with rectal bleeding	ICD-10-CM	Diagnosis
K51.012	Ulcerative (chronic) pancolitis with intestinal obstruction	ICD-10-CM	Diagnosis
K51.013	Ulcerative (chronic) pancolitis with fistula	ICD-10-CM	Diagnosis
K51.014	Ulcerative (chronic) pancolitis with abscess	ICD-10-CM	Diagnosis
K51.018	Ulcerative (chronic) pancolitis with other complication	ICD-10-CM	Diagnosis
K51.019	Ulcerative (chronic) pancolitis with unspecified complications	ICD-10-CM	Diagnosis
K51.20	Ulcerative (chronic) proctitis without complications	ICD-10-CM	Diagnosis
K51.211	Ulcerative (chronic) proctitis with rectal bleeding	ICD-10-CM	Diagnosis
K51.212	Ulcerative (chronic) proctitis with intestinal obstruction	ICD-10-CM	Diagnosis
K51.213	Ulcerative (chronic) proctitis with fistula	ICD-10-CM	Diagnosis
K51.214	Ulcerative (chronic) proctitis with abscess	ICD-10-CM	Diagnosis
K51.218	Ulcerative (chronic) proctitis with other complication	ICD-10-CM	Diagnosis
K51.219	Ulcerative (chronic) proctitis with unspecified complications	ICD-10-CM	Diagnosis
K51.30	Ulcerative (chronic) rectosigmoiditis without complications	ICD-10-CM	Diagnosis
K51.311	Ulcerative (chronic) rectosigmoiditis with rectal bleeding	ICD-10-CM	Diagnosis
K51.312	Ulcerative (chronic) rectosigmoiditis with intestinal obstruction	ICD-10-CM	Diagnosis
K51.313	Ulcerative (chronic) rectosigmoiditis with fistula	ICD-10-CM	Diagnosis
K51.314	Ulcerative (chronic) rectosigmoiditis with abscess	ICD-10-CM	Diagnosis

