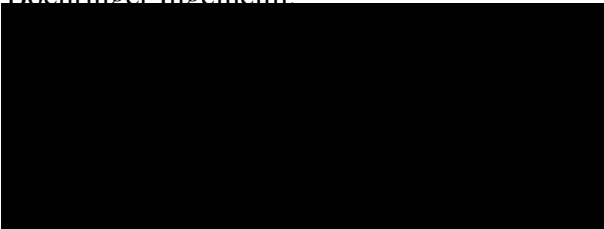


Non-Interventional Study (NIS) Protocol

Document Number:	c37262534-01
BI Study Number:	1237-0113
BI Investigational Product(s):	Stiolto Respimat (Tiotropium Bromide/Olodaterol)
Title:	Health Care Resource Utilization, Cost and Other Outcomes of Patients Diagnosed with COPD Initiating Tiotropium Bromide/Olodaterol versus Fluticasone Furoate/Umeclidinium/Vilanterol
Brief lay title:	Outcomes among COPD patients initiating TIO/OLO vs FF/UMEC/VI
Protocol version identifier:	Version 1.0
Date of last version of protocol:	04 May 2021
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Active substance:	Tiotropium Bromide/Olodaterol
Medicinal product:	Stiolto Respimat (Tiotropium Bromide/Olodaterol)
Product reference:	NA
Procedure number:	NA
Marketing authorisation holder(s):	Boehringer Ingelheim
Joint PASS:	NA
Research question and objectives:	The purpose of this study is to estimate disease-related and all-cause burden and clinical outcomes of interest following initiation of COPD maintenance therapy with TIO/OLO or FF/UMEC/VI.

Country(-ies) of study:	United States
Author:	Boehringer Ingelheim: 
Marketing authorisation holder(s):	NA
<i>In case of PASS, add:</i> MAH contact person:	NA
<i>In case of PASS, add:</i> <EU-QPPV:>	NA
<i>In case of PASS, add:</i> <Signature of EU-QPPV:>	NA
Date:	04 May 2021
Page 2 of 252	
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1. TABLE OF CONTENTS

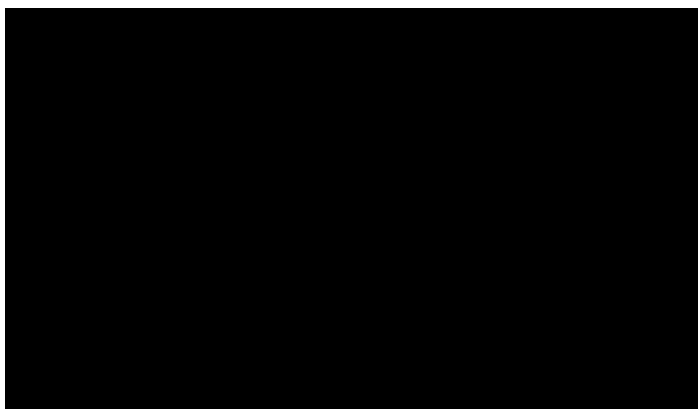
TITLE PAGE	1
1. TABLE OF CONTENTS.....	3
2. LIST OF ABBREVIATIONS.....	5
3. RESPONSIBLE PARTIES.....	6
4. ABSTRACT.....	7
5. AMENDMENTS AND UPDATES.....	11
6. MILESTONES.....	12
7. RATIONALE AND BACKGROUND.....	13
8. RESEARCH QUESTION AND OBJECTIVES	15
9. RESEARCH METHODS	16
9.1 STUDY DESIGN.....	16
9.2 SETTING	17
9.2.1 Observation period	17
9.2.2 Observation period – secondary objective	19
9.2.3 Study sites.....	19
9.2.4 Study population.....	19
9.2.4.1 Patient Identification – Eosinophil Subgroup	20
9.2.5 Study visits	21
9.2.6 Study discontinuation.....	21
9.3 VARIABLES.....	21
9.3.1 Exposures	21
9.3.2 Outcomes.....	21
9.3.2.1 Primary outcomes	21
9.3.2.2 Secondary outcomes	25
9.3.3 Covariates.....	26
9.3.3.1 Clinical Characteristics	26
9.3.3.2 Patient Characteristics.....	29
9.4 DATA SOURCES.....	30
9.4.1 [REDACTED] Database.....	30
9.4.2 Laboratory Results	31
9.5 STUDY SIZE	31

9.6	DATA MANAGEMENT	31
9.7	DATA ANALYSIS	32
9.7.1	Comparison of TIO/OLO Initiators.....	32
9.7.2	Main analysis.....	32
9.7.3	Primary Objectives	33
9.7.3.1	Descriptive Analysis	33
9.7.3.2	Kaplan Meier Analysis	34
9.7.3.3	Number Needed to Treat.....	34
9.7.3.4	Multivariable Analysis (Optional)	34
9.7.4	Secondary Objective.....	35
9.7.4.1	COPD Readmission CMS Definition	35
<div style="background-color: black; height: 20px; width: 100%;"></div>		
9.8	LIMITATIONS OF THE RESEARCH METHODS	36
9.9	OTHER ASPECTS.....	37
9.9.1	Data quality assurance.....	37
9.9.2	Study records.....	37
9.9.2.1	Source documents	37
10.	PROTECTION OF HUMAN SUBJECTS.....	38
10.1	STUDY APPROVAL, PATIENT INFORMATION, AND INFORMED CONSENT	38
10.2	STATEMENT OF CONFIDENTIALITY	38
11.	MANAGEMENT AND REPORTING OF ADVERSE EVENTS/ADVERSE REACTIONS	39
11.1	ADVERSE EVENT AND SERIOUS ADVERSE EVENT COLLECTION AND REPORTING	39
12.	PLANS FOR DISSEMINATING AND COMMUNICATING STUDY RESULTS	40
13.	REFERENCES.....	41
13.1	PUBLISHED REFERENCES.....	41
ANNEX 1. LIST OF STAND-ALONE DOCUMENTS		43
ANNEX 2. ENCEPP CHECKLIST FOR STUDY PROTOCOLS		44
ANNEX 3. ADDITIONAL INFORMATION		45
ANNEX 4. REVIEWERS AND APPROVAL SIGNATURES		252

2. LIST OF ABBREVIATIONS

CI	Confidence Intervals
CMS	Centers for Medicare and Medicaid Services
COPD	Chronic Obstructive Pulmonary Disease
CPI	Consumer Price Index
CPT	Current Procedural Terminology
ED	Emergency Department
EPO	Exclusive Provider Organization
ER	Emergency Room
FDA	Food and Drug Administration
FDC	Fixed Dose Combination
GOLD	Global Initiative for Chronic Obstructive Lung Disease
HCFA	Health Care Financing Administration
HCPCS	Healthcare Common Procedure Coding
HCRU	Health Care Resource Utilization
HIPAA	Health Insurance Portability and Accountability Act
HMO	Health Maintenance Organization
HPSA	Health Professional Shortage Areas
ICD	International Statistical Classification of Diseases and Related Health Problems
ICS	Inhaled Corticosteroid
IMPACT	InforMing the Pathway of COPD Treatment
KM	Kaplan-Meier
LABA	Long-acting β -agonist
LAMA	Long-acting Antimuscarinic
MAPD	Medicare Advantage Part D
NNT	Number Needed to Treat
OCS	Oral Corticosteroid
█████ D	█████ Database
POS	Point of Service
PPO	Preferred Provider Organization
PSM	Propensity Score Matching
SABA	Short-acting β -agonist
SAMA	Short-acting Anticholinergics
TIO/OLO	Tiotropium/Olodaterol
TT	Triple Therapy
UB	Uniform Billing
UMEC	Umeclidinium
US	United States
VI	Vilanterol

3. RESPONSIBLE PARTIES



4. ABSTRACT

Name of company: Boehringer Ingelheim			
Name of finished medicinal product: Stiolto Respimat			
Name of active ingredient: Tiotropium Bromide/Olodaterol			
Protocol date: 04 May 2021	Study number: 1237-0113	Version/Revision: 1.0	Version/Revision date: NA
Title of study:	Health Care Resource Utilization, Cost and Other Outcomes of Patients Diagnosed with COPD Initiating Tiotropium Bromide/Olodaterol versus Fluticasone Furoate/Umeclidinium/Vilanterol		
Rationale and background:	<p>The Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2020 report recommends dual therapy with long-acting muscarinic antagonists (LAMAs) plus long-acting beta₂ agonists (LABAs) for patients with chronic obstructive pulmonary disease (COPD) who have persistent symptoms and/or exacerbations on LAMA or LABA monotherapy. Consideration of escalation to triple therapy (TT; LAMA+LABA+inhaled corticosteroids [ICS]) is recommended in case of further exacerbation and after assessing the risks/benefits, including the increased risk of pneumonia with ICS treatment. A blood eosinophil count >300 cells/μL and exacerbation history together can be used to identify patients with the greatest likelihood of treatment benefit with ICS. Despite these recommendations, evidence suggests TT is over-prescribed across all COPD severities, including those at low exacerbation risk. This deviation from GOLD recommendations may have economic and clinical consequences.</p> <p>Data from multiple Phase III randomized clinical trials comparing FDC TT and LAMA/LABA are currently available. However, for the purposes of this study only one trial - InforMing the Pathway of COPD Treatment (IMPACT) - compared FDC fluticasone furoate/umeclidinium/vilanterol (FF/UMEC/VI; Trelegy Ellipta) and LAMA/LABA (specifically umeclidinium/vilanterol [UMEC/VI; Anoro Ellipta]). The study found significantly lower exacerbation rates, higher pneumonia rates [R18-1532], and reduction in all-cause mortality risk [R21-4089] for FF/UMEC/VI.</p> <p>We aim to understand the clinical and economic implications of prescribing FDC TT vs. TIO/OLO in clinical practice.</p>		
Research question and objectives:	The purpose of this study is to estimate disease-related and all-cause burden and clinical outcomes of interest following initiation of COPD maintenance therapy with TIO/OLO or FF/UMEC/VI.		

Study design:	This will be a retrospective study of commercial and MAPD beneficiaries, using administrative claims data for the period of 01 January 2013 through 31 December 2019. This study will include patients diagnosed with COPD who initiated treatment with TIO/OLO or FF/UMEC/VI between 01 June 2015 and 30 November 2019. Patients will be assigned to one of the following mutually exclusive study cohorts based on the index pharmacy claim: TIO/OLO or FF/UMEC/VI. Stratified propensity score matching (PSM), using an exact match on some variables and a propensity score match on the others, will be used to control for possible confounding of the association between the outcomes (e.g., health care resource utilization) and treatment with TIO/OLO or FF/UMEC/VI.
Population:	<p>Inclusion Criteria</p> <ul style="list-style-type: none"> • ≥ 30 consecutive days with TIO/OLO or FF/UMEC/VI initiated during the patient identification period of 01 June 2015 to 30 November 2019. The <i>index date</i> will be the date of the TIO/OLO or FF/UMEC/VI pharmacy claim that starts the ≥ 30 consecutive days with the medication. • ≥ 1 facility claim with a diagnosis of COPD in the primary position or ≥ 2 professional claims with a diagnosis code for COPD (Annex 3) in any position on separate dates of service during the study period • ≥ 40 years of age as of the year of the index date • Continuous enrollment with medical and pharmacy coverage for 12 months prior to and including the index date (baseline period) • Continuous enrollment with medical and pharmacy coverage for ≥ 30 days following the index date and without discontinuation of the index medication or switch to a non-index regimen (follow-up period); discontinuation and switch are defined in Section 9.2.1. <p>Exclusion Criteria</p> <ul style="list-style-type: none"> • ≥ 2 medical claims with a diagnosis code for asthma, cystic fibrosis, lung cancer, or interstitial lung disease (Annex 3) in any position on separate dates of service during the baseline period • Pharmacy claims for both TIO/OLO and FF/UMEC/VI on the index date • A pharmacy claim for any <i>non-index</i> COPD maintenance medication on the index date, defined as: LAMA monotherapy; LABA monotherapy; ICS monotherapy; FDC ICS/LABA, or FDC LAMA/LABA (Annex 3) • Free or fixed dose LAMA+LABA maintenance therapy defined as ≥ 7 consecutive days of overlapping days' supply with a LAMA and LABA during a 6-month pre-index period, excluding the index date (Annex 3)

	<ul style="list-style-type: none"> Flags will be created to identify patients excluded for baseline LAMA/LABA use overall and specifically for each FDC LAMA/LABA medication Free or fixed dose TT defined as ≥ 7 consecutive days of overlapping days' supply with an ICS, LABA, and LAMA during a 6-month pre-index period, excluding the index date (Annex 3) ≥ 1 medical claim with a procedure code for lung volume reduction during the study period (Annex 3) Unknown age, gender, or business line, or unknown/other geographic region <p>The exclusion criteria for previous medication use was relaxed to ≥ 7 consecutive days of overlapping days' supply rather than ≥ 1 day of overlapping days' supply based on the number of patients excluded in the attrition table. This decision was made after reviewing the attrition tables using the two criteria and before any baseline or follow-up analyses were completed.</p> <p>Study inclusion and exclusion criteria will be finalized during review of the patient attrition table, and prior to any baseline or follow-up analyses.</p>
Variables:	<p>Exposures</p> <p>Patients will be assigned to one of the following mutually exclusive study cohorts based on the index pharmacy claim: TIO/OLO or FF/UMEC/VI.</p> <p>Outcomes</p> <p>COPD and/or pneumonia-related costs and HRU</p> <p>COPD-related costs and HRU</p> <p>Pneumonia-related costs and HRU</p> <p>All-cause costs and HRU</p> <p>COPD or pneumonia-attributable costs and HRU</p> <p>COPD exacerbations</p> <p>Pneumonia diagnoses</p> <p>Pneumonia-related hospitalization</p> <p>COPD exacerbation and/or pneumonia diagnosis</p> <p>Baseline characteristics</p> <p>Clinical and demographic characteristics</p> <p>HRU</p> <p>Costs</p>
Data sources:	The [REDACTED] Database ([REDACTED] D), is fully de-identified and HIPAA compliant, and comprised of medical and pharmacy claims data (including linked enrollment information) from 1993 to present on more than 73 million lives.
Study size:	Using claims data for commercial and Medicare Advantage health plan enrollees we identified 5,717 and 17,733 patients who initiated treatment

	with TIO/OLO or FF/UMEC/VI, respectively, between 01 January 2018 and 31 July 2019. These patients had 12-months of baseline and ≥ 30 days of follow-up continuous enrollment with both medical and pharmacy coverage. This count is for informational purposes only and may not represent the actual number of patients to be utilized in the study. Application of other inclusion and exclusion criteria required for this study or other factors may reduce the sample size.
Data analysis:	Baseline categorical variables will be presented as numbers and percentages and baseline continuous variables will be presented as means, standard deviations, medians, and interquartile ranges. Follow-up variables will be presented as population annualized averages to account for the variable follow-up duration (minimum 1 month, maximum 12 months). Population annualized averages will be calculated as $([\text{sum of all utilization or cost for all individuals during the follow-up period}]/[\text{sum of all follow-up time in days for all individuals}]) \times 365$. Wald 95% confidence intervals (CI) will be provided for annualized population averages using the Taylor expansion to estimate the standard error. The numerator and denominator of the population annualized average equation and the 95% CI will be presented. Appropriate tests comparing the TIO/OLO cohort and the FF/UMEC/VI cohort (e.g., standardized differences, McNemar's tests, paired t-tests, sign tests) will be used based on the distribution of the measure.
Milestones:	Final report planned: March 2022

5. AMENDMENTS AND UPDATES

None

6. MILESTONES

Milestone	Planned Date
Final report of study results:	March 2022

7. RATIONALE AND BACKGROUND

The Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2020 report recommends dual therapy with long-acting muscarinic antagonists (LAMAs) plus long-acting beta₂ agonists (LABAs) for patients with chronic obstructive pulmonary disease (COPD) who have persistent symptoms and/or exacerbations on LAMA or LABA monotherapy. Consideration of escalation to triple therapy (TT; LAMA+LABA+inhaled corticosteroids [ICS]) is recommended in case of further exacerbation and after assessing the risks/benefits, including the increased risk of pneumonia with ICS treatment. A blood eosinophil count >300 cells/μL and exacerbation history together can be used to identify patients with the greatest likelihood of treatment benefit with ICS. Despite these recommendations, evidence suggests TT is over-prescribed across all COPD severities, including those at low exacerbation risk. This deviation from GOLD recommendations may have economic and clinical consequences.

A recently completed retrospective observational claims analysis of COPD patients enrolled in a Medicare-Advantage with Part D (MAPD) coverage plan, compared on-treatment COPD related healthcare cost and resource utilization (HCRU) among patients initiating tiotropium/olodaterol (TIO/OLO) vs. TT. Findings using propensity score matched cohorts included 41% (\$7,041) lower annualized cost per patient for TIO/OLO vs. TT (\$10,094 vs. \$17,135, $P<.001$) [[P20-06571](#)].

A *post-hoc* analysis of the same population examined outcomes for TIO/OLO and TT cohorts by stratifying on maintenance naïve status (no baseline COPD maintenance medications) and baseline exacerbation history (0 exacerbations, 1 moderate and no severe exacerbations, and ≥ 2 moderate or ≥ 1 severe exacerbations) and then matching on patient characteristics. Across these various subgroups, post-propensity score match, COPD-related annual costs for TIO/OLO versus TT were found to be significantly lower, with the greatest differences among the maintenance naïve and no exacerbation history subgroups, with 47% (\$8,018) and 53% (\$8,478) lower annual costs per patient, respectively. Cost differences in both subgroups were driven by COPD-related medical costs with 57% and 60% contribution, respectively, towards the observed total difference. Composite COPD/pneumonia related costs for TIO/OLO were similarly lower in the maintenance naïve (47% [\$9,548]) and no exacerbation history subgroups (56% [\$10,274]) compared to TT.

The same analysis also examined exacerbation and pneumonia diagnosis outcomes. After adjusting for treatment and additional covariates, the risk for a severe exacerbation was approximately 57% lower, for TIO/OLO patients with no exacerbation history compared to TT patients ($P=0.002$). The risk for pneumonia or acute bronchitis/bronchiolitis was approximately 34% lower among the TIO/OLO cohort with no exacerbation history compared to the TT cohort ($P=0.018$). However, the generalizability of these findings to contemporary TT initiators is limited since the TT cohort was predominantly composed of free-dose TT combinations. Only 1% involved fixed-dose combination (FDC) TT owing to the study end date.

Data from multiple Phase III randomized clinical trials comparing FDC TT and LAMA/LABA are currently available. However, for the purposes of this study only one trial - InforMing the PATHway of COPD Treatment (IMPACT) - compared FDC fluticasone furoate/umeclidinium/vilanterol (FF/UMEC/VI; Trelegy Ellipta) and LAMA/LABA (specifically umeclidinium/vilanterol [UMEC/VI; Anoro Ellipta]). The study found significantly lower exacerbation rates, higher pneumonia rates [[R18-1532](#)], and reduction in all-cause mortality risk [[R21-4089](#)] for FF/UMEC/VI. Additionally, a recently completed post-hoc, within trial economic analysis of this trial data found that FF/UMEC/VI resulted in lower 1-year on-treatment COPD exacerbation-related costs that were attributable to the lower exacerbation events for FDC TT rates from the trial [[R21-4088](#)]. However, both the trial and this post-hoc analysis have a few significant limitations in design and generalizability. Primarily, the trial itself involved a predominately severe COPD patient population of frequent exacerbators or GOLD C/D patients (70% were GOLD Group D and 74% had at least 2 moderate and/or 1 severe exacerbation in the year preceding the trial) and is not representative of the general COPD population. And the post-hoc analysis was further limited since it did not account for costs of maintenance treatment and pneumonia events, which may have offset the cost savings observed for FF/UMEC/VI.

Following the approval of FF/UMEC/VI FDC TT in late 2017 for the long-term maintenance treatment of COPD, this study attempts to fill the existing real-world evidence gap by comparing TIO/OLO vs. FF/UMEC/VI. We aim to understand the clinical and economic implications of prescribing FDC TT vs. TIO/OLO in clinical practice.

8. RESEARCH QUESTION AND OBJECTIVES

The purpose of this study is to estimate disease-related and all-cause burden and clinical outcomes of interest following initiation of COPD maintenance therapy with TIO/OLO or FF/UMEC/VI.

The specific primary objectives for this project are:

- To compare disease related and all-cause HCRU among patients newly treated with TIO/OLO compared with patients newly treated with FF/UMEC/VI
- To compare disease-related and all-cause medical and total (medical & pharmacy) health care costs among patients newly treated with TIO/OLO compared with patients newly treated with FF/UMEC/VI
- To compare pneumonia outcomes among patients newly treated with TIO/OLO compared with patients newly treated with FF/UMEC/VI
- To compare COPD exacerbations following initiation of TIO/OLO or FF/UMEC/VI

The specific secondary objective for this project is:

- To compare 30-day all-cause hospital readmissions following initiation of TIO/OLO or FF/UMEC/VI

The study objectives will be assessed within each of the following populations of TIO/OLO and FF/UMEC/VI initiators:

- Overall population of initiators (i.e., initiators who meet study selection criteria)
- Maintenance naïve (patients with no baseline maintenance medication [no free or fixed dose combination (FDC) LAMA, LABA, or ICS])
- No exacerbation (patients with no baseline exacerbation)
- No exacerbation or 1 exacerbation not leading to hospitalization (i.e., baseline GOLD A/B)
- ≥ 2 exacerbations not leading to hospitalization or ≥ 1 exacerbation leading to hospitalization [i.e., baseline GOLD C/D])

Additionally, HCRU, costs, COPD exacerbations, and pneumonia outcomes following initiation of TIO/OLO or FF/UMEC/VI will be assessed among subgroups of patients with ≥ 1 eosinophil lab in the following groups:

- Baseline blood eosinophil count ≤ 300 cells/ μ L
- Baseline blood eosinophil count > 300 cells/ μ L

9. RESEARCH METHODS

9.1 STUDY DESIGN

This will be a retrospective study of commercial and MAPD beneficiaries, using administrative claims data for the period of 01 January 2013 through 31 December 2019. Due to the COVID-19 pandemic, no data from 2020 will be included in this analysis. Medical claims are approximately 95% complete (fully adjudicated) approximately four to six months following the date of service. Pharmacy claims are complete (fully adjudicated) in the database approximately six weeks following the date of service. Laboratory results are typically added to the database within three to six months of administration of the test.

This study will include commercial and MAPD health plan members diagnosed with COPD who initiated treatment with TIO/OLO or FF/UMEC/VI between 01 June 2015 and 30 November 2019. The start of the patient identification period is based on the Food and Drug Administration (FDA) approval date of 21 May 2015 for use of TIO/OLO (i.e., Stiolto) for treatment of COPD, and may be moved later (e.g., 01 August 2015) based on uptake of TIO/OLO within the [REDACTED] D.

Ideally the patient identification period would only include the time period when both TIO/OLO and FF/UMEC/VI were approved for treatment of COPD. However, FF/UMEC/VI was FDA-approved for the treatment of COPD on 18 September 2017, and starting patient identification in January 2018 (to allow for uptake of FF/UMEC/VI in the [REDACTED] D), would substantially reduce the number of TIO/OLO patients identified the study. Since meaningful effect sizes for the study comparisons currently are unknown, and the primary analysis focuses on key subgroups of initiators (e.g., maintenance naïve), the patient identification period will begin at TIO/OLO approval.

TIO/OLO initiators with index dates before and after the FF/UMEC/VI approval data will be compared on a list of a priori baseline characteristics. The analytic plan, including the threshold for deciding if the TIO/OLO initiators are similar before and after FF/UMEC/VI approval is outlined in [Section 9.7.1](#)

Stratified propensity score matching (PSM), using an exact match on some variables and a propensity score match on the others, will be used to control for possible confounding of the association between the outcomes (e.g., health care resource utilization) and treatment with TIO/OLO or FF/UMEC/VI. This methodology has been widely used in observational studies for causal inference ever since it was introduced by Rosenbaum and Rubin.⁴ Depending on pre-match cohort sizes, patients will be matched in a 1:1 or 1:2 ratio of TIO/OLO to FF/UMEC/VI. Patients not matched will be excluded from the post-match analysis.

Covariates for the stratified match may include:

- Baseline exacerbation (number of severe and number of moderate exacerbations; yes/no)
- Bronchodilator naïve status (naïve to LAMA and LABA)

Potential covariates for the logistic regression model include:

- Index year, seasonality
- Patient demographics: age, gender, geographic region
- Baseline medication use: controller and rescue
- Baseline comorbidity burden (e.g., Quan-Charlson Comorbidity Score without COPD)
- Baseline healthcare utilization: all-cause, COPD-related, pneumonia-related
- Baseline healthcare costs: all-cause, COPD-related, pneumonia-related

The final list of variables to be included in the propensity score modeling will be determined following review of the pre-matching descriptive analysis of patient characteristics and other baseline measures.

The success of the matching procedure will be evaluated by comparing the characteristics included in the propensity score model between cohorts using standardized differences and other measures. Modifications may be made to the propensity score modeling procedure to increase sample size or improve balance between the cohorts. A standardized difference of $\leq 10\%$ for a measure will be considered as an acceptable threshold for balance between the treatment cohorts.

Statistical tests between cohorts will include variance adjustments for the clustering due to matching.

A separate stratified PSM will be conducted among the subgroup of TIO/OLO and FF/UMEC/VI patients with baseline eosinophil laboratory results. The methodology applied to the overall sample will be replicated for this subgroup analysis. If the numbers allow, patients in the subgroup analysis will be hard matched on baseline exacerbation history, baseline bronchodilator naïve status, and baseline eosinophil level (eosinophil >300 cells/ μL or eosinophil ≤ 300 cells/ μL) and propensity score matched on other baseline variables.

As an alternative approach, inverse probability of treatment weighting (IPTW) may be conducted in lieu of PSM.

9.2 SETTING

9.2.1 Observation period

Patients will be required to be continuously enrolled in the health plan for a minimum of 13 months. A schematic of the observation period is presented in [Figure 1](#)

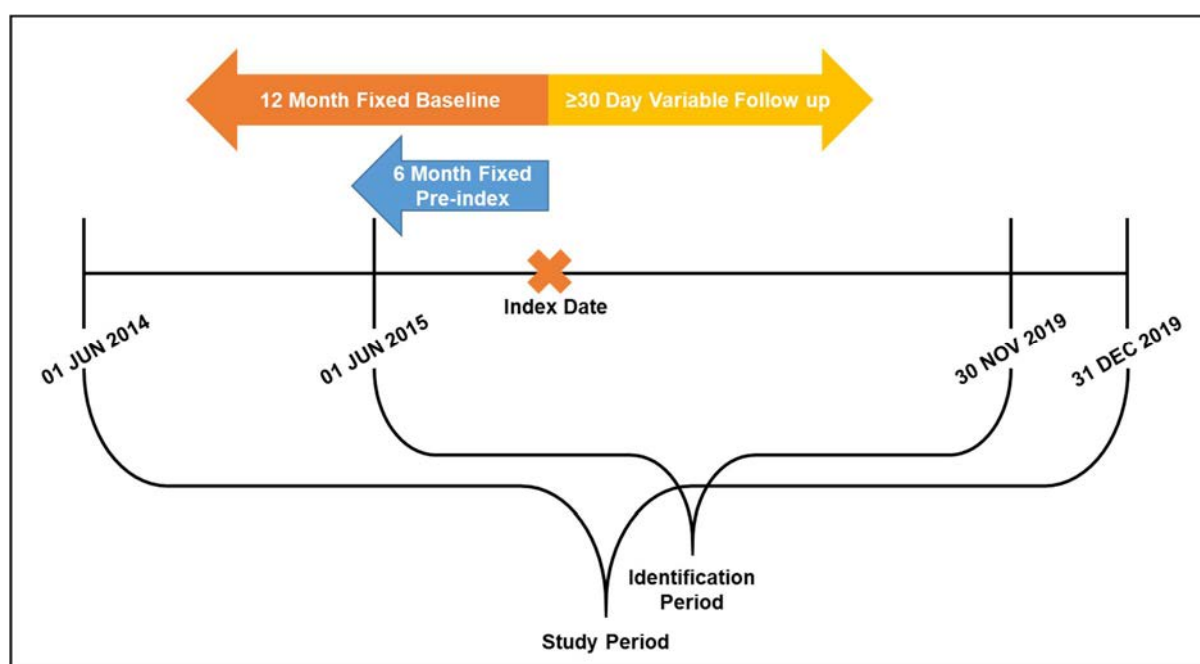
- **Baseline period:** The 12 months prior to and including the index date (index date–364 through index date) will be used to assess baseline patient and clinical characteristics. The index pharmacy claims will be excluded from the baseline period and included in the follow-up period.
- **Follow-up period:** The variable period starting on the day after the index date, with a minimum of 30-days duration (index date+1 through index date+30) up to a

maximum of 12 months duration (index date+1 through index date+365) will be used to assess HCRU, costs, exacerbation and pneumonia outcomes. Patients will be censored at the earliest of the following: discontinuation of the index medication, switch to a non-index regimen, disenrollment from the health plan, 12-months following the index date, or the end of the study period.

- Discontinuation will be defined as a gap in therapy of ≥ 60 days following the runout of days supply (discontinuation date = runout prior to the gap). Because the discontinuation status of patients whose runout of index medication occurs < 60 days before the end of their observation time is unobservable, patients with < 60 days of observation time following the runout of their last index prescription claim will be flagged as censored, and their observation period will end on the runout date.
- Switch will be defined as a pharmacy fill for ≥ 30 consecutive days of a non-index ICS-, LABA-, or LAMA-containing medication (switch date = first date of the new treatment regimen).

The distribution of follow-up time will be compared between the study cohorts. If there is a difference of more than one month of follow-up time between the cohorts, one or more of the following options may be utilized: for binary outcomes, a Kaplan-Meier analyses restricted to when both cohorts have follow-up time; for continuous outcomes, censoring the follow-up period of the cohort with longer follow-up such that the analysis is restricted to when both cohorts have follow-up time; for each matched pair (TIO/OLO and FF/UMEC/VI), use the minimum of follow-up time for the pair; include follow-up time in the propensity score match; or an alternative approach.

Figure 1 Observation Period for HCRU and Cost, COPD Exacerbation, and Pneumonia Outcomes



9.2.2 Observation period – secondary objective

A hospitalization-level analysis will be used to examine 30-day all-cause hospital readmission after a COPD-related hospitalization while on the index regimens of interest. To be included in the readmission analysis, patients must meet the study selection criteria outlined in [Section 9.2.4](#), plus have ≥ 1 eligible COPD-related hospitalization in the follow-up period with at least 30 days of continuous enrollment after discharge, unless readmission and death occur within 30 days of hospital discharge. Among patients who meet the study selection criteria, 30-day all-cause readmission following a COPD-related hospitalization while on the index regimens will be performed. Patients may contribute zero, one, or more than one observation depending on the number of COPD-related inpatient visits observed during follow-up. Each COPD-related hospitalization will be required to have at least 30 days of enrollment after the discharge date to be included in the analysis, unless readmission and death occur within 30 days of hospital discharge. Hospitalization discharge dates that occur within 30 days of the study end date will not be included because the readmission status is unobservable.

9.2.3 Study sites

The [REDACTED] Database ([REDACTED] D), is fully de-identified and HIPAA compliant, and comprised of medical and pharmacy claims data (including linked enrollment information) from 1993 to present on more than 73 million lives.

9.2.4 Study population

Patients will be assigned to one of the following mutually exclusive study cohorts based on the index pharmacy claim: TIO/OLO or FF/UMEC/VI.

Inclusion Criteria

- ≥ 30 consecutive days with TIO/OLO or FF/UMEC/VI initiated during the patient identification period of 01 June 2015 to 30 November 2019. The *index date* will be the date of the TIO/OLO or FF/UMEC/VI pharmacy claim that starts the ≥ 30 consecutive days with the medication.
- ≥ 1 facility claim with a diagnosis of COPD in the primary position or ≥ 2 professional claims with a diagnosis code for COPD ([Annex 3](#)) in any position on separate dates of service during the study period
- ≥ 40 years of age as of the year of the index date
- Continuous enrollment with medical and pharmacy coverage for 12 months prior to and including the index date (baseline period)
- Continuous enrollment with medical and pharmacy coverage for ≥ 30 days following the index date and without discontinuation of the index medication or switch to a non-index regimen (follow-up period); discontinuation and switch are defined in [Section 9.2.1](#).

Exclusion Criteria

- ≥ 2 medical claims with a diagnosis code for asthma, cystic fibrosis, lung cancer, or interstitial lung disease ([Annex 3](#)) in any position on separate dates of service during the baseline period
- Pharmacy claims for both TIO/OLO and FF/UMEC/VI on the index date
- A pharmacy claim for any *non-index* COPD maintenance medication on the index date, defined as: LAMA monotherapy; LABA monotherapy; ICS monotherapy; FDC ICS/LABA, or FDC LAMA/LABA ([Annex 3](#))
- Free or fixed dose LAMA+LABA maintenance therapy defined as ≥ 7 consecutive days of overlapping days' supply with a LAMA and LABA during a 6-month pre-index period, excluding the index date ([Annex 3](#))
 - Flags will be created to identify patients excluded for baseline LAMA/LABA use overall and specifically for each FDC LAMA/LABA medication
- Free or fixed dose TT defined as ≥ 7 consecutive days of overlapping days' supply with an ICS, LABA, and LAMA during a 6-month pre-index period, excluding the index date ([Annex 3](#))
- ≥ 1 medical claim with a procedure code for lung volume reduction during the study period ([Annex 3](#))
- Unknown age, gender, or business line, or unknown/other geographic region

The exclusion criteria for previous medication use was relaxed to ≥ 7 consecutive days of overlapping days' supply rather than ≥ 1 day of overlapping days' supply based on the number of patients excluded in the attrition table. This decision was made after reviewing the attrition tables using the two criteria and before any baseline or follow-up analyses were completed.

Study inclusion and exclusion criteria will be finalized during review of the patient attrition table, and prior to any baseline or follow-up analyses.

9.2.4.1 Patient Identification – Eosinophil Subgroup

To be included in the subgroup analysis of patients with at least one eosinophil lab result, patients will be required to meet the patient identification criteria outlined in [Section 9.2.4](#), as well as having at least one eosinophil lab result in the six months prior to the index date (index date – 179 days) through 15 days after the index date (index date + 15 days). Additionally, the number of patients with ≥ 1 eosinophil result in the three months prior the index date (index date – 89 days) through to the index date will be identified. The time period for identification of ≥ 1 eosinophil result will be determined based on the number of patients identified during these time windows.

Eosinophil test results will be categorized, according to the eosinophil test result closest to the index date during the time period of interest (i.e., with the smallest absolute difference in days between the lab date and the index date), as >300 cells/ μ L or ≤ 300 cells/ μ L. For multiple eosinophil laboratory results on the same date of service, the highest value will be retained.

9.2.5 Study visits

Not applicable

9.2.6 Study discontinuation

Not applicable

9.3 VARIABLES

9.3.1 Exposures

Patients will be assigned to one of the following mutually exclusive study cohorts based on the index pharmacy claim: TIO/OLO or FF/UMEC/VI.

9.3.2 Outcomes

9.3.2.1 Primary outcomes

The following outcomes will be measured in the baseline and follow-up periods. The baseline period will include claims occurring on the index date, except for the index medication claims, which will be included in the follow-up period.

- **All-cause health care resource utilization:** Indicator variables and counts of physician office visits, hospital outpatient visits, ED visits, “other” (non-inpatient) visits, inpatient stays, and pharmacy claims will be created. Other medical visits are a residual category that includes, but is not limited to, services rendered at independent laboratories, assisted living facilities, and by home health providers. An indicator variable will be created to identify inpatient stays with an acute stay during the inpatient admission. The length of inpatient stays will also be captured. The time to first inpatient stay, the time to first inpatient stay with an acute stay, and the time to first ED visit during follow-up will be captured.
- **COPD and/or pneumonia-related health care resource utilization:** This utilization will be calculated analogously to all-cause utilization, but restricted to medical claims with a diagnosis for COPD, pneumonia, or acute bronchitis/bronchiolitis in any position ([Annex 3](#)) and pharmacy claims for a COPD-related treatment ([Annex 3](#)), including COPD-guideline recommended antibiotics ([Annex 3](#)).
- **COPD-related health care resource utilization:** This utilization will be calculated analogously to all-cause utilization, but restricted to medical claims with a diagnosis for COPD in any position ([Annex 3](#)) and pharmacy claims for a COPD-related treatment ([Annex 3](#)), including COPD-guideline recommended antibiotics ([Annex 3](#)).

- **Pneumonia-related health care resource utilization:** This utilization will be calculated analogously to all-cause utilization, but restricted to medical claims with a diagnosis for pneumonia in any position ([Annex 3](#)).
- **COPD or pneumonia-attributable health care resource utilization:** This utilization will be calculated analogously to all-cause utilization, but restricted to medical claims with a diagnosis for COPD, pneumonia, or acute bronchitis/bronchiolitis in the primary position or a diagnosis for acute respiratory failure in the primary position and a diagnosis for COPD, pneumonia, or acute bronchitis/bronchiolitis in a non-primary position ([Annex 3](#)) and pharmacy claims for a COPD-related treatment ([Annex 3](#)), including COPD-guideline recommended antibiotics ([Annex 3](#)).
- **All-cause health care costs (insurer + patient paid amounts):** Health care costs will be computed from the payer and patient perspective together. This is the actual amount paid to the provider by the health plan plus the patient copay and/or coinsurance amounts, rather than an estimated cost. Total costs will be calculated and presented as the combined pharmacy costs and medical costs. Medical costs will be presented and will include sub-categories of physician office costs, hospital outpatient costs, emergency services costs, inpatient costs, and other costs.
 - Costs will be adjusted to 2020 dollars using the medical care component of the Consumer Price Index (CPI) to reflect inflation between the date of the claim and 2020 [[R21-4317](#)]. The final report will include additional columns with the latest available 2021 mid-year CPI adjustment applied to costs for scaling the results as needed.
 - Costs from other payers may be important, particularly for studies involving older patients dually eligible for commercial and Medicare coverage. In consultation with BIPI, this study will NOT incorporate the amounts estimated to be paid by other payers for a total paid or allowable amount [[P21-11033](#)].
- **COPD and/or pneumonia-related health care costs (insurer + patient paid amounts):** These costs will be calculated analogously to the all-cause costs, but restricted to medical claims with a diagnosis for COPD, pneumonia, or acute bronchitis/bronchiolitis in any position ([Annex 3](#)) and pharmacy claims for a COPD-related treatment ([Annex 3](#)), including COPD-guideline recommended antibiotics ([Annex 3](#)).
- **COPD-related health care costs (insurer + patient paid amounts):** These costs will be calculated analogously to the all-cause costs, but restricted to medical claims with a diagnosis for COPD in any position ([Annex 3](#)) and pharmacy claims for a COPD-related treatment ([Annex 3](#)), including COPD-guideline recommended antibiotics ([Annex 3](#)).

- **Pneumonia-related health care costs (insurer + patient paid amounts):** These costs will be calculated analogously to the all-cause costs, but restricted to medical claims with a diagnosis for pneumonia in any position ([Annex 3](#)).
- **COPD or pneumonia-attributable health care costs (insurer + patient paid amounts):** These costs will be calculated analogously to the all-cause costs, but restricted to medical claims with a diagnosis for COPD, pneumonia, or acute bronchitis/bronchiolitis in the primary position or a diagnosis for acute respiratory failure in the primary position and a diagnosis for COPD, pneumonia, or acute bronchitis/bronchiolitis in a non-primary position ([Annex 3](#)) or pharmacy claims for a COPD-related treatment ([Annex 3](#)), including COPD-guideline recommended antibiotics ([Annex 3](#)).
- **COPD exacerbations:** Exacerbations will be categorized as moderate or severe and a count of any (severe or moderate), severe, and moderate will be provided. The time to first severe exacerbation, and time to first exacerbation (severe or moderate), during follow-up will be captured. Diagnosis codes that will be used to identify exacerbation-related medical visits are included in [Annex 3](#). COPD-related treatments are listed in [Annex 3](#) and COPD-guideline recommended antibiotics are listed in [Annex 3](#). Details of the exacerbation definition are provided in [Annex 3](#).
 - A severe exacerbation will be defined as follows:
 - An inpatient admission or an ER visit with a COPD diagnosis code in the primary position; or
 - An inpatient admission or an ER visit with a diagnosis code for acute respiratory failure in the primary position and a COPD diagnosis code in any position; or
 - An inpatient admission or an ER visit with a diagnosis code for acute respiratory failure in the primary position + an inpatient admission or an ER visit within ± 7 days with a COPD diagnosis code in any position.
 - A moderate exacerbation will be defined as follows:
 - An ambulatory (office or outpatient) visit with a COPD diagnosis code in any position + a pharmacy claim for an oral corticosteroid (OCS) prescription within ± 7 days of the office/outpatient visit; or
 - An office or outpatient visit with a COPD diagnosis code in any position + a pharmacy claim for COPD-guideline recommended antibiotic prescription within ± 7 days of the office/outpatient visit; or
 - An office or outpatient visit with a COPD diagnosis code in any position + a pharmacy claim for an OCS + a pharmacy claim for COPD-guideline recommended antibiotic prescription within ± 7 days of the office/outpatient visit.