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
K51.318	Ulcerative (chronic) rectosigmoiditis with other complication	ICD-10-CM	Diagnosis
K51.319	Ulcerative (chronic) rectosigmoiditis with unspecified complications	ICD-10-CM	Diagnosis
K51.40	Inflammatory polyps of colon without complications	ICD-10-CM	Diagnosis
K51.411	Inflammatory polyps of colon with rectal bleeding	ICD-10-CM	Diagnosis
K51.412	Inflammatory polyps of colon with intestinal obstruction	ICD-10-CM	Diagnosis
K51.413	Inflammatory polyps of colon with fistula	ICD-10-CM	Diagnosis
K51.414	Inflammatory polyps of colon with abscess	ICD-10-CM	Diagnosis
K51.418	Inflammatory polyps of colon with other complication	ICD-10-CM	Diagnosis
K51.419	Inflammatory polyps of colon with unspecified complications	ICD-10-CM	Diagnosis
K51.50	Left sided colitis without complications	ICD-10-CM	Diagnosis
K51.511	Left sided colitis with rectal bleeding	ICD-10-CM	Diagnosis
K51.512	Left sided colitis with intestinal obstruction	ICD-10-CM	Diagnosis
K51.513	Left sided colitis with fistula	ICD-10-CM	Diagnosis
K51.514	Left sided colitis with abscess	ICD-10-CM	Diagnosis
K51.518	Left sided colitis with other complication	ICD-10-CM	Diagnosis
K51.519	Left sided colitis with unspecified complications	ICD-10-CM	Diagnosis
K51.80	Other ulcerative colitis without complications	ICD-10-CM	Diagnosis
K51.811	Other ulcerative colitis with rectal bleeding	ICD-10-CM	Diagnosis
K51.812	Other ulcerative colitis with intestinal obstruction	ICD-10-CM	Diagnosis
K51.813	Other ulcerative colitis with fistula	ICD-10-CM	Diagnosis
K51.814	Other ulcerative colitis with abscess	ICD-10-CM	Diagnosis
K51.818	Other ulcerative colitis with other complication	ICD-10-CM	Diagnosis
K51.819	Other ulcerative colitis with unspecified complications	ICD-10-CM	Diagnosis
K51.90	Ulcerative colitis, unspecified, without complications	ICD-10-CM	Diagnosis
K51.911	Ulcerative colitis, unspecified with rectal bleeding	ICD-10-CM	Diagnosis
K51.912	Ulcerative colitis, unspecified with intestinal obstruction	ICD-10-CM	Diagnosis
K51.913	Ulcerative colitis, unspecified with fistula	ICD-10-CM	Diagnosis
K51.914	Ulcerative colitis, unspecified with abscess	ICD-10-CM	Diagnosis
K51.918	Ulcerative colitis, unspecified with other complication	ICD-10-CM	Diagnosis
K51.919	Ulcerative colitis, unspecified with unspecified complications	ICD-10-CM	Diagnosis
K59.31	Toxic megacolon	ICD-10-CM	Diagnosis
K50	Crohn's disease [regional enteritis]	ICD-10-CM	Diagnosis
K50.0	Crohn's disease of small intestine	ICD-10-CM	Diagnosis
K50.01	Crohn's disease of small intestine with complications	ICD-10-CM	Diagnosis
K50.1	Crohn's disease of large intestine	ICD-10-CM	Diagnosis
K50.11	Crohn's disease of large intestine with complications	ICD-10-CM	Diagnosis
K50.8	Crohn's disease of both small and large intestine	ICD-10-CM	Diagnosis
K50.81	Crohn's disease of both small and large intestine with complications	ICD-10-CM	Diagnosis
K50.9	Crohn's disease, unspecified	ICD-10-CM	Diagnosis
K50.91	Crohn's disease, unspecified, with complications	ICD-10-CM	Diagnosis
K51	Ulcerative colitis	ICD-10-CM	Diagnosis
K51.0	Ulcerative (chronic) pancolitis	ICD-10-CM	Diagnosis
K51.01	Ulcerative (chronic) pancolitis with complications	ICD-10-CM	Diagnosis
K51.2	Ulcerative (chronic) proctitis	ICD-10-CM	Diagnosis

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
K51.21	Ulcerative (chronic) proctitis with complications	ICD-10-CM	Diagnosis
K51.3	Ulcerative (chronic) rectosigmoiditis	ICD-10-CM	Diagnosis
K51.31	Ulcerative (chronic) rectosigmoiditis with complications	ICD-10-CM	Diagnosis
K51.4	Inflammatory polyps of colon	ICD-10-CM	Diagnosis
K51.41	Inflammatory polyps of colon with complications	ICD-10-CM	Diagnosis
K51.5	Left sided colitis	ICD-10-CM	Diagnosis
K51.51	Left sided colitis with complications	ICD-10-CM	Diagnosis
K51.8	Other ulcerative colitis	ICD-10-CM	Diagnosis
K51.81	Other ulcerative colitis with complications	ICD-10-CM	Diagnosis
K51.9	Ulcerative colitis, unspecified	ICD-10-CM	Diagnosis
K51.91	Ulcerative colitis, unspecified, with complications	ICD-10-CM	Diagnosis
Intellectual Disabilities and Related Conditions			
E78.71	Barth syndrome	ICD-10-CM	Diagnosis
E78.72	Smith-Lemli-Opitz syndrome	ICD-10-CM	Diagnosis
F70	Mild intellectual disabilities	ICD-10-CM	Diagnosis
F71	Moderate intellectual disabilities	ICD-10-CM	Diagnosis
F72	Severe intellectual disabilities	ICD-10-CM	Diagnosis
F73	Profound intellectual disabilities	ICD-10-CM	Diagnosis
F78	Other intellectual disabilities	ICD-10-CM	Diagnosis
F79	Unspecified intellectual disabilities	ICD-10-CM	Diagnosis
P04.3	Newborn affected by maternal use of alcohol	ICD-10-CM	Diagnosis
Q86.0	Fetal alcohol syndrome (dysmorphic)	ICD-10-CM	Diagnosis
Q87.1	Congenital malformation syndromes predominantly associated with short stature	ICD-10-CM	Diagnosis
Q87.11	Prader-Willi syndrome	ICD-10-CM	Diagnosis
Q87.19	Other congenital malformation syndromes predominantly associated with short stature	ICD-10-CM	Diagnosis
Q87.2	Congenital malformation syndromes predominantly involving limbs	ICD-10-CM	Diagnosis
Q87.3	Congenital malformation syndromes involving early overgrowth	ICD-10-CM	Diagnosis
Q87.5	Other congenital malformation syndromes with other skeletal changes	ICD-10-CM	Diagnosis
Q87.81	Alport syndrome	ICD-10-CM	Diagnosis
Q87.89	Other specified congenital malformation syndromes, not elsewhere classified	ICD-10-CM	Diagnosis
Q89.7	Multiple congenital malformations, not elsewhere classified	ICD-10-CM	Diagnosis
Q89.8	Other specified congenital malformations	ICD-10-CM	Diagnosis
Q90.0	Trisomy 21, nonmosaicism (meiotic nondisjunction)	ICD-10-CM	Diagnosis
Q90.1	Trisomy 21, mosaicism (mitotic nondisjunction)	ICD-10-CM	Diagnosis
Q90.2	Trisomy 21, translocation	ICD-10-CM	Diagnosis
Q90.9	Down syndrome, unspecified	ICD-10-CM	Diagnosis