- **Baseline GOLD exacerbation history:** Indicator variables will be created to identify patients with no baseline exacerbation or 1 baseline exacerbation not leading to hospitalization (i.e. baseline GOLD A/B) and with ≥ 2 baseline exacerbations not leading to hospitalization or ≥ 1 baseline exacerbation leading to hospitalization (i.e. baseline GOLD C/D). These baseline GOLD classification variables will be used to classify the patient population for analysis by exacerbation history.
 - Baseline exacerbation not leading to hospitalization will be defined as follows:
 - An ER visit with a COPD diagnosis code in the primary position; or
 - An ER visit with a diagnosis code for acute respiratory failure in the primary position and a COPD diagnosis code in any position; or
 - An ER visit with a diagnosis code for acute respiratory failure in the primary position + an ER visit within ± 7 days with a COPD diagnosis code in any position; or
 - An ambulatory (office or outpatient) visit with a COPD diagnosis code in any position + a pharmacy claim for an oral corticosteroid (OCS) prescription within ± 7 days of the office/outpatient visit; or
 - An office or outpatient visit with a COPD diagnosis code in any position + a pharmacy claim for COPD-guideline recommended antibiotic prescription within ± 7 days of the office/outpatient visit; or
 - An office or outpatient visit with a COPD diagnosis code in any position + a pharmacy claim for an OCS + a pharmacy claim for COPD-guideline recommended antibiotic prescription within ± 7 days of the office/outpatient visit.
 - Baseline exacerbation leading to hospitalization will be defined as follows:
 - An inpatient admission with a COPD diagnosis code in the primary position; or
 - An inpatient admission with a diagnosis code for acute respiratory failure in the primary position and a COPD diagnosis code in any position; or
 - An inpatient admission with a diagnosis code for acute respiratory failure in the primary position + an inpatient admission or an ER visit within ± 7 days with a COPD diagnosis code in any position; or
 - An ER visit with a diagnosis code for acute respiratory failure in the primary position + an inpatient admission within ± 7 days with a COPD diagnosis code in any position.
- **Pneumonia diagnosis:** Binary indicators will be created to identify patients with a diagnosis of 1) pneumonia or 2) pneumonia or acute bronchitis/bronchiolitis in any position ([Annex 3](#)). The time to first pneumonia diagnosis, and time to first pneumonia or acute bronchitis/bronchiolitis diagnosis, during follow-up will also be captured.
- **Pneumonia-related hospitalization:** Binary indicators will be created to identify patients with an acute hospitalization with diagnosis of 1) pneumonia or 2) pneumonia or acute bronchitis/bronchiolitis in any position ([Annex 3](#)). The time to first

pneumonia-related acute hospitalization, and time to first pneumonia- or acute bronchitis/bronchiolitis-related acute hospitalization, during follow-up will also be captured.

- **COPD exacerbation and/or pneumonia diagnosis:** Binary indicators will be created to identify patients with each of the following composite outcomes: severe COPD exacerbation or an acute hospitalization with a diagnosis of pneumonia in any position, severe COPD exacerbation or an acute hospitalization with a diagnosis of pneumonia or acute bronchitis/bronchiolitis in any position, any COPD exacerbation or pneumonia diagnosis in any position, and any COPD exacerbation or pneumonia diagnosis or acute bronchitis/bronchiolitis diagnosis in any position. Time to event variables will be created for each composite outcome during the follow-up period.

9.3.2.2 Secondary outcomes

COPD readmission (Centers for Medicare and Medicaid Services [CMS] definition):

COPD readmissions, based on the 2017 CMS specifications as described below [[R21-4119](#)], will be captured.

- COPD-related hospitalizations will be identified during the patient's follow-up. Hospitalizations will be classified as COPD-related if they met either of the following 2 criteria:
 - ≥ 1 diagnosis of COPD ([Annex 3](#)) in the primary position any time during the acute inpatient stay; or
 - ≥ 1 diagnosis of acute respiratory failure ([Annex 3](#)) in the primary position and a diagnosis of acute exacerbation of COPD ([Annex 3](#)) in a later position on the same claim during an acute inpatient stay.
- For each qualifying COPD-related hospitalization, an indicator variable will be created to identify if there was a re-admission that started within 30 days of the discharge of the COPD-related hospitalization.
- COPD-related hospitalizations will be required to have at least 30 days of enrollment after the discharge to be included in the analysis, unless readmission and death occur within 30 days of hospital discharge. Hospitalizations that ended within 30 days of the end date will be not included because readmission status cannot be determined accurately.
- COPD-related hospitalizations that ended because the patient discharged themselves against medical advice will be excluded from the analysis, and all-cause hospitalizations that included procedures and diagnoses ([Annex 3](#)) that are always considered planned (i.e., transplant surgery, maintenance chemotherapy/immunotherapy, and rehabilitation) will not be eligible to be a readmission.

9.3.3 Covariates

9.3.3.1 Clinical Characteristics

Clinical characteristics will be measured in the baseline period. The baseline period will include claims occurring on the index date, except for the index medication claims, which will be included in the follow-up period.

- **Quan-Charlson comorbidity score:** A comorbidity score will be calculated based on the presence of diagnosis codes (in any position) on medical claims in the baseline period [[R21-4087](#); [R20-2288](#); [R14-4775](#)]. The score is calculated based on a weighted sum of 12 comorbid conditions. The score represents the cumulative likelihood of one-year mortality and serves as a proxy for comorbidity burden. The Quan-Charlson comorbidity score also will be categorized into the following groups: zero, one, two, three, four, and five or more.
 - **Charlson Comorbidity Score without COPD:** In addition to the standard Charlson comorbidity score, a modified score removing COPD diagnosis codes will be calculated.
- **Elixhauser score:** The Elixhauser score will be calculated based on the presence of diagnosis codes (any position) on medical claims during the baseline period [[R13-3591](#)]. Elixhauser comorbidities will be consolidated into a single numeric score to summarize disease burden [[R21-4090](#)]. The score is calculated based on a weighted sum of 31 comorbid conditions. The score represents the likelihood of hospital mortality, and serves as a proxy for comorbidity burden, similar to the Charlson score.
 - **Elixhauser score without COPD:** A modified score removing COPD diagnosis codes will also be calculated.
- **COPD Severity Score:** The COPD Severity score will be calculated as a weighted sum of the individual components listed in [Table 1](#) during the baseline period [[R21-4086](#)]. The COPD Severity score is a validated measure of COPD severity based on treatments.

Table 1 COPD Severity Score Components

Component (input from claims)	How Identified in Claims
Count of exacerbations	See definition for COPD Exacerbations above
Oxygen therapy – current	CPT, HCPCS, ICD-10, ICD-9 and revenue codes
Length of stay for COPD-attributable inpatient visits	ICD-9 or ICD-10 code for COPD in the primary position or a code for acute respiratory failure in the primary position and a code for COPD in a non-primary position
Emphysema	ICD-9 or ICD-10 code in any position on a medical claim
Spirometry testing	See Spirometry Testing, below
Pulmonologist visits	Physician specialty
Use of SAMAs (including SABA/SAMA combination)	See Medication Utilization, above
Use of oral corticosteroids	See Medication Utilization, above
Use of inhaled corticosteroids	See Medication Utilization, above
Use of SABAs (including SABA/SAMA combination)	See Medication Utilization, above
Use of long-acting bronchodilators	See Medication Utilization, above
Mean age	Age as of baseline year

- Additional comorbid conditions:** Additional comorbid conditions, including allergic rhinitis, anxiety (narrow and broad), arrhythmia, atrial fibrillation (narrow and broad), acute sinusitis, candidiasis, cataracts, chronic sinusitis, chronic rhinitis, congestive heart failure, depression, diabetes (type I and II), dyspnea, hypertension, ischemic heart disease, metabolic syndrome (including individual components), myocardial infarction, osteoporosis, pulmonary fibrosis, peripheral vascular disease, peptic ulcer/GERD, renal disease, sleep apnea, stroke, pneumonia, and pneumonia or acute bronchitis/bronchiolitis will also be identified based on the presence of a diagnosis code in any position on a medical claim ([Annex 3](#)).
- Oxygen therapy:** Evidence of oxygen use will be captured in the baseline period based on diagnosis (ICD-9, ICD-10), procedure (HCPCS, CPT, ICD-9) and revenue codes for oxygen therapy ([Annex 3](#)).

- **Baseline respiratory medication utilization:** Indicator variables for respiratory medication classes and selected individual respiratory medications will be based on both pharmacy and medical claims (nebulizer treatments may appear in medical claims). Medication classes will include: LAMAs (alone; overall and separately), LABAs (alone), ICS (alone), ICS/LABA single inhaler combination medications, SAMAs (alone), SABAs (alone), SAMA/SABA single inhaler combination medications, any rescue (SAMA alone, SABA alone, or SAMA/SABA single inhaler combination medications), methylxanthines, phosphodiesterase-4 (PDE-4) inhibitors and oral corticosteroids (OCS). Baseline medication use variables will exclude claims which make up the index therapy assignment. Number of fills by class will also be captured. Indicator variables will be created to identify patients who are naïve to long-acting bronchodilators (free or fixed dose LAMAs or LABAs) and to long-acting bronchodilators plus inhaled corticosteroids (free or fixed dose LAMAs, LABAs, and ICSs) at index.
- **Index provider specialty:** The specialty of the provider on the index prescription fill will be captured. If no provider specialty is recorded on the index prescription fill, the provider specialty from the most recent COPD-related visit on or prior to the index date will be captured. An indicator variable will identify if the provider specialty was determined from the index pharmacy claim. Provider specialty will be classified as one of the following: pulmonology, primary care [family practice, general practice, and geriatrics], internal medicine, allied health professional, cardiology, other specialty, and unknown specialty. If claims for more than one provider occur on the date used to classify the provider's specialty, the hierarchy of categories listed above will be used to pick a single provider specialty.
- **Pulmonology visit within 30 days of index date:** An indicator variable will be created to identify patients with a pulmonologist visit within 30 days prior to and excluding the index date.
- **Spirometry testing:** Indicator and count variables will be created to identify patients with lung function testing ([Annex 3](#)). A count of spirometry tests during the baseline period will be created.
- **Early adopter of index medication:** An indicator variable will be created to identify patients with an index date within 90 days of FDA approval of the medication. The FDA approval date is specific to the index therapy: Stiolto Respimat (TIO/OLO) was FDA approved on 21 May 2015 and Trelegy Ellipta (FF/UMEC/VI) was FDA approved on 18 September 2017.
- **Evidence of tobacco use:** An indicator variable will be created to identify patients with evidence of current or prior tobacco use based on diagnosis codes ([Annex 3](#)) or pharmacy fills for smoking cessation treatments (bupropion, varenicline tartrate, or nicotine inhalation system).

9.3.3.2 Patient Characteristics

Patient characteristics will be measured as of the index date, or the first available claim after the index date with valid values for each of the characteristics. Approval through the [REDACTED] data disclosure analysis process is required for inclusion of socioeconomic data (i.e., race/ethnicity) and resource scarce areas. Approval is not guaranteed. It may be necessary to modify or remove some variables or analytic table templates in order to preclude identification of individual patients and protect proprietary health plan information.

- **Index year:** The year of the patient's index date will be identified.
- **Seasonality:** The month of the patient's index date will be identified and classified as fall (September, October, November), winter (December, January, February), spring (March, April, May), or summer (June, July, August).
- **Age:** Age will be defined as of the index year
- **Age groups:** Patients will be assigned to one of the following age groups: 40-49, 50-59, 60-64, 65-69, 70-74 and 75+
- **Gender:** Gender will be captured from enrollment data; patients with undefined gender will be removed from the study sample
- **Race/ethnicity:** Race/ethnicity information will be captured from the linked consumer sociodemographic data and categorized as follows: White, African-American/Black, Asian, Hispanic, or unknown (unknown includes missing). This variable depends on the availability of data within the sociodemographic data and will be missing for some patients.
- **Insurance type:** Whether the patient was covered under a commercial or Medicare Advantage health plan will be captured
- **Plan type:** Plan type will be categorized as Exclusive Provider Organization (EPO), Health Maintenance Organization (HMO), Point of Service (POS), Preferred Provider Organization (PPO), Individual and Other
- **Geographic region:** The US region in which the study patient is enrolled in a health plan will be determined and reported and states will be categorized into five geographic regions in accordance with the US Census Bureau's region designations; the five health plan regions are presented in the table below. Patients categorized into "other" will be excluded from the study.
- **Resource scarce area:** Health professional shortage areas (HPSAs) will be identified based on the Health Resources and Services Administration designation of geographic regions with a shortage of providers to meet the needs of the population [[R21-4295](#)].

Table 2 Health Plan Regions

Region	State
Northeast	CT, MA, ME, NH, RI, VT, NJ, NY, PA
Midwest	IL, IN, MI, OH, WI, IA, KS, MN, MO, ND, NE, SD
South	DC, DE, FL, GA, MD, NC, SC, VA, WV, AL, KY, MS, TN, AR, LA, OK, TX
West	AZ, CO, ID, MT, NM, NV, UT, WY, AK, CA, HI, OR, WA

9.4 DATA SOURCES

9.4.1 [REDACTED] Database

The [REDACTED] Database ([REDACTED] D), is fully de-identified and HIPAA compliant, and comprised of medical and pharmacy claims data (including linked enrollment information) from 1993 to present on more than 73 million lives.

In 2018, the [REDACTED] D included claims for approximately 19% of the US commercially enrolled population and approximately 21% of the Medicare Advantage population (commonly referred to as the Medicare Advantage program [Medicare Part C]) through an offering associated with [REDACTED]. Medicare Advantage enrollees choose to receive all of their health care services through a provider organization in lieu of Medicare Part A/B coverage (commonly referred to as Medicare Fee for Service). These plans are referred to as MAPD when combined with Medicare Part D coverage.

Underlying information is geographically diverse across the United States and enrollees are fairly representative of the US population. Because the [REDACTED] D is a closed system, patients retain a single identifier within the system and can be tracked as they change plans, or as they disenroll and reenroll over time.

Claims for pharmacy services are typically submitted electronically by the pharmacy at the time prescriptions are filled. The claims history is a profile of all outpatient prescription pharmacy services provided and covered by the health plan. Pharmacy claims data include drug name, dosage form, drug strength, fill date, days of supply, financial information, and de-identified patient and prescriber codes, allowing for longitudinal tracking of medication refill patterns and changes in medications. Pharmacy claims are typically added to the research database within six weeks of dispensing.

Medical claims or encounter data are collected from all available health care sites (inpatient hospital, outpatient hospital, emergency department, physician's office, surgery center, etc.) for virtually all types of provided services, including specialty, preventive and office-based treatments. Medical claims and coding conform to insurance industry standards. Claims for ambulatory services submitted by individual providers, such as physicians, use the Health

Care Financing Administration (HCFA)-1500 or Centers for Medicare and Medicaid Services (CMS)-1500 formats. Claims for facility services submitted by institutions, e.g., hospitals, use the Uniform Billing (UB)-82, UB-92, UB-04, or CMS-1450 formats. Medical claims include: multiple diagnosis codes recorded with the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis codes; procedures recorded with ICD-9-CM and ICD-10-CM procedure codes, Current Procedural Terminology (CPT), or Health care Common Procedure Coding System (HCPCS) codes; site of service codes; provider specialty codes; revenue codes (for facilities); paid amounts; and other information. Typically, facility claims do not include medications dispensed in hospital. Approximately six months following the delivery of services is required for complete medical data.

9.4.2 Laboratory Results

Outpatient laboratory test results are available for subpopulations of the research database. Standard LOINC coding is used to define specific tests and results. Test results data can be linked to the other health care utilization and pharmacy claims data in the research database. Results included in the database are typically from blood-based tests (e.g., LDL, HbA1c) that are sent for processing to one of several laboratory facilities in the country that provide services to enrollees in the health plan. For common blood-based tests such as lipids and HbA1c, results are typically available for approximately 40-50% of tests performed. However, this proportion varies by test and by disease state. In addition, study requirements such as the timing of the laboratory result or the requirement of multiple results to assess change over time will be available for smaller subsets of the study population. Results dating back to 2000 are available for research.

Laboratory results are typically added to the research database within three to six months of administration of the test.

9.5 STUDY SIZE

Using claims data for commercial and Medicare Advantage health plan enrollees we identified 5,717 and 17,733 patients who initiated treatment with TIO/OLO or FF/UMEC/VI, respectively, between 01 January 2018 and 31 July 2019. These patients had 12-months of baseline and ≥ 30 days of follow-up continuous enrollment with both medical and pharmacy coverage. This count is for informational purposes only and may not represent the actual number of patients to be utilized in the study. Application of other inclusion and exclusion criteria required for this study or other factors may reduce the sample size.

9.6 DATA MANAGEMENT

Not applicable

9.7 DATA ANALYSIS

All statistical analyses will be performed by [REDACTED] using [REDACTED], [REDACTED] or later. The conventional significance level $\alpha=0.05$ will be used to determine statistical significance.

9.7.1 Comparison of TIO/OLO Initiators

Given the difference in FDA approval dates (May 2015 for TIO/OLO and September 2017 for FF/UMEC/VI) and concerns about retaining adequate sample size for the analyses the following stepwise approach will be implemented to finalize the patient identification period

- 1) In the overall population, TIO/OLO initiators from May 2015 – December 2017 will be compared to TIO/OLO initiators from January 2018 – November 2019 on a prespecified list of characteristics including:
 - Demographics (age in years, gender, geographic region, insurance type [commercial vs. MAPD], prescriber specialty, pulmonologist visit within 30 days prior to and excluding the index date)
 - Clinical comorbidities (diabetes, hypertension, ischemic heart disease, Elixhauser score without COPD)
 - COPD severity proxies (dyspnea, oxygen therapy, maintenance naïve, no baseline exacerbation or 1 baseline exacerbation not leading to hospitalization, ≥ 2 baseline exacerbations not leading to hospitalization or ≥ 1 baseline exacerbation leading to hospitalization)
- 2) If TIO/OLO initiators from before and after FF/UMEC/VI approval are well balanced (i.e., standardized difference $\leq 10\%$) across all characteristics outlined in step one, the start of the patient identification period will remain 01 June 2015.
- 3) If TIO/OLO initiators from before and after FF/UMEC/VI approval have standardized differences $>10\%$ on one to three characteristics listed in step one, those characteristics will be included as covariates in post-match multivariable regression analysis.
- 4) If TIO/OLO initiators from before and after FF/UMEC/VI approval have standardized differences $>10\%$ on four or more characteristics listed in step one, the start of the patient identification period will be moved from 01 June 2015 to 01 January 2018.

9.7.2 Main analysis

Not applicable

9.7.3 Primary Objectives

9.7.3.1 Descriptive Analysis

Baseline categorical variables will be presented as numbers and percentages and baseline continuous variables will be presented as means, standard deviations, medians, and interquartile ranges. Follow-up variables will be presented as population annualized averages to account for the variable follow-up duration (minimum 1 month, maximum 12 months). Population annualized averages will be calculated as $([\text{sum of all utilization or cost for all individuals during the follow-up period}] / [\text{sum of all follow-up time in days for all individuals}]) * 365$. Wald 95% confidence intervals (CI) will be provided for annualized population averages using the Taylor expansion to estimate the standard error. The numerator and denominator of the population annualized average equation and the 95% CI will be presented. Per patient per month calculations will not be performed. Appropriate statistical tests comparing treatment cohorts (e.g., t-test, chi-square test) will be used based on the distribution of the measure ([Table 3](#))

Bivariate comparisons of patient demographics and baseline characteristics will be provided for the TIO/OLO and FF/UMEC/VI cohorts prior to PSM. Following the matching procedure, bivariate comparisons of demographics and baseline characteristics will be provided to assess the success of the matching procedure, and comparisons of outcomes will be provided to assess the impact of initiating treatment with TIO/OLO vs FF/UMEC/VI. Appropriate tests comparing the TIO/OLO cohort and the FF/UMEC/VI cohort (e.g., standardized differences, McNemar's tests, paired t-tests, sign tests) ([Table 3](#)) will be used based on the distribution of the measure. Patients not matched will be excluded from the post-match analysis. In addition to presenting the results stratified by treatment cohort (TIO/OLO vs. FF/UMEC/VI), the results will be presented stratified by treatment cohort among the following populations: maintenance naïve (patients with no baseline maintenance medication [no free or fixed dose LAMA, LABA, or ICS]); no exacerbation (patients with no baseline exacerbation); no exacerbation or one exacerbation not leading to hospitalization (i.e., baseline GOLD A/B); at least two exacerbations not leading to hospitalization or at least one exacerbation leading to hospitalization [i.e., baseline GOLD C/D]). Results also will be presented for the subset of the population with at least one eosinophil laboratory result.

Table 3 Statistical Testing by Descriptive Variable Type

Variable type	Baseline	Variable follow-up comparisons between study cohorts
Categorical	Pearson's chi-square Fisher's exact test	Kaplan-Meier
Continuous	Independent samples t-test Wilcoxon-Mann Whitney test	Population annualized averages
Time-to-event variables	N/A	Incidence rate or Kaplan-Meier

9.7.3.2 Kaplan Meier Analysis

Kaplan–Meier (KM) analysis will be used to estimate time to first COPD exacerbation (any, severe), time to first pneumonia diagnosis, and time to first pneumonia hospitalization. When KM analysis is conducted, results will include censored-adjusted percentage of patients who have had at least one event of interest (i.e., COPD exacerbation, pneumonia diagnosis, pneumonia hospitalization) at pre-specified time periods of interest (e.g., 1 month, 3 months, 6 months). In addition, the median (and 25th and 75th percentile) time to event and the 95% confidence interval around the median (and 25th and 75th percentile) will be reported. A p-value will be calculated using the log rank test to examine if the distribution of outcomes among patients in the TIO/OLO cohort versus the FF/UMEC/VI cohort are different. In addition to presenting results for the overall TIO/OLO versus FF/UMEC/VI comparison, KM analysis also will be conducted among the following populations: maintenance naïve; no exacerbation; no exacerbation or one exacerbation not leading to hospitalization; at least two exacerbations not leading to hospitalization or at least one exacerbation leading to hospitalization; subset of the population with at least one eosinophil laboratory result.

9.7.3.3 Number Needed to Treat

Based on the descriptive analysis results, the number of FF/UMEC/VI patients that would instead need to be treated (i.e., number needed to treat [NNT]) with TIO/OLO to avoid one event (e.g., exacerbation of COPD) will be calculated for key outcomes. The NNT will be calculated using the following equation: $1/(\text{Event Rate}_{\text{FF/UMEC/VI}} - \text{Event Rate}_{\text{TIO/OLO}})$. Rates will be derived from the annualized Kaplan-Meier analyses.

9.7.3.4 Multivariable Analysis (Optional)

Multivariable regression will be included in the analysis if either TIO/OLO initiators from before and after FF/UMEC/VI approval have standardized differences of >10% on one to three characteristics listed in [Section 9.7.1](#), or if there are standardized differences of >10%

between the TIO/OLO and FF/UMEC/VI cohorts after PSM. If multivariable model is included, the appropriate regression model will be selected based on the distribution of the measure. Because health care costs are often skewed, cost measures may be modeled using Manning and Mullahy's formulation. This method avoids potential difficulties introduced by transformation and retransformation of the dependent variable. Specifically, the outcome is modeled employing a GLM with a gamma distribution and log link. Exponentiated coefficients from a GLM are estimated cost ratios. Cost ratios, 95% confidence intervals, and p-values will be presented for each covariate included in the final model. For ease of interpretation and comparison with the bivariate results, the average cost will be predicted for each cohort using recycled predictions. Cox proportional hazard modeling may be used for the exacerbation and pneumonia outcomes.

9.7.4 Secondary Objective

9.7.4.1 COPD Readmission CMS Definition

- CMS-based readmission analysis will not be conducted for the subgroup analysis among patients with available eosinophil lab results.

A hospitalization-level analysis will be performed to examine how many COPD-related hospitalizations resulted in an all-cause inpatient readmission within 30 days of discharge. The sample size for this analysis will be the number of qualifying COPD-related hospitalizations that occur during the follow-up, and consequently a patient may contribute 0, one, or more than one observation to the analysis. A patient with no COPD-related hospitalizations will not contribute any observations to the analysis, and a patient with two COPD-related hospitalizations five months apart may contribute two observations to the analysis. The number and percent of follow-up COPD-hospitalizations that result in an all-cause readmission will be calculated. An unmatched descriptive analysis will be conducted because the unit of analysis will be hospitalizations, not patients. Logistic regression will be conducted to determine if the adjusted odds of a readmission are different for hospitalizations among TIO/OLO initiators versus hospitalizations among FF/UMEC/VI initiators. The logistic regression model will include the propensity score model covariates, plus an additional baseline readmission covariate. A variable will be created to identify if the person associated with the hospitalization had: 1) at least one baseline COPD hospitalization that resulted in a readmission; 2) at least one baseline COPD hospitalization but none of them resulted in a readmission; 3) no baseline COPD-related hospitalization. The logistic regression model will account for clustering since patients could contribute multiple observations (i.e., multiple qualifying COPD hospitalizations).



9.8 LIMITATIONS OF THE RESEARCH METHODS

An inherent limitation of observational studies involving non-random allocation of treatment is a form of selection bias called ‘confounding by indication’. With this type of selection bias, the underlying patient characteristics associated with a certain treatment (i.e., TIO/OLO or the comparator) may influence the outcome under study. The current study proposes to address the bias from confounding by indication with PSM. The aim of PSM is to balance two non-equivalent groups on observed baseline characteristics to be able to obtain less biased estimates of treatment effects. This balancing can be achieved by either matching study patients in comparison groups on propensity scores, weighting for propensity scores, or adjusting for propensity scores in the analysis. This therefore ensures that the distribution of characteristics is the same for patients who initiate TIO/OLO and FF/UMEC/VI.

Second, an “on-treatment” analysis is planned in which patients will be censored at the time of discontinuation of the index medications or initiation of another COPD maintenance medication (as well as for disenrollment from the health plan, 12-months following the index date, or the end of the study period). Therefore, the conclusions from this study will be applicable to patients who initiate and remain on the study treatments, rather than the broader population of patients who initiate one of the study treatments (i.e., an intention to treat analysis) and therefore is potentially prone to survival bias. By censoring at the time of discontinuation of the index medication rather than the discontinuation date + 30 days outcomes that occur right after medication discontinuation, which may be related to the index medication, are not captured.

Third, patients with one or more days of free or fixed dose LAMA/LABA maintenance therapy in the six month pre-index period will be excluded from the study sample. The GOLD 2018 and 2019 recommendations maintain that TT should only be used as an escalation step following treatment with LAMA and LABA or LABA and ICS. Thus, patients initiating FF/UMEC/VI in this study, will be a subset of TT initiators who are not following the GOLD recommendations.

Fourth, the patient identification period starts at the FDA approval of TIO/OLO (May 2015) rather than the FDA approval of FF/UMEC/VI (September 2017). By design, patient index year will not be included/ as a matching variable for the PSM models because there will be no FF/UMEC/VI initiators to match in the first part of the patient identification period. TIO/OLO initiators from May 2015 – December 2017 will be compared to TIO/OLO initiators from January 2018 – November 2019 on a prespecified list of characteristics as outlined in [Section 9.7.1](#). If there are differences between TIO/OLO initiators from before and after FF/UMEC/VI approval the start of the patient identification period will be moved to 01 January 2018. Index year may be included in multivariable regression analysis to determine if the index year (i.e., initiation date) is a confounder of the association between treatment and outcomes. If index year is a significant predictor in the multivariable regression model, sample selection may be restricted to patients with an index date following FF/UMEC/VI launch or the sample may be restricted to a time period where index year is not a significant covariate in the multivariable regression model.

Finally, claims data are subject to certain limitations. In addition to miscoding, omissions and/or rule-out diagnoses, the presence of a claim for a filled prescription does not indicate that the medication was consumed or that it was taken as prescribed, and any medications filled over-the-counter or provided as samples by the physician will not be observed in the claims data. It also lacks some lifestyle behaviors and clinically relevant characteristics including lung function, smoking status/history, symptom burden that may impact disease progression and in turn the outcome metrics. Data on physician decision-making process on treatment choices is also unavailable and may impact our comparison of an initial vs. a next-in-line treatment. Relying on pharmacy claims for switch and discontinuation definitions will miss patients who use nebulized medications captured via medical claims and may preemptively censor adherent patients. Finally, as with all claims-based analyses, study results may not be generalizable to those with non-commercial or MAPD health insurance.

9.9 OTHER ASPECTS

None

9.9.1 Data quality assurance

A quality assurance audit/inspection of this study may be conducted by the sponsor or sponsor's designees or by Institutional Review Board (IRBs) / Independent Ethics Committee (IECs) or by regulatory authorities. The quality assurance auditor will have access to all medical records, the investigator's study-related files and correspondence, and the informed consent documentation of this study.

9.9.2 Study records

9.9.2.1 Source documents

Not applicable

10. PROTECTION OF HUMAN SUBJECTS

The study will be carried out in compliance with the protocol, the principles laid down in the Declaration of Helsinki, Guidelines for Good Pharmacoepidemiology Practice (GPP), and the relevant BI Standard Operating Procedures (SOPs). Standard medical care (prophylactic, diagnostic and therapeutic procedures) remains the responsibility of the treating physician of the patient.

10.1 STUDY APPROVAL, PATIENT INFORMATION, AND INFORMED CONSENT

This NIS will be initiated only after all required legal documentation has been reviewed and approved by the respective Institutional Review Board (IRB)/Independent Ethics Committee (IEC) and Competent Authority (CA) according to national and international regulations. The same applies for the implementation of changes introduced by amendments.

Prior to patient participation in the study, written informed consent must be obtained from each patient (or the patient's legally accepted representative) per GPP and according to the regulatory and legal requirements of the participating country, if applicable.

10.2 STATEMENT OF CONFIDENTIALITY

No patient's identity or medical records will be disclosed for the purposes of this study except in compliance with applicable law.

11. MANAGEMENT AND REPORTING OF ADVERSE EVENTS/ADVERSE REACTIONS

11.1 ADVERSE EVENT AND SERIOUS ADVERSE EVENT COLLECTION AND REPORTING

Collection of AEs

Not applicable based on secondary use of data without any potential that any employee of BI or agent working on behalf of BI will access individually identifiable patient data.

12. PLANS FOR DISSEMINATING AND COMMUNICATING STUDY RESULTS

The rights of the investigator and of the sponsor with regard to publication of the results of this study are described in the investigator contract. As a general rule, no study results should be published prior to finalization of the Study Report.

13. REFERENCES

13.1 PUBLISHED REFERENCES

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ANNEX 1. LIST OF STAND-ALONE DOCUMENTS

None

ANNEX 2. ENCEPP CHECKLIST FOR STUDY PROTOCOLS

NA

ANNEX 3. ADDITIONAL INFORMATION

Table 1. COPD-related Respiratory Medications and Classes

Drug Class	Subclass	Medication
Maintenance medications	Inhaled long-acting anti-muscarinic agents (LAMA)	acclidinium glycopyrrolate revfenacin tiotropium umeclidinium
	Long-acting β -agonists (LABA)	arformoterol formoterol indacaterol olodaterol salmeterol
	Inhaled corticosteroids (ICS)	beclomethasone budesonide (both inhaler and nebulizer) ciclesonide flunisolide fluticasone mometasone triamcinolone
	Inhaled LAMA/LABA combination	acclidinium/formoterol glycopyrrolate/formoterol indacaterol/glycopyrrolate tiotropium/olodaterol umeclidinium/vilanterol
	Inhaled ICS/LABA combination	budesonide/formoterol fluticasone/salmeterol fluticasone/vilanterol mometasone/formoterol
	Inhaled ICS/LABA/LAMA	Budesonide/glycopyrrolate/formoterol

Drug Class	Subclass	Medication
	combination	fumarate ¹ Fluticasone/umeclidinium/vilanterol
	Methylxanthines (intravenous, oral)	aminophylline dyphylline theophylline
	PDE-4 inhibitor (oral)	roflumilast
Rescue medications	Short-acting β -agonists (SABA) (inhalation, oral)	albuterol bitolterol isoetharine isoproterenol levalbuterol metaproterenol pirbuterol
	Short-acting anti-muscarinic Agents (SAMA) (inhalation)	ipratropium
	SAMA/SABA (inhalation)	ipratropium/albuterol
	Oral corticosteroids (OCS) ²	betamethasone dexamethasone hydrocortisone methylprednisolone prednisolone prednisone

¹This medication was FDA approved for maintenance treatment of COPD on 24 July 2020, which is outside of the study time period, and will not be included in this study.

²Including tablets, oral solutions, elixirs, etc. Injectable corticosteroid medications will not be included.

COPD Guideline-recommend Antibiotic Medications

Drug Category	Drug Class	Medication
COPD Guideline-recommended Antibiotics ¹	Cephalosporins	cefaclor
		cefdinir
		cefditoren
		cefepime
		cefpodoxime
		cefprozil
		ceftibuten
		ceftriaxone
		cefuroxime
	Macrolides	azithromycin
		clarithromycin
	Penicillins	amoxicillin
		amoxicillin/potassium
		piperacillin/tazobactam
	Quinolones	levofloxacin
		moxifloxacin
	Sulfonamide combinations	sulfamethoxazole/trimethoprim
	Tetracyclines	doxycycline

- ¹The American Thoracic Society (2017) and Global Initiative for Chronic Obstructive Lung Disease (2020) guidelines recommend that antibiotics for acute exacerbation of chronic bronchitis be selected based on local sensitivity patterns. For more specific recommendations, The Sanford Guide to Antimicrobial Therapy (2020) was referenced.

COPD Exacerbation Definition

- Exacerbation Hierarchy:** Exacerbation events will be classified as severe or moderate according to the highest severity contributing event.
- Exacerbation Episodes:** Exacerbations occurring within 14 days of each other will be considered a single exacerbation episode and will be classified according to the highest severity contributing event.
- Episode Length:** The start date of the exacerbation episode will be the service date of the first event (medical encounter or pharmacy fill for an OCS or antibiotic). The end date of the exacerbation episode will be defined as the last observed exacerbation event date (or discharge date if an inpatient event) + 14 days.

Single Event Episode

- In a single event episode, the exacerbation begins with the earliest occurrence of these events: COPD exacerbation defined inpatient admission, ER visit, ambulatory visit, or corticosteroid or antibiotic dispensing as defined in [Section 9.3.2.1](#). In a single event episode, the exacerbation ends 14 days from the start of the event, hospital discharge, or following the OCS or antibiotic dispensing, whichever is later.

Episode Start date = service date of a qualifying event (inpatient admission, ED visit, ambulatory visit, or OCS or antibiotic dispensing).

- If the qualifying event is a hospitalization, the start date is the admission date.
- If the qualifying event is an ED visit, the start date is the service date.
- If the qualifying event is an ambulatory visit or an OCS or antibiotic dispensing, the start date is the earliest of the associated medical visit or medication dispensing date.

Episode End Date

- If the qualifying event is a hospitalization: discharge date + 14 days
- If the qualifying event is an ER visit: start date + 14 days
- If the qualifying event is an ambulatory visit or an OCS or antibiotic dispensing: the latest of the medical visit or medication dispensing + 14 days
- If the Episode End Date is after the end of follow-up, then set an additional flag **CENSORED=1**.
- NOTE: Under this definition, it is possible for the runout of a medication to exceed the End Date.

MULTIPLE EVENT EPISODES

If another qualifying event occurs before the episode End Date, then the episode is extended. The date of the second event is used to reset the End Date per the definition above, using information from this second event. The process continues until a 14-day period with no exacerbation qualifying events occur. The End Date is set (as defined above).

- **Episode Length:** (End date – Start date) + 1

Condition	Code	Code type	Description
COPD	491.0	ICD-9 Dx	Simple chronic bronchitis
	491.1	ICD-9 Dx	Mucopurulent chronic bronchitis
	491.20	ICD-9 Dx	Obstructive chronic bronchitis, without exacerbation
	491.21	ICD-9 Dx	Obstructive chronic bronchitis, with (acute) exacerbation
	491.22	ICD-9 Dx	Obstructive chronic bronchitis with acute bronchitis
	491.8	ICD-9 Dx	Other chronic bronchitis
	491.9	ICD-9 Dx	Unspecified chronic bronchitis
	492.0	ICD-9 Dx	Emphysematous bleb
	492.8	ICD-9 Dx	Other emphysema
	496	ICD-9 Dx	Chronic airway obstruction, not elsewhere classified
	J41.0	ICD-10 Dx	Simple chronic bronchitis
	J41.1	ICD-10 Dx	Mucopurulent chronic bronchitis
	J41.8	ICD-10 Dx	Mixed simple and mucopurulent chronic bronchitis
	J42	ICD-10 Dx	Unspecified chronic bronchitis
	J43.0	ICD-10 Dx	Unilateral pulmonary emphysema (MacLeod's syndrome)
	J43.1	ICD-10 Dx	Panlobular emphysema
	J43.2	ICD-10 Dx	Centrilobular emphysema

	J43.8	ICD-10 Dx	Other emphysema
	J43.9	ICD-10 Dx	Emphysema, unspecified
	J44.0	ICD-10 Dx	Chronic obstructive pulmonary disease with acute lower respiratory infection
	J44.1	ICD-10 Dx	Chronic obstructive pulmonary disease with (acute) exacerbation
	J44.9	ICD-10 Dx	Chronic obstructive pulmonary disease, unspecified
Asthma	493	ICD-9 Dx	Asthma
	493.00	ICD-9 Dx	Extrinsic asthma, unspecified
	493.01	ICD-9 Dx	Extrinsic asthma with status asthmaticus
	493.02	ICD-9 Dx	Extrinsic asthma, with (acute) exacerbation
	493.10	ICD-9 Dx	Intrinsic asthma, unspecified
	493.11	ICD-9 Dx	Intrinsic asthma with status asthmaticus
	493.12	ICD-9 Dx	Intrinsic asthma, with (acute) exacerbation
	493.20	ICD-9 Dx	Chronic obstructive asthma, unspecified
	493.21	ICD-9 Dx	Chronic obstructive asthma with status asthmaticus
	493.22	ICD-9 Dx	Chronic obstructive asthma, with (acute) exacerbation
	493.81	ICD-9 Dx	Exercise induced bronchospasm
	493.82	ICD-9 Dx	Cough variant asthma
	493.90	ICD-9 Dx	Asthma, unspecified, unspecified status

	493.91	ICD-9 Dx	Asthma, unspecified with status asthmaticus
	493.92	ICD-9 Dx	Asthma, unspecified, with (acute) exacerbation
	J45	ICD-10 Dx	Asthma
	J4520	ICD-10 Dx	Mild intermittent asthma, uncomplicated
	J4521	ICD-10 Dx	Mild intermittent asthma with (acute) exacerbation
	J4522	ICD-10 Dx	Mild intermittent asthma with status asthmaticus
	J4530	ICD-10 Dx	Mild persistent asthma, uncomplicated
	J4531	ICD-10 Dx	Mild persistent asthma with (acute) exacerbation
	J4532	ICD-10 Dx	Mild persistent asthma with status asthmaticus
	J4540	ICD-10 Dx	Moderate persistent asthma, uncomplicated
	J4541	ICD-10 Dx	Moderate persistent asthma with (acute) exacerbation
	J4542	ICD-10 Dx	Moderate persistent asthma with status asthmaticus
	J4550	ICD-10 Dx	Severe persistent asthma, uncomplicated
	J4551	ICD-10 Dx	Severe persistent asthma with (acute) exacerbation
	J4552	ICD-10 Dx	Severe persistent asthma with status asthmaticus
	J45901	ICD-10 Dx	Unspecified asthma with (acute) exacerbation
	J45902	ICD-10 Dx	Unspecified asthma with status asthmaticus
	J45909	ICD-10 Dx	Unspecified asthma, uncomplicated

	J45990	ICD-10 Dx	Exercise induced bronchospasm
	J45991	ICD-10 Dx	Cough variant asthma
	J45998	ICD-10 Dx	Other asthma
Cystic Fibrosis	277.0	ICD-9 Dx	Cystic fibrosis
	277.00	ICD-9 Dx	Cystic fibrosis without mention of meconium ileus
	277.01	ICD-9 Dx	Cystic fibrosis with meconium ileus
	277.02	ICD-9 Dx	Cystic fibrosis with pulmonary manifestations
	277.03	ICD-9 Dx	Cystic fibrosis with gastrointestinal manifestations
	277.09	ICD-9 Dx	Cystic fibrosis with other manifestations
	E84	ICD-10 Dx	Cystic fibrosis
	E84.0	ICD-10 Dx	Cystic fibrosis with pulmonary manifestations
	E84.11	ICD-10 Dx	Meconium ileus in cystic fibrosis
	E84.19	ICD-10 Dx	Cystic fibrosis with other intestinal manifestations
	E84.8	ICD-10 Dx	Cystic fibrosis with other manifestations
	E84.9	ICD-10 Dx	Cystic fibrosis, unspecified
Lung Cancer	162.2	ICD-9 Dx	Malignant neoplasm of main bronchus
	162.3	ICD-9 Dx	Malignant neoplasm of upper lobe, bronchus or lung
	162.4	ICD-9 Dx	Malignant neoplasm of middle lobe, bronchus or lung

	162.5	ICD-9 Dx	Malignant neoplasm of lower lobe, bronchus or lung
	162.8	ICD-9 Dx	Malignant neoplasm of other parts of bronchus or lung
	162.9	ICD-9 Dx	Malignant neoplasm of bronchus and lung, unspecified
	C34	ICD-10 Dx	Malignant neoplasm of bronchus and lung
	C340	ICD-10 Dx	Malignant neoplasm of main bronchus
	C3400	ICD-10 Dx	Malignant neoplasm of unspecified main bronchus
	C3401	ICD-10 Dx	Malignant neoplasm of right main bronchus
	C3402	ICD-10 Dx	Malignant neoplasm of left main bronchus
	C341	ICD-10 Dx	Malignant neoplasm of upper lobe, bronchus or lung
	C3410	ICD-10 Dx	Malignant neoplasm of upper lobe, unspecified bronchus or lung
	C3411	ICD-10 Dx	Malignant neoplasm of upper lobe, right bronchus or lung
	C3412	ICD-10 Dx	Malignant neoplasm of upper lobe, left bronchus or lung
	C342	ICD-10 Dx	Malignant neoplasm of middle lobe, bronchus or lung
	C343	ICD-10 Dx	Malignant neoplasm of lower lobe, bronchus or lung
	C3430	ICD-10 Dx	Malignant neoplasm of lower lobe, unspecified bronchus or lung
	C3431	ICD-10 Dx	Malignant neoplasm of lower lobe, right bronchus or lung
	C3432	ICD-10 Dx	Malignant neoplasm of lower lobe, left bronchus or lung
	C348	ICD-10 Dx	Malignant neoplasm of overlapping sites of bronchus and lung

	C3480	ICD-10 Dx	Malignant neoplasm of overlapping sites of unspecified bronchus and lung
	C3481	ICD-10 Dx	Malignant neoplasm of overlapping sites of right bronchus and lung
	C3482	ICD-10 Dx	Malignant neoplasm of overlapping sites of left bronchus and lung
	C349	ICD-10 Dx	Malignant neoplasm of unspecified part of bronchus or lung
	C3490	ICD-10 Dx	Malignant neoplasm of unspecified part of unspecified bronchus or lung
	C3491	ICD-10 Dx	Malignant neoplasm of unspecified part of right bronchus or lung
	C3492	ICD-10 Dx	Malignant neoplasm of unspecified part of left bronchus or lung
Interstitial Lung Disease	515	ICD-9 Dx	Post-inflammatory pulmonary fibrosis
	516.3	ICD-9 Dx	Idiopathic fibrosing alveolitis
	516.8	ICD-9 Dx	Other specified alveolar and parietoalveolar pneumopathies (Interstitial Pneumonia, DIP, LIP)
	516.9	ICD-9 Dx	Unspecified alveolar and parietoalveolar pneumopathy
	517.1	ICD-9 Dx	Rheumatic pneumonia
	517.2	ICD-9 Dx	Lung involvement in systemic sclerosis
	517.8	ICD-9 Dx	Lung involvement in other diseases classified elsewhere (autoimmune, sarcoid)
	714.81	ICD-9 Dx	Rheumatoid Lung
	J84	ICD-10 Dx	Other interstitial pulmonary diseases
	J84.1	ICD-10 Dx	Pulmonary fibrosis, unspecified
	J84.8	ICD-10 Dx	Other specified interstitial pulmonary diseases

	J84.9	ICD-10 Dx	Interstitial pulmonary disease, unspecified
	J84.09	ICD-10 Dx	Other alveolar and parieto-alveolar conditions
Lung volume reduction procedure	32480	CPT	Removal of lung, other than pneumonectomy; single lobe (lobectomy)
	32482	CPT	Removal of lung, other than pneumonectomy; 2 lobes (bilobectomy)
	32484	CPT	Removal of lung, other than pneumonectomy; single segment (segmentectomy)
	32486	CPT	Removal of lung, other than pneumonectomy; with circumferential resection of segment of bronchus followed by broncho-bronchial anastomosis (sleeve lobectomy)
	32491	CPT	Removal of lung, other than pneumonectomy; with resection-plication of emphysematous lung(s) (bullous or non-bullous) for lung volume reduction, sternal split or transthoracic approach, includes any pleural procedure, when performed
	32669	CPT	Thoracoscopy, surgical; with removal of a single lung segment (segmentectomy)
	32672	CPT	Thoracoscopy, surgical; with resection-plication for emphysematous lung (bullous or non-bullous) for lung volume reduction (LVRS), unilateral includes any pleural procedure, when performed
Pneumonia	480.1	ICD-9 Dx	Pneumonia due to respiratory syncytial virus
	480.2	ICD-9 Dx	Pneumonia due to parainfluenza virus
	480.3	ICD-9 Dx	Pneumonia due to SARS-associated coronavirus
	480.8	ICD-9 Dx	Pneumonia due to other virus not elsewhere classified
	480.9	ICD-9 Dx	Unspecified viral pneumonia
	481	ICD-9 Dx	Pneumococcal pneumonia (streptococcus pneumoniae pneumonia)

	482.1	ICD-9 Dx	Pneumonia due to Pseudomonas
	482.2	ICD-9 Dx	Pneumonia due to Hemophilus influenzae (H. influenzae)
	482.31	ICD-9 Dx	Pneumonia due to Streptococcus, group A
	482.32	ICD-9 Dx	Pneumonia due to Streptococcus, group B
	482.39	ICD-9 Dx	Pneumonia due to other Streptococcus
	482.41	ICD-9 Dx	Methicillin susceptible pneumonia due to Staphylococcus aureus
	482.42	ICD-9 Dx	Methicillin resistant pneumonia due to Staphylococcus aureus
	482.49	ICD-9 Dx	Other Staphylococcus pneumonia
	482.81	ICD-9 Dx	Pneumonia due to anaerobes
	482.82	ICD-9 Dx	Pneumonia due to Escherichia coli (E. coli)
	482.83	ICD-9 Dx	Pneumonia due to other gram-negative bacteria
	482.84	ICD-9 Dx	Legionnaires' disease
	482.89	ICD-9 Dx	Pneumonia due to other specified bacteria
	482.9	ICD-9 Dx	Unspecified bacterial pneumonia
	483.1	ICD-9 Dx	Pneumonia due to Chlamydia
	483.8	ICD-9 Dx	Pneumonia due to other specified organism
	484.1	ICD-9 Dx	Pneumonia in cytomegalic inclusion disease
	484.3	ICD-9 Dx	Pneumonia in whooping cough

	484.6	ICD-9 Dx	Pneumonia in aspergillosis
	484.7	ICD-9 Dx	Pneumonia in other systemic mycoses
	484.8	ICD-9 Dx	Pneumonia in other infectious diseases classified elsewhere
	485	ICD-9 Dx	Bronchopneumonia, organism unspecified
	486	ICD-9 Dx	Pneumonia, organism unspecified
	003.22	ICD-9 Dx	Salmonella pneumonia
	011.60	ICD-9 Dx	Tuberculous pneumonia (any form), confirmation unspecified
	011.61	ICD-9 Dx	Tuberculous pneumonia (any form), bacteriological or histological examination not done
	011.62	ICD-9 Dx	Tuberculous pneumonia (any form), bacteriological or histological examination unknown (at present)
	011.63	ICD-9 Dx	Tuberculous pneumonia (any form), tubercle bacilli found (in sputum) by microscopy
	011.64	ICD-9 Dx	Tuberculous pneumonia (any form), tubercle bacilli not found (in sputum) by microscopy, but found by bacterial culture
	011.65	ICD-9 Dx	Tuberculous pneumonia (any form), tubercle bacilli not found by bacteriological examination, but tuberculosis confirmed histologically
	011.66	ICD-9 Dx	Tuberculous pneumonia (any form), tubercle bacilli not found by bacteriological or histological examination, but tuberculosis confirmed by other methods [inoculation of animals]
	052.1	ICD-9 Dx	Varicella (hemorrhagic) pneumonitis
	055.1	ICD-9 Dx	Postmeasles pneumonia
	073.0	ICD-9 Dx	Ornithosis with pneumonia
	115.05	ICD-9 Dx	Histoplasma capsulatum pneumonia

	115.15	ICD-9 Dx	Histoplasma duboisii pneumonia
	115.95	ICD-9 Dx	Unspecified Histoplasmosis pneumonia
	130.4	ICD-9 Dx	Pneumonitis due to toxoplasmosis
	480.0	ICD-9 Dx	Pneumonia due to adenovirus
	482.0	ICD-9 Dx	Pneumonia due to Klebsiella pneumoniae
	482.30	ICD-9 Dx	Pneumonia due to unspecified Streptococcus
	482.40	ICD-9 Dx	Pneumonia due to Staphylococcus, unspecified
	483.0	ICD-9 Dx	Pneumonia due to Mycoplasma pneumoniae
	487.0	ICD-9 Dx	Influenza with pneumonia
	488.01	ICD-9 Dx	Influenza due to identified avian influenza virus with pneumonia
	488.11	ICD-9 Dx	Influenza due to identified 2009 H1N1 influenza virus with pneumonia
	488.81	ICD-9 Dx	Influenza due to identified novel influenza A virus with pneumonia
	495.7	ICD-9 Dx	Ventilation pneumonitis
	495.8	ICD-9 Dx	Other specified allergic alveolitis and pneumonitis
	495.9	ICD-9 Dx	Unspecified allergic alveolitis and pneumonitis
	506.0	ICD-9 Dx	Bronchitis and pneumonitis due to fumes and vapors
	507.0	ICD-9 Dx	Pneumonitis due to inhalation of food or vomitus
	507.1	ICD-9 Dx	Pneumonitis due to inhalation of oils and essences

	507.8	ICD-9 Dx	Pneumonitis due to other solids and liquids
	516.30	ICD-9 Dx	Idiopathic interstitial pneumonia, not otherwise specified
	516.32	ICD-9 Dx	Idiopathic non-specific interstitial pneumonitis
	516.33	ICD-9 Dx	Acute interstitial pneumonitis
	516.35	ICD-9 Dx	Idiopathic lymphoid interstitial pneumonia
	516.36	ICD-9 Dx	Cryptogenic organizing pneumonia
	516.37	ICD-9 Dx	Desquamative interstitial pneumonia
	517.1	ICD-9 Dx	Rheumatic pneumonia
	997.31	ICD-9 Dx	Ventilator associated pneumonia
	997.32	ICD-9 Dx	Postprocedural aspiration pneumonia
	A0103	ICD-10 Dx	Typhoid pneumonia
	A0222	ICD-10 Dx	Salmonella pneumonia
	A3701	ICD-10 Dx	Whooping cough due to Bordetella pertussis with pneumonia
	A3711	ICD-10 Dx	Whooping cough due to Bordetella parapertussis with pneumonia
	A3781	ICD-10 Dx	Whooping cough due to other Bordetella species with pneumonia
	A3791	ICD-10 Dx	Whooping cough, unspecified species with pneumonia
	A481	ICD-10 Dx	Legionnaires' disease
	A5484	ICD-10 Dx	Gonococcal pneumonia

	B012	ICD-10 Dx	Varicella pneumonia
	B052	ICD-10 Dx	Measles complicated by pneumonia
	B0681	ICD-10 Dx	Rubella pneumonia
	B250	ICD-10 Dx	Cytomegaloviral pneumonitis
	B440	ICD-10 Dx	Invasive pulmonary aspergillosis
	J09X1	ICD-10 Dx	Influenza due to identified novel influenza A virus with pneumonia
	J1000	ICD-10 Dx	Influenza due to other identified influenza virus with unspecified type of pneumonia
	J1001	ICD-10 Dx	Influenza due to other identified influenza virus with the same other identified influenza virus pneumonia
	J1008	ICD-10 Dx	Influenza due to other identified influenza virus with other specified pneumonia
	J1100	ICD-10 Dx	Influenza due to unidentified influenza virus with unspecified type of pneumonia
	J1108	ICD-10 Dx	Influenza due to unidentified influenza virus with specified pneumonia
	J120	ICD-10 Dx	Adenoviral pneumonia
	J121	ICD-10 Dx	Respiratory syncytial virus pneumonia
	J122	ICD-10 Dx	Parainfluenza virus pneumonia
	J123	ICD-10 Dx	Human metapneumovirus pneumonia
	J1281	ICD-10 Dx	Pneumonia due to SARS-associated coronavirus
	J1289	ICD-10 Dx	Other viral pneumonia
	J129	ICD-10 Dx	Viral pneumonia, unspecified

	J13	ICD-10 Dx	Pneumonia due to Streptococcus pneumoniae
	J14	ICD-10 Dx	Pneumonia due to Hemophilus influenzae
	J150	ICD-10 Dx	Pneumonia due to Klebsiella pneumoniae
	J151	ICD-10 Dx	Pneumonia due to Pseudomonas
	J1520	ICD-10 Dx	Pneumonia due to staphylococcus, unspecified
	J15211	ICD-10 Dx	Pneumonia due to Methicillin susceptible Staphylococcus aureus
	J15212	ICD-10 Dx	Pneumonia due to Methicillin resistant Staphylococcus aureus
	J1529	ICD-10 Dx	Pneumonia due to other staphylococcus
	J153	ICD-10 Dx	Pneumonia due to streptococcus, group B
	J154	ICD-10 Dx	Pneumonia due to other streptococci
	J155	ICD-10 Dx	Pneumonia due to Escherichia coli
	J156	ICD-10 Dx	Pneumonia due to other aerobic Gram-negative bacteria
	J157	ICD-10 Dx	Pneumonia due to Mycoplasma pneumoniae
	J158	ICD-10 Dx	Pneumonia due to other specified bacteria
	J159	ICD-10 Dx	Unspecified bacterial pneumonia
	J160	ICD-10 Dx	Chlamydial pneumonia
	J168	ICD-10 Dx	Pneumonia due to other specified infectious organisms
	J17	ICD-10 Dx	Pneumonia in diseases classified elsewhere

	J180	ICD-10 Dx	Bronchopneumonia, unspecified organism
	J181	ICD-10 Dx	Lobar pneumonia, unspecified organism
	J182	ICD-10 Dx	Hypostatic pneumonia, unspecified organism
	J188	ICD-10 Dx	Other pneumonia, unspecified organism
	J189	ICD-10 Dx	Pneumonia, unspecified organism
	J200	ICD-10 Dx	Acute bronchitis due to <i>Mycoplasma pneumoniae</i>
	J678	ICD-10 Dx	Hypersensitivity pneumonitis due to other organic dusts
	J679	ICD-10 Dx	Hypersensitivity pneumonitis due to unspecified organic dust
	J680	ICD-10 Dx	Bronchitis and pneumonitis due to chemicals, gases, fumes and vapors
	J690	ICD-10 Dx	Pneumonitis due to inhalation of food and vomit
	J691	ICD-10 Dx	Pneumonitis due to inhalation of oils and essences
	J698	ICD-10 Dx	Pneumonitis due to inhalation of other solids and liquids
	J84111	ICD-10 Dx	Idiopathic interstitial pneumonia, not otherwise specified
	J84113	ICD-10 Dx	Idiopathic non-specific interstitial pneumonitis
	J84114	ICD-10 Dx	Acute interstitial pneumonitis
	J84116	ICD-10 Dx	Cryptogenic organizing pneumonia
	J84117	ICD-10 Dx	Desquamative interstitial pneumonia
	J842	ICD-10 Dx	Lymphoid interstitial pneumonia

	J851	ICD-10 Dx	Abscess of lung with pneumonia
	J954	ICD-10 Dx	Chemical pneumonitis due to anesthesia
	J95851	ICD-10 Dx	Ventilator associated pneumonia
Bronchitis /bronchiolitis	466	ICD-9 Dx	Acute bronchitis and bronchiolitis
	466.0	ICD-9 Dx	Acute bronchitis
	466.1	ICD-9 Dx	Acute bronchiolitis
	466.11	ICD-9 Dx	Acute bronchiolitis due to respiratory syncytial virus (RSV)
	466.19	ICD-9 Dx	Acute bronchiolitis due to other infectious organisms
	J20	ICD-10 Dx	Acute bronchitis
	J200	ICD-10 Dx	Acute bronchitis due to Mycoplasma pneumoniae
	J201	ICD-10 Dx	Acute bronchitis due to Hemophilus influenzae
	J202	ICD-10 Dx	Acute bronchitis due to streptococcus
	J203	ICD-10 Dx	Acute bronchitis due to coxsackievirus
	J204	ICD-10 Dx	Acute bronchitis due to parainfluenza virus
	J205	ICD-10 Dx	Acute bronchitis due to respiratory syncytial virus
	J206	ICD-10 Dx	Acute bronchitis due to rhinovirus
	J207	ICD-10 Dx	Acute bronchitis due to echovirus
	J208	ICD-10 Dx	Acute bronchitis due to other specified organisms

	J209	ICD-10 Dx	Acute bronchitis, unspecified
	J21	ICD-10 Dx	Acute bronchiolitis
	J210	ICD-10 Dx	Acute bronchiolitis due to respiratory syncytial virus
	J211	ICD-10 Dx	Acute bronchiolitis due to human metapneumovirus
	J218	ICD-10 Dx	Acute bronchiolitis due to other specified organisms
	J219	ICD-10 Dx	Acute bronchiolitis, unspecified
Acute respiratory failure	518.81	ICD-9 Dx	Acute respiratory failure
	518.82	ICD-9 Dx	Other pulmonary insufficiency, not elsewhere classified
	518.84	ICD-9 Dx	Acute and chronic respiratory failure
	799.1	ICD-9 Dx	Respiratory arrest
	J9600	ICD-10 Dx	Acute respiratory failure, unspecified whether with hypoxia or hypercapnia
	J9601	ICD-10 Dx	Acute respiratory failure with hypoxia
	J9602	ICD-10 Dx	Acute respiratory failure with hypercapnia
	J80	ICD-10 Dx	Acute respiratory distress syndrome
	J9620	ICD-10 Dx	Acute and chronic respiratory failure, unspecified whether with hypoxia or hypercapnia
	J9621	ICD-10 Dx	Acute and chronic respiratory failure with hypoxia
	J9622	ICD-10 Dx	Acute and chronic respiratory failure with hypercapnia
	R092	ICD-10 Dx	Respiratory arrest

Acute exacerbation of COPD	491.21	ICD-9 Dx	With (acute) exacerbation
	491.22	ICD-9 Dx	With acute bronchitis
	493.21	ICD-9 Dx	Chronic obstructive asthma with status asthmaticus
	493.22	ICD-9 Dx	Chronic obstructive asthma, with (acute) exacerbation
	J441	ICD-10 Dx	Chronic obstructive pulmonary disease with (acute) exacerbation
	J440	ICD-10 Dx	Chronic obstructive pulmonary disease with (acute) lower respiratory infection
Planned procedures and diagnoses	Z510	ICD-10 Dx	Encounter for antineoplastic radiation therapy
	Z5111	ICD-10 Dx	Encounter for antineoplastic chemotherapy
	Z5112	ICD-10 Dx	Encounter for antineoplastic immunotherapy
	Z44001	ICD-10 Dx	Encounter for fit/adjst of unsp right artificial arm
	Z44002	ICD-10 Dx	Encounter for fit/adjst of unsp left artificial arm
	Z44009	ICD-10 Dx	Encounter for fit/adjst of unsp artificial arm, unsp arm
	Z44011	ICD-10 Dx	Encounter for fit/adjst of complete right artificial arm
	Z44012	ICD-10 Dx	Encounter for fit/adjst of complete left artificial arm
	Z44019	ICD-10 Dx	Encounter for fit/adjst of complete artificial arm, unsp arm
	Z44021	ICD-10 Dx	Encounter for fit/adjst of partial artificial right arm
	Z44022	ICD-10 Dx	Encounter for fit/adjst of partial artificial left arm
	Z44029	ICD-10 Dx	Encounter for fit/adjst of partial artificial arm, unsp arm

	Z44101	ICD-10 Dx	Encounter for fit/adjst of unsp right artificial leg
	Z44102	ICD-10 Dx	Encounter for fit/adjst of unsp left artificial leg
	Z44109	ICD-10 Dx	Encounter for fit/adjst of unsp artificial leg, unsp leg
	Z44111	ICD-10 Dx	Encounter for fit/adjst of complete right artificial leg
	Z44112	ICD-10 Dx	Encounter for fit/adjst of complete left artificial leg
	Z44119	ICD-10 Dx	Encounter for fit/adjst of complete artificial leg, unsp leg
	Z44121	ICD-10 Dx	Encounter for fit/adjst of partial artificial right leg
	Z44122	ICD-10 Dx	Encounter for fit/adjst of partial artificial left leg
	Z44129	ICD-10 Dx	Encounter for fit/adjst of partial artificial leg, unsp leg
	Z4430	ICD-10 Dx	Encntr for fit/adjst of external breast prosth, unsp breast
	Z4431	ICD-10 Dx	Encounter for fit/adjst of external right breast prosthesis
	Z4432	ICD-10 Dx	Encounter for fit/adjst of external left breast prosthesis
	Z448	ICD-10 Dx	Encounter for fit/adjst of external prosthetic devices
	Z449	ICD-10 Dx	Encounter for fit/adjst of unsp external prosthetic device
	Z451	ICD-10 Dx	Encounter for adjustment and management of infusion pump
	Z4531	ICD-10 Dx	Encntr for adjust and mgmt of implnt visual substitution dev
	Z45320	ICD-10 Dx	Encounter for adjust and mgmt of bone conduction device
	Z45321	ICD-10 Dx	Encounter for adjustment and management of cochlear device

	Z45328	ICD-10 Dx	Encounter for adjust and management of implanted hear dev
	Z4541	ICD-10 Dx	Encounter for adjustment and management of CSF drain dev
	Z4542	ICD-10 Dx	Encounter for adjust and mgmt of neuropacemaker (brain)
	Z4549	ICD-10 Dx	Encntr for adjust and mgmt of implanted nervous sys device
	Z45811	ICD-10 Dx	Encounter for adjustment or removal of right breast implant
	Z45812	ICD-10 Dx	Encounter for adjustment or removal of left breast implant
	Z45819	ICD-10 Dx	Encounter for adjustment or removal of unsp breast implant
	Z4682	ICD-10 Dx	Encounter for fit/adjst of non-vascular catheter
	Z4689	ICD-10 Dx	Encounter for fitting and adjustment of oth devices
	Z469	ICD-10 Dx	Encounter for fitting and adjustment of unspecified device
	30230AZ	ICD-10 Proc	Transfuse of Embr Stem Cell into Periph Vein, Open Approach
	30230G0	ICD-10 Proc	Transfuse Autol Bone Marrow in Periph Vein, Open
	30230G1	ICD-10 Proc	Transfusion of Nonautologous Bone Marrow into Peripheral Vei
	30230G2	ICD-10 Proc	Transfuse Allo Rel Bone Marrow in Periph Vein, Open
	30230G3	ICD-10 Proc	Transfuse Allo Unr Bone Marrow in Periph Vein, Open
	30230G4	ICD-10 Proc	Transfuse Allo Unsp Bone Marrow in Periph Vein, Open
	30230X0	ICD-10 Proc	Transfuse Autol Cord Bld Stem Cell in Periph Vein, Open
	30230X1	ICD-10 Proc	Transfusion of Nonautologous Cord Blood Stem Cells into Peri

	30230X2	ICD-10 Proc	Transfuse Allo Rel Cord Bld Stem Cell in Periph Vein, Open
	30230X3	ICD-10 Proc	Transfuse Allo Unr Cord Bld Stem Cell in Periph Vein, Open
	30230X4	ICD-10 Proc	Transfuse Allo Unsp Cord Bld Stem Cell in Periph Vein, Open
	30230Y0	ICD-10 Proc	Transfuse Autol Hemat Stem Cell in Periph Vein, Open
	30230Y1	ICD-10 Proc	Transfusion of Nonautologous Hematopoietic Stem Cells into P
	30230Y2	ICD-10 Proc	Transfuse Allo Rel Hemat Stem Cell in Periph Vein, Open
	30230Y3	ICD-10 Proc	Transfuse Allo Unr Hemat Stem Cell in Periph Vein, Open
	30230Y4	ICD-10 Proc	Transfuse Allo Unsp Hemat Stem Cell in Periph Vein, Open
	30233AZ	ICD-10 Proc	Transfuse of Embr Stem Cell into Periph Vein, Perc Approach
	30233G0	ICD-10 Proc	Transfuse Autol Bone Marrow in Periph Vein, Perc
	30233G1	ICD-10 Proc	Transfusion of Nonautologous Bone Marrow into Peripheral Vei
	30233G2	ICD-10 Proc	Transfuse Allo Rel Bone Marrow in Periph Vein, Perc
	30233G3	ICD-10 Proc	Transfuse Allo Unr Bone Marrow in Periph Vein, Perc
	30233G4	ICD-10 Proc	Transfuse Allo Unsp Bone Marrow in Periph Vein, Perc
	30233X0	ICD-10 Proc	Transfuse Autol Cord Bld Stem Cell in Periph Vein, Perc
	30233X1	ICD-10 Proc	Transfusion of Nonautologous Cord Blood Stem Cells into Peri
	30233X2	ICD-10 Proc	Transfuse Allo Rel Cord Bld Stem Cell in Periph Vein, Perc
	30233X3	ICD-10 Proc	Transfuse Allo Unr Cord Bld Stem Cell in Periph Vein, Perc

	30233X4	ICD-10 Proc	Transfuse Allo Unsp Cord Bld Stem Cell in Periph Vein, Perc
	30233Y0	ICD-10 Proc	Transfuse Autol Hemat Stem Cell in Periph Vein, Perc
	30233Y1	ICD-10 Proc	Transfusion of Nonautologous Hematopoietic Stem Cells into P
	30233Y2	ICD-10 Proc	Transfuse Allo Rel Hemat Stem Cell in Periph Vein, Perc
	30233Y3	ICD-10 Proc	Transfuse Allo Unr Hemat Stem Cell in Periph Vein, Perc
	30233Y4	ICD-10 Proc	Transfuse Allo Unsp Hemat Stem Cell in Periph Vein, Perc
	30240AZ	ICD-10 Proc	Transfuse of Embr Stem Cell into Central Vein, Open Approach
	30240G0	ICD-10 Proc	Transfuse Autol Bone Marrow in Central Vein, Open
	30240G1	ICD-10 Proc	Transfusion of Nonautologous Bone Marrow into Central Vein O
	30240G2	ICD-10 Proc	Transfuse Allo Rel Bone Marrow in Central Vein, Open
	30240G3	ICD-10 Proc	Transfuse Allo Unr Bone Marrow in Central Vein, Open
	30240G4	ICD-10 Proc	Transfuse Allo Unsp Bone Marrow in Central Vein, Open
	30240X0	ICD-10 Proc	Transfuse Autol Cord Bld Stem Cell in Central Vein, Open
	30240X1	ICD-10 Proc	Transfusion of Nonautologous Cord Blood Stem Cells into Cent
	30240X2	ICD-10 Proc	Transfuse Allo Rel Cord Bld Stem Cell in Central Vein, Open
	30240X3	ICD-10 Proc	Transfuse Allo Unr Cord Bld Stem Cell in Central Vein, Open
	30240X4	ICD-10 Proc	Transfuse Allo Unsp Cord Bld Stem Cell in Central Vein, Open
	30240Y0	ICD-10 Proc	Transfuse Autol Hemat Stem Cell in Central Vein, Open

	30240Y1	ICD-10 Proc	Transfusion of Nonautologous Hematopoietic Stem Cells into C
	30240Y2	ICD-10 Proc	Transfuse Allo Rel Hemat Stem Cell in Central Vein, Open
	30240Y3	ICD-10 Proc	Transfuse Allo Unr Hemat Stem Cell in Central Vein, Open
	30240Y4	ICD-10 Proc	Transfuse Allo Unsp Hemat Stem Cell in Central Vein, Open
	30243AZ	ICD-10 Proc	Transfuse of Embr Stem Cell into Central Vein, Perc Approach
	30243G0	ICD-10 Proc	Transfuse Autol Bone Marrow in Central Vein, Perc
	30243G1	ICD-10 Proc	Transfusion of Nonautologous Bone Marrow into Central Vein P
	30243G2	ICD-10 Proc	Transfuse Allo Rel Bone Marrow in Central Vein, Perc
	30243G3	ICD-10 Proc	Transfuse Allo Unr Bone Marrow in Central Vein, Perc
	30243G4	ICD-10 Proc	Transfuse Allo Unsp Bone Marrow in Central Vein, Perc
	30243X0	ICD-10 Proc	Transfuse Autol Cord Bld Stem Cell in Central Vein, Perc
	30243X1	ICD-10 Proc	Transfusion of Nonautologous Cord Blood Stem Cells into Cent
	30243X2	ICD-10 Proc	Transfuse Allo Rel Cord Bld Stem Cell in Central Vein, Perc
	30243X3	ICD-10 Proc	Transfuse Allo Unr Cord Bld Stem Cell in Central Vein, Perc
	30243X4	ICD-10 Proc	Transfuse Allo Unsp Cord Bld Stem Cell in Central Vein, Perc
	30243Y0	ICD-10 Proc	Transfuse Autol Hemat Stem Cell in Central Vein, Perc
	30243Y1	ICD-10 Proc	Transfusion of Nonautologous Hematopoietic Stem Cells into C
	30243Y2	ICD-10 Proc	Transfuse Allo Rel Hemat Stem Cell in Central Vein, Perc

	30243Y3	ICD-10 Proc	Transfuse Allo Unr Hemat Stem Cell in Central Vein, Perc
	30243Y4	ICD-10 Proc	Transfuse Allo Unsp Hemat Stem Cell in Central Vein, Perc
	30250G0	ICD-10 Proc	Transfuse Autol Bone Marrow in Periph Art, Open
	30250G1	ICD-10 Proc	Transfuse Nonaut Bone Marrow in Periph Art, Open
	30250X0	ICD-10 Proc	Transfuse Autol Cord Bld Stem Cell in Periph Art, Open
	30250X1	ICD-10 Proc	Transfuse Nonaut Cord Bld Stem Cell in Periph Art, Open
	30250Y0	ICD-10 Proc	Transfuse Autol Hemat Stem Cell in Periph Art, Open
	30250Y1	ICD-10 Proc	Transfuse Nonaut Hemat Stem Cell in Periph Art, Open
	30253G0	ICD-10 Proc	Transfuse Autol Bone Marrow in Periph Art, Perc
	30253G1	ICD-10 Proc	Transfuse Nonaut Bone Marrow in Periph Art, Perc
	30253X0	ICD-10 Proc	Transfuse Autol Cord Bld Stem Cell in Periph Art, Perc
	30253X1	ICD-10 Proc	Transfuse Nonaut Cord Bld Stem Cell in Periph Art, Perc
	30253Y0	ICD-10 Proc	Transfuse Autol Hemat Stem Cell in Periph Art, Perc
	30253Y1	ICD-10 Proc	Transfuse Nonaut Hemat Stem Cell in Periph Art, Perc
	30260G0	ICD-10 Proc	Transfuse Autol Bone Marrow in Central Art, Open
	30260G1	ICD-10 Proc	Transfuse Nonaut Bone Marrow in Central Art, Open
	30260X0	ICD-10 Proc	Transfuse Autol Cord Bld Stem Cell in Central Art, Open
	30260X1	ICD-10 Proc	Transfuse Nonaut Cord Bld Stem Cell in Central Art, Open

	30260Y0	ICD-10 Proc	Transfuse Autol Hemat Stem Cell in Central Art, Open
	30260Y1	ICD-10 Proc	Transfuse Nonaut Hemat Stem Cell in Central Art, Open
	30263G0	ICD-10 Proc	Transfuse Autol Bone Marrow in Central Art, Perc
	30263G1	ICD-10 Proc	Transfuse Nonaut Bone Marrow in Central Art, Perc
	30263X0	ICD-10 Proc	Transfuse Autol Cord Bld Stem Cell in Central Art, Perc
	30263X1	ICD-10 Proc	Transfuse Nonaut Cord Bld Stem Cell in Central Art, Perc
	30263Y0	ICD-10 Proc	Transfuse Autol Hemat Stem Cell in Central Art, Perc
	30263Y1	ICD-10 Proc	Transfuse Nonaut Hemat Stem Cell in Central Art, Perc
	0TY00Z0	ICD-10 Proc	Transplantation of Right Kidney, Allogeneic, Open Approach
	0TY00Z1	ICD-10 Proc	Transplantation of Right Kidney, Syngeneic, Open Approach
	0TY00Z2	ICD-10 Proc	Transplantation of Right Kidney, Zooplasic, Open Approach
	0TY10Z0	ICD-10 Proc	Transplantation of Left Kidney, Allogeneic, Open Approach
	0TY10Z1	ICD-10 Proc	Transplantation of Left Kidney, Syngeneic, Open Approach
	0TY10Z2	ICD-10 Proc	Transplantation of Left Kidney, Zooplasic, Open Approach
	02YA0Z0	ICD-10 Proc	Transplantation of Heart, Allogeneic, Open Approach
	02YA0Z1	ICD-10 Proc	Transplantation of Heart, Syngeneic, Open Approach
	02YA0Z2	ICD-10 Proc	Transplantation of Heart, Zooplasic, Open Approach
	07YM0Z0	ICD-10 Proc	Transplantation of Thymus, Allogeneic, Open Approach

	07YM0Z1	ICD-10 Proc	Transplantation of Thymus, Syngeneic, Open Approach
	07YM0Z2	ICD-10 Proc	Transplantation of Thymus, Zooplastic, Open Approach
	07YP0Z0	ICD-10 Proc	Transplantation of Spleen, Allogeneic, Open Approach
	07YP0Z1	ICD-10 Proc	Transplantation of Spleen, Syngeneic, Open Approach
	07YP0Z2	ICD-10 Proc	Transplantation of Spleen, Zooplastic, Open Approach
	0BYC0Z0	ICD-10 Proc	Transplantation of R Up Lung Lobe, Allogen, Open Approach
	0BYC0Z1	ICD-10 Proc	Transplantation of R Up Lung Lobe, Syngen, Open Approach
	0BYC0Z2	ICD-10 Proc	Transplantation of R Up Lung Lobe, Zooplast, Open Approach
	0BYD0Z0	ICD-10 Proc	Transplantation of R Mid Lung Lobe, Allogen, Open Approach
	0BYD0Z1	ICD-10 Proc	Transplantation of R Mid Lung Lobe, Syngen, Open Approach
	0BYD0Z2	ICD-10 Proc	Transplantation of R Mid Lung Lobe, Zooplast, Open Approach
	0BYF0Z0	ICD-10 Proc	Transplantation of R Low Lung Lobe, Allogen, Open Approach
	0BYF0Z1	ICD-10 Proc	Transplantation of R Low Lung Lobe, Syngen, Open Approach
	0BYF0Z2	ICD-10 Proc	Transplantation of R Low Lung Lobe, Zooplast, Open Approach
	0BYG0Z0	ICD-10 Proc	Transplantation of L Up Lung Lobe, Allogen, Open Approach
	0BYG0Z1	ICD-10 Proc	Transplantation of L Up Lung Lobe, Syngen, Open Approach
	0BYG0Z2	ICD-10 Proc	Transplantation of L Up Lung Lobe, Zooplast, Open Approach
	0BYH0Z0	ICD-10 Proc	Transplantation of Lung Lingula, Allogeneic, Open Approach

	0BYH0Z1	ICD-10 Proc	Transplantation of Lung Lingula, Syngeneic, Open Approach
	0BYH0Z2	ICD-10 Proc	Transplantation of Lung Lingula, Zooplastic, Open Approach
	0BYJ0Z0	ICD-10 Proc	Transplantation of L Low Lung Lobe, Allogen, Open Approach
	0BYJ0Z1	ICD-10 Proc	Transplantation of L Low Lung Lobe, Syngen, Open Approach
	0BYJ0Z2	ICD-10 Proc	Transplantation of L Low Lung Lobe, Zooplast, Open Approach
	0BYK0Z0	ICD-10 Proc	Transplantation of Right Lung, Allogeneic, Open Approach
	0BYK0Z1	ICD-10 Proc	Transplantation of Right Lung, Syngeneic, Open Approach
	0BYK0Z2	ICD-10 Proc	Transplantation of Right Lung, Zooplastic, Open Approach
	0BYL0Z0	ICD-10 Proc	Transplantation of Left Lung, Allogeneic, Open Approach
	0BYL0Z1	ICD-10 Proc	Transplantation of Left Lung, Syngeneic, Open Approach
	0BYL0Z2	ICD-10 Proc	Transplantation of Left Lung, Zooplastic, Open Approach
	0BYM0Z0	ICD-10 Proc	Transplantation of Bilateral Lungs, Allogen, Open Approach
	0BYM0Z1	ICD-10 Proc	Transplantation of Bilateral Lungs, Syngeneic, Open Approach
	0BYM0Z2	ICD-10 Proc	Transplantation of Bilateral Lungs, Zooplast, Open Approach
	0DY50Z0	ICD-10 Proc	Transplantation of Esophagus, Allogeneic, Open Approach
	0DY50Z1	ICD-10 Proc	Transplantation of Esophagus, Syngeneic, Open Approach
	0DY50Z2	ICD-10 Proc	Transplantation of Esophagus, Zooplastic, Open Approach
	0DY60Z0	ICD-10 Proc	Transplantation of Stomach, Allogeneic, Open Approach

	0DY60Z1	ICD-10 Proc	Transplantation of Stomach, Syngeneic, Open Approach
	0DY60Z2	ICD-10 Proc	Transplantation of Stomach, Zooplastic, Open Approach
	0DY80Z0	ICD-10 Proc	Transplantation of Small Intestine, Allogeneic, Open Approach
	0DY80Z1	ICD-10 Proc	Transplantation of Small Intestine, Syngeneic, Open Approach
	0DY80Z2	ICD-10 Proc	Transplantation of Small Intestine, Zooplast, Open Approach
	0DYE0Z0	ICD-10 Proc	Transplantation of Large Intestine, Allogeneic, Open Approach
	0DYE0Z1	ICD-10 Proc	Transplantation of Large Intestine, Syngeneic, Open Approach
	0DYE0Z2	ICD-10 Proc	Transplantation of Large Intestine, Zooplast, Open Approach
	0FY00Z0	ICD-10 Proc	Transplantation of Liver, Allogeneic, Open Approach
	0FY00Z1	ICD-10 Proc	Transplantation of Liver, Syngeneic, Open Approach
	0FY00Z2	ICD-10 Proc	Transplantation of Liver, Zooplastic, Open Approach
	0FYG0Z0	ICD-10 Proc	Transplantation of Pancreas, Allogeneic, Open Approach
	0FYG0Z1	ICD-10 Proc	Transplantation of Pancreas, Syngeneic, Open Approach
	0FYG0Z2	ICD-10 Proc	Transplantation of Pancreas, Zooplastic, Open Approach
	0UY00Z0	ICD-10 Proc	Transplantation of Right Ovary, Allogeneic, Open Approach
	0UY00Z1	ICD-10 Proc	Transplantation of Right Ovary, Syngeneic, Open Approach
	0UY00Z2	ICD-10 Proc	Transplantation of Right Ovary, Zooplastic, Open Approach
	0UY10Z0	ICD-10 Proc	Transplantation of Left Ovary, Allogeneic, Open Approach

	0UY10Z1	ICD-10 Proc	Transplantation of Left Ovary, Syngeneic, Open Approach
	0UY10Z2	ICD-10 Proc	Transplantation of Left Ovary, Zooplasic, Open Approach
	0UY90Z0	ICD-10 Proc	Transplantation of Uterus, Allogeneic, Open Approach
	0UY90Z1	ICD-10 Proc	Transplantation of Uterus, Syngeneic, Open Approach
	0UY90Z2	ICD-10 Proc	Transplantation of Uterus, Zooplasic, Open Approach
	0WY20Z0	ICD-10 Proc	Transplantation of Face, Allogeneic, Open Approach
	0WY20Z1	ICD-10 Proc	Transplantation of Face, Syngeneic, Open Approach
	0XYJ0Z0	ICD-10 Proc	Transplantation of Right Hand, Allogeneic, Open Approach
	0XYJ0Z1	ICD-10 Proc	Transplantation of Right Hand, Syngeneic, Open Approach
	0XYK0Z0	ICD-10 Proc	Transplantation of Left Hand, Allogeneic, Open Approach
	0XYK0Z1	ICD-10 Proc	Transplantation of Left Hand, Syngeneic, Open Approach
	3E030U0	ICD-10 Proc	Introduce Autol Pancr Islet in Periph Vein, Open
	3E030U1	ICD-10 Proc	Introduce Nonaut Pancr Islet in Periph Vein, Open
	3E033U0	ICD-10 Proc	Introduce Autol Pancr Islet in Periph Vein, Perc
	3E033U1	ICD-10 Proc	Introduce Nonaut Pancr Islet in Periph Vein, Perc
	3E0J3U0	ICD-10 Proc	Introduce Autol Pancr Islet in Bil/Panc Tract, Perc
	3E0J3U1	ICD-10 Proc	Introduce Nonaut Pancr Islet in Bil/Panc Tract, Perc
	3E0J7U0	ICD-10 Proc	Introduce Autol Pancr Islet in Bil/Panc Tract, Via Opening