Q91.0	Trisomy 18, nonmosaicism (meiotic nondisjunction)	ICD-10-CM	Diagnosis
Q91.1	Trisomy 18, mosaicism (mitotic nondisjunction)	ICD-10-CM	Diagnosis
Q91.2	Trisomy 18, translocation	ICD-10-CM	Diagnosis
Q91.3	Trisomy 18, unspecified	ICD-10-CM	Diagnosis
Q91.4	Trisomy 13, nonmosaicism (meiotic nondisjunction)	ICD-10-CM	Diagnosis
Q91.5	Trisomy 13, mosaicism (mitotic nondisjunction)	ICD-10-CM	Diagnosis

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
Q91.6	Trisomy 13, translocation	ICD-10-CM	Diagnosis
Q91.7	Trisomy 13, unspecified	ICD-10-CM	Diagnosis
Q92.0	Whole chromosome trisomy, nonmosaicism (meiotic nondisjunction)	ICD-10-CM	Diagnosis
Q92.1	Whole chromosome trisomy, mosaicism (mitotic nondisjunction)	ICD-10-CM	Diagnosis
Q92.2	Partial trisomy	ICD-10-CM	Diagnosis
Q92.5	Duplications with other complex rearrangements	ICD-10-CM	Diagnosis
Q92.61	Marker chromosomes in normal individual	ICD-10-CM	Diagnosis
Q92.62	Marker chromosomes in abnormal individual	ICD-10-CM	Diagnosis
Q92.7	Triploidy and polyploidy	ICD-10-CM	Diagnosis
Q92.8	Other specified trisomies and partial trisomies of autosomes	ICD-10-CM	Diagnosis
Q92.9	Trisomy and partial trisomy of autosomes, unspecified	ICD-10-CM	Diagnosis
Q93.0	Whole chromosome monosomy, nonmosaicism (meiotic nondisjunction)	ICD-10-CM	Diagnosis
Q93.1	Whole chromosome monosomy, mosaicism (mitotic nondisjunction)	ICD-10-CM	Diagnosis
Q93.2	Chromosome replaced with ring, dicentric or isochromosome	ICD-10-CM	Diagnosis
Q93.3	Deletion of short arm of chromosome 4	ICD-10-CM	Diagnosis
Q93.4	Deletion of short arm of chromosome 5	ICD-10-CM	Diagnosis
Q93.5	Other deletions of part of a chromosome	ICD-10-CM	Diagnosis
Q93.51	Angelman syndrome	ICD-10-CM	Diagnosis
Q93.7	Deletions with other complex rearrangements	ICD-10-CM	Diagnosis
Q93.81	Velo-cardio-facial syndrome	ICD-10-CM	Diagnosis
Q93.88	Other microdeletions	ICD-10-CM	Diagnosis
Q93.89	Other deletions from the autosomes	ICD-10-CM	Diagnosis
Q93.9	Deletion from autosomes, unspecified	ICD-10-CM	Diagnosis
Q95.2	Balanced autosomal rearrangement in abnormal individual	ICD-10-CM	Diagnosis
Q95.3	Balanced sex/autosomal rearrangement in abnormal individual	ICD-10-CM	Diagnosis
Q99.2	Fragile X chromosome	ICD-10-CM	Diagnosis
Juvenile Arthritis			
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
M08.059	Unspecified juvenile rheumatoid arthritis, unspecified hip	ICD-10-CM	Diagnosis
M08.061	Unspecified juvenile rheumatoid arthritis, right knee	ICD-10-CM	Diagnosis

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
M08.1	Juvenile ankylosing spondylitis	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
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
M08.80	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	Diagnosis
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

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
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
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
Learning Disabilities			
F80.0	Phonological disorder	ICD-10-CM	Diagnosis
F80.1	Expressive language disorder	ICD-10-CM	Diagnosis
F80.2	Mixed receptive-expressive language disorder	ICD-10-CM	Diagnosis
F80.4	Speech and language development delay due to hearing loss	ICD-10-CM	Diagnosis
F80.81	Childhood onset fluency disorder	ICD-10-CM	Diagnosis
F80.82	Social pragmatic communication disorder	ICD-10-CM	Diagnosis
F80.89	Other developmental disorders of speech and language	ICD-10-CM	Diagnosis
F80.9	Developmental disorder of speech and language, unspecified	ICD-10-CM	Diagnosis

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
F81.0	Specific reading disorder	ICD-10-CM	Diagnosis
F81.2	Mathematics disorder	ICD-10-CM	Diagnosis
F81.81	Disorder of written expression	ICD-10-CM	Diagnosis
F81.89	Other developmental disorders of scholastic skills	ICD-10-CM	Diagnosis
F81.9	Developmental disorder of scholastic skills, unspecified	ICD-10-CM	Diagnosis
F82	Specific developmental disorder of motor function	ICD-10-CM	Diagnosis
H93.25	Central auditory processing disorder	ICD-10-CM	Diagnosis
R48.0	Dyslexia and alexia	ICD-10-CM	Diagnosis
Obesity			
E66.01	Morbid (severe) obesity due to excess calories	ICD-10-CM	Diagnosis
E66.09	Other obesity due to excess calories	ICD-10-CM	Diagnosis
E66.1	Drug-induced obesity	ICD-10-CM	Diagnosis
E66.2	Morbid (severe) obesity with alveolar hypoventilation	ICD-10-CM	Diagnosis
E66.8	Other obesity	ICD-10-CM	Diagnosis
E66.9	Obesity, unspecified	ICD-10-CM	Diagnosis
Z68.30	Body mass index [BMI]30.0-30.9, adult	ICD-10-CM	Diagnosis
Z68.31	Body mass index [BMI] 31.0-31.9, adult	ICD-10-CM	Diagnosis
Z68.32	Body mass index [BMI] 32.0-32.9, adult	ICD-10-CM	Diagnosis
Z68.33	Body mass index [BMI] 33.0-33.9, adult	ICD-10-CM	Diagnosis
Z68.34	Body mass index [BMI] 34.0-34.9, adult	ICD-10-CM	Diagnosis
Z68.35	Body mass index [BMI] 35.0-35.9, adult	ICD-10-CM	Diagnosis
Z68.36	Body mass index [BMI] 36.0-36.9, adult	ICD-10-CM	Diagnosis
Z68.37	Body mass index [BMI] 37.0-37.9, adult	ICD-10-CM	Diagnosis
Z68.38	Body mass index [BMI] 38.0-38.9, adult	ICD-10-CM	Diagnosis
Z68.39	Body mass index [BMI] 39.0-39.9, adult	ICD-10-CM	Diagnosis
Z68.41	Body mass index [BMI]40.0-44.9, adult	ICD-10-CM	Diagnosis
Z68.42	Body mass index [BMI] 45.0-49.9, adult	ICD-10-CM	Diagnosis
Z68.43	Body mass index [BMI] 50.0-59.9, adult	ICD-10-CM	Diagnosis
Z68.44	Body mass index [BMI] 60.0-69.9, adult	ICD-10-CM	Diagnosis
Z68.45	Body mass index [BMI] 70 or greater, adult	ICD-10-CM	Diagnosis
Other Developmental Delays			
F81.9	Developmental disorder of scholastic skills, unspecified	ICD-10-CM	Diagnosis
F82	Specific developmental disorder of motor function	ICD-10-CM	Diagnosis
F88	Other disorders of psychological development	ICD-10-CM	Diagnosis
F89	Unspecified disorder of psychological development	ICD-10-CM	Diagnosis
Small for Gestational Age (SGA)			
P05.1	Newborn small for gestational age	ICD-10-CM	Diagnosis
P05.10	Newborn small for gestational age, unspecified weight	ICD-10-CM	Diagnosis
P05.11	Newborn small for gestational age, less than 500 grams	ICD-10-CM	Diagnosis
P05.12	Newborn small for gestational age, 500-749 grams	ICD-10-CM	Diagnosis
P05.13	Newborn small for gestational age, 750-999 grams	ICD-10-CM	Diagnosis
P05.14	Newborn small for gestational age, 1000-1249 grams	ICD-10-CM	Diagnosis
P05.15	Newborn small for gestational age, 1250-1499 grams	ICD-10-CM	Diagnosis
P05.16	Newborn small for gestational age, 1500-1749 grams	ICD-10-CM	Diagnosis

Appendix C. List of international Classification of Diseases, Tenth Revisions, Clinical Modification (ICD-10-CM) Diagnosis Codes to Define Baseline Characteristics in this Request

Code	Description	Code Type	Code Category
P05.17	Newborn small for gestational age, 1750-1999 grams	ICD-10-CM	Diagnosis
P05.18	Newborn small for gestational age, 2000-2499 grams	ICD-10-CM	Diagnosis
P05.19	Newborn small for gestational age, other	ICD-10-CM	Diagnosis

Appendix D. Specifications Defining Parameters for this Request

This request executed the Cohort Identification and Descriptive Analysis (CIDA) tool, version 10.1.1, to estimate drug-device combination utilization in individuals aged <25 years in the Sentinel Distributed Database (SDD).

Query period: January 1, 2018 - February 29, 2020
Coverage requirement: Medical & Drug Coverage
Pre-index enrollment requirement: 365 days
Post-index enrollment requirement: 0 days
Enrollment gap: 45 days
Age groups: 0-4, 5-7, 8-10, 11-13, 14-16, 17-19, 20-25 years
Stratifications: Overall, Age group, Sex, Calendar year
Censor output categorization: < 1 Year, 1 Year, 2 Years, 3+ Years
Freeze data: No