	3E0J7U1	ICD-10 Proc	Introduce Nonaut Pancr Islet in Bil/Panc Tract, Via Opening
	3E0J8U0	ICD-10 Proc	Introduction of Autol Pancr Islet into Bil/Panc Tract, Endo
	3E0J8U1	ICD-10 Proc	Introduction of Nonaut Pancr Islet into Bil/Panc Tract, Endo
	V580	ICD-9 Dx	RADIOTHERAPY ENCOUNTER
	V581	ICD-9 Dx	CHEMOTHERAPY ENCOUNTER (End 2005)
	V5811	ICD-9 Dx	ANTINEOPLASTIC CHEMO ENC (Begin 2005)
	V5812	ICD-9 Dx	IMMUNOTHERAPY ENCOUNTER (Begin 2005)
	V661	ICD-9 Dx	RADIOTHERAPY CONVALESCEN
	V662	ICD-9 Dx	CHEMOTHERAPY CONVALESCEN
	V671	ICD-9 Dx	RADIOTHERAPY FOLLOW-UP
	V672	ICD-9 Dx	CHEMOTHERAPY FOLLOW-UP
	V520	ICD-9 Dx	FITTING ARTIFICIAL ARM
	V521	ICD-9 Dx	FITTING ARTIFICIAL LEG
	V524	ICD-9 Dx	FITTING BREAST PROSTHES
	V528	ICD-9 Dx	FITTING PROSTHESIS NEC
	V529	ICD-9 Dx	FITTING PROSTHESIS NOS
	V538	ICD-9 Dx	ADJUSTMENT OF WHEELCHAIR
	V570	ICD-9 Dx	BREATHING EXERCISES

	V571	ICD-9 Dx	PHYSICAL THERAPY NEC
	V572	ICD-9 Dx	OCCUPAT/VOCATION THERAPY (End 1994)
	V5721	ICD-9 Dx	OCCUP THER ENCOUNTER (Begin 1994)
	V5722	ICD-9 Dx	VOCATIONAL THER ENCOUNTER (Begin 1994)
	V573	ICD-9 Dx	SPEECH THERAPY
	V574	ICD-9 Dx	ORTHOPTIC TRAINING
	V5781	ICD-9 Dx	ORTHOTIC TRAINING
	V5789	ICD-9 Dx	REHABILITATION PROC NEC
	V579	ICD-9 Dx	REHABILITATION PROC NOS
	V5882	ICD-9 Dx	FIT ADJUST NONVASC CATH (Begin 1995)
	410	ICD-9 Proc	BONE MARROW TRNSPLNT (Begin 1980 End 1988)
	4100	ICD-9 Proc	BONE MARROW TRNSPLNT NOS (Begin 1988)
	4101	ICD-9 Proc	AUT BONE MARROW TRNSPLNT (Begin 1988)
	4102	ICD-9 Proc	ALO BONE MARROW TRNSPLNT (Begin 1988)
	4103	ICD-9 Proc	ALLOGRFT BONE MARROW NOS (Begin 1988)
	4104	ICD-9 Proc	AUTOL HEMATOPO STEM CELL TRANSPLNT (Begin 1994)
	4105	ICD-9 Proc	ALLOGEN HEMATO STEM CELL TRANS (Begin 1997)
	4106	ICD-9 Proc	CORD BLOOD STEM CELL TRANS (Begin 1997)

	4107	ICD-9 Proc	AUTOL HEMAT STEM CELL TRANS W/PURGING (Begin 2000)
	4108	ICD-9 Proc	ALLOGEN HEMAT STEM CELL TRANS W/PURGING (Begin 2000)
	4109	ICD-9 Proc	AUTOL BONE MARROW TRANS W/PURGING (Begin 2000)
	5561	ICD-9 Proc	RENAL AUTOTRANSPLANT
	5569	ICD-9 Proc	KIDNEY TRANSPLANT NEC
	335	ICD-9 Proc	LUNG TRANSPLANT (End 1995)
	3350	ICD-9 Proc	LUNG TRANSPL NOS (Begin 1995)
	3351	ICD-9 Proc	UNILAT LUNG TRANSPL (Begin 1995)
	3352	ICD-9 Proc	BILAT LUNG TRANSPL (Begin 1995)
	336	ICD-9 Proc	COMB HEART/LUNG TRANSPLA (Begin 1990)
	375	ICD-9 Proc	HEART TRANSPLANTATION (End 2003)
	3751	ICD-9 Proc	HEART TRANSPLANTATION (Begin 2003)
	4194	ICD-9 Proc	SPLEEN TRANSPLANTATION
	4697	ICD-9 Proc	TRANSPLANT OF INTESTINE (Begin 2000)
	5051	ICD-9 Proc	AUXILIARY LIVER TRANSPL
	5059	ICD-9 Proc	LIVER TRANSPLANT NEC
	5280	ICD-9 Proc	PANCREAT TRANSPLANT NOS
	5281	ICD-9 Proc	REIMPLANT PANCREATIC TIS

	5282	ICD-9 Proc	PANCREATIC HOMOTRANSPLAN
	5283	ICD-9 Proc	PANCREATIC HETEROTRANSPL
	5284	ICD-9 Proc	AUTOTRANS ISLET CELLS (Begin 1996)
	5285	ICD-9 Proc	ALLOTTRANS ISLET CELLS (Begin 1996)
	5286	ICD-9 Proc	TRANSPL ISLET CELLS NOS (Begin 1996)
Allergic rhinitis	477	ICD-9 Dx	Allergic rhinitis
	477.0	ICD-9 Dx	Allergic rhinitis due to pollen
	477.1	ICD-9 Dx	Allergic rhinitis, due to food
	477.2	ICD-9 Dx	Allergic rhinitis due to animal (cat) (dog) hair and dander
	477.8	ICD-9 Dx	Allergic rhinitis due to other allergen
	477.9	ICD-9 Dx	Allergic rhinitis, cause unspecified
	J30	ICD-10 Dx	Vasomotor and allergic rhinitis
	J300	ICD-10 Dx	Vasomotor rhinitis
	J301	ICD-10 Dx	Allergic rhinitis due to pollen
	J302	ICD-10 Dx	Other seasonal allergic rhinitis
	J305	ICD-10 Dx	Allergic rhinitis due to food
	J3081	ICD-10 Dx	Allergic rhinitis due to animal (cat) (dog) hair and dander
	J3089	ICD-10 Dx	Other allergic rhinitis

	J309	ICD-10 Dx	Allergic rhinitis, unspecified
Anxiety (narrow)	293.84	ICD-9 Dx	Anxiety disorder in conditions classified elsewhere
	300.00	ICD-9 Dx	Anxiety state, unspecified
	300.02	ICD-9 Dx	Generalized anxiety disorder
	300.09	ICD-9 Dx	Other anxiety states
	F064	ICD-10 Dx	Anxiety disorder due to known physiological condition
	F411	ICD-10 Dx	Generalized anxiety disorder
	F413	ICD-10 Dx	Other mixed anxiety disorders
	F418	ICD-10 Dx	Other specified anxiety disorders
	F419	ICD-10 Dx	Anxiety disorder, unspecified
	F940	ICD-10 Dx	Selective mutism
Anxiety (broad)	293.84	ICD-9 Dx	Anxiety disorder in conditions classified elsewhere
	300.00	ICD-9 Dx	Anxiety state, unspecified
	300.02	ICD-9 Dx	Generalized anxiety disorder
	300.09	ICD-9 Dx	Other anxiety states
	300.01	ICD-9 Dx	Panic Disorder without Agoraphobia
	300.20	ICD-9 Dx	Phobia, unspecified
	300.21	ICD-9 Dx	Agoraphobia with panic disorder

	300.22	ICD-9 Dx	Agoraphobia without mention of panic attacks
	300.23	ICD-9 Dx	Social phobia
	300.29	ICD-9 Dx	Other isolated or specific phobias
	309.21	ICD-9 Dx	Separation anxiety disorder
	313.23	ICD-9 Dx	Selective mutism
	F10180	ICD-10 Dx	Alcohol abuse with alcohol-induced anxiety disorder
	F10280	ICD-10 Dx	Alcohol dependence with alcohol-induced anxiety disorder
	F10980	ICD-10 Dx	Alcohol use, unspecified with alcohol-induced anxiety disorder
	F12180	ICD-10 Dx	Cannabis abuse with cannabis-induced anxiety disorder
	F12280	ICD-10 Dx	Cannabis dependence with cannabis-induced anxiety disorder
	F12980	ICD-10 Dx	Cannabis use, unspecified with anxiety disorder
	F13180	ICD-10 Dx	Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced anxiety disorder
	F13280	ICD-10 Dx	Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced anxiety disorder
	F13980	ICD-10 Dx	Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced anxiety disorder
	F14180	ICD-10 Dx	Cocaine abuse with cocaine-induced anxiety disorder
	F14280	ICD-10 Dx	Cocaine dependence with cocaine-induced anxiety disorder
	F14980	ICD-10 Dx	Cocaine use, unspecified with cocaine-induced anxiety disorder

	F15180	ICD-10 Dx	Other stimulant abuse with stimulant-induced anxiety disorder
	F15280	ICD-10 Dx	Other stimulant dependence with stimulant-induced anxiety disorder
	F15980	ICD-10 Dx	Other stimulant use, unspecified with stimulant-induced anxiety disorder
	F16180	ICD-10 Dx	Hallucinogen abuse with hallucinogen-induced anxiety disorder
	F16280	ICD-10 Dx	Hallucinogen dependence with hallucinogen-induced anxiety disorder
	F16980	ICD-10 Dx	Hallucinogen use, unspecified with hallucinogen-induced anxiety disorder
	F18180	ICD-10 Dx	Inhalant abuse with inhalant-induced anxiety disorder
	F18280	ICD-10 Dx	Inhalant dependence with inhalant-induced anxiety disorder
	F18980	ICD-10 Dx	Inhalant use, unspecified with inhalant-induced anxiety disorder
	F19180	ICD-10 Dx	Other psychoactive substance abuse with psychoactive substance-induced anxiety disorder
	F19280	ICD-10 Dx	Other psychoactive substance dependence with psychoactive substance-induced anxiety disorder
	F19980	ICD-10 Dx	Other psychoactive substance use, unspecified with psychoactive substance-induced anxiety disorder
	F4000	ICD-10 Dx	Agoraphobia, unspecified
	F4001	ICD-10 Dx	Agoraphobia with panic disorder
	F4002	ICD-10 Dx	Agoraphobia without panic disorder
	F4010	ICD-10 Dx	Social phobia, unspecified
	F4011	ICD-10 Dx	Social phobia, generalized
	F40210	ICD-10 Dx	Arachnophobia

	F40218	ICD-10 Dx	Other animal type phobia
	F40220	ICD-10 Dx	Fear of thunderstorms
	F40228	ICD-10 Dx	Other natural environment type phobia
	F40230	ICD-10 Dx	Fear of blood
	F40231	ICD-10 Dx	Fear of injections and transfusions
	F40232	ICD-10 Dx	Fear of other medical care
	F40233	ICD-10 Dx	Fear of injury
	F40240	ICD-10 Dx	Claustrophobia
	F40241	ICD-10 Dx	Acrophobia
	F40242	ICD-10 Dx	Fear of bridges
	F40243	ICD-10 Dx	Fear of flying
	F40248	ICD-10 Dx	Other situational type phobia
	F40290	ICD-10 Dx	Androphobia
	F40291	ICD-10 Dx	Gynephobia
	F40298	ICD-10 Dx	Other specified phobia
	F408	ICD-10 Dx	Other phobic anxiety disorders
	F409	ICD-10 Dx	Phobic anxiety disorder, unspecified
	F410	ICD-10 Dx	Panic disorder [episodic paroxysmal anxiety] without agoraphobia

	F930	ICD-10 Dx	Separation anxiety disorder of childhood
	F064	ICD-10 Dx	Anxiety disorder due to known physiological condition
	F411	ICD-10 Dx	Generalized anxiety disorder
	F413	ICD-10 Dx	Other mixed anxiety disorders
	F418	ICD-10 Dx	Other specified anxiety disorders
	F419	ICD-10 Dx	Anxiety disorder, unspecified
	F940	ICD-10 Dx	Selective mutism
Arrhythmia	427.2	ICD-9 Dx	Unspecified paroxysmal tachycardia
	427.31	ICD-9 Dx	Atrial fibrillation
	427.9	ICD-9 Dx	Unspecified cardiac dysrhythmia
	427.0	ICD-9 Dx	Paroxysmal supraventricular tachycardia
	427.60	ICD-9 Dx	Unspecified premature beats
	427.1	ICD-9 Dx	Paroxysmal ventricular tachycardia
	427.32	ICD-9 Dx	Atrial flutter
	427.41	ICD-9 Dx	Ventricular fibrillation
	427.42	ICD-9 Dx	Ventricular flutter
	427.5	ICD-9 Dx	Cardiac arrest
	427.81	ICD-9 Dx	Sinoatrial node dysfunction

	427.89	ICD-9 Dx	Other specified cardiac dysrhythmias
	I471	ICD-10 Dx	Supraventricular tachycardia
	I479	ICD-10 Dx	Paroxysmal tachycardia, unspecified
	I480	ICD-10 Dx	Paroxysmal atrial fibrillation
	I482	ICD-10 Dx	Chronic atrial fibrillation
	I4891	ICD-10 Dx	Unspecified atrial fibrillation
	I492	ICD-10 Dx	Junctional premature depolarization
	I4940	ICD-10 Dx	Unspecified premature depolarization
	I499	ICD-10 Dx	Cardiac arrhythmia, unspecified
	I462	ICD-10 Dx	Cardiac arrest due to underlying cardiac condition
	I468	ICD-10 Dx	Cardiac arrest due to other underlying condition
	I469	ICD-10 Dx	Cardiac arrest, cause unspecified
	I470	ICD-10 Dx	Re-entry ventricular arrhythmia
	I471	ICD-10 Dx	Supraventricular tachycardia
	I472	ICD-10 Dx	Ventricular tachycardia
	I479	ICD-10 Dx	Paroxysmal tachycardia, unspecified
	I480	ICD-10 Dx	Paroxysmal atrial fibrillation
	I481	ICD-10 Dx	Persistent atrial fibrillation

	I482	ICD-10 Dx	Chronic atrial fibrillation
	I483	ICD-10 Dx	Typical atrial flutter
	I484	ICD-10 Dx	Atypical atrial flutter
	I4891	ICD-10 Dx	Unspecified atrial fibrillation
	I4892	ICD-10 Dx	Unspecified atrial flutter
	I4901	ICD-10 Dx	Ventricular fibrillation
	I4902	ICD-10 Dx	Ventricular flutter
	I491	ICD-10 Dx	Atrial premature depolarization
	I492	ICD-10 Dx	Junctional premature depolarization
	I493	ICD-10 Dx	Ventricular premature depolarization
	I4940	ICD-10 Dx	Unspecified premature depolarization
	I4949	ICD-10 Dx	Other premature depolarization
	I495	ICD-10 Dx	Sick sinus syndrome
	I498	ICD-10 Dx	Other specified cardiac arrhythmias
	I499	ICD-10 Dx	Cardiac arrhythmia, unspecified
Atrial fibrillation (narrow)	427.31	ICD-9 Dx	Atrial fibrillation
	I480	ICD-10 Dx	Paroxysmal atrial fibrillation
	I481	ICD-10 Dx	Persistent atrial fibrillation

	I482	ICD-10 Dx	Chronic atrial fibrillation
	I4891	ICD-10 Dx	Unspecified atrial fibrillation
Atrial fibrillation (broad)	427.31	ICD-9 Dx	Atrial fibrillation
	427.32	ICD-9 Dx	Atrial flutter
	I480	ICD-10 Dx	Paroxysmal atrial fibrillation
	I481	ICD-10 Dx	Persistent atrial fibrillation
	I482	ICD-10 Dx	Chronic atrial fibrillation
	I483	ICD-10 Dx	Typical atrial flutter
	I484	ICD-10 Dx	Atypical atrial flutter
	I4891	ICD-10 Dx	Unspecified atrial fibrillation
	I4892	ICD-10 Dx	Unspecified atrial flutter
Acute sinusitis	461	ICD-9 Dx	Acute sinusitis
	461.0	ICD-9 Dx	Acute maxillary sinusitis
	461.1	ICD-9 Dx	Acute frontal sinusitis
	461.2	ICD-9 Dx	Acute ethmoidal sinusitis
	461.3	ICD-9 Dx	Acute sphenoidal sinusitis
	461.8	ICD-9 Dx	Other acute sinusitis
	461.9	ICD-9 Dx	Acute sinusitis, unspecified

	J01	ICD-10 Dx	Acute sinusitis
	J010	ICD-10 Dx	Acute maxillary sinusitis
	J0100	ICD-10 Dx	Acute maxillary sinusitis, unspecified
	J0101	ICD-10 Dx	Acute recurrent maxillary sinusitis
	J011	ICD-10 Dx	Acute frontal sinusitis
	J0110	ICD-10 Dx	Acute frontal sinusitis, unspecified
	J0111	ICD-10 Dx	Acute recurrent frontal sinusitis
	J012	ICD-10 Dx	Acute ethmoidal sinusitis
	J0120	ICD-10 Dx	Acute ethmoidal sinusitis, unspecified
	J0121	ICD-10 Dx	Acute recurrent ethmoidal sinusitis
	J013	ICD-10 Dx	Acute sphenoidal sinusitis
	J0130	ICD-10 Dx	Acute sphenoidal sinusitis, unspecified
	J0131	ICD-10 Dx	Acute recurrent sphenoidal sinusitis
	J014	ICD-10 Dx	Acute pansinusitis
	J0140	ICD-10 Dx	Acute pansinusitis, unspecified
	J0141	ICD-10 Dx	Acute recurrent pansinusitis
	J018	ICD-10 Dx	Other acute sinusitis
	J0180	ICD-10 Dx	Other acute sinusitis, unspecified

	J0181	ICD-10 Dx	Other acute recurrent sinusitis
	J019	ICD-10 Dx	Acute sinusitis, unspecified
	J0190	ICD-10 Dx	Acute sinusitis, unspecified
	J0191	ICD-10 Dx	Acute recurrent sinusitis, unspecified
Candidiasis	B370	ICD-10 Dx	Candidal stomatitis
	B371	ICD-10 Dx	Pulmonary candidiasis
	B372	ICD-10 Dx	Candidiasis of skin and nail
	B373	ICD-10 Dx	Candidiasis of vulva and vagina
	B3741	ICD-10 Dx	Candidal cystitis and urethritis
	B3742	ICD-10 Dx	Candidal balanitis
	B3749	ICD-10 Dx	Other urogenital candidiasis
	B375	ICD-10 Dx	Candidal meningitis
	B376	ICD-10 Dx	Candidal endocarditis
	B377	ICD-10 Dx	Candidal sepsis
	B3781	ICD-10 Dx	Candidal esophagitis
	B3782	ICD-10 Dx	Candidal enteritis
	B3783	ICD-10 Dx	Candidal cheilitis
	B3784	ICD-10 Dx	Candidal otitis externa

	B3789	ICD-10 Dx	Other sites of candidiasis
	B379	ICD-10 Dx	Candidiasis, unspecified
	112.0	ICD-9 Dx	Candidiasis of mouth
	112.1	ICD-9 Dx	Candidiasis of vulva and vagina
	112.2	ICD-9 Dx	Candidiasis of other urogenital sites
	112.3	ICD-9 Dx	Candidiasis of skin and nails
	112.4	ICD-9 Dx	Candidiasis of lung
	112.5	ICD-9 Dx	Disseminated candidiasis
	112.81	ICD-9 Dx	Candidal endocarditis
	112.82	ICD-9 Dx	Candidal otitis externa
	112.83	ICD-9 Dx	Candidal meningitis
	112.84	ICD-9 Dx	Candidiasis of the esophagus
	112.85	ICD-9 Dx	Candidiasis of the intestine
	112.89	ICD-9 Dx	Other candidiasis of other specified sites
	112.9	ICD-9 Dx	Candidiasis of unspecified site
Cataracts	E0836	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic cataract
	E0936	ICD-10 Dx	Drug or chemical induced diabetes mellitus with diabetic cataract
	E1036	ICD-10 Dx	Type 1 diabetes mellitus with diabetic cataract

	E1136	ICD-10 Dx	Type 2 diabetes mellitus with diabetic cataract
	E1336	ICD-10 Dx	Other specified diabetes mellitus with diabetic cataract
	H25011	ICD-10 Dx	Cortical age-related cataract, right eye
	H25012	ICD-10 Dx	Cortical age-related cataract, left eye
	H25013	ICD-10 Dx	Cortical age-related cataract, bilateral
	H25019	ICD-10 Dx	Cortical age-related cataract, unspecified eye
	H25031	ICD-10 Dx	Anterior subcapsular polar age-related cataract, right eye
	H25032	ICD-10 Dx	Anterior subcapsular polar age-related cataract, left eye
	H25033	ICD-10 Dx	Anterior subcapsular polar age-related cataract, bilateral
	H25039	ICD-10 Dx	Anterior subcapsular polar age-related cataract, unspecified eye
	H25041	ICD-10 Dx	Posterior subcapsular polar age-related cataract, right eye
	H25042	ICD-10 Dx	Posterior subcapsular polar age-related cataract, left eye
	H25043	ICD-10 Dx	Posterior subcapsular polar age-related cataract, bilateral
	H25049	ICD-10 Dx	Posterior subcapsular polar age-related cataract, unspecified eye
	H25091	ICD-10 Dx	Other age-related incipient cataract, right eye
	H25092	ICD-10 Dx	Other age-related incipient cataract, left eye
	H25093	ICD-10 Dx	Other age-related incipient cataract, bilateral
	H25099	ICD-10 Dx	Other age-related incipient cataract, unspecified eye

	H2510	ICD-10 Dx	Age-related nuclear cataract, unspecified eye
	H2511	ICD-10 Dx	Age-related nuclear cataract, right eye
	H2512	ICD-10 Dx	Age-related nuclear cataract, left eye
	H2513	ICD-10 Dx	Age-related nuclear cataract, bilateral
	H2520	ICD-10 Dx	Age-related cataract, morgagnian type, unspecified eye
	H2521	ICD-10 Dx	Age-related cataract, morgagnian type, right eye
	H2522	ICD-10 Dx	Age-related cataract, morgagnian type, left eye
	H2523	ICD-10 Dx	Age-related cataract, morgagnian type, bilateral
	H25811	ICD-10 Dx	Combined forms of age-related cataract, right eye
	H25812	ICD-10 Dx	Combined forms of age-related cataract, left eye
	H25813	ICD-10 Dx	Combined forms of age-related cataract, bilateral
	H25819	ICD-10 Dx	Combined forms of age-related cataract, unspecified eye
	H2589	ICD-10 Dx	Other age-related cataract
	H259	ICD-10 Dx	Unspecified age-related cataract
	H26001	ICD-10 Dx	Unspecified infantile and juvenile cataract, right eye
	H26002	ICD-10 Dx	Unspecified infantile and juvenile cataract, left eye
	H26003	ICD-10 Dx	Unspecified infantile and juvenile cataract, bilateral
	H26009	ICD-10 Dx	Unspecified infantile and juvenile cataract, unspecified eye

	H26011	ICD-10 Dx	Infantile and juvenile cortical, lamellar, or zonular cataract, right eye
	H26012	ICD-10 Dx	Infantile and juvenile cortical, lamellar, or zonular cataract, left eye
	H26013	ICD-10 Dx	Infantile and juvenile cortical, lamellar, or zonular cataract, bilateral
	H26019	ICD-10 Dx	Infantile and juvenile cortical, lamellar, or zonular cataract, unspecified eye
	H26031	ICD-10 Dx	Infantile and juvenile nuclear cataract, right eye
	H26032	ICD-10 Dx	Infantile and juvenile nuclear cataract, left eye
	H26033	ICD-10 Dx	Infantile and juvenile nuclear cataract, bilateral
	H26039	ICD-10 Dx	Infantile and juvenile nuclear cataract, unspecified eye
	H26041	ICD-10 Dx	Anterior subcapsular polar infantile and juvenile cataract, right eye
	H26042	ICD-10 Dx	Anterior subcapsular polar infantile and juvenile cataract, left eye
	H26043	ICD-10 Dx	Anterior subcapsular polar infantile and juvenile cataract, bilateral
	H26049	ICD-10 Dx	Anterior subcapsular polar infantile and juvenile cataract, unspecified eye
	H26051	ICD-10 Dx	Posterior subcapsular polar infantile and juvenile cataract, right eye
	H26052	ICD-10 Dx	Posterior subcapsular polar infantile and juvenile cataract, left eye
	H26053	ICD-10 Dx	Posterior subcapsular polar infantile and juvenile cataract, bilateral
	H26059	ICD-10 Dx	Posterior subcapsular polar infantile and juvenile cataract, unspecified eye
	H26061	ICD-10 Dx	Combined forms of infantile and juvenile cataract, right eye
	H26062	ICD-10 Dx	Combined forms of infantile and juvenile cataract, left eye

	H26063	ICD-10 Dx	Combined forms of infantile and juvenile cataract, bilateral
	H26069	ICD-10 Dx	Combined forms of infantile and juvenile cataract, unspecified eye
	H2609	ICD-10 Dx	Other infantile and juvenile cataract
	H26101	ICD-10 Dx	Unspecified traumatic cataract, right eye
	H26102	ICD-10 Dx	Unspecified traumatic cataract, left eye
	H26103	ICD-10 Dx	Unspecified traumatic cataract, bilateral
	H26109	ICD-10 Dx	Unspecified traumatic cataract, unspecified eye
	H26121	ICD-10 Dx	Partially resolved traumatic cataract, right eye
	H26122	ICD-10 Dx	Partially resolved traumatic cataract, left eye
	H26123	ICD-10 Dx	Partially resolved traumatic cataract, bilateral
	H26129	ICD-10 Dx	Partially resolved traumatic cataract, unspecified eye
	H26131	ICD-10 Dx	Total traumatic cataract, right eye
	H26132	ICD-10 Dx	Total traumatic cataract, left eye
	H26133	ICD-10 Dx	Total traumatic cataract, bilateral
	H26139	ICD-10 Dx	Total traumatic cataract, unspecified eye
	H2620	ICD-10 Dx	Unspecified complicated cataract
	H26211	ICD-10 Dx	Cataract with neovascularization, right eye
	H26212	ICD-10 Dx	Cataract with neovascularization, left eye

	H26213	ICD-10 Dx	Cataract with neovascularization, bilateral
	H26219	ICD-10 Dx	Cataract with neovascularization, unspecified eye
	H26221	ICD-10 Dx	Cataract secondary to ocular disorders (degenerative) (inflammatory), right eye
	H26222	ICD-10 Dx	Cataract secondary to ocular disorders (degenerative) (inflammatory), left eye
	H26223	ICD-10 Dx	Cataract secondary to ocular disorders (degenerative) (inflammatory), bilateral
	H26229	ICD-10 Dx	Cataract secondary to ocular disorders (degenerative) (inflammatory), unspecified eye
	H2630	ICD-10 Dx	Drug-induced cataract, unspecified eye
	H2631	ICD-10 Dx	Drug-induced cataract, right eye
	H2632	ICD-10 Dx	Drug-induced cataract, left eye
	H2633	ICD-10 Dx	Drug-induced cataract, bilateral
	H2640	ICD-10 Dx	Unspecified secondary cataract
	H26491	ICD-10 Dx	Other secondary cataract, right eye
	H26492	ICD-10 Dx	Other secondary cataract, left eye
	H26493	ICD-10 Dx	Other secondary cataract, bilateral
	H26499	ICD-10 Dx	Other secondary cataract, unspecified eye
	H268	ICD-10 Dx	Other specified cataract
	H269	ICD-10 Dx	Unspecified cataract
	H28	ICD-10 Dx	Cataract in diseases classified elsewhere

	H59011	ICD-10 Dx	Keratopathy (bullous aphakic) following cataract surgery, right eye
	H59012	ICD-10 Dx	Keratopathy (bullous aphakic) following cataract surgery, left eye
	H59013	ICD-10 Dx	Keratopathy (bullous aphakic) following cataract surgery, bilateral
	H59019	ICD-10 Dx	Keratopathy (bullous aphakic) following cataract surgery, unspecified eye
	H59021	ICD-10 Dx	Cataract (lens) fragments in eye following cataract surgery, right eye
	H59022	ICD-10 Dx	Cataract (lens) fragments in eye following cataract surgery, left eye
	H59023	ICD-10 Dx	Cataract (lens) fragments in eye following cataract surgery, bilateral
	H59029	ICD-10 Dx	Cataract (lens) fragments in eye following cataract surgery, unspecified eye
	H59031	ICD-10 Dx	Cystoid macular edema following cataract surgery, right eye
	H59032	ICD-10 Dx	Cystoid macular edema following cataract surgery, left eye
	H59033	ICD-10 Dx	Cystoid macular edema following cataract surgery, bilateral
	H59039	ICD-10 Dx	Cystoid macular edema following cataract surgery, unspecified eye
	H59091	ICD-10 Dx	Other disorders of the right eye following cataract surgery
	H59092	ICD-10 Dx	Other disorders of the left eye following cataract surgery
	H59093	ICD-10 Dx	Other disorders of the eye following cataract surgery, bilateral
	H59099	ICD-10 Dx	Other disorders of unspecified eye following cataract surgery
	Q120	ICD-10 Dx	Congenital cataract
	Z9841	ICD-10 Dx	Cataract extraction status, right eye

	Z9842	ICD-10 Dx	Cataract extraction status, left eye
	Z9849	ICD-10 Dx	Cataract extraction status, unspecified eye
	366.00	ICD-9 Dx	Unspecified nonsenile cataract
	366.01	ICD-9 Dx	Anterior subcapsular polar cataract, nonsenile
	366.02	ICD-9 Dx	Posterior subcapsular polar cataract, nonsenile
	366.03	ICD-9 Dx	Cortical, lamellar, or zonular cataract, nonsenile
	366.04	ICD-9 Dx	Nuclear cataract, nonsenile
	366.09	ICD-9 Dx	Other and combined forms of nonsenile cataract
	366.10	ICD-9 Dx	Unspecified senile cataract
	366.12	ICD-9 Dx	Incipient cataract
	366.13	ICD-9 Dx	Anterior subcapsular polar senile cataract
	366.14	ICD-9 Dx	Posterior subcapsular polar senile cataract
	366.15	ICD-9 Dx	Cortical senile cataract
	366.17	ICD-9 Dx	Total or mature senile cataract
	366.18	ICD-9 Dx	Hypermaturation senile cataract
	366.19	ICD-9 Dx	Other and combined forms of senile cataract
	366.20	ICD-9 Dx	Unspecified traumatic cataract
	366.21	ICD-9 Dx	Localized traumatic opacities of cataract

	366.22	ICD-9 Dx	Total traumatic cataract
	366.23	ICD-9 Dx	Partially resolved traumatic cataract
	366.30	ICD-9 Dx	Unspecified cataracta complicata
	366.31	ICD-9 Dx	Cataract secondary to glaucomatous flecks (subcapsular)
	366.32	ICD-9 Dx	Cataract in inflammatory ocular disorders
	366.33	ICD-9 Dx	Cataract with ocular neovascularization
	366.34	ICD-9 Dx	Cataract in degenerative ocular disorders
	366.41	ICD-9 Dx	Diabetic cataract
	366.42	ICD-9 Dx	Tetanic cataract
	366.43	ICD-9 Dx	Myotonic cataract
	366.44	ICD-9 Dx	Cataract associated with other syndromes
	366.45	ICD-9 Dx	Toxic cataract
	366.46	ICD-9 Dx	Cataract associated with radiation and other physical influences
	366.50	ICD-9 Dx	Unspecified after-cataract
	366.52	ICD-9 Dx	Other after-cataract, not obscuring vision
	366.53	ICD-9 Dx	After-cataract, obscuring vision
	366.8	ICD-9 Dx	Other cataract
	366.9	ICD-9 Dx	Unspecified cataract

	743.30	ICD-9 Dx	Unspecified congenital cataract
	743.31	ICD-9 Dx	Congenital capsular and subcapsular cataract
	743.32	ICD-9 Dx	Congenital cortical and zonular cataract
	743.33	ICD-9 Dx	Congenital nuclear cataract
	743.34	ICD-9 Dx	Congenital total and subtotal cataract
	743.39	ICD-9 Dx	Other congenital cataract and lens anomalies
	998.82	ICD-9 Dx	Cataract fragments in eye following surgery
	V45.61	ICD-9 Dx	Cataract extraction status
Chronic sinusitis	473	ICD-9 Dx	Chronic sinusitis
	473.0	ICD-9 Dx	Maxillary chronic sinusitis
	473.1	ICD-9 Dx	Frontal chronic sinusitis
	473.2	ICD-9 Dx	Ethmoidal chronic sinusitis
	473.3	ICD-9 Dx	Sphenoidal chronic sinusitis
	473.8	ICD-9 Dx	Other chronic sinusitis
	473.9	ICD-9 Dx	Unspecified sinusitis (chronic)
	J32	ICD-10 Dx	Chronic sinusitis
	J320	ICD-10 Dx	Chronic maxillary sinusitis
	J321	ICD-10 Dx	Chronic frontal sinusitis

	J322	ICD-10 Dx	Chronic ethmoidal sinusitis
	J323	ICD-10 Dx	Chronic sphenoidal sinusitis
	J324	ICD-10 Dx	Chronic pansinusitis
	J328	ICD-10 Dx	Other chronic sinusitis
	J329	ICD-10 Dx	Chronic sinusitis, unspecified
Chronic rhinitis	472.0	ICD-9 Dx	Chronic rhinitis
	J310	ICD-10 Dx	Chronic rhinitis
Heart failure	428	ICD-9 Dx	Heart failure
	428.1	ICD-9 Dx	Left heart failure
	428.21	ICD-9 Dx	Acute systolic heart failure
	428.22	ICD-9 Dx	Chronic systolic heart failure
	428.23	ICD-9 Dx	Acute on chronic systolic heart failure
	428.31	ICD-9 Dx	Acute diastolic heart failure
	428.32	ICD-9 Dx	Chronic diastolic heart failure
	428.33	ICD-9 Dx	Acute on chronic diastolic heart failure
	428.41	ICD-9 Dx	Acute combined systolic and diastolic heart failure
	428.42	ICD-9 Dx	Chronic combined systolic and diastolic heart failure
	428.43	ICD-9 Dx	Acute on chronic combined systolic and diastolic heart failure

	428.9	ICD-9 Dx	Unspecified heart failure
	398.91	ICD-9 Dx	Rheumatic heart failure (congestive)
	402.01	ICD-9 Dx	Malignant hypertensive heart disease with heart failure
	402.11	ICD-9 Dx	Benign hypertensive heart disease with heart failure
	402.91	ICD-9 Dx	Hypertensive heart disease, unspecified, with heart failure
	404.01	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.03	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease
	404.11	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.13	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease
	404.91	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.93	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease
	428.0	ICD-9 Dx	Congestive heart failure, unspecified
	428.20	ICD-9 Dx	Unspecified systolic heart failure
	428.30	ICD-9 Dx	Unspecified diastolic heart failure
	428.40	ICD-9 Dx	Unspecified combined systolic and diastolic heart failure

	I0981	ICD-10 Dx	Rheumatic heart failure
	I110	ICD-10 Dx	Hypertensive heart disease with heart failure
	I130	ICD-10 Dx	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
	I132	ICD-10 Dx	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease
	I50	ICD-10 Dx	Heart failure
	I501	ICD-10 Dx	Left ventricular failure
	I5020	ICD-10 Dx	Unspecified systolic (congestive) heart failure
	I5021	ICD-10 Dx	Acute systolic (congestive) heart failure
	I5022	ICD-10 Dx	Chronic systolic (congestive) heart failure
	I5023	ICD-10 Dx	Acute on chronic systolic (congestive) heart failure
	I5030	ICD-10 Dx	Unspecified diastolic (congestive) heart failure
	I5031	ICD-10 Dx	Acute diastolic (congestive) heart failure
	I5032	ICD-10 Dx	Chronic diastolic (congestive) heart failure
	I5033	ICD-10 Dx	Acute on chronic diastolic (congestive) heart failure
	I5040	ICD-10 Dx	Unspecified combined systolic (congestive) and diastolic (congestive) heart failure
	I5041	ICD-10 Dx	Acute combined systolic (congestive) and diastolic (congestive) heart failure
	I5042	ICD-10 Dx	Chronic combined systolic (congestive) and diastolic (congestive) heart failure

	I5043	ICD-10 Dx	Acute on chronic combined systolic (congestive) and diastolic (congestive) heart failure
	I509	ICD-10 Dx	Heart failure, unspecified
	I97130	ICD-10 Dx	Postprocedural heart failure following cardiac surgery
	I97131	ICD-10 Dx	Postprocedural heart failure following other surgery
Depression	296.21	ICD-9 Dx	Major depressive disorder, single episode, mild
	296.22	ICD-9 Dx	Major depressive disorder, single episode, moderate
	296.23	ICD-9 Dx	Major depressive disorder, single episode, severe, without mention of psychotic behavior
	296.24	ICD-9 Dx	Major depressive disorder, single episode, severe, specified as with psychotic behavior
	296.25	ICD-9 Dx	Major depressive disorder, single episode, in partial or unspecified remission
	296.26	ICD-9 Dx	Major depressive disorder, single episode in full remission
	296.31	ICD-9 Dx	Major depressive disorder, recurrent episode, mild
	296.32	ICD-9 Dx	Major depressive disorder, recurrent episode, moderate
	296.33	ICD-9 Dx	Major depressive disorder, recurrent episode, severe, without mention of psychotic behavior
	296.34	ICD-9 Dx	Major depressive disorder, recurrent episode, severe, specified as with psychotic behavior
	296.35	ICD-9 Dx	Major depressive disorder, recurrent episode, in partial or unspecified remission
	296.36	ICD-9 Dx	Major depressive disorder, recurrent episode, in full remission
	296.51	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) depressed, mild
	296.52	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) depressed, moderate

	296.53	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) depressed, severe, without mention of psychotic behavior
	296.54	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) depressed, severe, specified as with psychotic behavior
	296.55	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) depressed, in partial or unspecified remission
	296.56	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) depressed, in full remission
	296.61	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) mixed, mild
	296.62	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) mixed, moderate
	296.63	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) mixed, severe, without mention of psychotic behavior
	296.64	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) mixed, severe, specified as with psychotic behavior
	296.65	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) mixed, in partial or unspecified remission
	296.66	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) mixed, in full remission
	296.7	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) unspecified
	296.81	ICD-9 Dx	Atypical manic disorder
	296.82	ICD-9 Dx	Atypical depressive disorder
	296.89	ICD-9 Dx	Other and unspecified bipolar disorders
	300.4	ICD-9 Dx	Dysthymic disorder
	309.1	ICD-9 Dx	Prolonged depressive reaction as adjustment reaction
	311	ICD-9 Dx	Depressive disorder, not elsewhere classified

	296.20	ICD-9 Dx	Major depressive disorder, single episode, unspecified
	296.30	ICD-9 Dx	Major depressive disorder, recurrent episode, unspecified
	296.50	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) depressed, unspecified
	296.60	ICD-9 Dx	Bipolar I disorder, most recent episode (or current) mixed, unspecified
	296.80	ICD-9 Dx	Bipolar disorder, unspecified
	298.0	ICD-9 Dx	Depressive type psychosis
	309.0	ICD-9 Dx	Adjustment disorder with depressed mood
	F308	ICD-10 Dx	Other manic episodes
	F3130	ICD-10 Dx	Bipolar disorder, current episode depressed, mild or moderate severity, unspecified
	F3131	ICD-10 Dx	Bipolar disorder, current episode depressed, mild
	F3132	ICD-10 Dx	Bipolar disorder, current episode depressed, moderate
	F314	ICD-10 Dx	Bipolar disorder, current episode depressed, severe, without psychotic features
	F315	ICD-10 Dx	Bipolar disorder, current episode depressed, severe, with psychotic features
	F3160	ICD-10 Dx	Bipolar disorder, current episode mixed, unspecified
	F3161	ICD-10 Dx	Bipolar disorder, current episode mixed, mild
	F3162	ICD-10 Dx	Bipolar disorder, current episode mixed, moderate
	F3163	ICD-10 Dx	Bipolar disorder, current episode mixed, severe, without psychotic features
	F3164	ICD-10 Dx	Bipolar disorder, current episode mixed, severe, with psychotic features

	F3170	ICD-10 Dx	Bipolar disorder, currently in remission, most recent episode unspecified
	F3171	ICD-10 Dx	Bipolar disorder, in partial remission, most recent episode hypomanic
	F3172	ICD-10 Dx	Bipolar disorder, in full remission, most recent episode hypomanic
	F3175	ICD-10 Dx	Bipolar disorder, in partial remission, most recent episode depressed
	F3176	ICD-10 Dx	Bipolar disorder, in full remission, most recent episode depressed
	F3177	ICD-10 Dx	Bipolar disorder, in partial remission, most recent episode mixed
	F3178	ICD-10 Dx	Bipolar disorder, in full remission, most recent episode mixed
	F3181	ICD-10 Dx	Bipolar II disorder
	F3189	ICD-10 Dx	Other bipolar disorder
	F319	ICD-10 Dx	Bipolar disorder, unspecified
	F320	ICD-10 Dx	Major depressive disorder, single episode, mild
	F321	ICD-10 Dx	Major depressive disorder, single episode, moderate
	F322	ICD-10 Dx	Major depressive disorder, single episode, severe without psychotic features
	F323	ICD-10 Dx	Major depressive disorder, single episode, severe with psychotic features
	F324	ICD-10 Dx	Major depressive disorder, single episode, in partial remission
	F325	ICD-10 Dx	Major depressive disorder, single episode, in full remission
	F328	ICD-10 Dx	Other depressive episodes
	F329	ICD-10 Dx	Major depressive disorder, single episode, unspecified

	F330	ICD-10 Dx	Major depressive disorder, recurrent, mild
	F331	ICD-10 Dx	Major depressive disorder, recurrent, moderate
	F332	ICD-10 Dx	Major depressive disorder, recurrent severe without psychotic features
	F333	ICD-10 Dx	Major depressive disorder, recurrent, severe with psychotic symptoms
	F3340	ICD-10 Dx	Major depressive disorder, recurrent, in remission, unspecified
	F3341	ICD-10 Dx	Major depressive disorder, recurrent, in partial remission
	F3342	ICD-10 Dx	Major depressive disorder, recurrent, in full remission
	F338	ICD-10 Dx	Other recurrent depressive disorders
	F339	ICD-10 Dx	Major depressive disorder, recurrent, unspecified
	F341	ICD-10 Dx	Dysthymic disorder
	F4321	ICD-10 Dx	Adjustment disorder with depressed mood
Diabetes	249.00	ICD-9 Dx	Secondary diabetes mellitus without mention of complication, not stated as uncontrolled, or unspecified
	249.01	ICD-9 Dx	Secondary diabetes mellitus without mention of complication, uncontrolled
	249.10	ICD-9 Dx	Secondary diabetes mellitus with ketoacidosis, not stated as uncontrolled, or unspecified
	249.11	ICD-9 Dx	Secondary diabetes mellitus with ketoacidosis, uncontrolled
	249.20	ICD-9 Dx	Secondary diabetes mellitus with hyperosmolarity, not stated as uncontrolled, or unspecified
	249.21	ICD-9 Dx	Secondary diabetes mellitus with hyperosmolarity, uncontrolled
	249.30	ICD-9 Dx	Secondary diabetes mellitus with other coma, not stated as uncontrolled, or unspecified

	249.31	ICD-9 Dx	Secondary diabetes mellitus with other coma, uncontrolled
	249.40	ICD-9 Dx	Secondary diabetes mellitus with renal manifestations, not stated as uncontrolled, or unspecified
	249.41	ICD-9 Dx	Secondary diabetes mellitus with renal manifestations, uncontrolled
	249.50	ICD-9 Dx	Secondary diabetes mellitus with ophthalmic manifestations, not stated as uncontrolled, or unspecified
	249.51	ICD-9 Dx	Secondary diabetes mellitus with ophthalmic manifestations, uncontrolled
	249.60	ICD-9 Dx	Secondary diabetes mellitus with neurological manifestations, not stated as uncontrolled, or unspecified
	249.61	ICD-9 Dx	Secondary diabetes mellitus with neurological manifestations, uncontrolled
	249.70	ICD-9 Dx	Secondary diabetes mellitus with peripheral circulatory disorders, not stated as uncontrolled, or unspecified
	249.71	ICD-9 Dx	Secondary diabetes mellitus with peripheral circulatory disorders, uncontrolled
	249.80	ICD-9 Dx	Secondary diabetes mellitus with other specified manifestations, not stated as uncontrolled, or unspecified
	249.81	ICD-9 Dx	Secondary diabetes mellitus with other specified manifestations, uncontrolled
	249.90	ICD-9 Dx	Secondary diabetes mellitus with unspecified complication, not stated as uncontrolled, or unspecified
	249.91	ICD-9 Dx	Secondary diabetes mellitus with unspecified complication, uncontrolled
	250.00	ICD-9 Dx	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled
	250.01	ICD-9 Dx	Diabetes mellitus without mention of complication, type I [juvenile type], not stated as uncontrolled

	250.02	ICD-9 Dx	Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled
	250.03	ICD-9 Dx	Diabetes mellitus without mention of complication, type I [juvenile type], uncontrolled
	250.10	ICD-9 Dx	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled
	250.11	ICD-9 Dx	Diabetes with ketoacidosis, type I [juvenile type], not stated as uncontrolled
	250.12	ICD-9 Dx	Diabetes with ketoacidosis, type II or unspecified type, uncontrolled
	250.13	ICD-9 Dx	Diabetes with ketoacidosis, type I [juvenile type], uncontrolled
	250.20	ICD-9 Dx	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled
	250.21	ICD-9 Dx	Diabetes with hyperosmolarity, type I [juvenile type], not stated as uncontrolled
	250.22	ICD-9 Dx	Diabetes with hyperosmolarity, type II or unspecified type, uncontrolled
	250.23	ICD-9 Dx	Diabetes with hyperosmolarity, type I [juvenile type], uncontrolled
	250.30	ICD-9 Dx	Diabetes with other coma, type II or unspecified type, not stated as uncontrolled
	250.31	ICD-9 Dx	Diabetes with other coma, type I [juvenile type], not stated as uncontrolled
	250.32	ICD-9 Dx	Diabetes with other coma, type II or unspecified type, uncontrolled
	250.33	ICD-9 Dx	Diabetes with other coma, type I [juvenile type], uncontrolled
	250.40	ICD-9 Dx	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled
	250.41	ICD-9 Dx	Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled
	250.42	ICD-9 Dx	Diabetes with renal manifestations, type II or unspecified type, uncontrolled
	250.43	ICD-9 Dx	Diabetes with renal manifestations, type I [juvenile type], uncontrolled

	250.50	ICD-9 Dx	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled
	250.51	ICD-9 Dx	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled
	250.52	ICD-9 Dx	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled
	250.53	ICD-9 Dx	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled
	250.60	ICD-9 Dx	Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled
	250.61	ICD-9 Dx	Diabetes with neurological manifestations, type I [juvenile type], not stated as uncontrolled
	250.62	ICD-9 Dx	Diabetes with neurological manifestations, type II or unspecified type, uncontrolled
	250.63	ICD-9 Dx	Diabetes with neurological manifestations, type I [juvenile type], uncontrolled
	250.70	ICD-9 Dx	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled
	250.71	ICD-9 Dx	Diabetes with peripheral circulatory disorders, type I [juvenile type], not stated as uncontrolled
	250.72	ICD-9 Dx	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled
	250.73	ICD-9 Dx	Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled
	250.80	ICD-9 Dx	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled
	250.81	ICD-9 Dx	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled
	250.82	ICD-9 Dx	Diabetes with other specified manifestations, type II or unspecified type, uncontrolled
	250.83	ICD-9 Dx	Diabetes with other specified manifestations, type I [juvenile type], uncontrolled
	250.90	ICD-9 Dx	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled
	250.91	ICD-9 Dx	Diabetes with unspecified complication, type I [juvenile type], not stated as uncontrolled

	250.92	ICD-9 Dx	Diabetes with unspecified complication, type II or unspecified type, uncontrolled
	250.93	ICD-9 Dx	Diabetes with unspecified complication, type I [juvenile type], uncontrolled
	251.0	ICD-9 Dx	Hypoglycemic coma
	357.2	ICD-9 Dx	Polyneuropathy in diabetes
	362.01	ICD-9 Dx	Background diabetic retinopathy
	362.02	ICD-9 Dx	Proliferative diabetic retinopathy
	362.03	ICD-9 Dx	Nonproliferative diabetic retinopathy NOS
	362.04	ICD-9 Dx	Mild nonproliferative diabetic retinopathy
	362.05	ICD-9 Dx	Moderate nonproliferative diabetic retinopathy
	362.06	ICD-9 Dx	Severe nonproliferative diabetic retinopathy
	362.07	ICD-9 Dx	Diabetic macular edema
	366.41	ICD-9 Dx	Diabetic cataract
	E0800	ICD-10 Dx	Diabetes mellitus due to underlying condition with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)
	E0801	ICD-10 Dx	Diabetes mellitus due to underlying condition with hyperosmolarity with coma
	E0810	ICD-10 Dx	Diabetes mellitus due to underlying condition with ketoacidosis without coma
	E0811	ICD-10 Dx	Diabetes mellitus due to underlying condition with ketoacidosis with coma
	E0821	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic nephropathy
	E0822	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic chronic kidney disease

	E0829	ICD-10 Dx	Diabetes mellitus due to underlying condition with other diabetic kidney complication
	E08311	ICD-10 Dx	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy with macular edema
	E08319	ICD-10 Dx	Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy without macular edema
	E08321	ICD-10 Dx	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema
	E08329	ICD-10 Dx	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema
	E08331	ICD-10 Dx	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema
	E08339	ICD-10 Dx	Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema
	E08341	ICD-10 Dx	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema
	E08349	ICD-10 Dx	Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema
	E08351	ICD-10 Dx	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema
	E08359	ICD-10 Dx	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema
	E0836	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic cataract
	E0839	ICD-10 Dx	Diabetes mellitus due to underlying condition with other diabetic ophthalmic complication
	E0840	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic neuropathy, unspecified

	E0841	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic mononeuropathy
	E0842	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic polyneuropathy
	E0843	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic autonomic (poly)neuropathy
	E0844	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic amyotrophy
	E0849	ICD-10 Dx	Diabetes mellitus due to underlying condition with other diabetic neurological complication
	E0851	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy without gangrene
	E0852	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy with gangrene
	E0859	ICD-10 Dx	Diabetes mellitus due to underlying condition with other circulatory complications
	E08610	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic neuropathic arthropathy
	E08618	ICD-10 Dx	Diabetes mellitus due to underlying condition with other diabetic arthropathy
	E08620	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic dermatitis
	E08621	ICD-10 Dx	Diabetes mellitus due to underlying condition with foot ulcer
	E08622	ICD-10 Dx	Diabetes mellitus due to underlying condition with other skin ulcer
	E08628	ICD-10 Dx	Diabetes mellitus due to underlying condition with other skin complications
	E08630	ICD-10 Dx	Diabetes mellitus due to underlying condition with periodontal disease
	E08638	ICD-10 Dx	Diabetes mellitus due to underlying condition with other oral complications
	E08641	ICD-10 Dx	Diabetes mellitus due to underlying condition with hypoglycemia with coma
	E08649	ICD-10 Dx	Diabetes mellitus due to underlying condition with hypoglycemia without coma

	E0865	ICD-10 Dx	Diabetes mellitus due to underlying condition with hyperglycemia
	E0869	ICD-10 Dx	Diabetes mellitus due to underlying condition with other specified complication
	E088	ICD-10 Dx	Diabetes mellitus due to underlying condition with unspecified complications
	E089	ICD-10 Dx	Diabetes mellitus due to underlying condition without complications
	E0900	ICD-10 Dx	Drug or chemical induced diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)
	E0901	ICD-10 Dx	Drug or chemical induced diabetes mellitus with hyperosmolarity with coma
	E0910	ICD-10 Dx	Drug or chemical induced diabetes mellitus with ketoacidosis without coma
	E0911	ICD-10 Dx	Drug or chemical induced diabetes mellitus with ketoacidosis with coma
	E0921	ICD-10 Dx	Drug or chemical induced diabetes mellitus with diabetic nephropathy
	E0922	ICD-10 Dx	Drug or chemical induced diabetes mellitus with diabetic chronic kidney disease
	E0929	ICD-10 Dx	Drug or chemical induced diabetes mellitus with other diabetic kidney complication
	E09311	ICD-10 Dx	Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy with macular edema
	E09319	ICD-10 Dx	Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy without macular edema
	E09321	ICD-10 Dx	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
	E09329	ICD-10 Dx	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema
	E09331	ICD-10 Dx	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema

	E09339	ICD-10 Dx	Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
	E09341	ICD-10 Dx	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
	E09349	ICD-10 Dx	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
	E09351	ICD-10 Dx	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema
	E09359	ICD-10 Dx	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema
	E0936	ICD-10 Dx	Drug or chemical induced diabetes mellitus with diabetic cataract
	E0939	ICD-10 Dx	Drug or chemical induced diabetes mellitus with other diabetic ophthalmic complication
	E0940	ICD-10 Dx	Drug or chemical induced diabetes mellitus with neurological complications with diabetic neuropathy, unspecified
	E0941	ICD-10 Dx	Drug or chemical induced diabetes mellitus with neurological complications with diabetic mononeuropathy
	E0942	ICD-10 Dx	Drug or chemical induced diabetes mellitus with neurological complications with diabetic polyneuropathy
	E0943	ICD-10 Dx	Drug or chemical induced diabetes mellitus with neurological complications with diabetic autonomic (poly)neuropathy
	E0944	ICD-10 Dx	Drug or chemical induced diabetes mellitus with neurological complications with diabetic amyotrophy
	E0949	ICD-10 Dx	Drug or chemical induced diabetes mellitus with neurological complications with other diabetic neurological complication
	E0951	ICD-10 Dx	Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy without gangrene

	E0952	ICD-10 Dx	Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy with gangrene
	E0959	ICD-10 Dx	Drug or chemical induced diabetes mellitus with other circulatory complications
	E09610	ICD-10 Dx	Drug or chemical induced diabetes mellitus with diabetic neuropathic arthropathy
	E09618	ICD-10 Dx	Drug or chemical induced diabetes mellitus with other diabetic arthropathy
	E09620	ICD-10 Dx	Drug or chemical induced diabetes mellitus with diabetic dermatitis
	E09621	ICD-10 Dx	Drug or chemical induced diabetes mellitus with foot ulcer
	E09622	ICD-10 Dx	Drug or chemical induced diabetes mellitus with other skin ulcer
	E09628	ICD-10 Dx	Drug or chemical induced diabetes mellitus with other skin complications
	E09630	ICD-10 Dx	Drug or chemical induced diabetes mellitus with periodontal disease
	E09638	ICD-10 Dx	Drug or chemical induced diabetes mellitus with other oral complications
	E09641	ICD-10 Dx	Drug or chemical induced diabetes mellitus with hypoglycemia with coma
	E09649	ICD-10 Dx	Drug or chemical induced diabetes mellitus with hypoglycemia without coma
	E0965	ICD-10 Dx	Drug or chemical induced diabetes mellitus with hyperglycemia
	E0969	ICD-10 Dx	Drug or chemical induced diabetes mellitus with other specified complication
	E098	ICD-10 Dx	Drug or chemical induced diabetes mellitus with unspecified complications
	E099	ICD-10 Dx	Drug or chemical induced diabetes mellitus without complications
	E1010	ICD-10 Dx	Type 1 diabetes mellitus with ketoacidosis without coma
	E1011	ICD-10 Dx	Type 1 diabetes mellitus with ketoacidosis with coma

	E1021	ICD-10 Dx	Type 1 diabetes mellitus with diabetic nephropathy
	E1022	ICD-10 Dx	Type 1 diabetes mellitus with diabetic chronic kidney disease
	E1029	ICD-10 Dx	Type 1 diabetes mellitus with other diabetic kidney complication
	E10311	ICD-10 Dx	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema
	E10319	ICD-10 Dx	Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema
	E10321	ICD-10 Dx	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
	E10329	ICD-10 Dx	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema
	E10331	ICD-10 Dx	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
	E10339	ICD-10 Dx	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
	E10341	ICD-10 Dx	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
	E10349	ICD-10 Dx	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
	E10351	ICD-10 Dx	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema
	E10359	ICD-10 Dx	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema
	E1036	ICD-10 Dx	Type 1 diabetes mellitus with diabetic cataract
	E1039	ICD-10 Dx	Type 1 diabetes mellitus with other diabetic ophthalmic complication
	E1040	ICD-10 Dx	Type 1 diabetes mellitus with diabetic neuropathy, unspecified
	E1041	ICD-10 Dx	Type 1 diabetes mellitus with diabetic mononeuropathy

	E1042	ICD-10 Dx	Type 1 diabetes mellitus with diabetic polyneuropathy
	E1043	ICD-10 Dx	Type 1 diabetes mellitus with diabetic autonomic (poly)neuropathy
	E1044	ICD-10 Dx	Type 1 diabetes mellitus with diabetic amyotrophy
	E1049	ICD-10 Dx	Type 1 diabetes mellitus with other diabetic neurological complication
	E1051	ICD-10 Dx	Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene
	E1052	ICD-10 Dx	Type 1 diabetes mellitus with diabetic peripheral angiopathy with gangrene
	E1059	ICD-10 Dx	Type 1 diabetes mellitus with other circulatory complications
	E10610	ICD-10 Dx	Type 1 diabetes mellitus with diabetic neuropathic arthropathy
	E10618	ICD-10 Dx	Type 1 diabetes mellitus with other diabetic arthropathy
	E10620	ICD-10 Dx	Type 1 diabetes mellitus with diabetic dermatitis
	E10621	ICD-10 Dx	Type 1 diabetes mellitus with foot ulcer
	E10622	ICD-10 Dx	Type 1 diabetes mellitus with other skin ulcer
	E10628	ICD-10 Dx	Type 1 diabetes mellitus with other skin complications
	E10630	ICD-10 Dx	Type 1 diabetes mellitus with periodontal disease
	E10638	ICD-10 Dx	Type 1 diabetes mellitus with other oral complications
	E10641	ICD-10 Dx	Type 1 diabetes mellitus with hypoglycemia with coma
	E10649	ICD-10 Dx	Type 1 diabetes mellitus with hypoglycemia without coma
	E1065	ICD-10 Dx	Type 1 diabetes mellitus with hyperglycemia

	E1069	ICD-10 Dx	Type 1 diabetes mellitus with other specified complication
	E108	ICD-10 Dx	Type 1 diabetes mellitus with unspecified complications
	E109	ICD-10 Dx	Type 1 diabetes mellitus without complications
	E1100	ICD-10 Dx	Type 2 diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)
	E1101	ICD-10 Dx	Type 2 diabetes mellitus with hyperosmolarity with coma
	E1121	ICD-10 Dx	Type 2 diabetes mellitus with diabetic nephropathy
	E1122	ICD-10 Dx	Type 2 diabetes mellitus with diabetic chronic kidney disease
	E1129	ICD-10 Dx	Type 2 diabetes mellitus with other diabetic kidney complication
	E11311	ICD-10 Dx	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema
	E11319	ICD-10 Dx	Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema
	E11321	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
	E113211	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye
	E113212	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye
	E113213	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral
	E113219	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye
	E11329	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema
	E113291	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye

	E113292	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye
	E113293	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral
	E113299	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye
	E11331	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
	E113311	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye
	E113312	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye
	E113313	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral
	E113319	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye
	E11339	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
	E113391	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye
	E113392	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye
	E113393	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral
	E113399	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye

	E11341	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
	E113411	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye
	E113412	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye
	E113413	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral
	E113419	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye
	E11349	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
	E113491	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye
	E113492	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye
	E113493	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral
	E113499	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye
	E11351	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema
	E113511	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye
	E113512	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye
	E113513	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral

	E113519	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye
	E113521	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye
	E113522	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye
	E113523	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral
	E113529	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye
	E113531	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye
	E113532	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye
	E113533	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral
	E113539	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye
	E113541	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye
	E113542	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye
	E113543	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral

	E113549	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye
	E113551	ICD-10 Dx	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, right eye
	E113552	ICD-10 Dx	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, left eye
	E113553	ICD-10 Dx	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral
	E113559	ICD-10 Dx	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye
	E11359	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema
	E113591	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye
	E113592	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye
	E113593	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral
	E113599	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye
	E1136	ICD-10 Dx	Type 2 diabetes mellitus with diabetic cataract
	E1137X1	ICD-10 Dx	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye
	E1137X2	ICD-10 Dx	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye
	E1137X3	ICD-10 Dx	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral
	E1137X9	ICD-10 Dx	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye
	E1139	ICD-10 Dx	Type 2 diabetes mellitus with other diabetic ophthalmic complication
	E1140	ICD-10 Dx	Type 2 diabetes mellitus with diabetic neuropathy, unspecified

	E1141	ICD-10 Dx	Type 2 diabetes mellitus with diabetic mononeuropathy
	E1142	ICD-10 Dx	Type 2 diabetes mellitus with diabetic polyneuropathy
	E1143	ICD-10 Dx	Type 2 diabetes mellitus with diabetic autonomic (poly)neuropathy
	E1144	ICD-10 Dx	Type 2 diabetes mellitus with diabetic amyotrophy
	E1149	ICD-10 Dx	Type 2 diabetes mellitus with other diabetic neurological complication
	E1151	ICD-10 Dx	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene
	E1152	ICD-10 Dx	Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene
	E1159	ICD-10 Dx	Type 2 diabetes mellitus with other circulatory complications
	E11610	ICD-10 Dx	Type 2 diabetes mellitus with diabetic neuropathic arthropathy
	E11618	ICD-10 Dx	Type 2 diabetes mellitus with other diabetic arthropathy
	E11620	ICD-10 Dx	Type 2 diabetes mellitus with diabetic dermatitis
	E11621	ICD-10 Dx	Type 2 diabetes mellitus with foot ulcer
	E11622	ICD-10 Dx	Type 2 diabetes mellitus with other skin ulcer
	E11628	ICD-10 Dx	Type 2 diabetes mellitus with other skin complications
	E11630	ICD-10 Dx	Type 2 diabetes mellitus with periodontal disease
	E11638	ICD-10 Dx	Type 2 diabetes mellitus with other oral complications
	E11641	ICD-10 Dx	Type 2 diabetes mellitus with hypoglycemia with coma
	E11649	ICD-10 Dx	Type 2 diabetes mellitus with hypoglycemia without coma

	E1165	ICD-10 Dx	Type 2 diabetes mellitus with hyperglycemia
	E1169	ICD-10 Dx	Type 2 diabetes mellitus with other specified complication
	E118	ICD-10 Dx	Type 2 diabetes mellitus with unspecified complications
	E119	ICD-10 Dx	Type 2 diabetes mellitus without complications
	E1300	ICD-10 Dx	Other specified diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)
	E1301	ICD-10 Dx	Other specified diabetes mellitus with hyperosmolarity with coma
	E1310	ICD-10 Dx	Other specified diabetes mellitus with ketoacidosis without coma
	E1311	ICD-10 Dx	Other specified diabetes mellitus with ketoacidosis with coma
	E1321	ICD-10 Dx	Other specified diabetes mellitus with diabetic nephropathy
	E1322	ICD-10 Dx	Other specified diabetes mellitus with diabetic chronic kidney disease
	E1329	ICD-10 Dx	Other specified diabetes mellitus with other diabetic kidney complication
	E13311	ICD-10 Dx	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema
	E13319	ICD-10 Dx	Other specified diabetes mellitus with unspecified diabetic retinopathy without macular edema
	E13321	ICD-10 Dx	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
	E13329	ICD-10 Dx	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema
	E13331	ICD-10 Dx	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema

	E13339	ICD-10 Dx	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema
	E13341	ICD-10 Dx	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
	E13349	ICD-10 Dx	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
	E13351	ICD-10 Dx	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema
	E13359	ICD-10 Dx	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema
	E1336	ICD-10 Dx	Other specified diabetes mellitus with diabetic cataract
	E1339	ICD-10 Dx	Other specified diabetes mellitus with other diabetic ophthalmic complication
	E1340	ICD-10 Dx	Other specified diabetes mellitus with diabetic neuropathy, unspecified
	E1341	ICD-10 Dx	Other specified diabetes mellitus with diabetic mononeuropathy
	E1342	ICD-10 Dx	Other specified diabetes mellitus with diabetic polyneuropathy
	E1343	ICD-10 Dx	Other specified diabetes mellitus with diabetic autonomic (poly)neuropathy
	E1344	ICD-10 Dx	Other specified diabetes mellitus with diabetic amyotrophy
	E1349	ICD-10 Dx	Other specified diabetes mellitus with other diabetic neurological complication
	E1351	ICD-10 Dx	Other specified diabetes mellitus with diabetic peripheral angiopathy without gangrene
	E1352	ICD-10 Dx	Other specified diabetes mellitus with diabetic peripheral angiopathy with gangrene
	E1359	ICD-10 Dx	Other specified diabetes mellitus with other circulatory complications
	E13610	ICD-10 Dx	Other specified diabetes mellitus with diabetic neuropathic arthropathy

	E13618	ICD-10 Dx	Other specified diabetes mellitus with other diabetic arthropathy
	E13620	ICD-10 Dx	Other specified diabetes mellitus with diabetic dermatitis
	E13621	ICD-10 Dx	Other specified diabetes mellitus with foot ulcer
	E13622	ICD-10 Dx	Other specified diabetes mellitus with other skin ulcer
	E13628	ICD-10 Dx	Other specified diabetes mellitus with other skin complications
	E13630	ICD-10 Dx	Other specified diabetes mellitus with periodontal disease
	E13638	ICD-10 Dx	Other specified diabetes mellitus with other oral complications
	E13641	ICD-10 Dx	Other specified diabetes mellitus with hypoglycemia with coma
	E13649	ICD-10 Dx	Other specified diabetes mellitus with hypoglycemia without coma
	E1365	ICD-10 Dx	Other specified diabetes mellitus with hyperglycemia
	E1369	ICD-10 Dx	Other specified diabetes mellitus with other specified complication
	E138	ICD-10 Dx	Other specified diabetes mellitus with unspecified complications
	E139	ICD-10 Dx	Other specified diabetes mellitus without complications
Dyspnea	786.09	ICD-9 Dx	Dyspnea and respiratory abnormalities, other (respiratory distress/insufficiency)
	786.05	ICD-9 Dx	Shortness of breath
	786.07	ICD-9 Dx	Wheezing
	786.1	ICD-9 Dx	Stridor
	R0689	ICD-10 Dx	Other abnormalities of breathing

	R0600	ICD-10 Dx	Dyspnea, unspecified
	R0602	ICD-10 Dx	Shortness of breath
	R0609	ICD-10 Dx	Other forms of dyspnea
	R061	ICD-10 Dx	Stridor
	R062	ICD-10 Dx	Wheezing
Hypertension	362.11	ICD-9 Dx	Hypertensive retinopathy
	401.0	ICD-9 Dx	Essential hypertension, malignant
	401.1	ICD-9 Dx	Essential hypertension, benign
	401.9	ICD-9 Dx	Unspecified essential hypertension
	402.00	ICD-9 Dx	Malignant hypertensive heart disease without heart failure
	402.01	ICD-9 Dx	Malignant hypertensive heart disease with heart failure
	402.10	ICD-9 Dx	Benign hypertensive heart disease without heart failure
	402.11	ICD-9 Dx	Benign hypertensive heart disease with heart failure
	402.90	ICD-9 Dx	Unspecified hypertensive heart disease without heart failure
	402.91	ICD-9 Dx	Hypertensive heart disease, unspecified, with heart failure
	403.00	ICD-9 Dx	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage I through stage IV, or unspecified
	403.01	ICD-9 Dx	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease

	403.10	ICD-9 Dx	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage I through stage IV, or unspecified
	403.11	ICD-9 Dx	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease
	403.90	ICD-9 Dx	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage I through stage IV, or unspecified
	403.91	ICD-9 Dx	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease
	404.00	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.01	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.02	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease
	404.03	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease
	404.10	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.11	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.12	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease
	404.13	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease

	404.90	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.91	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.92	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease
	404.93	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease
	405.01	ICD-9 Dx	Secondary renovascular hypertension, malignant
	405.09	ICD-9 Dx	Other secondary hypertension, malignant
	405.11	ICD-9 Dx	Secondary renovascular hypertension, benign
	405.19	ICD-9 Dx	Other secondary hypertension, benign
	405.91	ICD-9 Dx	Secondary renovascular hypertension, unspecified
	405.99	ICD-9 Dx	Other secondary hypertension, unspecified
	437.2	ICD-9 Dx	Hypertensive encephalopathy
	997.91	ICD-9 Dx	Hypertension
	H35031	ICD-10 Dx	Hypertensive retinopathy, right eye
	H35032	ICD-10 Dx	Hypertensive retinopathy, left eye
	H35033	ICD-10 Dx	Hypertensive retinopathy, bilateral
	H35039	ICD-10 Dx	Hypertensive retinopathy, unspecified eye

	I10	ICD-10 Dx	Essential (primary) hypertension
	I110	ICD-10 Dx	Hypertensive heart disease with heart failure
	I119	ICD-10 Dx	Hypertensive heart disease without heart failure
	I120	ICD-10 Dx	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease
	I129	ICD-10 Dx	Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
	I130	ICD-10 Dx	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
	I1310	ICD-10 Dx	Hypertensive heart and chronic kidney disease without heart failure, with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
	I1311	ICD-10 Dx	Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease
	I132	ICD-10 Dx	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease
	I150	ICD-10 Dx	Renovascular hypertension
	I151	ICD-10 Dx	Hypertension secondary to other renal disorders
	I152	ICD-10 Dx	Hypertension secondary to endocrine disorders
	I158	ICD-10 Dx	Other secondary hypertension
	I159	ICD-10 Dx	Secondary hypertension, unspecified
	I160	ICD-10 Dx	Hypertensive urgency

	I161	ICD-10 Dx	Hypertensive emergency
	I169	ICD-10 Dx	Hypertensive crisis, unspecified
	I674	ICD-10 Dx	Hypertensive encephalopathy
	I973	ICD-10 Dx	Postprocedural hypertension
	N262	ICD-10 Dx	Page kidney
Ischemic heart disease	410.01	ICD-9 Dx	Acute myocardial infarction of anterolateral wall, initial episode of care
	410.02	ICD-9 Dx	Acute myocardial infarction of anterolateral wall, subsequent episode of care
	410.11	ICD-9 Dx	Acute myocardial infarction of other anterior wall, initial episode of care
	410.12	ICD-9 Dx	Acute myocardial infarction of other anterior wall, subsequent episode of care
	410.21	ICD-9 Dx	Acute myocardial infarction of inferolateral wall, initial episode of care
	410.22	ICD-9 Dx	Acute myocardial infarction of inferolateral wall, subsequent episode of care
	410.31	ICD-9 Dx	Acute myocardial infarction of inferoposterior wall, initial episode of care
	410.32	ICD-9 Dx	Acute myocardial infarction of inferoposterior wall, subsequent episode of care
	410.41	ICD-9 Dx	Acute myocardial infarction of other inferior wall, initial episode of care
	410.42	ICD-9 Dx	Acute myocardial infarction of other inferior wall, subsequent episode of care
	410.51	ICD-9 Dx	Acute myocardial infarction of other lateral wall, initial episode of care
	410.52	ICD-9 Dx	Acute myocardial infarction of other lateral wall, subsequent episode of care
	410.61	ICD-9 Dx	Acute myocardial infarction, true posterior wall infarction, initial episode of care

	410.62	ICD-9 Dx	Acute myocardial infarction, true posterior wall infarction, subsequent episode of care
	410.71	ICD-9 Dx	Acute myocardial infarction, subendocardial infarction, initial episode of care
	410.72	ICD-9 Dx	Acute myocardial infarction, subendocardial infarction, subsequent episode of care
	410.81	ICD-9 Dx	Acute myocardial infarction of other specified sites, initial episode of care
	410.82	ICD-9 Dx	Acute myocardial infarction of other specified sites, subsequent episode of care
	410.91	ICD-9 Dx	Acute myocardial infarction, unspecified site, initial episode of care
	410.92	ICD-9 Dx	Acute myocardial infarction, unspecified site, subsequent episode of care
	411.1	ICD-9 Dx	Intermediate coronary syndrome
	411.81	ICD-9 Dx	Acute coronary occlusion without myocardial infarction
	411.89	ICD-9 Dx	Other acute and subacute form of ischemic heart disease
	412	ICD-9 Dx	Old myocardial infarction
	413.1	ICD-9 Dx	Prinzmetal angina
	413.9	ICD-9 Dx	Other and unspecified angina pectoris
	414.01	ICD-9 Dx	Coronary atherosclerosis of native coronary artery
	414.02	ICD-9 Dx	Coronary atherosclerosis of autologous vein bypass graft
	414.03	ICD-9 Dx	Coronary atherosclerosis of nonautologous biological bypass graft
	414.04	ICD-9 Dx	Coronary atherosclerosis of artery bypass graft
	414.05	ICD-9 Dx	Coronary atherosclerosis of unspecified type of bypass graft

	414.06	ICD-9 Dx	Coronary atherosclerosis, of native coronary artery of transplanted heart
	414.07	ICD-9 Dx	Coronary atherosclerosis, of bypass graft (artery) (vein) of transplanted heart
	414.11	ICD-9 Dx	Aneurysm of coronary vessels
	414.12	ICD-9 Dx	Dissection of coronary artery
	414.19	ICD-9 Dx	Other aneurysm of heart
	414.2	ICD-9 Dx	Chronic total occlusion of coronary artery
	414.3	ICD-9 Dx	Coronary atherosclerosis due to lipid rich plaque
	414.4	ICD-9 Dx	Coronary atherosclerosis due to calcified coronary lesion
	414.8	ICD-9 Dx	Other specified forms of chronic ischemic heart disease
	414.9	ICD-9 Dx	Unspecified chronic ischemic heart disease
	410.00	ICD-9 Dx	Acute myocardial infarction of anterolateral wall, episode of care unspecified
	410.10	ICD-9 Dx	Acute myocardial infarction of other anterior wall, episode of care unspecified
	410.20	ICD-9 Dx	Acute myocardial infarction of inferolateral wall, episode of care unspecified
	410.30	ICD-9 Dx	Acute myocardial infarction of inferoposterior wall, episode of care unspecified
	410.40	ICD-9 Dx	Acute myocardial infarction of other inferior wall, episode of care unspecified
	410.50	ICD-9 Dx	Acute myocardial infarction of other lateral wall, episode of care unspecified
	410.60	ICD-9 Dx	Acute myocardial infarction, true posterior wall infarction, episode of care unspecified
	410.70	ICD-9 Dx	Acute myocardial infarction, subendocardial infarction, episode of care unspecified

	410.80	ICD-9 Dx	Acute myocardial infarction of other specified sites, episode of care unspecified
	410.90	ICD-9 Dx	Acute myocardial infarction, unspecified site, episode of care unspecified
	411.0	ICD-9 Dx	Postmyocardial infarction syndrome
	413.0	ICD-9 Dx	Angina decubitus
	414.00	ICD-9 Dx	Coronary atherosclerosis of unspecified type of vessel, native or graft
	414.10	ICD-9 Dx	Aneurysm of heart
	429.71	ICD-9 Dx	Acquired cardiac septal defect following myocardial infarction
	429.79	ICD-9 Dx	Other certain sequelae of myocardial infarction, not elsewhere classified
	I200	ICD-10 Dx	Unstable angina
	I201	ICD-10 Dx	Angina pectoris with documented spasm
	I208	ICD-10 Dx	Other forms of angina pectoris
	I209	ICD-10 Dx	Angina pectoris, unspecified
	I2101	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving left main coronary artery
	I2102	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery
	I2109	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall
	I2111	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving right coronary artery
	I2119	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall
	I2121	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery

	I2129	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving other sites
	I213	ICD-10 Dx	ST elevation (STEMI) myocardial infarction of unspecified site
	I214	ICD-10 Dx	Non-ST elevation (NSTEMI) myocardial infarction
	I220	ICD-10 Dx	Subsequent ST elevation (STEMI) myocardial infarction of anterior wall
	I221	ICD-10 Dx	Subsequent ST elevation (STEMI) myocardial infarction of inferior wall
	I222	ICD-10 Dx	Subsequent non-ST elevation (NSTEMI) myocardial infarction
	I228	ICD-10 Dx	Subsequent ST elevation (STEMI) myocardial infarction of other sites
	I229	ICD-10 Dx	Subsequent ST elevation (STEMI) myocardial infarction of unspecified site
	I230	ICD-10 Dx	Hemopericardium as current complication following acute myocardial infarction
	I231	ICD-10 Dx	Atrial septal defect as current complication following acute myocardial infarction
	I232	ICD-10 Dx	Ventricular septal defect as current complication following acute myocardial infarction
	I233	ICD-10 Dx	Rupture of cardiac wall without hemopericardium as current complication following acute myocardial infarction
	I234	ICD-10 Dx	Rupture of chordae tendineae as current complication following acute myocardial infarction
	I235	ICD-10 Dx	Rupture of papillary muscle as current complication following acute myocardial infarction
	I236	ICD-10 Dx	Thrombosis of atrium, auricular appendage, and ventricle as current complications following acute myocardial infarction
	I240	ICD-10 Dx	Acute coronary thrombosis not resulting in myocardial infarction
	I241	ICD-10 Dx	Dressler's syndrome

	I248	ICD-10 Dx	Other forms of acute ischemic heart disease
	I249	ICD-10 Dx	Acute ischemic heart disease, unspecified
	I2510	ICD-10 Dx	Atherosclerotic heart disease of native coronary artery without angina pectoris
	I25110	ICD-10 Dx	Atherosclerotic heart disease of native coronary artery with unstable angina pectoris
	I25111	ICD-10 Dx	Atherosclerotic heart disease of native coronary artery with angina pectoris with documented spasm
	I25118	ICD-10 Dx	Atherosclerotic heart disease of native coronary artery with other forms of angina pectoris
	I25119	ICD-10 Dx	Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris
	I252	ICD-10 Dx	Old myocardial infarction
	I253	ICD-10 Dx	Aneurysm of heart
	I2541	ICD-10 Dx	Coronary artery aneurysm
	I2542	ICD-10 Dx	Coronary artery dissection
	I255	ICD-10 Dx	Ischemic cardiomyopathy
	I256	ICD-10 Dx	Silent myocardial ischemia
	I25700	ICD-10 Dx	Atherosclerosis of coronary artery bypass graft(s), unspecified, with unstable angina pectoris
	I25701	ICD-10 Dx	Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina pectoris with documented spasm
	I25708	ICD-10 Dx	Atherosclerosis of coronary artery bypass graft(s), unspecified, with other forms of angina pectoris
	I25709	ICD-10 Dx	Atherosclerosis of coronary artery bypass graft(s), unspecified, with unspecified angina pectoris
	I25710	ICD-10 Dx	Atherosclerosis of autologous vein coronary artery bypass graft(s) with unstable angina pectoris

	I25711	ICD-10 Dx	Atherosclerosis of autologous vein coronary artery bypass graft(s) with angina pectoris with documented spasm
	I25718	ICD-10 Dx	Atherosclerosis of autologous vein coronary artery bypass graft(s) with other forms of angina pectoris
	I25719	ICD-10 Dx	Atherosclerosis of autologous vein coronary artery bypass graft(s) with unspecified angina pectoris
	I25720	ICD-10 Dx	Atherosclerosis of autologous artery coronary artery bypass graft(s) with unstable angina pectoris
	I25721	ICD-10 Dx	Atherosclerosis of autologous artery coronary artery bypass graft(s) with angina pectoris with documented spasm
	I25728	ICD-10 Dx	Atherosclerosis of autologous artery coronary artery bypass graft(s) with other forms of angina pectoris
	I25729	ICD-10 Dx	Atherosclerosis of autologous artery coronary artery bypass graft(s) with unspecified angina pectoris
	I25730	ICD-10 Dx	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unstable angina pectoris
	I25731	ICD-10 Dx	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with angina pectoris with documented spasm
	I25738	ICD-10 Dx	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with other forms of angina pectoris
	I25739	ICD-10 Dx	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unspecified angina pectoris
	I25750	ICD-10 Dx	Atherosclerosis of native coronary artery of transplanted heart with unstable angina
	I25751	ICD-10 Dx	Atherosclerosis of native coronary artery of transplanted heart with angina pectoris with documented spasm
	I25758	ICD-10 Dx	Atherosclerosis of native coronary artery of transplanted heart with other forms of angina pectoris
	I25759	ICD-10 Dx	Atherosclerosis of native coronary artery of transplanted heart with unspecified angina pectoris