Exposure

Scenario	Index Exposure	Cohort definition	Incident exposure washout period	Incident with respect to:	Exclude evidence of days supply if exposure washout includes dispensings	Treatment episode gap	Exposure episode extension	Minimum exposure episode duration	Minimum days supplied	Maximum exposure episode duration	Care setting	Principal diagnosis position	Forced supply to attach to dispensings	Censor treatment episode at evidence of:	Baseline Characteristics
1	Humira	01 - First valid exposure episodes during query period	365 days	Humira	Washout lookback period should search for evidence of days supply (N)	30 days	30 days	1	1	None	Outpatient pharmacy	N/A	N/A	Death; DP end date; Query end date; Disenrollment	See Appendix E
2	Somatropin	01 - First valid exposure episodes during query period	365 days	Somatropin	Washout lookback period should search for evidence of days supply (N)	30 days	30 days	1	1	None	Outpatient pharmacy	N/A	N/A	Death; DP end date; Query end date; Disenrollment	See Appendix E
3	Short-acting insulin pens (lispro, lispro-aabc, aspart, glulisine, regular)	01 - First valid exposure episodes during query period	365 days	Short-acting insulin pens (lispro, lispro-aabc, aspart, glulisine, regular)	Washout lookback period should search for evidence of days supply (N)	30 days	30 days	1	1	None	Outpatient pharmacy	N/A	N/A	Death; DP end date; Query end date; Disenrollment	See Appendix E

Appendix D. Specifications Defining Parameters for this Request

Scenario	Index Exposure	Cohort definition	Incident exposure washout period	Incident with respect to:	Exposure						Care setting	Principal diagnosis position	Forced supply to attach to dispensings	Censor treatment episode at evidence of:	Baseline Characteristics
					Exclude evidence of days supply if exposure washout includes dispensings	Treatment episode gap	Exposure episode extension	Minimum exposure episode duration	Minimum days supplied	Maximum exposure episode duration					
4	Intermediate-acting insulin pens (NPH - neutral protamine hagedorn, NPL - lispro protamine)	01 - First valid exposure episodes during query period	365 days	Intermediate-acting insulin pens (NPH - neutral protamine hagedorn, NPL - lispro protamine)	Washout lookback period should search for evidence of days supply (N)	30 days	30 days	1	1	None	Outpatient pharmacy	N/A	N/A	Death; DP end date; Query end date; Disenrollment	See Appendix E
5	Long-acting insulin pens (glargine, detemir, degludec)	01 - First valid exposure episodes during query period	365 days	Long-acting insulin pens (glargine, detemir, degludec)	Washout lookback period should search for evidence of days supply (N)	30 days	30 days	1	1	None	Outpatient pharmacy	N/A	N/A	Death; DP end date; Query end date; Disenrollment	See Appendix E
6	Epinephrine - EpiPen and EpiPen Jr.	01 - First valid exposure episodes during query period	365 days	Epinephrine - EpiPen and EpiPen Jr.	Washout lookback period should search for evidence of days supply (N)	0 days	0 days	1	1	None	Outpatient pharmacy	N/A	N/A	Death; DP end date; Query end date; Disenrollment	See Appendix E
7	Inhaled corticosteroids (fluticasone, beclomethasone, mometasone, budesonide)	01 - First valid exposure episodes during query period	365 days	Inhaled corticosteroids (fluticasone, beclomethasone, mometasone, budesonide)	Washout lookback period should search for evidence of days supply (N)	30 days	30 days	1	1	None	Outpatient pharmacy	N/A	N/A	Death; DP end date; Query end date; Disenrollment	See Appendix E
8	Nasal corticosteroids (fluticasone, beclomethasone, mometasone, budesonide)	01 - First valid exposure episodes during query period	365 days	Nasal corticosteroids (fluticasone, beclomethasone, mometasone, budesonide)	Washout lookback period should search for evidence of days supply (N)	0 days	0 days	1	1	None	Outpatient pharmacy	N/A	N/A	Death; DP end date; Query end date; Disenrollment	See Appendix E