	I25760	ICD-10 Dx	Atherosclerosis of bypass graft of coronary artery of transplanted heart with unstable angina
	I25761	ICD-10 Dx	Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris with documented spasm
	I25768	ICD-10 Dx	Atherosclerosis of bypass graft of coronary artery of transplanted heart with other forms of angina pectoris
	I25769	ICD-10 Dx	Atherosclerosis of bypass graft of coronary artery of transplanted heart with unspecified angina pectoris
	I25790	ICD-10 Dx	Atherosclerosis of other coronary artery bypass graft(s) with unstable angina pectoris
	I25791	ICD-10 Dx	Atherosclerosis of other coronary artery bypass graft(s) with angina pectoris with documented spasm
	I25798	ICD-10 Dx	Atherosclerosis of other coronary artery bypass graft(s) with other forms of angina pectoris
	I25799	ICD-10 Dx	Atherosclerosis of other coronary artery bypass graft(s) with unspecified angina pectoris
	I25810	ICD-10 Dx	Atherosclerosis of coronary artery bypass graft(s) without angina pectoris
	I25811	ICD-10 Dx	Atherosclerosis of native coronary artery of transplanted heart without angina pectoris
	I25812	ICD-10 Dx	Atherosclerosis of bypass graft of coronary artery of transplanted heart without angina pectoris
	I2582	ICD-10 Dx	Chronic total occlusion of coronary artery
	I2583	ICD-10 Dx	Coronary atherosclerosis due to lipid rich plaque
	I2584	ICD-10 Dx	Coronary atherosclerosis due to calcified coronary lesion
	I2589	ICD-10 Dx	Other forms of chronic ischemic heart disease
	I259	ICD-10 Dx	Chronic ischemic heart disease, unspecified
Metabolic syndrome	278.00	ICD-9 Dx	Obesity, unspecified

	278.01	ICD-9 Dx	Morbid obesity
	278.02	ICD-9 Dx	Overweight
	278.1	ICD-9 Dx	Localized adiposity
	783.1	ICD-9 Dx	Abnormal weight gain
	E65	ICD-10 Dx	Localized adiposity
	E6601	ICD-10 Dx	Morbid (severe) obesity due to excess calories
	E6609	ICD-10 Dx	Other obesity due to excess calories
	E663	ICD-10 Dx	Overweight
	E668	ICD-10 Dx	Other obesity
	E669	ICD-10 Dx	Obesity, unspecified
	R635	ICD-10 Dx	Abnormal weight gain
	272.0	ICD-9 Dx	Pure hypercholesterolemia
	272.1	ICD-9 Dx	Pure hyperglyceridemia
	272.2	ICD-9 Dx	Mixed hyperlipidemia
	272.4	ICD-9 Dx	Other and unspecified hyperlipidemia
	E780	ICD-10 Dx	Pure hypercholesterolemia
	E7800	ICD-10 Dx	Pure hypercholesterolemia, unspecified
	E781	ICD-10 Dx	Pure hyperglyceridemia

	E782	ICD-10 Dx	Mixed hyperlipidemia
	E784	ICD-10 Dx	Other hyperlipidemia
	E785	ICD-10 Dx	Hyperlipidemia, unspecified
	362.11	ICD-9 Dx	Hypertensive retinopathy
	401.0	ICD-9 Dx	Essential hypertension, malignant
	401.1	ICD-9 Dx	Essential hypertension, benign
	401.9	ICD-9 Dx	Unspecified essential hypertension
	402.00	ICD-9 Dx	Malignant hypertensive heart disease without heart failure
	402.01	ICD-9 Dx	Malignant hypertensive heart disease with heart failure
	402.10	ICD-9 Dx	Benign hypertensive heart disease without heart failure
	402.11	ICD-9 Dx	Benign hypertensive heart disease with heart failure
	402.90	ICD-9 Dx	Unspecified hypertensive heart disease without heart failure
	402.91	ICD-9 Dx	Hypertensive heart disease, unspecified, with heart failure
	403.00	ICD-9 Dx	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage I through stage IV, or unspecified
	403.01	ICD-9 Dx	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease
	403.10	ICD-9 Dx	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage I through stage IV, or unspecified
	403.11	ICD-9 Dx	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease

	403.90	ICD-9 Dx	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage I through stage IV, or unspecified
	403.91	ICD-9 Dx	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease
	404.00	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.01	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.02	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease
	404.03	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease
	404.10	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.11	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.12	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease
	404.13	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease
	404.90	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified

	404.91	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.92	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease
	404.93	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease
	405.01	ICD-9 Dx	Secondary renovascular hypertension, malignant
	405.09	ICD-9 Dx	Other secondary hypertension, malignant
	405.11	ICD-9 Dx	Secondary renovascular hypertension, benign
	405.19	ICD-9 Dx	Other secondary hypertension, benign
	405.91	ICD-9 Dx	Secondary renovascular hypertension, unspecified
	405.99	ICD-9 Dx	Other secondary hypertension, unspecified
	437.2	ICD-9 Dx	Hypertensive encephalopathy
	997.91	ICD-9 Dx	Hypertension
	H35031	ICD-10 Dx	Hypertensive retinopathy, right eye
	H35032	ICD-10 Dx	Hypertensive retinopathy, left eye
	H35033	ICD-10 Dx	Hypertensive retinopathy, bilateral
	H35039	ICD-10 Dx	Hypertensive retinopathy, unspecified eye
	I10	ICD-10 Dx	Essential (primary) hypertension
	I110	ICD-10 Dx	Hypertensive heart disease with heart failure

	I119	ICD-10 Dx	Hypertensive heart disease without heart failure
	I120	ICD-10 Dx	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease
	I129	ICD-10 Dx	Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
	I130	ICD-10 Dx	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
	I1310	ICD-10 Dx	Hypertensive heart and chronic kidney disease without heart failure, with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
	I1311	ICD-10 Dx	Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease
	I132	ICD-10 Dx	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease
	I150	ICD-10 Dx	Renovascular hypertension
	I151	ICD-10 Dx	Hypertension secondary to other renal disorders
	I152	ICD-10 Dx	Hypertension secondary to endocrine disorders
	I158	ICD-10 Dx	Other secondary hypertension
	I159	ICD-10 Dx	Secondary hypertension, unspecified
	I160	ICD-10 Dx	Hypertensive urgency
	I161	ICD-10 Dx	Hypertensive emergency
	I169	ICD-10 Dx	Hypertensive crisis, unspecified

	I674	ICD-10 Dx	Hypertensive encephalopathy
	I973	ICD-10 Dx	Postprocedural hypertension
	N262	ICD-10 Dx	Page kidney
	250.00	ICD-9 Dx	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled
	250.02	ICD-9 Dx	Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled
	250.10	ICD-9 Dx	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled
	250.12	ICD-9 Dx	Diabetes with ketoacidosis, type II or unspecified type, uncontrolled
	250.20	ICD-9 Dx	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled
	250.22	ICD-9 Dx	Diabetes with hyperosmolarity, type II or unspecified type, uncontrolled
	250.30	ICD-9 Dx	Diabetes with other coma, type II or unspecified type, not stated as uncontrolled
	250.32	ICD-9 Dx	Diabetes with other coma, type II or unspecified type, uncontrolled
	250.40	ICD-9 Dx	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled
	250.42	ICD-9 Dx	Diabetes with renal manifestations, type II or unspecified type, uncontrolled
	250.50	ICD-9 Dx	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled
	250.52	ICD-9 Dx	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled
	250.60	ICD-9 Dx	Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled
	250.62	ICD-9 Dx	Diabetes with neurological manifestations, type II or unspecified type, uncontrolled
	250.70	ICD-9 Dx	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled

	250.72	ICD-9 Dx	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled
	250.80	ICD-9 Dx	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled
	250.82	ICD-9 Dx	Diabetes with other specified manifestations, type II or unspecified type, uncontrolled
	250.90	ICD-9 Dx	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled
	250.92	ICD-9 Dx	Diabetes with unspecified complication, type II or unspecified type, uncontrolled
	790.21	ICD-9 Dx	Impaired fasting glucose
	790.22	ICD-9 Dx	Impaired glucose tolerance test (oral)
	790.29	ICD-9 Dx	Other abnormal glucose
	E1100	ICD-10 Dx	Type 2 diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)
	E1101	ICD-10 Dx	Type 2 diabetes mellitus with hyperosmolarity with coma
	E1121	ICD-10 Dx	Type 2 diabetes mellitus with diabetic nephropathy
	E1122	ICD-10 Dx	Type 2 diabetes mellitus with diabetic chronic kidney disease
	E1129	ICD-10 Dx	Type 2 diabetes mellitus with other diabetic kidney complication
	E11311	ICD-10 Dx	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema
	E11319	ICD-10 Dx	Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema
	E11321	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema
	E113211	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye
	E113212	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye

	E113213	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral
	E113219	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye
	E11329	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema
	E113291	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye
	E113292	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye
	E113293	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral
	E113299	ICD-10 Dx	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye
	E11331	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema
	E113311	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye
	E113312	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye
	E113313	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral
	E113319	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye
	E11339	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema

	E113391	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye
	E113392	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye
	E113393	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral
	E113399	ICD-10 Dx	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye
	E11341	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema
	E113411	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye
	E113412	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye
	E113413	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral
	E113419	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye
	E11349	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema
	E113491	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye
	E113492	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye
	E113493	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral

	E113499	ICD-10 Dx	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye
	E11351	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema
	E113511	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye
	E113512	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye
	E113513	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral
	E113519	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye
	E113521	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye
	E113522	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye
	E113523	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral
	E113529	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye
	E113531	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye
	E113532	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye
	E113533	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral
	E113539	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye

	E113541	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye
	E113542	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye
	E113543	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral
	E113549	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye
	E113551	ICD-10 Dx	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, right eye
	E113552	ICD-10 Dx	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, left eye
	E113553	ICD-10 Dx	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral
	E113559	ICD-10 Dx	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye
	E11359	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema
	E113591	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye
	E113592	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye
	E113593	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral
	E113599	ICD-10 Dx	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye
	E1136	ICD-10 Dx	Type 2 diabetes mellitus with diabetic cataract
	E1137X1	ICD-10 Dx	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye

	E1137X2	ICD-10 Dx	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye
	E1137X3	ICD-10 Dx	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral
	E1137X9	ICD-10 Dx	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye
	E1139	ICD-10 Dx	Type 2 diabetes mellitus with other diabetic ophthalmic complication
	E1140	ICD-10 Dx	Type 2 diabetes mellitus with diabetic neuropathy, unspecified
	E1141	ICD-10 Dx	Type 2 diabetes mellitus with diabetic mononeuropathy
	E1142	ICD-10 Dx	Type 2 diabetes mellitus with diabetic polyneuropathy
	E1143	ICD-10 Dx	Type 2 diabetes mellitus with diabetic autonomic (poly)neuropathy
	E1144	ICD-10 Dx	Type 2 diabetes mellitus with diabetic amyotrophy
	E1149	ICD-10 Dx	Type 2 diabetes mellitus with other diabetic neurological complication
	E1151	ICD-10 Dx	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene
	E1152	ICD-10 Dx	Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene
	E1159	ICD-10 Dx	Type 2 diabetes mellitus with other circulatory complications
	E11610	ICD-10 Dx	Type 2 diabetes mellitus with diabetic neuropathic arthropathy
	E11618	ICD-10 Dx	Type 2 diabetes mellitus with other diabetic arthropathy
	E11620	ICD-10 Dx	Type 2 diabetes mellitus with diabetic dermatitis
	E11621	ICD-10 Dx	Type 2 diabetes mellitus with foot ulcer
	E11622	ICD-10 Dx	Type 2 diabetes mellitus with other skin ulcer

	E11628	ICD-10 Dx	Type 2 diabetes mellitus with other skin complications
	E11630	ICD-10 Dx	Type 2 diabetes mellitus with periodontal disease
	E11638	ICD-10 Dx	Type 2 diabetes mellitus with other oral complications
	E11641	ICD-10 Dx	Type 2 diabetes mellitus with hypoglycemia with coma
	E11649	ICD-10 Dx	Type 2 diabetes mellitus with hypoglycemia without coma
	E1165	ICD-10 Dx	Type 2 diabetes mellitus with hyperglycemia
	E1169	ICD-10 Dx	Type 2 diabetes mellitus with other specified complication
	E118	ICD-10 Dx	Type 2 diabetes mellitus with unspecified complications
	E119	ICD-10 Dx	Type 2 diabetes mellitus without complications
	R7301	ICD-10 Dx	Impaired fasting glucose
	R7302	ICD-10 Dx	Impaired glucose tolerance (oral)
	R7303	ICD-10 Dx	Prediabetes
	R7309	ICD-10 Dx	Other abnormal glucose
Myocardial infarction	410.01	ICD-9 Dx	Acute myocardial infarction of anterolateral wall, initial episode of care
	410.02	ICD-9 Dx	Acute myocardial infarction of anterolateral wall, subsequent episode of care
	410.11	ICD-9 Dx	Acute myocardial infarction of other anterior wall, initial episode of care
	410.12	ICD-9 Dx	Acute myocardial infarction of other anterior wall, subsequent episode of care
	410.21	ICD-9 Dx	Acute myocardial infarction of inferolateral wall, initial episode of care

	410.22	ICD-9 Dx	Acute myocardial infarction of inferolateral wall, subsequent episode of care
	410.31	ICD-9 Dx	Acute myocardial infarction of inferoposterior wall, initial episode of care
	410.32	ICD-9 Dx	Acute myocardial infarction of inferoposterior wall, subsequent episode of care
	410.41	ICD-9 Dx	Acute myocardial infarction of other inferior wall, initial episode of care
	410.42	ICD-9 Dx	Acute myocardial infarction of other inferior wall, subsequent episode of care
	410.51	ICD-9 Dx	Acute myocardial infarction of other lateral wall, initial episode of care
	410.52	ICD-9 Dx	Acute myocardial infarction of other lateral wall, subsequent episode of care
	410.61	ICD-9 Dx	Acute myocardial infarction, true posterior wall infarction, initial episode of care
	410.62	ICD-9 Dx	Acute myocardial infarction, true posterior wall infarction, subsequent episode of care
	410.71	ICD-9 Dx	Acute myocardial infarction, subendocardial infarction, initial episode of care
	410.72	ICD-9 Dx	Acute myocardial infarction, subendocardial infarction, subsequent episode of care
	410.81	ICD-9 Dx	Acute myocardial infarction of other specified sites, initial episode of care
	410.82	ICD-9 Dx	Acute myocardial infarction of other specified sites, subsequent episode of care
	410.91	ICD-9 Dx	Acute myocardial infarction, unspecified site, initial episode of care
	410.92	ICD-9 Dx	Acute myocardial infarction, unspecified site, subsequent episode of care
	412	ICD-9 Dx	Old myocardial infarction
	410.00	ICD-9 Dx	Acute myocardial infarction of anterolateral wall, episode of care unspecified
	410.10	ICD-9 Dx	Acute myocardial infarction of other anterior wall, episode of care unspecified

	410.20	ICD-9 Dx	Acute myocardial infarction of inferolateral wall, episode of care unspecified
	410.30	ICD-9 Dx	Acute myocardial infarction of inferoposterior wall, episode of care unspecified
	410.40	ICD-9 Dx	Acute myocardial infarction of other inferior wall, episode of care unspecified
	410.50	ICD-9 Dx	Acute myocardial infarction of other lateral wall, episode of care unspecified
	410.60	ICD-9 Dx	Acute myocardial infarction, true posterior wall infarction, episode of care unspecified
	410.70	ICD-9 Dx	Acute myocardial infarction, subendocardial infarction, episode of care unspecified
	410.80	ICD-9 Dx	Acute myocardial infarction of other specified sites, episode of care unspecified
	410.90	ICD-9 Dx	Acute myocardial infarction, unspecified site, episode of care unspecified
	411.0	ICD-9 Dx	Postmyocardial infarction syndrome
	429.71	ICD-9 Dx	Acquired cardiac septal defect
	429.79	ICD-9 Dx	Other certain sequelae of myocardial infarction, not elsewhere classified
	I2101	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving left main coronary artery
	I2102	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery
	I2109	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall
	I2111	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving right coronary artery
	I2119	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall
	I2121	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery
	I2129	ICD-10 Dx	ST elevation (STEMI) myocardial infarction involving other sites

	I213	ICD-10 Dx	ST elevation (STEMI) myocardial infarction of unspecified site
	I214	ICD-10 Dx	Non-ST elevation (NSTEMI) myocardial infarction
	I220	ICD-10 Dx	Subsequent ST elevation (STEMI) myocardial infarction of anterior wall
	I221	ICD-10 Dx	Subsequent ST elevation (STEMI) myocardial infarction of inferior wall
	I222	ICD-10 Dx	Subsequent non-ST elevation (NSTEMI) myocardial infarction
	I228	ICD-10 Dx	Subsequent ST elevation (STEMI) myocardial infarction of other sites
	I229	ICD-10 Dx	Subsequent ST elevation (STEMI) myocardial infarction of unspecified site
	I230	ICD-10 Dx	Hemopericardium as current complication following acute myocardial infarction
	I231	ICD-10 Dx	Atrial septal defect as current complication following acute myocardial infarction
	I232	ICD-10 Dx	Ventricular septal defect as current complication following acute myocardial infarction
	I233	ICD-10 Dx	Rupture of cardiac wall without hemopericardium as current complication following acute myocardial infarction
	I234	ICD-10 Dx	Rupture of chordae tendineae as current complication following acute myocardial infarction
	I235	ICD-10 Dx	Rupture of papillary muscle as current complication following acute myocardial infarction
	I236	ICD-10 Dx	Thrombosis of atrium, auricular appendage, and ventricle as current complications following acute myocardial infarction
	I252	ICD-10 Dx	Old myocardial infarction
Osteoporosis	733.0	ICD-9 Dx	Osteoporosis
	733.00	ICD-9 Dx	Unspecified osteoporosis

	733.01	ICD-9 Dx	Senile osteoporosis
	733.02	ICD-9 Dx	Idiopathic osteoporosis
	733.03	ICD-9 Dx	Disuse osteoporosis
	733.09	ICD-9 Dx	Other osteoporosis
	M80	ICD-10 Dx	Osteoporosis with current pathological fracture
	M8000XA	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified site, initial encounter for fracture
	M8000XD	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified site, subsequent encounter for fracture with routine healing
	M8000XG	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified site, subsequent encounter for fracture with delayed healing
	M8000XK	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified site, subsequent encounter for fracture with nonunion
	M8000XP	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified site, subsequent encounter for fracture with malunion
	M8000XS	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified site, sequela
	M80011A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right shoulder, initial encounter for fracture
	M80011D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right shoulder, subsequent encounter for fracture with routine healing
	M80011G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right shoulder, subsequent encounter for fracture with delayed healing
	M80011K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right shoulder, subsequent encounter for fracture with nonunion

	M80011P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right shoulder, subsequent encounter for fracture with malunion
	M80011S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right shoulder, sequela
	M80012A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left shoulder, initial encounter for fracture
	M80012D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left shoulder, subsequent encounter for fracture with routine healing
	M80012G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left shoulder, subsequent encounter for fracture with delayed healing
	M80012K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left shoulder, subsequent encounter for fracture with nonunion
	M80012P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left shoulder, subsequent encounter for fracture with malunion
	M80012S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left shoulder, sequela
	M80019A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified shoulder, initial encounter for fracture
	M80019D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified shoulder, subsequent encounter for fracture with routine healing
	M80019G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified shoulder, subsequent encounter for fracture with delayed healing
	M80019K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified shoulder, subsequent encounter for fracture with nonunion
	M80019P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified shoulder, subsequent encounter for fracture with malunion
	M80019S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified shoulder, sequela

	M80021A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right humerus, initial encounter for fracture
	M80021D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right humerus, subsequent encounter for fracture with routine healing
	M80021G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right humerus, subsequent encounter for fracture with delayed healing
	M80021K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right humerus, subsequent encounter for fracture with nonunion
	M80021P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right humerus, subsequent encounter for fracture with malunion
	M80021S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right humerus, sequela
	M80022A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left humerus, initial encounter for fracture
	M80022D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left humerus, subsequent encounter for fracture with routine healing
	M80022G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left humerus, subsequent encounter for fracture with delayed healing
	M80022K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left humerus, subsequent encounter for fracture with nonunion
	M80022P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left humerus, subsequent encounter for fracture with malunion
	M80022S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left humerus, sequela
	M80029A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified humerus, initial encounter for fracture
	M80029D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified humerus, subsequent encounter for fracture with routine healing

	M80029G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified humerus, subsequent encounter for fracture with delayed healing
	M80029K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified humerus, subsequent encounter for fracture with nonunion
	M80029P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified humerus, subsequent encounter for fracture with malunion
	M80029S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified humerus, sequela
	M80031A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right forearm, initial encounter for fracture
	M80031D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right forearm, subsequent encounter for fracture with routine healing
	M80031G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right forearm, subsequent encounter for fracture with delayed healing
	M80031K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right forearm, subsequent encounter for fracture with nonunion
	M80031P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right forearm, subsequent encounter for fracture with malunion
	M80031S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right forearm, sequela
	M80032A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left forearm, initial encounter for fracture
	M80032D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left forearm, subsequent encounter for fracture with routine healing
	M80032G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left forearm, subsequent encounter for fracture with delayed healing
	M80032K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left forearm, subsequent encounter for fracture with nonunion

	M80032P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left forearm, subsequent encounter for fracture with malunion
	M80032S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left forearm, sequela
	M80039A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified forearm, initial encounter for fracture
	M80039D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified forearm, subsequent encounter for fracture with routine healing
	M80039G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified forearm, subsequent encounter for fracture with delayed healing
	M80039K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified forearm, subsequent encounter for fracture with nonunion
	M80039P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified forearm, subsequent encounter for fracture with malunion
	M80039S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified forearm, sequela
	M80041A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right hand, initial encounter for fracture
	M80041D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right hand, subsequent encounter for fracture with routine healing
	M80041G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right hand, subsequent encounter for fracture with delayed healing
	M80041K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right hand, subsequent encounter for fracture with nonunion
	M80041P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right hand, subsequent encounter for fracture with malunion
	M80041S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right hand, sequela

	M80042A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left hand, initial encounter for fracture
	M80042D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left hand, subsequent encounter for fracture with routine healing
	M80042G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left hand, subsequent encounter for fracture with delayed healing
	M80042K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left hand, subsequent encounter for fracture with nonunion
	M80042P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left hand, subsequent encounter for fracture with malunion
	M80042S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left hand, sequela
	M80049A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified hand, initial encounter for fracture
	M80049D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified hand, subsequent encounter for fracture with routine healing
	M80049G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified hand, subsequent encounter for fracture with delayed healing
	M80049K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified hand, subsequent encounter for fracture with nonunion
	M80049P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified hand, subsequent encounter for fracture with malunion
	M80049S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified hand, sequela
	M80051A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right femur, initial encounter for fracture
	M80051D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right femur, subsequent encounter for fracture with routine healing

	M80051G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right femur, subsequent encounter for fracture with delayed healing
	M80051K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right femur, subsequent encounter for fracture with nonunion
	M80051P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right femur, subsequent encounter for fracture with malunion
	M80051S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right femur, sequela
	M80052A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left femur, initial encounter for fracture
	M80052D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left femur, subsequent encounter for fracture with routine healing
	M80052G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left femur, subsequent encounter for fracture with delayed healing
	M80052K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left femur, subsequent encounter for fracture with nonunion
	M80052P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left femur, subsequent encounter for fracture with malunion
	M80052S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left femur, sequela
	M80059A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified femur, initial encounter for fracture
	M80059D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified femur, subsequent encounter for fracture with routine healing
	M80059G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified femur, subsequent encounter for fracture with delayed healing
	M80059K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified femur, subsequent encounter for fracture with nonunion

	M80059P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified femur, subsequent encounter for fracture with malunion
	M80059S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified femur, sequela
	M80061A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right lower leg, initial encounter for fracture
	M80061D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right lower leg, subsequent encounter for fracture with routine healing
	M80061G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right lower leg, subsequent encounter for fracture with delayed healing
	M80061K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right lower leg, subsequent encounter for fracture with nonunion
	M80061P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right lower leg, subsequent encounter for fracture with malunion
	M80061S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right lower leg, sequela
	M80062A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left lower leg, initial encounter for fracture
	M80062D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left lower leg, subsequent encounter for fracture with routine healing
	M80062G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left lower leg, subsequent encounter for fracture with delayed healing
	M80062K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left lower leg, subsequent encounter for fracture with nonunion
	M80062P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left lower leg, subsequent encounter for fracture with malunion
	M80062S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left lower leg, sequela

	M80069A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified lower leg, initial encounter for fracture
	M80069D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified lower leg, subsequent encounter for fracture with routine healing
	M80069G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified lower leg, subsequent encounter for fracture with delayed healing
	M80069K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified lower leg, subsequent encounter for fracture with nonunion
	M80069P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified lower leg, subsequent encounter for fracture with malunion
	M80069S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified lower leg, sequela
	M80071A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right ankle and foot, initial encounter for fracture
	M80071D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right ankle and foot, subsequent encounter for fracture with routine healing
	M80071G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right ankle and foot, subsequent encounter for fracture with delayed healing
	M80071K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right ankle and foot, subsequent encounter for fracture with nonunion
	M80071P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right ankle and foot, subsequent encounter for fracture with malunion
	M80071S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, right ankle and foot, sequela
	M80072A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left ankle and foot, initial encounter for fracture

	M80072D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left ankle and foot, subsequent encounter for fracture with routine healing
	M80072G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left ankle and foot, subsequent encounter for fracture with delayed healing
	M80072K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left ankle and foot, subsequent encounter for fracture with nonunion
	M80072P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left ankle and foot, subsequent encounter for fracture with malunion
	M80072S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, left ankle and foot, sequela
	M80079A	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified ankle and foot, initial encounter for fracture
	M80079D	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified ankle and foot, subsequent encounter for fracture with routine healing
	M80079G	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified ankle and foot, subsequent encounter for fracture with delayed healing
	M80079K	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified ankle and foot, subsequent encounter for fracture with nonunion
	M80079P	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified ankle and foot, subsequent encounter for fracture with malunion
	M80079S	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, unspecified ankle and foot, sequela
	M8008XA	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, vertebra(e), initial encounter for fracture
	M8008XD	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, vertebra(e), subsequent encounter for fracture with routine healing
	M8008XG	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, vertebra(e), subsequent encounter for fracture with delayed healing

	M8008XK	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, vertebra(e), subsequent encounter for fracture with nonunion
	M8008XP	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, vertebra(e), subsequent encounter for fracture with malunion
	M8008XS	ICD-10 Dx	Age-related osteoporosis with current pathological fracture, vertebra(e), sequela
	M8080XA	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified site, initial encounter for fracture
	M8080XD	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified site, subsequent encounter for fracture with routine healing
	M8080XG	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified site, subsequent encounter for fracture with delayed healing
	M8080XK	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified site, subsequent encounter for fracture with nonunion
	M8080XP	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified site, subsequent encounter for fracture with malunion
	M8080XS	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified site, sequela
	M80811A	ICD-10 Dx	Other osteoporosis with current pathological fracture, right shoulder, initial encounter for fracture
	M80811D	ICD-10 Dx	Other osteoporosis with current pathological fracture, right shoulder, subsequent encounter for fracture with routine healing
	M80811G	ICD-10 Dx	Other osteoporosis with current pathological fracture, right shoulder, subsequent encounter for fracture with delayed healing
	M80811K	ICD-10 Dx	Other osteoporosis with current pathological fracture, right shoulder, subsequent encounter for fracture with nonunion
	M80811P	ICD-10 Dx	Other osteoporosis with current pathological fracture, right shoulder, subsequent encounter for fracture with malunion

	M80811S	ICD-10 Dx	Other osteoporosis with current pathological fracture, right shoulder, sequela
	M80812A	ICD-10 Dx	Other osteoporosis with current pathological fracture, left shoulder, initial encounter for fracture
	M80812D	ICD-10 Dx	Other osteoporosis with current pathological fracture, left shoulder, subsequent encounter for fracture with routine healing
	M80812G	ICD-10 Dx	Other osteoporosis with current pathological fracture, left shoulder, subsequent encounter for fracture with delayed healing
	M80812K	ICD-10 Dx	Other osteoporosis with current pathological fracture, left shoulder, subsequent encounter for fracture with nonunion
	M80812P	ICD-10 Dx	Other osteoporosis with current pathological fracture, left shoulder, subsequent encounter for fracture with malunion
	M80812S	ICD-10 Dx	Other osteoporosis with current pathological fracture, left shoulder, sequela
	M80819A	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified shoulder, initial encounter for fracture
	M80819D	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified shoulder, subsequent encounter for fracture with routine healing
	M80819G	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified shoulder, subsequent encounter for fracture with delayed healing
	M80819K	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified shoulder, subsequent encounter for fracture with nonunion
	M80819P	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified shoulder, subsequent encounter for fracture with malunion
	M80819S	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified shoulder, sequela
	M80821A	ICD-10 Dx	Other osteoporosis with current pathological fracture, right humerus, initial encounter for fracture

	M80821D	ICD-10 Dx	Other osteoporosis with current pathological fracture, right humerus, subsequent encounter for fracture with routine healing
	M80821G	ICD-10 Dx	Other osteoporosis with current pathological fracture, right humerus, subsequent encounter for fracture with delayed healing
	M80821K	ICD-10 Dx	Other osteoporosis with current pathological fracture, right humerus, subsequent encounter for fracture with nonunion
	M80821P	ICD-10 Dx	Other osteoporosis with current pathological fracture, right humerus, subsequent encounter for fracture with malunion
	M80821S	ICD-10 Dx	Other osteoporosis with current pathological fracture, right humerus, sequela
	M80822A	ICD-10 Dx	Other osteoporosis with current pathological fracture, left humerus, initial encounter for fracture
	M80822D	ICD-10 Dx	Other osteoporosis with current pathological fracture, left humerus, subsequent encounter for fracture with routine healing
	M80822G	ICD-10 Dx	Other osteoporosis with current pathological fracture, left humerus, subsequent encounter for fracture with delayed healing
	M80822K	ICD-10 Dx	Other osteoporosis with current pathological fracture, left humerus, subsequent encounter for fracture with nonunion
	M80822P	ICD-10 Dx	Other osteoporosis with current pathological fracture, left humerus, subsequent encounter for fracture with malunion
	M80822S	ICD-10 Dx	Other osteoporosis with current pathological fracture, left humerus, sequela
	M80829A	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified humerus, initial encounter for fracture
	M80829D	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified humerus, subsequent encounter for fracture with routine healing
	M80829G	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified humerus, subsequent encounter for fracture with delayed healing

	M80829K	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified humerus, subsequent encounter for fracture with nonunion
	M80829P	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified humerus, subsequent encounter for fracture with malunion
	M80829S	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified humerus, sequela
	M80831A	ICD-10 Dx	Other osteoporosis with current pathological fracture, right forearm, initial encounter for fracture
	M80831D	ICD-10 Dx	Other osteoporosis with current pathological fracture, right forearm, subsequent encounter for fracture with routine healing
	M80831G	ICD-10 Dx	Other osteoporosis with current pathological fracture, right forearm, subsequent encounter for fracture with delayed healing
	M80831K	ICD-10 Dx	Other osteoporosis with current pathological fracture, right forearm, subsequent encounter for fracture with nonunion
	M80831P	ICD-10 Dx	Other osteoporosis with current pathological fracture, right forearm, subsequent encounter for fracture with malunion
	M80831S	ICD-10 Dx	Other osteoporosis with current pathological fracture, right forearm, sequela
	M80832A	ICD-10 Dx	Other osteoporosis with current pathological fracture, left forearm, initial encounter for fracture
	M80832D	ICD-10 Dx	Other osteoporosis with current pathological fracture, left forearm, subsequent encounter for fracture with routine healing
	M80832G	ICD-10 Dx	Other osteoporosis with current pathological fracture, left forearm, subsequent encounter for fracture with delayed healing
	M80832K	ICD-10 Dx	Other osteoporosis with current pathological fracture, left forearm, subsequent encounter for fracture with nonunion
	M80832P	ICD-10 Dx	Other osteoporosis with current pathological fracture, left forearm, subsequent encounter for fracture with malunion

	M80832S	ICD-10 Dx	Other osteoporosis with current pathological fracture, left forearm, sequela
	M80839A	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified forearm, initial encounter for fracture
	M80839D	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified forearm, subsequent encounter for fracture with routine healing
	M80839G	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified forearm, subsequent encounter for fracture with delayed healing
	M80839K	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified forearm, subsequent encounter for fracture with nonunion
	M80839P	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified forearm, subsequent encounter for fracture with malunion
	M80839S	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified forearm, sequela
	M80841A	ICD-10 Dx	Other osteoporosis with current pathological fracture, right hand, initial encounter for fracture
	M80841D	ICD-10 Dx	Other osteoporosis with current pathological fracture, right hand, subsequent encounter for fracture with routine healing
	M80841G	ICD-10 Dx	Other osteoporosis with current pathological fracture, right hand, subsequent encounter for fracture with delayed healing
	M80841K	ICD-10 Dx	Other osteoporosis with current pathological fracture, right hand, subsequent encounter for fracture with nonunion
	M80841P	ICD-10 Dx	Other osteoporosis with current pathological fracture, right hand, subsequent encounter for fracture with malunion
	M80841S	ICD-10 Dx	Other osteoporosis with current pathological fracture, right hand, sequela
	M80842A	ICD-10 Dx	Other osteoporosis with current pathological fracture, left hand, initial encounter for fracture

	M80842D	ICD-10 Dx	Other osteoporosis with current pathological fracture, left hand, subsequent encounter for fracture with routine healing
	M80842G	ICD-10 Dx	Other osteoporosis with current pathological fracture, left hand, subsequent encounter for fracture with delayed healing
	M80842K	ICD-10 Dx	Other osteoporosis with current pathological fracture, left hand, subsequent encounter for fracture with nonunion
	M80842P	ICD-10 Dx	Other osteoporosis with current pathological fracture, left hand, subsequent encounter for fracture with malunion
	M80842S	ICD-10 Dx	Other osteoporosis with current pathological fracture, left hand, sequela
	M80849A	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified hand, initial encounter for fracture
	M80849D	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified hand, subsequent encounter for fracture with routine healing
	M80849G	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified hand, subsequent encounter for fracture with delayed healing
	M80849K	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified hand, subsequent encounter for fracture with nonunion
	M80849P	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified hand, subsequent encounter for fracture with malunion
	M80849S	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified hand, sequela
	M80851A	ICD-10 Dx	Other osteoporosis with current pathological fracture, right femur, initial encounter for fracture
	M80851D	ICD-10 Dx	Other osteoporosis with current pathological fracture, right femur, subsequent encounter for fracture with routine healing
	M80851G	ICD-10 Dx	Other osteoporosis with current pathological fracture, right femur, subsequent encounter for fracture with delayed healing

	M80851K	ICD-10 Dx	Other osteoporosis with current pathological fracture, right femur, subsequent encounter for fracture with nonunion
	M80851P	ICD-10 Dx	Other osteoporosis with current pathological fracture, right femur, subsequent encounter for fracture with malunion
	M80851S	ICD-10 Dx	Other osteoporosis with current pathological fracture, right femur, sequela
	M80852A	ICD-10 Dx	Other osteoporosis with current pathological fracture, left femur, initial encounter for fracture
	M80852D	ICD-10 Dx	Other osteoporosis with current pathological fracture, left femur, subsequent encounter for fracture with routine healing
	M80852G	ICD-10 Dx	Other osteoporosis with current pathological fracture, left femur, subsequent encounter for fracture with delayed healing
	M80852K	ICD-10 Dx	Other osteoporosis with current pathological fracture, left femur, subsequent encounter for fracture with nonunion
	M80852P	ICD-10 Dx	Other osteoporosis with current pathological fracture, left femur, subsequent encounter for fracture with malunion
	M80852S	ICD-10 Dx	Other osteoporosis with current pathological fracture, left femur, sequela
	M80859A	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified femur, initial encounter for fracture
	M80859D	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified femur, subsequent encounter for fracture with routine healing
	M80859G	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified femur, subsequent encounter for fracture with delayed healing
	M80859K	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified femur, subsequent encounter for fracture with nonunion
	M80859P	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified femur, subsequent encounter for fracture with malunion

	M80859S	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified femur, sequela
	M80861A	ICD-10 Dx	Other osteoporosis with current pathological fracture, right lower leg, initial encounter for fracture
	M80861D	ICD-10 Dx	Other osteoporosis with current pathological fracture, right lower leg, subsequent encounter for fracture with routine healing
	M80861G	ICD-10 Dx	Other osteoporosis with current pathological fracture, right lower leg, subsequent encounter for fracture with delayed healing
	M80861K	ICD-10 Dx	Other osteoporosis with current pathological fracture, right lower leg, subsequent encounter for fracture with nonunion
	M80861P	ICD-10 Dx	Other osteoporosis with current pathological fracture, right lower leg, subsequent encounter for fracture with malunion
	M80861S	ICD-10 Dx	Other osteoporosis with current pathological fracture, right lower leg, sequela
	M80862A	ICD-10 Dx	Other osteoporosis with current pathological fracture, left lower leg, initial encounter for fracture
	M80862D	ICD-10 Dx	Other osteoporosis with current pathological fracture, left lower leg, subsequent encounter for fracture with routine healing
	M80862G	ICD-10 Dx	Other osteoporosis with current pathological fracture, left lower leg, subsequent encounter for fracture with delayed healing
	M80862K	ICD-10 Dx	Other osteoporosis with current pathological fracture, left lower leg, subsequent encounter for fracture with nonunion
	M80862P	ICD-10 Dx	Other osteoporosis with current pathological fracture, left lower leg, subsequent encounter for fracture with malunion
	M80862S	ICD-10 Dx	Other osteoporosis with current pathological fracture, left lower leg, sequela
	M80869A	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified lower leg, initial encounter for fracture

	M80869D	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified lower leg, subsequent encounter for fracture with routine healing
	M80869G	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified lower leg, subsequent encounter for fracture with delayed healing
	M80869K	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified lower leg, subsequent encounter for fracture with nonunion
	M80869P	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified lower leg, subsequent encounter for fracture with malunion
	M80869S	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified lower leg, sequela
	M80871A	ICD-10 Dx	Other osteoporosis with current pathological fracture, right ankle and foot, initial encounter for fracture
	M80871D	ICD-10 Dx	Other osteoporosis with current pathological fracture, right ankle and foot, subsequent encounter for fracture with routine healing
	M80871G	ICD-10 Dx	Other osteoporosis with current pathological fracture, right ankle and foot, subsequent encounter for fracture with delayed healing
	M80871K	ICD-10 Dx	Other osteoporosis with current pathological fracture, right ankle and foot, subsequent encounter for fracture with nonunion
	M80871P	ICD-10 Dx	Other osteoporosis with current pathological fracture, right ankle and foot, subsequent encounter for fracture with malunion
	M80871S	ICD-10 Dx	Other osteoporosis with current pathological fracture, right ankle and foot, sequela
	M80872A	ICD-10 Dx	Other osteoporosis with current pathological fracture, left ankle and foot, initial encounter for fracture
	M80872D	ICD-10 Dx	Other osteoporosis with current pathological fracture, left ankle and foot, subsequent encounter for fracture with routine healing

	M80872G	ICD-10 Dx	Other osteoporosis with current pathological fracture, left ankle and foot, subsequent encounter for fracture with delayed healing
	M80872K	ICD-10 Dx	Other osteoporosis with current pathological fracture, left ankle and foot, subsequent encounter for fracture with nonunion
	M80872P	ICD-10 Dx	Other osteoporosis with current pathological fracture, left ankle and foot, subsequent encounter for fracture with malunion
	M80872S	ICD-10 Dx	Other osteoporosis with current pathological fracture, left ankle and foot, sequela
	M80879A	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified ankle and foot, initial encounter for fracture
	M80879D	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified ankle and foot, subsequent encounter for fracture with routine healing
	M80879G	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified ankle and foot, subsequent encounter for fracture with delayed healing
	M80879K	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified ankle and foot, subsequent encounter for fracture with nonunion
	M80879P	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified ankle and foot, subsequent encounter for fracture with malunion
	M80879S	ICD-10 Dx	Other osteoporosis with current pathological fracture, unspecified ankle and foot, sequela
	M8088XA	ICD-10 Dx	Other osteoporosis with current pathological fracture, vertebra(e), initial encounter for fracture
	M8088XD	ICD-10 Dx	Other osteoporosis with current pathological fracture, vertebra(e), subsequent encounter for fracture with routine healing
	M8088XG	ICD-10 Dx	Other osteoporosis with current pathological fracture, vertebra(e), subsequent encounter for fracture with delayed healing
	M8088XK	ICD-10 Dx	Other osteoporosis with current pathological fracture, vertebra(e), subsequent encounter for fracture with nonunion

	M8088XP	ICD-10 Dx	Other osteoporosis with current pathological fracture, vertebra(e), subsequent encounter for fracture with malunion
	M8088XS	ICD-10 Dx	Other osteoporosis with current pathological fracture, vertebra(e), sequela
	M81	ICD-10 Dx	Osteoporosis without current pathological fracture
	M810	ICD-10 Dx	Age-related osteoporosis without current pathological fracture
	M816	ICD-10 Dx	Localized osteoporosis [Lequesne]
	M818	ICD-10 Dx	Other osteoporosis without current pathological fracture
	Z87310	ICD-10 Dx	Personal history of (healed) osteoporosis fracture
Pulmonary fibrosis	515	ICD-9 Dx	Postinflammatory pulmonary fibrosis
	500	ICD-9 Dx	Coal workers' pneumoconiosis
	501	ICD-9 Dx	Asbestosis
	502	ICD-9 Dx	Pneumoconiosis due to other silica or silicates
	503	ICD-9 Dx	Pneumoconiosis due to other inorganic dust
	504	ICD-9 Dx	Pneumonopathy due to inhalation of other dust
	505	ICD-9 Dx	Unspecified pneumoconiosis
	516.31	ICD-9 Dx	Idiopathic pulmonary fibrosis
	J60	ICD-10 Dx	Coalworker's pneumoconiosis
	J61	ICD-10 Dx	Pneumoconiosis due to asbestos and other mineral fibers
	J620	ICD-10 Dx	Pneumoconiosis due to talc dust

	J628	ICD-10 Dx	Pneumoconiosis due to other dust containing silica
	J631	ICD-10 Dx	Bauxite fibrosis (of lung)
	J633	ICD-10 Dx	Graphite fibrosis (of lung)
	J636	ICD-10 Dx	Pneumoconiosis due to other specified inorganic dusts
	J64	ICD-10 Dx	Unspecified pneumoconiosis
	J65	ICD-10 Dx	Pneumoconiosis associated with tuberculosis
	J8410	ICD-10 Dx	Pulmonary fibrosis, unspecified
	J84112	ICD-10 Dx	Idiopathic pulmonary fibrosis
	J8417	ICD-10 Dx	Other interstitial pulmonary diseases with fibrosis in diseases classified elsewhere
Peripheral vascular disease	250.70	ICD-9 Dx	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled
	250.71	ICD-9 Dx	Diabetes with peripheral circulatory disorders, type I [juvenile type], not stated as uncontrolled
	250.72	ICD-9 Dx	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled
	250.73	ICD-9 Dx	Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled
	362.30	ICD-9 Dx	Unspecified retinal vascular occlusion
	362.31	ICD-9 Dx	Central artery occlusion of retina
	362.32	ICD-9 Dx	Arterial branch occlusion of retina
	362.33	ICD-9 Dx	Partial arterial occlusion of retina
	405.01	ICD-9 Dx	Secondary renovascular hypertension

	405.11	ICD-9 Dx	Secondary renovascular hypertension, benign
	405.19	ICD-9 Dx	Other secondary hypertension, benign
	405.91	ICD-9 Dx	Secondary renovascular hypertension, unspecified
	440.0	ICD-9 Dx	Atherosclerosis of aorta
	440.1	ICD-9 Dx	Atherosclerosis of renal artery
	440.20	ICD-9 Dx	Atherosclerosis of native arteries of the extremities, unspecified
	440.21	ICD-9 Dx	Atherosclerosis of native arteries of the extremities with intermittent claudication
	440.22	ICD-9 Dx	Atherosclerosis of native arteries of the extremities with rest pain
	440.23	ICD-9 Dx	Atherosclerosis of native arteries of the extremities with ulceration
	440.24	ICD-9 Dx	Atherosclerosis of native arteries of the extremities with gangrene
	440.29	ICD-9 Dx	Other atherosclerosis of native arteries of the extremities
	440.30	ICD-9 Dx	Atherosclerosis of unspecified bypass graft of extremities
	440.31	ICD-9 Dx	Atherosclerosis of autologous vein bypass graft of extremities
	440.32	ICD-9 Dx	Atherosclerosis of nonautologous biological bypass graft of extremities
	440.4	ICD-9 Dx	Chronic total occlusion of artery of the extremities
	440.8	ICD-9 Dx	Atherosclerosis of other specified arteries
	440.9	ICD-9 Dx	Generalized and unspecified atherosclerosis
	441.00	ICD-9 Dx	Dissecting aortic aneurysm (any part), unspecified site

	441.01	ICD-9 Dx	Dissecting aortic aneurysm (any part), thoracic
	441.02	ICD-9 Dx	Dissecting aortic aneurysm (any part), abdominal
	441.03	ICD-9 Dx	Dissecting aortic aneurysm (any part), thoracoabdominal
	441.1	ICD-9 Dx	Thoracic aneurysm, ruptured
	441.2	ICD-9 Dx	Thoracic aneurysm without mention of rupture
	441.3	ICD-9 Dx	Abdominal aneurysm, ruptured
	441.4	ICD-9 Dx	Abdominal aneurysm without mention of rupture
	441.5	ICD-9 Dx	Aortic aneurysm of unspecified site, ruptured
	441.6	ICD-9 Dx	Thoracoabdominal aneurysm, ruptured
	441.7	ICD-9 Dx	Thoracoabdominal aneurysm without mention of rupture
	441.9	ICD-9 Dx	Aortic aneurysm of unspecified site without mention of rupture
	442.0	ICD-9 Dx	Aneurysm of artery of upper extremity
	442.1	ICD-9 Dx	Aneurysm of renal artery
	442.2	ICD-9 Dx	Aneurysm of iliac artery
	442.3	ICD-9 Dx	Aneurysm of artery of lower extremity
	442.81	ICD-9 Dx	Aneurysm of artery of neck
	442.82	ICD-9 Dx	Aneurysm of subclavian artery
	442.83	ICD-9 Dx	Aneurysm of splenic artery

	442.84	ICD-9 Dx	Aneurysm of other visceral artery
	442.89	ICD-9 Dx	Aneurysm of other specified artery
	442.9	ICD-9 Dx	Other aneurysm of unspecified site
	443.0	ICD-9 Dx	Raynaud's syndrome
	443.1	ICD-9 Dx	Thromboangiitis obliterans (Buerger's disease)
	443.21	ICD-9 Dx	Dissection of carotid artery
	443.22	ICD-9 Dx	Dissection of iliac artery
	443.23	ICD-9 Dx	Dissection of renal artery
	443.24	ICD-9 Dx	Dissection of vertebral artery
	443.29	ICD-9 Dx	Dissection of other artery
	443.81	ICD-9 Dx	Peripheral angiopathy in diseases classified elsewhere
	443.82	ICD-9 Dx	Erythromelalgia
	443.89	ICD-9 Dx	Other peripheral vascular disease
	443.9	ICD-9 Dx	Peripheral vascular disease, unspecified
	444.01	ICD-9 Dx	Saddle embolus of abdominal aorta
	444.09	ICD-9 Dx	Other arterial embolism and thrombosis of abdominal aorta
	444.1	ICD-9 Dx	Embolism and thrombosis of thoracic aorta
	444.21	ICD-9 Dx	Embolism and thrombosis of arteries of upper extremity

	444.22	ICD-9 Dx	Embolism and thrombosis of arteries of lower extremity
	444.81	ICD-9 Dx	Embolism and thrombosis of iliac artery
	444.89	ICD-9 Dx	Embolism and thrombosis of other specified artery
	444.9	ICD-9 Dx	Embolism and thrombosis of unspecified artery
	445.01	ICD-9 Dx	Atheroembolism of upper extremity
	445.02	ICD-9 Dx	Atheroembolism of lower extremity
	445.81	ICD-9 Dx	Atheroembolism of kidney
	445.89	ICD-9 Dx	Atheroembolism of other site
	446.0	ICD-9 Dx	Polyarteritis nodosa
	446.1	ICD-9 Dx	Acute febrile mucocutaneous lymph node syndrome (MCLS)
	446.20	ICD-9 Dx	Unspecified hypersensitivity angiitis
	446.21	ICD-9 Dx	Goodpasture's syndrome
	446.29	ICD-9 Dx	Other specified hypersensitivity angiitis
	446.3	ICD-9 Dx	Lethal midline granuloma
	446.4	ICD-9 Dx	Wegener's granulomatosis
	446.5	ICD-9 Dx	Giant cell arteritis
	446.6	ICD-9 Dx	Thrombotic microangiopathy
	446.7	ICD-9 Dx	Takayasu's disease

	447.0	ICD-9 Dx	Arteriovenous fistula, acquired
	447.1	ICD-9 Dx	Stricture of artery
	447.2	ICD-9 Dx	Rupture of artery
	447.3	ICD-9 Dx	Hyperplasia of renal artery
	447.4	ICD-9 Dx	Celiac artery compression syndrome
	447.5	ICD-9 Dx	Necrosis of artery
	447.6	ICD-9 Dx	Unspecified arteritis
	447.70	ICD-9 Dx	Aortic ectasia, unspecified site
	447.71	ICD-9 Dx	Thoracic aortic ectasia
	447.72	ICD-9 Dx	Abdominal aortic ectasia
	447.73	ICD-9 Dx	Thoracoabdominal aortic ectasia
	447.8	ICD-9 Dx	Other specified disorders of arteries and arterioles
	447.9	ICD-9 Dx	Unspecified disorders of arteries and arterioles
	557.1	ICD-9 Dx	Chronic vascular insufficiency of intestine
	557.9	ICD-9 Dx	Unspecified vascular insufficiency of intestine
	E0851	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy without gangrene
	E0852	ICD-10 Dx	Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy with gangrene
	E0951	ICD-10 Dx	Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy without gangrene

	E0952	ICD-10 Dx	Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy with gangrene
	E1051	ICD-10 Dx	Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene
	E1052	ICD-10 Dx	Type 1 diabetes mellitus with diabetic peripheral angiopathy with gangrene
	E1151	ICD-10 Dx	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene
	E1152	ICD-10 Dx	Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene
	E1351	ICD-10 Dx	Other specified diabetes mellitus with diabetic peripheral angiopathy without gangrene
	E1352	ICD-10 Dx	Other specified diabetes mellitus with diabetic peripheral angiopathy with gangrene
	I700	ICD-10 Dx	Atherosclerosis of aorta
	I701	ICD-10 Dx	Atherosclerosis of renal artery
	I70201	ICD-10 Dx	Unspecified atherosclerosis of native arteries of extremities, right leg
	I70202	ICD-10 Dx	Unspecified atherosclerosis of native arteries of extremities, left leg
	I70203	ICD-10 Dx	Unspecified atherosclerosis of native arteries of extremities, bilateral legs
	I70208	ICD-10 Dx	Unspecified atherosclerosis of native arteries of extremities, other extremity
	I70209	ICD-10 Dx	Unspecified atherosclerosis of native arteries of extremities, unspecified extremity
	I70211	ICD-10 Dx	Atherosclerosis of native arteries of extremities with intermittent claudication, right leg
	I70212	ICD-10 Dx	Atherosclerosis of native arteries of extremities with intermittent claudication, left leg
	I70213	ICD-10 Dx	Atherosclerosis of native arteries of extremities with intermittent claudication, bilateral legs
	I70218	ICD-10 Dx	Atherosclerosis of native arteries of extremities with intermittent claudication, other extremity

	I70219	ICD-10 Dx	Atherosclerosis of native arteries of extremities with intermittent claudication, unspecified extremity
	I70221	ICD-10 Dx	Atherosclerosis of native arteries of extremities with rest pain, right leg
	I70222	ICD-10 Dx	Atherosclerosis of native arteries of extremities with rest pain, left leg
	I70223	ICD-10 Dx	Atherosclerosis of native arteries of extremities with rest pain, bilateral legs
	I70228	ICD-10 Dx	Atherosclerosis of native arteries of extremities with rest pain, other extremity
	I70229	ICD-10 Dx	Atherosclerosis of native arteries of extremities with rest pain, unspecified extremity
	I70231	ICD-10 Dx	Atherosclerosis of native arteries of right leg with ulceration of thigh
	I70232	ICD-10 Dx	Atherosclerosis of native arteries of right leg with ulceration of calf
	I70233	ICD-10 Dx	Atherosclerosis of native arteries of right leg with ulceration of ankle
	I70234	ICD-10 Dx	Atherosclerosis of native arteries of right leg with ulceration of heel and midfoot
	I70235	ICD-10 Dx	Atherosclerosis of native arteries of right leg with ulceration of other part of foot
	I70238	ICD-10 Dx	Atherosclerosis of native arteries of right leg with ulceration of other part of lower right leg
	I70239	ICD-10 Dx	Atherosclerosis of native arteries of right leg with ulceration of unspecified site
	I70241	ICD-10 Dx	Atherosclerosis of native arteries of left leg with ulceration of thigh
	I70242	ICD-10 Dx	Atherosclerosis of native arteries of left leg with ulceration of calf
	I70243	ICD-10 Dx	Atherosclerosis of native arteries of left leg with ulceration of ankle
	I70244	ICD-10 Dx	Atherosclerosis of native arteries of left leg with ulceration of heel and midfoot
	I70245	ICD-10 Dx	Atherosclerosis of native arteries of left leg with ulceration of other part of foot

	I70248	ICD-10 Dx	Atherosclerosis of native arteries of left leg with ulceration of other part of lower left leg
	I70249	ICD-10 Dx	Atherosclerosis of native arteries of left leg with ulceration of unspecified site
	I7025	ICD-10 Dx	Atherosclerosis of native arteries of other extremities with ulceration
	I70261	ICD-10 Dx	Atherosclerosis of native arteries of extremities with gangrene, right leg
	I70262	ICD-10 Dx	Atherosclerosis of native arteries of extremities with gangrene, left leg
	I70263	ICD-10 Dx	Atherosclerosis of native arteries of extremities with gangrene, bilateral legs
	I70268	ICD-10 Dx	Atherosclerosis of native arteries of extremities with gangrene, other extremity
	I70269	ICD-10 Dx	Atherosclerosis of native arteries of extremities with gangrene, unspecified extremity
	I70291	ICD-10 Dx	Other atherosclerosis of native arteries of extremities, right leg
	I70292	ICD-10 Dx	Other atherosclerosis of native arteries of extremities, left leg
	I70293	ICD-10 Dx	Other atherosclerosis of native arteries of extremities, bilateral legs
	I70298	ICD-10 Dx	Other atherosclerosis of native arteries of extremities, other extremity
	I70299	ICD-10 Dx	Other atherosclerosis of native arteries of extremities, unspecified extremity
	I70301	ICD-10 Dx	Unspecified atherosclerosis of unspecified type of bypass graft(s) of the extremities, right leg
	I70302	ICD-10 Dx	Unspecified atherosclerosis of unspecified type of bypass graft(s) of the extremities, left leg
	I70303	ICD-10 Dx	Unspecified atherosclerosis of unspecified type of bypass graft(s) of the extremities, bilateral legs
	I70308	ICD-10 Dx	Unspecified atherosclerosis of unspecified type of bypass graft(s) of the extremities, other extremity
	I70309	ICD-10 Dx	Unspecified atherosclerosis of unspecified type of bypass graft(s) of the extremities, unspecified extremity

	I70311	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with intermittent claudication, right leg
	I70312	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with intermittent claudication, left leg
	I70313	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with intermittent claudication, bilateral legs
	I70318	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with intermittent claudication, other extremity
	I70319	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with intermittent claudication, unspecified extremity
	I70321	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with rest pain, right leg
	I70322	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with rest pain, left leg
	I70323	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with rest pain, bilateral legs
	I70328	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with rest pain, other extremity
	I70329	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with rest pain, unspecified extremity
	I70331	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of thigh
	I70332	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of calf
	I70333	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of ankle
	I70334	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of heel and midfoot

	I70335	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of other part of foot
	I70338	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of other part of lower leg
	I70339	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the right leg with ulceration of unspecified site
	I70341	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of thigh
	I70342	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of calf
	I70343	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of ankle
	I70344	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of heel and midfoot
	I70345	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of other part of foot
	I70348	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of other part of lower leg
	I70349	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the left leg with ulceration of unspecified site
	I7035	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of other extremity with ulceration
	I70361	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with gangrene, right leg
	I70362	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with gangrene, left leg
	I70363	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with gangrene, bilateral legs
	I70368	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with gangrene, other extremity

	I70369	ICD-10 Dx	Atherosclerosis of unspecified type of bypass graft(s) of the extremities with gangrene, unspecified extremity
	I70391	ICD-10 Dx	Other atherosclerosis of unspecified type of bypass graft(s) of the extremities, right leg
	I70392	ICD-10 Dx	Other atherosclerosis of unspecified type of bypass graft(s) of the extremities, left leg
	I70393	ICD-10 Dx	Other atherosclerosis of unspecified type of bypass graft(s) of the extremities, bilateral legs
	I70398	ICD-10 Dx	Other atherosclerosis of unspecified type of bypass graft(s) of the extremities, other extremity
	I70399	ICD-10 Dx	Other atherosclerosis of unspecified type of bypass graft(s) of the extremities, unspecified extremity
	I70401	ICD-10 Dx	Unspecified atherosclerosis of autologous vein bypass graft(s) of the extremities, right leg
	I70402	ICD-10 Dx	Unspecified atherosclerosis of autologous vein bypass graft(s) of the extremities, left leg
	I70403	ICD-10 Dx	Unspecified atherosclerosis of autologous vein bypass graft(s) of the extremities, bilateral legs
	I70408	ICD-10 Dx	Unspecified atherosclerosis of autologous vein bypass graft(s) of the extremities, other extremity
	I70409	ICD-10 Dx	Unspecified atherosclerosis of autologous vein bypass graft(s) of the extremities, unspecified extremity
	I70411	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with intermittent claudication, right leg
	I70412	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with intermittent claudication, left leg
	I70413	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with intermittent claudication, bilateral legs
	I70418	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with intermittent claudication, other extremity

	I70419	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with intermittent claudication, unspecified extremity
	I70421	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with rest pain, right leg
	I70422	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with rest pain, left leg
	I70423	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with rest pain, bilateral legs
	I70428	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with rest pain, other extremity
	I70429	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with rest pain, unspecified extremity
	I70431	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of thigh
	I70432	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of calf
	I70433	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of ankle
	I70434	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of heel and midfoot
	I70435	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of other part of foot
	I70438	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of other part of lower leg
	I70439	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the right leg with ulceration of unspecified site
	I70441	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of thigh
	I70442	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of calf
	I70443	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of ankle
	I70444	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of heel and midfoot

	I70445	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of other part of foot
	I70448	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of other part of lower leg
	I70449	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the left leg with ulceration of unspecified site
	I7045	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of other extremity with ulceration
	I70461	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with gangrene, right leg
	I70462	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with gangrene, left leg
	I70463	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with gangrene, bilateral legs
	I70468	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with gangrene, other extremity
	I70469	ICD-10 Dx	Atherosclerosis of autologous vein bypass graft(s) of the extremities with gangrene, unspecified extremity
	I70491	ICD-10 Dx	Other atherosclerosis of autologous vein bypass graft(s) of the extremities, right leg
	I70492	ICD-10 Dx	Other atherosclerosis of autologous vein bypass graft(s) of the extremities, left leg
	I70493	ICD-10 Dx	Other atherosclerosis of autologous vein bypass graft(s) of the extremities, bilateral legs
	I70498	ICD-10 Dx	Other atherosclerosis of autologous vein bypass graft(s) of the extremities, other extremity
	I70499	ICD-10 Dx	Other atherosclerosis of autologous vein bypass graft(s) of the extremities, unspecified extremity
	I70501	ICD-10 Dx	Unspecified atherosclerosis of nonautologous biological bypass graft(s) of the extremities, right leg
	I70502	ICD-10 Dx	Unspecified atherosclerosis of nonautologous biological bypass graft(s) of the extremities, left leg
	I70503	ICD-10 Dx	Unspecified atherosclerosis of nonautologous biological bypass graft(s) of the extremities, bilateral legs

	I70508	ICD-10 Dx	Unspecified atherosclerosis of nonautologous biological bypass graft(s) of the extremities, other extremity
	I70509	ICD-10 Dx	Unspecified atherosclerosis of nonautologous biological bypass graft(s) of the extremities, unspecified extremity
	I70511	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with intermittent claudication, right leg
	I70512	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with intermittent claudication, left leg
	I70513	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with intermittent claudication, bilateral legs
	I70518	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with intermittent claudication, other extremity
	I70519	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with intermittent claudication, unspecified extremity
	I70521	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with rest pain, right leg
	I70522	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with rest pain, left leg
	I70523	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with rest pain, bilateral legs
	I70528	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with rest pain, other extremity
	I70529	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with rest pain, unspecified extremity
	I70531	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of thigh
	I70532	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of calf

	I70533	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of ankle
	I70534	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of heel and midfoot
	I70535	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of other part of foot
	I70538	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of other part of lower leg
	I70539	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the right leg with ulceration of unspecified site
	I70541	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration of thigh
	I70542	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration of calf
	I70543	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration of ankle
	I70544	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration of heel and midfoot
	I70545	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration of other part of foot
	I70548	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration of other part of lower leg
	I70549	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the left leg with ulceration of unspecified site
	I7055	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of other extremity with ulceration
	I70561	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with gangrene, right leg
	I70562	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with gangrene, left leg

	I70563	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with gangrene, bilateral legs
	I70568	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with gangrene, other extremity
	I70569	ICD-10 Dx	Atherosclerosis of nonautologous biological bypass graft(s) of the extremities with gangrene, unspecified extremity
	I70591	ICD-10 Dx	Other atherosclerosis of nonautologous biological bypass graft(s) of the extremities, right leg
	I70592	ICD-10 Dx	Other atherosclerosis of nonautologous biological bypass graft(s) of the extremities, left leg
	I70593	ICD-10 Dx	Other atherosclerosis of nonautologous biological bypass graft(s) of the extremities, bilateral legs
	I70598	ICD-10 Dx	Other atherosclerosis of nonautologous biological bypass graft(s) of the extremities, other extremity
	I70599	ICD-10 Dx	Other atherosclerosis of nonautologous biological bypass graft(s) of the extremities, unspecified extremity
	I70601	ICD-10 Dx	Unspecified atherosclerosis of nonbiological bypass graft(s) of the extremities, right leg
	I70602	ICD-10 Dx	Unspecified atherosclerosis of nonbiological bypass graft(s) of the extremities, left leg
	I70603	ICD-10 Dx	Unspecified atherosclerosis of nonbiological bypass graft(s) of the extremities, bilateral legs
	I70608	ICD-10 Dx	Unspecified atherosclerosis of nonbiological bypass graft(s) of the extremities, other extremity
	I70609	ICD-10 Dx	Unspecified atherosclerosis of nonbiological bypass graft(s) of the extremities, unspecified extremity
	I70611	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with intermittent claudication, right leg
	I70612	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with intermittent claudication, left leg

	I70613	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with intermittent claudication, bilateral legs
	I70618	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with intermittent claudication, other extremity
	I70619	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with intermittent claudication, unspecified extremity
	I70621	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with rest pain, right leg
	I70622	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with rest pain, left leg
	I70623	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with rest pain, bilateral legs
	I70628	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with rest pain, other extremity
	I70629	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with rest pain, unspecified extremity
	I70631	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the right leg with ulceration of thigh
	I70632	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the right leg with ulceration of calf
	I70633	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the right leg with ulceration of ankle
	I70634	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the right leg with ulceration of heel and midfoot
	I70635	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the right leg with ulceration of other part of foot
	I70638	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the right leg with ulceration of other part of lower leg
	I70639	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the right leg with ulceration of unspecified site
	I70641	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the left leg with ulceration of thigh
	I70642	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the left leg with ulceration of calf

	I70643	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the left leg with ulceration of ankle
	I70644	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the left leg with ulceration of heel and midfoot
	I70645	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the left leg with ulceration of other part of foot
	I70648	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the left leg with ulceration of other part of lower leg
	I70649	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the left leg with ulceration of unspecified site
	I7065	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of other extremity with ulceration
	I70661	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with gangrene, right leg
	I70662	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with gangrene, left leg
	I70663	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with gangrene, bilateral legs
	I70668	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with gangrene, other extremity
	I70669	ICD-10 Dx	Atherosclerosis of nonbiological bypass graft(s) of the extremities with gangrene, unspecified extremity
	I70691	ICD-10 Dx	Other atherosclerosis of nonbiological bypass graft(s) of the extremities, right leg
	I70692	ICD-10 Dx	Other atherosclerosis of nonbiological bypass graft(s) of the extremities, left leg
	I70693	ICD-10 Dx	Other atherosclerosis of nonbiological bypass graft(s) of the extremities, bilateral legs
	I70698	ICD-10 Dx	Other atherosclerosis of nonbiological bypass graft(s) of the extremities, other extremity
	I70699	ICD-10 Dx	Other atherosclerosis of nonbiological bypass graft(s) of the extremities, unspecified extremity
	I70701	ICD-10 Dx	Unspecified atherosclerosis of other type of bypass graft(s) of the extremities, right leg
	I70702	ICD-10 Dx	Unspecified atherosclerosis of other type of bypass graft(s) of the extremities, left leg

	I70703	ICD-10 Dx	Unspecified atherosclerosis of other type of bypass graft(s) of the extremities, bilateral legs
	I70708	ICD-10 Dx	Unspecified atherosclerosis of other type of bypass graft(s) of the extremities, other extremity
	I70709	ICD-10 Dx	Unspecified atherosclerosis of other type of bypass graft(s) of the extremities, unspecified extremity
	I70711	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with intermittent claudication, right leg
	I70712	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with intermittent claudication, left leg
	I70713	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with intermittent claudication, bilateral legs
	I70718	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with intermittent claudication, other extremity
	I70719	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with intermittent claudication, unspecified extremity
	I70721	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with rest pain, right leg
	I70722	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with rest pain, left leg
	I70723	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with rest pain, bilateral legs
	I70728	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with rest pain, other extremity
	I70729	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with rest pain, unspecified extremity
	I70731	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of thigh
	I70732	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of calf
	I70733	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of ankle

	I70734	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of heel and midfoot
	I70735	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of other part of foot
	I70738	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of other part of lower leg
	I70739	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the right leg with ulceration of unspecified site
	I70741	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of thigh
	I70742	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of calf
	I70743	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of ankle
	I70744	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of heel and midfoot
	I70745	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of other part of foot
	I70748	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of other part of lower leg
	I70749	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the left leg with ulceration of unspecified site
	I7075	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of other extremity with ulceration
	I70761	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with gangrene, right leg
	I70762	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with gangrene, left leg
	I70763	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with gangrene, bilateral legs
	I70768	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with gangrene, other extremity
	I70769	ICD-10 Dx	Atherosclerosis of other type of bypass graft(s) of the extremities with gangrene, unspecified extremity
	I70791	ICD-10 Dx	Other atherosclerosis of other type of bypass graft(s) of the extremities, right leg

	I70792	ICD-10 Dx	Other atherosclerosis of other type of bypass graft(s) of the extremities, left leg
	I70793	ICD-10 Dx	Other atherosclerosis of other type of bypass graft(s) of the extremities, bilateral legs
	I70798	ICD-10 Dx	Other atherosclerosis of other type of bypass graft(s) of the extremities, other extremity
	I70799	ICD-10 Dx	Other atherosclerosis of other type of bypass graft(s) of the extremities, unspecified extremity
	I708	ICD-10 Dx	Atherosclerosis of other arteries
	I7090	ICD-10 Dx	Unspecified atherosclerosis
	I7091	ICD-10 Dx	Generalized atherosclerosis
	I7092	ICD-10 Dx	Chronic total occlusion of artery of the extremities
	I7100	ICD-10 Dx	Dissection of unspecified site of aorta
	I7101	ICD-10 Dx	Dissection of thoracic aorta
	I7102	ICD-10 Dx	Dissection of abdominal aorta
	I7103	ICD-10 Dx	Dissection of thoracoabdominal aorta
	I711	ICD-10 Dx	Thoracic aortic aneurysm, ruptured
	I712	ICD-10 Dx	Thoracic aortic aneurysm, without rupture
	I713	ICD-10 Dx	Abdominal aortic aneurysm, ruptured
	I714	ICD-10 Dx	Abdominal aortic aneurysm, without rupture
	I715	ICD-10 Dx	Thoracoabdominal aortic aneurysm, ruptured
	I716	ICD-10 Dx	Thoracoabdominal aortic aneurysm, without rupture

	I718	ICD-10 Dx	Aortic aneurysm of unspecified site, ruptured
	I719	ICD-10 Dx	Aortic aneurysm of unspecified site, without rupture
	I720	ICD-10 Dx	Aneurysm of carotid artery
	I721	ICD-10 Dx	Aneurysm of artery of upper extremity
	I722	ICD-10 Dx	Aneurysm of renal artery
	I723	ICD-10 Dx	Aneurysm of iliac artery
	I724	ICD-10 Dx	Aneurysm of artery of lower extremity
	I728	ICD-10 Dx	Aneurysm of other specified arteries
	I729	ICD-10 Dx	Aneurysm of unspecified site
	I7300	ICD-10 Dx	Raynaud's syndrome without gangrene
	I7301	ICD-10 Dx	Raynaud's syndrome with gangrene
	I731	ICD-10 Dx	Thromboangiitis obliterans [Buerger's disease]
	I7381	ICD-10 Dx	Erythromelalgia
	I7389	ICD-10 Dx	Other specified peripheral vascular diseases
	I739	ICD-10 Dx	Peripheral vascular disease, unspecified
	I739	ICD-10 Dx	Peripheral vascular disease, unspecified
	I7401	ICD-10 Dx	Saddle embolus of abdominal aorta
	I7409	ICD-10 Dx	Other arterial embolism and thrombosis of abdominal aorta

	I7410	ICD-10 Dx	Embolism and thrombosis of unspecified parts of aorta
	I7411	ICD-10 Dx	Embolism and thrombosis of thoracic aorta
	I7419	ICD-10 Dx	Embolism and thrombosis of other parts of aorta
	I742	ICD-10 Dx	Embolism and thrombosis of arteries of the upper extremities
	I743	ICD-10 Dx	Embolism and thrombosis of arteries of the lower extremities
	I744	ICD-10 Dx	Embolism and thrombosis of arteries of extremities, unspecified
	I745	ICD-10 Dx	Embolism and thrombosis of iliac artery
	I748	ICD-10 Dx	Embolism and thrombosis of other arteries
	I749	ICD-10 Dx	Embolism and thrombosis of unspecified artery
	I75011	ICD-10 Dx	Atheroembolism of right upper extremity
	I75012	ICD-10 Dx	Atheroembolism of left upper extremity
	I75013	ICD-10 Dx	Atheroembolism of bilateral upper extremities
	I75019	ICD-10 Dx	Atheroembolism of unspecified upper extremity
	I75021	ICD-10 Dx	Atheroembolism of right lower extremity
	I75022	ICD-10 Dx	Atheroembolism of left lower extremity
	I75023	ICD-10 Dx	Atheroembolism of bilateral lower extremities
	I75029	ICD-10 Dx	Atheroembolism of unspecified lower extremity
	I7581	ICD-10 Dx	Atheroembolism of kidney

	I7589	ICD-10 Dx	Atheroembolism of other site
	I76	ICD-10 Dx	Septic arterial embolism
	I770	ICD-10 Dx	Arteriovenous fistula, acquired
	I771	ICD-10 Dx	Stricture of artery
	I772	ICD-10 Dx	Rupture of artery
	I773	ICD-10 Dx	Arterial fibromuscular dysplasia
	I774	ICD-10 Dx	Celiac artery compression syndrome
	I775	ICD-10 Dx	Necrosis of artery
	I776	ICD-10 Dx	Arteritis, unspecified
	I7771	ICD-10 Dx	Dissection of carotid artery
	I7772	ICD-10 Dx	Dissection of iliac artery
	I7773	ICD-10 Dx	Dissection of renal artery
	I7774	ICD-10 Dx	Dissection of vertebral artery
	I7779	ICD-10 Dx	Dissection of other artery
	I77810	ICD-10 Dx	Thoracic aortic ectasia
	I77811	ICD-10 Dx	Abdominal aortic ectasia
	I77812	ICD-10 Dx	Thoracoabdominal aortic ectasia
	I77819	ICD-10 Dx	Aortic ectasia, unspecified site

	I7789	ICD-10 Dx	Other specified disorders of arteries and arterioles
	I779	ICD-10 Dx	Disorder of arteries and arterioles, unspecified
	I780	ICD-10 Dx	Hereditary hemorrhagic telangiectasia
	I781	ICD-10 Dx	Nevus, non-neoplastic
	I788	ICD-10 Dx	Other diseases of capillaries
	I789	ICD-10 Dx	Disease of capillaries, unspecified
	I790	ICD-10 Dx	Aneurysm of aorta in diseases classified elsewhere
	I791	ICD-10 Dx	Aortitis in diseases classified elsewhere
	I798	ICD-10 Dx	Other disorders of arteries, arterioles and capillaries in diseases classified elsewhere
	K551	ICD-10 Dx	Chronic vascular disorders of intestine
	Z95820	ICD-10 Dx	Peripheral vascular angioplasty status with implants and grafts
Spirometry	94010	CPT	Spirometry, including graphic record, total and timed vital capacity, expiratory flow rate measurement(s), with or without maximal voluntary ventilation
	94014	CPT	Patient-initiated spirometric recording per 30-day period of time; includes reinforced education, transmission of spirometric tracing, data capture, analysis of transmitted data, periodic recalibration and review and interpretation by a physician or other qualified health care professional
	94015	CPT	Patient-initiated spirometric recording per 30-day period of time; recording (includes hook-up, reinforced education, data transmission, data capture, trend analysis, and periodic recalibration)
	94016	CPT	Patient-initiated spirometric recording per 30-day period of time; review and interpretation only by a physician or other qualified health care professional

	94060	CPT	Bronchodilation responsiveness, spirometry as in 94010, pre- and post-bronchodilator administration
	94070	CPT	Bronchospasm provocation evaluation, multiple spirometric determinations as in 94010, with administered agents (eg, antigen[s], cold air, methacholine)
	94150	CPT	Vital capacity, total (separate procedure)
	94200	CPT	Maximum breathing capacity, maximal voluntary ventilation
	4A0971Z	ICD-10 Proc	Measurement of Respiratory Capacity, Via Natural or Artificial Opening
	4A0975Z	ICD-10 Proc	Measurement of Respiratory Flow, Via Natural or Artificial Opening
	4A097LZ	ICD-10 Proc	Measurement of Respiratory Volume, Via Natural or Artificial Opening
	4A0981Z	ICD-10 Proc	Measurement of Respiratory Capacity, Via Natural or Artificial Opening Endoscopic
	4A0985Z	ICD-10 Proc	Measurement of Respiratory Flow, Via Natural or Artificial Opening Endoscopic
	4A098LZ	ICD-10 Proc	Measurement of Respiratory Volume, Via Natural or Artificial Opening Endoscopic
	4A09X1Z	ICD-10 Proc	Measurement of Respiratory Capacity, External Approach
	4A09X5Z	ICD-10 Proc	Measurement of Respiratory Flow, External Approach
	4A09XLZ	ICD-10 Proc	Measurement of Respiratory Volume, External Approach
	89.37	ICD-9 Proc	Vital capacity determination
	94375	CPT	Respiratory flow volume loop
	94400	CPT	Breathing response to CO ₂ (CO ₂ response curve)
	94450	CPT	Breathing response to hypoxia (hypoxia response curve)
	94620	CPT	Pulmonary stress testing; simple (e.g., six-minute walk test, prolonged exercise test for bronchospasm with pre- and post-spirometry and oximetry)

	4A097DZ	ICD-10 Proc	Measurement of Respiratory Resistance, Via Natural or Artificial Opening
	4A097MZ	ICD-10 Proc	Measurement of Respiratory Total Activity, Via Natural or Artificial Opening
	4A098DZ	ICD-10 Proc	Measurement of Respiratory Resistance, Via Natural or Artificial Opening Endoscopic
	4A098MZ	ICD-10 Proc	Measurement of Respiratory Total Activity, Via Natural or Artificial Opening Endoscopic
	4A09XDZ	ICD-10 Proc	Measurement of Respiratory Resistance, External Approach
	4A09XMZ	ICD-10 Proc	Measurement of Respiratory Total Activity, External Approach
	89.38	ICD-9 Proc	Other nonoperative respiratory measurements
Peptic ulcer/GER D	530.11	ICD-9 Dx	Reflux esophagitis
	530.81	ICD-9 Dx	Esophageal reflux
	533	ICD-9 Dx	Peptic ulcer, site unspecified
	533.00	ICD-9 Dx	Acute peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction
	533.01	ICD-9 Dx	Acute peptic ulcer, unspecified site, with hemorrhage and obstruction
	533.10	ICD-9 Dx	Acute peptic ulcer, unspecified site, with perforation, without mention of obstruction
	533.11	ICD-9 Dx	Acute peptic ulcer, unspecified site, with perforation and obstruction
	533.20	ICD-9 Dx	Acute peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction
	533.21	ICD-9 Dx	Acute peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction
	533.30	ICD-9 Dx	Acute peptic ulcer, unspecified site, without mention of hemorrhage, perforation, or obstruction

	533.31	ICD-9 Dx	Acute peptic ulcer, unspecified site, without mention of hemorrhage and perforation, with obstruction
	533.40	ICD-9 Dx	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction
	533.41	ICD-9 Dx	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and obstruction
	533.50	ICD-9 Dx	Chronic or unspecified peptic ulcer, unspecified site, with perforation, without mention of obstruction
	533.51	ICD-9 Dx	Chronic or unspecified peptic ulcer, unspecified site, with perforation and obstruction
	533.60	ICD-9 Dx	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction
	533.61	ICD-9 Dx	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction
	533.70	ICD-9 Dx	Chronic peptic ulcer, unspecified site, without mention of hemorrhage, perforation, or obstruction
	533.71	ICD-9 Dx	Chronic peptic ulcer of unspecified site without mention of hemorrhage or perforation, with obstruction
	533.90	ICD-9 Dx	Peptic ulcer, unspecified site, unspecified as acute or chronic, without mention of hemorrhage, perforation, or obstruction
	533.91	ICD-9 Dx	Peptic ulcer, unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, with obstruction
	K210	ICD-10 Dx	Gastro-esophageal reflux disease with esophagitis
	K219	ICD-10 Dx	Gastro-esophageal reflux disease without esophagitis
	K27	ICD-10 Dx	Peptic ulcer, site unspecified
	K270	ICD-10 Dx	Acute peptic ulcer, site unspecified, with hemorrhage

	K271	ICD-10 Dx	Acute peptic ulcer, site unspecified, with perforation
	K272	ICD-10 Dx	Acute peptic ulcer, site unspecified, with both hemorrhage and perforation
	K273	ICD-10 Dx	Acute peptic ulcer, site unspecified, without hemorrhage or perforation
	K274	ICD-10 Dx	Chronic or unspecified peptic ulcer, site unspecified, with hemorrhage
	K275	ICD-10 Dx	Chronic or unspecified peptic ulcer, site unspecified, with perforation
	K276	ICD-10 Dx	Chronic or unspecified peptic ulcer, site unspecified, with both hemorrhage and perforation
	K277	ICD-10 Dx	Chronic peptic ulcer, site unspecified, without hemorrhage or perforation
	K279	ICD-10 Dx	Peptic ulcer, site unspecified, unspecified as acute or chronic, without hemorrhage or perforation
Renal disease	792.5	ICD-9 Dx	Cloudy (hemodialysis) (peritoneal) dialysis affluent
	996.56	ICD-9 Dx	Mechanical complications due to peritoneal dialysis catheter
	996.68	ICD-9 Dx	Infection or inflammation due to peritoneal dialysis catheter
	996.73	ICD-9 Dx	Other complications due to renal dialysis device, implant, and graft
	996.81	ICD-9 Dx	Complications of transplanted kidney
	249.40	ICD-9 Dx	Secondary diabetes mellitus with renal manifestations
	249.41	ICD-9 Dx	Secondary diabetes mellitus with renal manifestations, uncontrolled
	250.40	ICD-9 Dx	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled
	250.41	ICD-9 Dx	Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled
	250.42	ICD-9 Dx	Diabetes with renal manifestations, type II or unspecified type, uncontrolled

	250.43	ICD-9 Dx	Diabetes with renal manifestations, type I [juvenile type], uncontrolled
	285.21	ICD-9 Dx	Anemia in chronic kidney disease
	403.00	ICD-9 Dx	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage I through stage IV, or unspecified
	403.01	ICD-9 Dx	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease
	403.10	ICD-9 Dx	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage I through stage IV, or unspecified
	403.11	ICD-9 Dx	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease
	403.90	ICD-9 Dx	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage I through stage IV, or unspecified
	403.91	ICD-9 Dx	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease
	404.00	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.01	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.02	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease
	404.03	ICD-9 Dx	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease
	404.10	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified

	404.11	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.12	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease
	404.13	ICD-9 Dx	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease
	404.90	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.91	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
	404.92	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease
	404.93	ICD-9 Dx	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease
	405.01	ICD-9 Dx	Secondary renovascular hypertension, malignant
	405.11	ICD-9 Dx	Secondary renovascular hypertension, benign
	405.91	ICD-9 Dx	Secondary renovascular hypertension, unspecified
	458.21	ICD-9 Dx	Hypotension of hemodialysis
	580.0	ICD-9 Dx	Acute glomerulonephritis with lesion of proliferative glomerulonephritis
	580.4	ICD-9 Dx	Acute glomerulonephritis with lesion of rapidly progressive glomerulonephritis
	580.81	ICD-9 Dx	Acute glomerulonephritis with other specified pathological lesion in kidney in disease classified elsewhere