Appendix D. Specifications Defining Parameters for this Request

Exposure															
Scenario	Index Exposure	Cohort definition	Incident exposure washout period	Incident with respect to:	Exclude evidence of days supply if exposure washout includes dispensings	Treatment episode gap	Exposure episode extension	Minimum exposure episode duration	Minimum days supplied	Maximum exposure episode duration	Care setting	Principal diagnosis position	Forced supply to attach to dispensings	Censor treatment episode at evidence of:	Baseline Characteristics
9	Albuterol nebulizer	01 - First valid exposure episodes during query period	365 days	Albuterol nebulizer	Washout lookback period should search for evidence of days supply (N)	0 days	0 days	1	1	None	Outpatient pharmacy	N/A	N/A	Death; DP end date; Query end date; Disenrollment	See Appendix E
10	Ophthalmic antibiotic drops (polymyxin B sulfate/trimethoprim, ofloxacin, tobramycin, ciprofloxacin, moxifloxacin, gentamicin sulfate)	01 - First valid exposure episodes during query period	365 days	Ophthalmic antibiotic drops (polymyxin B sulfate/trimethoprim, ofloxacin, tobramycin, ciprofloxacin, moxifloxacin, gentamicin sulfate)	Washout lookback period should search for evidence of days supply (N)	0 days	0 days	1	1	None	Outpatient pharmacy	N/A	N/A	Death; DP end date; Query end date; Disenrollment	See Appendix E
11	Glucagon nasal spray	01 - First valid exposure episodes during query period	365 days	Glucagon nasal spray	Washout lookback period should search for evidence of days supply (N)	0 days	0 days	1	1	None	Outpatient pharmacy	N/A	N/A	Death; DP end date; Query end date; Disenrollment	See Appendix E
12	Leuprolide acetate	01 - First valid exposure episodes during query period	365 days	Leuprolide acetate	Washout lookback period should search for evidence of days supply (N)	0 days	0 days	1	1	None	Outpatient pharmacy	N/A	N/A	Death; DP end date; Query end date; Disenrollment	See Appendix E

International Classification of Diseases, Ninth and Tenth Revisions (ICD-9 and ICD-10), Healthcare Common Procedural Coding System (HCPCS), and Current Procedural Terminology (CPT) codes are provided by Optum360.

National Drug Codes (NDC) are checked against First Data Bank's "FDB MedKnowledge®."

Appendix E. Specifications Defining Parameters for Baseline Characteristics in this Request

Baseline characteristic	Care setting	Principal diagnosis position	Evaluation period start	Evaluation period end	Number of instances the baseline characteristics should be found in evaluation period
Attention Deficit Hyperactivity Disorder (ADHD), Conduct Disorders, and Hyperkinetic Syndrome	Any	Any	-365	0	1
Allergies (Serious and Ambulatory)	Any	Any	-365	0	1
Anaphylaxis	Any	Any	-365	0	1
Anxiety Disorders	Any	Any	-365	0	1
Asthma	Any	Any	-365	0	1
Autism Spectrum Disorder	Any	Any	-365	0	1
Depressive Disorders	Any	Any	-365	0	1
Diabetes	Any	Any	-365	0	1
Inflammatory Bowel Disease (IBD)	Any	Any	-365	0	1
Intellectual Disabilities and Related Conditions	Any	Any	-365	0	1
Juvenile Arthritis	Any	Any	-365	0	1
Learning Disabilities	Any	Any	-365	0	1
Obesity	Any	Any	-365	0	1

Appendix E. Specifications Defining Parameters for Baseline Characteristics in this Request

Baseline characteristic	Care setting	Principal diagnosis position	Evaluation period start	Evaluation period end	Number of instances the baseline characteristics should be found in evaluation period
Other Developmental Delays	Any	Any	-365	0	1
Small for Gestational Age (SGA)	Any	Any	-365	0	1