	580.89	ICD-9 Dx	Other acute glomerulonephritis with other specified pathological lesion in kidney
	580.9	ICD-9 Dx	Acute glomerulonephritis with unspecified pathological lesion in kidney
	581.0	ICD-9 Dx	Nephrotic syndrome with lesion of proliferative glomerulonephritis
	581.1	ICD-9 Dx	Nephrotic syndrome with lesion of membranous glomerulonephritis
	581.2	ICD-9 Dx	Nephrotic syndrome with lesion of membranoproliferative glomerulonephritis
	581.3	ICD-9 Dx	Nephrotic syndrome with lesion of minimal change glomerulonephritis
	581.81	ICD-9 Dx	Nephrotic syndrome with other specified pathological lesion in kidney in diseases classified elsewhere
	581.89	ICD-9 Dx	Other nephrotic syndrome with specified pathological lesion in kidney
	581.9	ICD-9 Dx	Nephrotic syndrome with unspecified pathological lesion in kidney
	582.0	ICD-9 Dx	Chronic glomerulonephritis with lesion of proliferative glomerulonephritis
	582.1	ICD-9 Dx	Chronic glomerulonephritis with lesion of membranous glomerulonephritis
	582.2	ICD-9 Dx	Chronic glomerulonephritis with lesion of membranoproliferative glomerulonephritis
	582.4	ICD-9 Dx	Chronic glomerulonephritis with lesion of rapidly progressive glomerulonephritis
	582.81	ICD-9 Dx	Chronic glomerulonephritis with other specified pathological lesion in kidney in diseases classified elsewhere
	582.89	ICD-9 Dx	Other chronic glomerulonephritis with specified pathological lesion in kidney
	582.9	ICD-9 Dx	Chronic glomerulonephritis with unspecified pathological lesion in kidney
	583.0	ICD-9 Dx	Nephritis and nephropathy, not specified as acute or chronic, with lesion of proliferative glomerulonephritis

	583.1	ICD-9 Dx	Nephritis and nephropathy, not specified as acute or chronic, with lesion of membranous glomerulonephritis
	583.2	ICD-9 Dx	Nephritis and nephropathy, not specified as acute or chronic, with lesion of membranoproliferative glomerulonephritis
	583.4	ICD-9 Dx	Nephritis and nephropathy, not specified as acute or chronic, with lesion of rapidly progressive glomerulonephritis
	583.6	ICD-9 Dx	Nephritis and nephropathy, not specified as acute or chronic, with lesion of renal cortical necrosis
	583.7	ICD-9 Dx	Nephritis and nephropathy, not specified as acute or chronic, with lesion of renal medullary necrosis
	583.81	ICD-9 Dx	Nephritis and nephropathy, not specified as acute or chronic, with other specified pathological lesion in kidney, in diseases classified elsewhere
	583.89	ICD-9 Dx	Other nephritis and nephropathy, not specified as acute or chronic, with specified pathological lesion in kidney
	583.9	ICD-9 Dx	Nephritis and nephropathy, not specified as acute or chronic, with unspecified pathological lesion in kidney
	584.5	ICD-9 Dx	Acute kidney failure with lesion of tubular necrosis
	584.6	ICD-9 Dx	Acute kidney failure with lesion of renal cortical necrosis
	584.7	ICD-9 Dx	Acute kidney failure with lesion of medullary [papillary] necrosis
	584.8	ICD-9 Dx	Acute kidney failure with other specified pathological lesion in kidney
	584.9	ICD-9 Dx	Acute kidney failure, unspecified
	585.1	ICD-9 Dx	Chronic kidney disease, Stage I
	585.2	ICD-9 Dx	Chronic kidney disease, Stage II (mild)
	585.3	ICD-9 Dx	Chronic kidney disease, Stage III (moderate)

	585.4	ICD-9 Dx	Chronic kidney disease, Stage IV (severe)
	585.5	ICD-9 Dx	Chronic kidney disease, Stage V
	585.6	ICD-9 Dx	End stage renal disease
	585.9	ICD-9 Dx	Chronic kidney disease, unspecified
	586	ICD-9 Dx	Unspecified renal failure
	587	ICD-9 Dx	Unspecified renal sclerosis
	588.0	ICD-9 Dx	Renal osteodystrophy
	588.1	ICD-9 Dx	Nephrogenic diabetes insipidus
	588.81	ICD-9 Dx	Secondary hyperparathyroidism (of renal origin)
	588.89	ICD-9 Dx	Other specified disorders resulting from impaired renal function
	588.9	ICD-9 Dx	Unspecified disorder resulting from impaired renal function
	589.0	ICD-9 Dx	Unilateral small kidney
	589.1	ICD-9 Dx	Bilateral small kidneys
	589.9	ICD-9 Dx	Unspecified small kidney
	590.00	ICD-9 Dx	Chronic pyelonephritis without lesion of renal medullary necrosis
	590.01	ICD-9 Dx	Chronic pyelonephritis with lesion of renal medullary necrosis
	590.10	ICD-9 Dx	Acute pyelonephritis without lesion of renal medullary necrosis
	590.11	ICD-9 Dx	Acute pyelonephritis with lesion of renal medullary necrosis

	590.2	ICD-9 Dx	Renal and perinephric abscess
	590.3	ICD-9 Dx	Pyeloureteritis cystica
	590.80	ICD-9 Dx	Unspecified pyelonephritis
	590.81	ICD-9 Dx	Pyelitis or pyelonephritis in diseases classified elsewhere
	590.9	ICD-9 Dx	Unspecified infection of kidney
	591	ICD-9 Dx	Hydronephrosis
	592.0	ICD-9 Dx	Calculus of kidney
	592.1	ICD-9 Dx	Calculus of ureter
	592.9	ICD-9 Dx	Unspecified urinary calculus
	593.0	ICD-9 Dx	Nephroptosis
	593.1	ICD-9 Dx	Hypertrophy of kidney
	593.2	ICD-9 Dx	Acquired cyst of kidney
	593.6	ICD-9 Dx	Postural proteinuria
	593.70	ICD-9 Dx	Vesicoureteral reflux, unspecified or without reflux nephropathy
	593.71	ICD-9 Dx	Vesicoureteral reflux with reflux nephropathy, unilateral
	593.72	ICD-9 Dx	Vesicoureteral reflux with reflux nephropathy, bilateral
	593.73	ICD-9 Dx	Vesicoureteral reflux with reflux nephropathy, NOS
	593.81	ICD-9 Dx	Vascular disorders of kidney

	593.89	ICD-9 Dx	Other specified disorder of kidney and ureter
	593.9	ICD-9 Dx	Unspecified disorder of kidney and ureter
	599.60	ICD-9 Dx	Urinary obstruction, unspecified
	599.69	ICD-9 Dx	Urinary obstruction, not elsewhere classified
	599.70	ICD-9 Dx	Hematuria, unspecified
	599.71	ICD-9 Dx	Gross hematuria
	599.72	ICD-9 Dx	Microscopic hematuria
	E879.1	ICD-9 Dx	Kidney dialysis as the cause of abnormal reaction of patient, or of later complication, without mention of misadventure at time of procedure
	V42.0	ICD-9 Dx	Kidney replaced by transplant
	V45.11	ICD-9 Dx	Renal dialysis status
	V45.12	ICD-9 Dx	Noncompliance with renal dialysis
	V56.0	ICD-9 Dx	Encounter for extracorporeal dialysis
	V56.1	ICD-9 Dx	Fitting and adjustment of extracorporeal dialysis catheter
	V56.2	ICD-9 Dx	Fitting and adjustment of peritoneal dialysis catheter
	V56.31	ICD-9 Dx	Encounter for adequacy testing for hemodialysis
	V56.32	ICD-9 Dx	Encounter for adequacy testing for peritoneal dialysis
	V56.8	ICD-9 Dx	Encounter other dialysis
	N000	ICD-10 Dx	Acute nephritic syndrome with minor glomerular abnormality

	N001	ICD-10 Dx	Acute nephritic syndrome with focal and segmental glomerular lesions
	N002	ICD-10 Dx	Acute nephritic syndrome with diffuse membranous glomerulonephritis
	N003	ICD-10 Dx	Acute nephritic syndrome with diffuse mesangial proliferative glomerulonephritis
	N004	ICD-10 Dx	Acute nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis
	N005	ICD-10 Dx	Acute nephritic syndrome with diffuse mesangiocapillary glomerulonephritis
	N006	ICD-10 Dx	Acute nephritic syndrome with dense deposit disease
	N007	ICD-10 Dx	Acute nephritic syndrome with diffuse crescentic glomerulonephritis
	N008	ICD-10 Dx	Acute nephritic syndrome with other morphologic changes
	N009	ICD-10 Dx	Acute nephritic syndrome with unspecified morphologic changes
	N010	ICD-10 Dx	Rapidly progressive nephritic syndrome with minor glomerular abnormality
	N011	ICD-10 Dx	Rapidly progressive nephritic syndrome with focal and segmental glomerular lesions
	N012	ICD-10 Dx	Rapidly progressive nephritic syndrome with diffuse membranous glomerulonephritis
	N013	ICD-10 Dx	Rapidly progressive nephritic syndrome with diffuse mesangial proliferative glomerulonephritis
	N014	ICD-10 Dx	Rapidly progressive nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis
	N015	ICD-10 Dx	Rapidly progressive nephritic syndrome with diffuse mesangiocapillary glomerulonephritis
	N016	ICD-10 Dx	Rapidly progressive nephritic syndrome with dense deposit disease
	N017	ICD-10 Dx	Rapidly progressive nephritic syndrome with diffuse crescentic glomerulonephritis
	N018	ICD-10 Dx	Rapidly progressive nephritic syndrome with other morphologic changes

	N019	ICD-10 Dx	Rapidly progressive nephritic syndrome with unspecified morphologic changes
	N020	ICD-10 Dx	Recurrent and persistent hematuria with minor glomerular abnormality
	N021	ICD-10 Dx	Recurrent and persistent hematuria with focal and segmental glomerular lesions
	N022	ICD-10 Dx	Recurrent and persistent hematuria with diffuse membranous glomerulonephritis
	N023	ICD-10 Dx	Recurrent and persistent hematuria with diffuse mesangial proliferative glomerulonephritis
	N024	ICD-10 Dx	Recurrent and persistent hematuria with diffuse endocapillary proliferative glomerulonephritis
	N025	ICD-10 Dx	Recurrent and persistent hematuria with diffuse mesangiocapillary glomerulonephritis
	N026	ICD-10 Dx	Recurrent and persistent hematuria with dense deposit disease
	N027	ICD-10 Dx	Recurrent and persistent hematuria with diffuse crescentic glomerulonephritis
	N028	ICD-10 Dx	Recurrent and persistent hematuria with other morphologic changes
	N029	ICD-10 Dx	Recurrent and persistent hematuria with unspecified morphologic changes
	N030	ICD-10 Dx	Chronic nephritic syndrome with minor glomerular abnormality
	N031	ICD-10 Dx	Chronic nephritic syndrome with focal and segmental glomerular lesions
	N032	ICD-10 Dx	Chronic nephritic syndrome with diffuse membranous glomerulonephritis
	N033	ICD-10 Dx	Chronic nephritic syndrome with diffuse mesangial proliferative glomerulonephritis
	N034	ICD-10 Dx	Chronic nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis
	N035	ICD-10 Dx	Chronic nephritic syndrome with diffuse mesangiocapillary glomerulonephritis
	N036	ICD-10 Dx	Chronic nephritic syndrome with dense deposit disease

	N037	ICD-10 Dx	Chronic nephritic syndrome with diffuse crescentic glomerulonephritis
	N038	ICD-10 Dx	Chronic nephritic syndrome with other morphologic changes
	N039	ICD-10 Dx	Chronic nephritic syndrome with unspecified morphologic changes
	N040	ICD-10 Dx	Nephrotic syndrome with minor glomerular abnormality
	N041	ICD-10 Dx	Nephrotic syndrome with focal and segmental glomerular lesions
	N042	ICD-10 Dx	Nephrotic syndrome with diffuse membranous glomerulonephritis
	N043	ICD-10 Dx	Nephrotic syndrome with diffuse mesangial proliferative glomerulonephritis
	N044	ICD-10 Dx	Nephrotic syndrome with diffuse endocapillary proliferative glomerulonephritis
	N045	ICD-10 Dx	Nephrotic syndrome with diffuse mesangiocapillary glomerulonephritis
	N046	ICD-10 Dx	Nephrotic syndrome with dense deposit disease
	N047	ICD-10 Dx	Nephrotic syndrome with diffuse crescentic glomerulonephritis
	N048	ICD-10 Dx	Nephrotic syndrome with other morphologic changes
	N049	ICD-10 Dx	Nephrotic syndrome with unspecified morphologic changes
	N050	ICD-10 Dx	Unspecified nephritic syndrome with minor glomerular abnormality
	N051	ICD-10 Dx	Unspecified nephritic syndrome with focal and segmental glomerular lesions
	N052	ICD-10 Dx	Unspecified nephritic syndrome with diffuse membranous glomerulonephritis
	N053	ICD-10 Dx	Unspecified nephritic syndrome with diffuse mesangial proliferative glomerulonephritis
	N054	ICD-10 Dx	Unspecified nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis

	N055	ICD-10 Dx	Unspecified nephritic syndrome with diffuse mesangiocapillary glomerulonephritis
	N056	ICD-10 Dx	Unspecified nephritic syndrome with dense deposit disease
	N057	ICD-10 Dx	Unspecified nephritic syndrome with diffuse crescentic glomerulonephritis
	N058	ICD-10 Dx	Unspecified nephritic syndrome with other morphologic changes
	N059	ICD-10 Dx	Unspecified nephritic syndrome with unspecified morphologic changes
	N060	ICD-10 Dx	Isolated proteinuria with minor glomerular abnormality
	N061	ICD-10 Dx	Isolated proteinuria with focal and segmental glomerular lesions
	N062	ICD-10 Dx	Isolated proteinuria with diffuse membranous glomerulonephritis
	N063	ICD-10 Dx	Isolated proteinuria with diffuse mesangial proliferative glomerulonephritis
	N064	ICD-10 Dx	Isolated proteinuria with diffuse endocapillary proliferative glomerulonephritis
	N065	ICD-10 Dx	Isolated proteinuria with diffuse mesangiocapillary glomerulonephritis
	N066	ICD-10 Dx	Isolated proteinuria with dense deposit disease
	N067	ICD-10 Dx	Isolated proteinuria with diffuse crescentic glomerulonephritis
	N068	ICD-10 Dx	Isolated proteinuria with other morphologic lesion
	N069	ICD-10 Dx	Isolated proteinuria with unspecified morphologic lesion
	N070	ICD-10 Dx	Hereditary nephropathy, not elsewhere classified with minor glomerular abnormality
	N071	ICD-10 Dx	Hereditary nephropathy, not elsewhere classified with focal and segmental glomerular lesions
	N072	ICD-10 Dx	Hereditary nephropathy, not elsewhere classified with diffuse membranous glomerulonephritis

	N073	ICD-10 Dx	Hereditary nephropathy, not elsewhere classified with diffuse mesangial proliferative glomerulonephritis
	N074	ICD-10 Dx	Hereditary nephropathy, not elsewhere classified with diffuse endocapillary proliferative glomerulonephritis
	N075	ICD-10 Dx	Hereditary nephropathy, not elsewhere classified with diffuse mesangiocapillary glomerulonephritis
	N076	ICD-10 Dx	Hereditary nephropathy, not elsewhere classified with dense deposit disease
	N077	ICD-10 Dx	Hereditary nephropathy, not elsewhere classified with diffuse crescentic glomerulonephritis
	N078	ICD-10 Dx	Hereditary nephropathy, not elsewhere classified with other morphologic lesions
	N079	ICD-10 Dx	Hereditary nephropathy, not elsewhere classified with unspecified morphologic lesions
	N08	ICD-10 Dx	Glomerular disorders in diseases classified elsewhere
	N10	ICD-10 Dx	Acute pyelonephritis
	N110	ICD-10 Dx	Nonobstructive reflux-associated chronic pyelonephritis
	N111	ICD-10 Dx	Chronic obstructive pyelonephritis
	N118	ICD-10 Dx	Other chronic tubulo-interstitial nephritis
	N119	ICD-10 Dx	Chronic tubulo-interstitial nephritis, unspecified
	N12	ICD-10 Dx	Tubulo-interstitial nephritis, not specified as acute or chronic
	N131	ICD-10 Dx	Hydronephrosis with ureteral stricture, not elsewhere classified
	N132	ICD-10 Dx	Hydronephrosis with renal and ureteral calculous obstruction
	N1330	ICD-10 Dx	Unspecified hydronephrosis

	N1339	ICD-10 Dx	Other hydronephrosis
	N134	ICD-10 Dx	Hydroureter
	N135	ICD-10 Dx	Crossing vessel and stricture of ureter without hydronephrosis
	N136	ICD-10 Dx	Pyonephrosis
	N1370	ICD-10 Dx	Vesicoureteral-reflux, unspecified
	N1371	ICD-10 Dx	Vesicoureteral-reflux without reflux nephropathy
	N13721	ICD-10 Dx	Vesicoureteral-reflux with reflux nephropathy without hydroureter, unilateral
	N13722	ICD-10 Dx	Vesicoureteral-reflux with reflux nephropathy without hydroureter, bilateral
	N13729	ICD-10 Dx	Vesicoureteral-reflux with reflux nephropathy without hydroureter, unspecified
	N13731	ICD-10 Dx	Vesicoureteral-reflux with reflux nephropathy with hydroureter, unilateral
	N13732	ICD-10 Dx	Vesicoureteral-reflux with reflux nephropathy with hydroureter, bilateral
	N13739	ICD-10 Dx	Vesicoureteral-reflux with reflux nephropathy with hydroureter, unspecified
	N138	ICD-10 Dx	Other obstructive and reflux uropathy
	N139	ICD-10 Dx	Obstructive and reflux uropathy, unspecified
	N140	ICD-10 Dx	Analgesic nephropathy
	N141	ICD-10 Dx	Nephropathy induced by other drugs, medicaments and biological substances
	N142	ICD-10 Dx	Nephropathy induced by unspecified drug, medicament or biological substance
	N143	ICD-10 Dx	Nephropathy induced by heavy metals

	N144	ICD-10 Dx	Toxic nephropathy, not elsewhere classified
	N150	ICD-10 Dx	Balkan nephropathy
	N151	ICD-10 Dx	Renal and perinephric abscess
	N158	ICD-10 Dx	Other specified renal tubulo-interstitial diseases
	N159	ICD-10 Dx	Renal tubulo-interstitial disease, unspecified
	N16	ICD-10 Dx	Renal tubulo-interstitial disorders in diseases classified elsewhere
	N170	ICD-10 Dx	Acute kidney failure with tubular necrosis
	N171	ICD-10 Dx	Acute kidney failure with acute cortical necrosis
	N172	ICD-10 Dx	Acute kidney failure with medullary necrosis
	N178	ICD-10 Dx	Other acute kidney failure
	N179	ICD-10 Dx	Acute kidney failure, unspecified
	N181	ICD-10 Dx	Chronic kidney disease, stage 1
	N182	ICD-10 Dx	Chronic kidney disease, stage 2 (mild)
	N183	ICD-10 Dx	Chronic kidney disease, stage 3 (moderate)
	N184	ICD-10 Dx	Chronic kidney disease, stage 4 (severe)
	N185	ICD-10 Dx	Chronic kidney disease, stage 5
	N186	ICD-10 Dx	End stage renal disease
	N189	ICD-10 Dx	Chronic kidney disease, unspecified

	N19	ICD-10 Dx	Unspecified kidney failure
	N200	ICD-10 Dx	Calculus of kidney
	N201	ICD-10 Dx	Calculus of ureter
	N202	ICD-10 Dx	Calculus of kidney with calculus of ureter
	N209	ICD-10 Dx	Urinary calculus, unspecified
	N210	ICD-10 Dx	Calculus in bladder
	N211	ICD-10 Dx	Calculus in urethra
	N218	ICD-10 Dx	Other lower urinary tract calculus
	N219	ICD-10 Dx	Calculus of lower urinary tract, unspecified
	N22	ICD-10 Dx	Calculus of urinary tract in diseases classified elsewhere
	N23	ICD-10 Dx	Unspecified renal colic
	N250	ICD-10 Dx	Renal osteodystrophy
	N251	ICD-10 Dx	Nephrogenic diabetes insipidus
	N2581	ICD-10 Dx	Secondary hyperparathyroidism of renal origin
	N2589	ICD-10 Dx	Other disorders resulting from impaired renal tubular function
	N259	ICD-10 Dx	Disorder resulting from impaired renal tubular function, unspecified
	N261	ICD-10 Dx	Atrophy of kidney (terminal)
	N262	ICD-10 Dx	Page kidney

	N269	ICD-10 Dx	Renal sclerosis, unspecified
	N270	ICD-10 Dx	Small kidney, unilateral
	N271	ICD-10 Dx	Small kidney, bilateral
	N279	ICD-10 Dx	Small kidney, unspecified
	N280	ICD-10 Dx	Ischemia and infarction of kidney
	N281	ICD-10 Dx	Cyst of kidney, acquired
	N2881	ICD-10 Dx	Hypertrophy of kidney
	N2884	ICD-10 Dx	Pyelitis cystica
	N2885	ICD-10 Dx	Pyeloureteritis cystica
	N2889	ICD-10 Dx	Other specified disorders of kidney and ureter
	N289	ICD-10 Dx	Disorder of kidney and ureter, unspecified
	R802	ICD-10 Dx	Orthostatic proteinuria, unspecified
Sleep apnea	327.23	ICD-9 Dx	Obstructive sleep apnea (adult) (pediatric)
	780.51	ICD-9 Dx	Insomnia with sleep apnea, unspecified
	780.53	ICD-9 Dx	Hypersomnia with sleep apnea, unspecified
	780.57	ICD-9 Dx	Unspecified sleep apnea
	327.20	ICD-9 Dx	Organic sleep apnea, unspecified
	327.21	ICD-9 Dx	Primary central sleep apnea

	327.22	ICD-9 Dx	High altitude periodic breathing
	327.24	ICD-9 Dx	Idiopathic sleep related nonobstructive alveolar hypoventilation
	327.25	ICD-9 Dx	Congenital central alveolar hypoventilation syndrome
	327.26	ICD-9 Dx	Sleep related hypoventilation/hypoxemia in conditions classifiable elsewhere
	327.27	ICD-9 Dx	Central sleep apnea in conditions classified elsewhere
	327.29	ICD-9 Dx	Other organic sleep apnea
	G473	ICD-10 Dx	Sleep apnea
	G4730	ICD-10 Dx	Sleep apnea, unspecified
	G4731	ICD-10 Dx	Primary central sleep apnea
	G4732	ICD-10 Dx	High altitude periodic breathing
	G4733	ICD-10 Dx	Obstructive sleep apnea (adult) (pediatric)
	G4734	ICD-10 Dx	Idiopathic sleep related nonobstructive alveolar hypoventilation
	G4735	ICD-10 Dx	Congenital central alveolar hypoventilation syndrome
	G4736	ICD-10 Dx	Sleep related hypoventilation in conditions classifiable elsewhere
	G4737	ICD-10 Dx	Central sleep apnea in conditions classified elsewhere
Stroke	G4739	ICD-10 Dx	other sleep apnea
	430	ICD-9 Dx	Subarachnoid hemorrhage
	431	ICD-9 Dx	Intracerebral hemorrhage

	432.9	ICD-9 Dx	Unspecified intracranial hemorrhage
	433.01	ICD-9 Dx	Occlusion and stenosis of basilar artery with cerebral infarction
	433.11	ICD-9 Dx	Occlusion and stenosis of carotid artery with cerebral infarction
	433.21	ICD-9 Dx	Occlusion and stenosis of vertebral artery with cerebral infarction
	433.31	ICD-9 Dx	Occlusion and stenosis of multiple and bilateral precerebral arteries with cerebral infarction
	433.81	ICD-9 Dx	Occlusion and stenosis of other specified precerebral artery with cerebral infarction
	433.91	ICD-9 Dx	Occlusion and stenosis of unspecified precerebral artery with cerebral infarction
	434.01	ICD-9 Dx	Cerebral thrombosis with cerebral infarction
	434.11	ICD-9 Dx	Cerebral embolism with cerebral infarction
	434.91	ICD-9 Dx	Unspecified cerebral artery occlusion with cerebral infarction
	346.60	ICD-9 Dx	Persistent migraine aura with cerebral infarction, without mention of intractable migraine without mention of status migrainosus
	346.61	ICD-9 Dx	Persistent migraine aura with cerebral infarction, with intractable migraine, so stated, without mention of status migrainosus
	346.62	ICD-9 Dx	Persistent migraine aura with cerebral infarction, without mention of intractable migraine with status migrainosus
	346.63	ICD-9 Dx	Persistent migraine aura with cerebral infarction, with intractable migraine, so stated, with status migrainosus
	997.02	ICD-9 Dx	Iatrogenic cerebrovascular infarction or hemorrhage
	G43501	ICD-10 Dx	Persistent migraine aura without cerebral infarction, not intractable, with status migrainosus
	G43509	ICD-10 Dx	Persistent migraine aura without cerebral infarction, not intractable, without status migrainosus

	G43511	ICD-10 Dx	Persistent migraine aura without cerebral infarction, intractable, with status migrainosus
	G43519	ICD-10 Dx	Persistent migraine aura without cerebral infarction, intractable, without status migrainosus
	G43601	ICD-10 Dx	Persistent migraine aura with cerebral infarction, not intractable, with status migrainosus
	G43609	ICD-10 Dx	Persistent migraine aura with cerebral infarction, not intractable, without status migrainosus
	G43611	ICD-10 Dx	Persistent migraine aura with cerebral infarction, intractable, with status migrainosus
	G43619	ICD-10 Dx	Persistent migraine aura with cerebral infarction, intractable, without status migrainosus
	G463	ICD-10 Dx	Brain stem stroke syndrome
	G464	ICD-10 Dx	Cerebellar stroke syndrome
	G465	ICD-10 Dx	Pure motor lacunar syndrome
	G466	ICD-10 Dx	Pure sensory lacunar syndrome
	G467	ICD-10 Dx	Other lacunar syndromes
	I6000	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation
	I6001	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation
	I6002	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation
	I6010	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery
	I6011	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery
	I6012	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery
	I602	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from anterior communicating artery

	I6020	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from unspecified anterior communicating artery
	I6021	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from right anterior communicating artery
	I6022	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from left anterior communicating artery
	I6030	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery
	I6031	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery
	I6032	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery
	I604	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from basilar artery
	I6050	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery
	I6051	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from right vertebral artery
	I6052	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from left vertebral artery
	I606	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from other intracranial arteries
	I607	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery
	I608	ICD-10 Dx	Other nontraumatic subarachnoid hemorrhage
	I609	ICD-10 Dx	Nontraumatic subarachnoid hemorrhage, unspecified
	I610	ICD-10 Dx	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical
	I611	ICD-10 Dx	Nontraumatic intracerebral hemorrhage in hemisphere, cortical
	I612	ICD-10 Dx	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified
	I613	ICD-10 Dx	Nontraumatic intracerebral hemorrhage in brain stem

	I614	ICD-10 Dx	Nontraumatic intracerebral hemorrhage in cerebellum
	I615	ICD-10 Dx	Nontraumatic intracerebral hemorrhage, intraventricular
	I616	ICD-10 Dx	Nontraumatic intracerebral hemorrhage, multiple localized
	I618	ICD-10 Dx	Other nontraumatic intracerebral hemorrhage
	I619	ICD-10 Dx	Nontraumatic intracerebral hemorrhage, unspecified
	I6200	ICD-10 Dx	Nontraumatic subdural hemorrhage, unspecified
	I6203	ICD-10 Dx	Nontraumatic chronic subdural hemorrhage
	I621	ICD-10 Dx	Nontraumatic extradural hemorrhage
	I629	ICD-10 Dx	Nontraumatic intracranial hemorrhage, unspecified
	I6300	ICD-10 Dx	Cerebral infarction due to thrombosis of unspecified precerebral artery
	I63011	ICD-10 Dx	Cerebral infarction due to thrombosis of right vertebral artery
	I63012	ICD-10 Dx	Cerebral infarction due to thrombosis of left vertebral artery
	I63013	ICD-10 Dx	Cerebral infarction due to thrombosis of bilateral vertebral arteries
	I63019	ICD-10 Dx	Cerebral infarction due to thrombosis of unspecified vertebral artery
	I6302	ICD-10 Dx	Cerebral infarction due to thrombosis of basilar artery
	I63031	ICD-10 Dx	Cerebral infarction due to thrombosis of right carotid artery
	I63032	ICD-10 Dx	Cerebral infarction due to thrombosis of left carotid artery
	I63033	ICD-10 Dx	Cerebral infarction due to thrombosis of bilateral carotid arteries

	I63039	ICD-10 Dx	Cerebral infarction due to thrombosis of unspecified carotid artery
	I6309	ICD-10 Dx	Cerebral infarction due to thrombosis of other precerebral artery
	I6310	ICD-10 Dx	Cerebral infarction due to embolism of unspecified precerebral artery
	I63111	ICD-10 Dx	Cerebral infarction due to embolism of right vertebral artery
	I63112	ICD-10 Dx	Cerebral infarction due to embolism of left vertebral artery
	I63113	ICD-10 Dx	Cerebral infarction due to embolism of bilateral vertebral arteries
	I63119	ICD-10 Dx	Cerebral infarction due to embolism of unspecified vertebral artery
	I6312	ICD-10 Dx	Cerebral infarction due to embolism of basilar artery
	I63131	ICD-10 Dx	Cerebral infarction due to embolism of right carotid artery
	I63132	ICD-10 Dx	Cerebral infarction due to embolism of left carotid artery
	I63133	ICD-10 Dx	Cerebral infarction due to embolism of bilateral carotid arteries
	I63139	ICD-10 Dx	Cerebral infarction due to embolism of unspecified carotid artery
	I6319	ICD-10 Dx	Cerebral infarction due to embolism of other precerebral artery
	I6320	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries
	I63211	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of right vertebral arteries
	I63212	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of left vertebral arteries
	I63213	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral arteries
	I63219	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral arteries

	I6322	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of basilar arteries
	I63231	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries
	I63232	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries
	I63233	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries
	I63239	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid arteries
	I6329	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries
	I6330	ICD-10 Dx	Cerebral infarction due to thrombosis of unspecified cerebral artery
	I63311	ICD-10 Dx	Cerebral infarction due to thrombosis of right middle cerebral artery
	I63312	ICD-10 Dx	Cerebral infarction due to thrombosis of left middle cerebral artery
	I63313	ICD-10 Dx	Cerebral infarction due to thrombosis of bilateral middle cerebral arteries
	I63319	ICD-10 Dx	Cerebral infarction due to thrombosis of unspecified middle cerebral artery
	I63321	ICD-10 Dx	Cerebral infarction due to thrombosis of right anterior cerebral artery
	I63322	ICD-10 Dx	Cerebral infarction due to thrombosis of left anterior cerebral artery
	I63323	ICD-10 Dx	Cerebral infarction due to thrombosis of bilateral anterior arteries
	I63329	ICD-10 Dx	Cerebral infarction due to thrombosis of unspecified anterior cerebral artery
	I63331	ICD-10 Dx	Cerebral infarction due to thrombosis of right posterior cerebral artery
	I63332	ICD-10 Dx	Cerebral infarction due to thrombosis of left posterior cerebral artery
	I63333	ICD-10 Dx	Cerebral infarction to thrombosis of bilateral posterior arteries

	I63339	ICD-10 Dx	Cerebral infarction due to thrombosis of unspecified posterior cerebral artery
	I63341	ICD-10 Dx	Cerebral infarction due to thrombosis of right cerebellar artery
	I63342	ICD-10 Dx	Cerebral infarction due to thrombosis of left cerebellar artery
	I63343	ICD-10 Dx	Cerebral infarction to thrombosis of bilateral cerebellar arteries
	I63349	ICD-10 Dx	Cerebral infarction due to thrombosis of unspecified cerebellar artery
	I6339	ICD-10 Dx	Cerebral infarction due to thrombosis of other cerebral artery
	I6340	ICD-10 Dx	Cerebral infarction due to embolism of unspecified cerebral artery
	I63411	ICD-10 Dx	Cerebral infarction due to embolism of right middle cerebral artery
	I63412	ICD-10 Dx	Cerebral infarction due to embolism of left middle cerebral artery
	I63413	ICD-10 Dx	Cerebral infarction due to embolism of bilateral middle cerebral arteries
	I63419	ICD-10 Dx	Cerebral infarction due to embolism of unspecified middle cerebral artery
	I63421	ICD-10 Dx	Cerebral infarction due to embolism of right anterior cerebral artery
	I63422	ICD-10 Dx	Cerebral infarction due to embolism of left anterior cerebral artery
	I63423	ICD-10 Dx	Cerebral infarction due to embolism of bilateral anterior cerebral arteries
	I63429	ICD-10 Dx	Cerebral infarction due to embolism of unspecified anterior cerebral artery
	I63431	ICD-10 Dx	Cerebral infarction due to embolism of right posterior cerebral artery
	I63432	ICD-10 Dx	Cerebral infarction due to embolism of left posterior cerebral artery
	I63433	ICD-10 Dx	Cerebral infarction due to embolism of bilateral posterior cerebral arteries

	I63439	ICD-10 Dx	Cerebral infarction due to embolism of unspecified posterior cerebral artery
	I63441	ICD-10 Dx	Cerebral infarction due to embolism of right cerebellar artery
	I63442	ICD-10 Dx	Cerebral infarction due to embolism of left cerebellar artery
	I63443	ICD-10 Dx	Cerebral infarction due to embolism of bilateral cerebellar arteries
	I63449	ICD-10 Dx	Cerebral infarction due to embolism of unspecified cerebellar artery
	I6349	ICD-10 Dx	Cerebral infarction due to embolism of other cerebral artery
	I6350	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery
	I63511	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery
	I63512	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral artery
	I63513	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle arteries
	I63519	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle cerebral artery
	I63521	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral artery
	I63522	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral artery
	I63523	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior arteries
	I63529	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior cerebral artery
	I63531	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral artery
	I63532	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral artery
	I63533	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior arteries

	I63539	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior cerebral artery
	I63541	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery
	I63542	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery
	I63543	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar arteries
	I63549	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar artery
	I6359	ICD-10 Dx	Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery
	I636	ICD-10 Dx	Cerebral infarction due to cerebral venous thrombosis, nonpyogenic
	I638	ICD-10 Dx	Other cerebral infarction
	I639	ICD-10 Dx	Cerebral infarction, unspecified
	I6900	ICD-10 Dx	Unspecified sequelae of nontraumatic subarachnoid hemorrhage
	I6901	ICD-10 Dx	Cognitive deficits following nontraumatic subarachnoid hemorrhage
	I69010	ICD-10 Dx	Attention and concentration deficit following nontraumatic subarachnoid hemorrhage
	I69011	ICD-10 Dx	Memory deficit following nontraumatic subarachnoid hemorrhage
	I69012	ICD-10 Dx	Visuospatial deficit and spatial neglect following nontraumatic subarachnoid hemorrhage
	I69013	ICD-10 Dx	Psychomotor deficit following nontraumatic subarachnoid hemorrhage
	I69014	ICD-10 Dx	Frontal lobe and executive function deficit following nontraumatic subarachnoid hemorrhage
	I69015	ICD-10 Dx	Cognitive social or emotional deficit following nontraumatic subarachnoid hemorrhage
	I69018	ICD-10 Dx	Other symptoms and signs involving cognitive functions following nontraumatic subarachnoid hemorrhage

	I69019	ICD-10 Dx	Unspecified symptoms and signs involving cognitive functions following nontraumatic subarachnoid hemorrhage
	I69020	ICD-10 Dx	Aphasia following nontraumatic subarachnoid hemorrhage
	I69021	ICD-10 Dx	Dysphasia following nontraumatic subarachnoid hemorrhage
	I69022	ICD-10 Dx	Dysarthria following nontraumatic subarachnoid hemorrhage
	I69023	ICD-10 Dx	Fluency disorder following nontraumatic subarachnoid hemorrhage
	I69028	ICD-10 Dx	Other speech and language deficits following nontraumatic subarachnoid hemorrhage
	I69031	ICD-10 Dx	Monoplegia of upper limb following nontraumatic subarachnoid hemorrhage affecting right dominant side
	I69032	ICD-10 Dx	Monoplegia of upper limb following nontraumatic subarachnoid hemorrhage affecting left dominant side
	I69033	ICD-10 Dx	Monoplegia of upper limb following nontraumatic subarachnoid hemorrhage affecting right non-dominant side
	I69034	ICD-10 Dx	Monoplegia of upper limb following nontraumatic subarachnoid hemorrhage affecting left non-dominant side
	I69039	ICD-10 Dx	Monoplegia of upper limb following nontraumatic subarachnoid hemorrhage affecting unspecified side
	I69041	ICD-10 Dx	Monoplegia of lower limb following nontraumatic subarachnoid hemorrhage affecting right dominant side
	I69042	ICD-10 Dx	Monoplegia of lower limb following nontraumatic subarachnoid hemorrhage affecting left dominant side
	I69043	ICD-10 Dx	Monoplegia of lower limb following nontraumatic subarachnoid hemorrhage affecting right non-dominant side
	I69044	ICD-10 Dx	Monoplegia of lower limb following nontraumatic subarachnoid hemorrhage affecting left non-dominant side

	I69049	ICD-10 Dx	Monoplegia of lower limb following nontraumatic subarachnoid hemorrhage affecting unspecified side
	I69051	ICD-10 Dx	Hemiplegia and hemiparesis following nontraumatic subarachnoid hemorrhage affecting right dominant side
	I69052	ICD-10 Dx	Hemiplegia and hemiparesis following nontraumatic subarachnoid hemorrhage affecting left dominant side
	I69053	ICD-10 Dx	Hemiplegia and hemiparesis following nontraumatic subarachnoid hemorrhage affecting right non-dominant side
	I69054	ICD-10 Dx	Hemiplegia and hemiparesis following nontraumatic subarachnoid hemorrhage affecting left non-dominant side
	I69059	ICD-10 Dx	Hemiplegia and hemiparesis following nontraumatic subarachnoid hemorrhage affecting unspecified side
	I69061	ICD-10 Dx	Other paralytic syndrome following nontraumatic subarachnoid hemorrhage affecting right dominant side
	I69062	ICD-10 Dx	Other paralytic syndrome following nontraumatic subarachnoid hemorrhage affecting left dominant side
	I69063	ICD-10 Dx	Other paralytic syndrome following nontraumatic subarachnoid hemorrhage affecting right non-dominant side
	I69064	ICD-10 Dx	Other paralytic syndrome following nontraumatic subarachnoid hemorrhage affecting left non-dominant side
	I69065	ICD-10 Dx	Other paralytic syndrome following nontraumatic subarachnoid hemorrhage, bilateral
	I69069	ICD-10 Dx	Other paralytic syndrome following nontraumatic subarachnoid hemorrhage affecting unspecified side
	I69090	ICD-10 Dx	Apraxia following nontraumatic subarachnoid hemorrhage
	I69091	ICD-10 Dx	Dysphagia following nontraumatic subarachnoid hemorrhage
	I69092	ICD-10 Dx	Facial weakness following nontraumatic subarachnoid hemorrhage

	I69093	ICD-10 Dx	Ataxia following nontraumatic subarachnoid hemorrhage
	I69098	ICD-10 Dx	Other sequelae following nontraumatic subarachnoid hemorrhage
	I6910	ICD-10 Dx	Unspecified sequelae of nontraumatic intracerebral hemorrhage
	I6911	ICD-10 Dx	Cognitive deficits following nontraumatic intracerebral hemorrhage
	I69110	ICD-10 Dx	Attention and concentration deficit following nontraumatic intracerebral hemorrhage
	I69111	ICD-10 Dx	Memory deficit following nontraumatic intracerebral hemorrhage
	I69112	ICD-10 Dx	Visuospatial deficit and spatial neglect following nontraumatic intracerebral hemorrhage
	I69113	ICD-10 Dx	Psychomotor deficit following nontraumatic intracerebral hemorrhage
	I69114	ICD-10 Dx	Frontal lobe and executive function deficit following nontraumatic intracerebral hemorrhage
	I69115	ICD-10 Dx	Cognitive social or emotional deficit following nontraumatic intracerebral hemorrhage
	I69118	ICD-10 Dx	Other symptoms and signs involving cognitive functions following nontraumatic intracerebral hemorrhage
	I69119	ICD-10 Dx	Unspecified symptoms and signs involving cognitive functions following nontraumatic intracerebral hemorrhage
	I69120	ICD-10 Dx	Aphasia following nontraumatic intracerebral hemorrhage
	I69121	ICD-10 Dx	Dysphasia following nontraumatic intracerebral hemorrhage
	I69122	ICD-10 Dx	Dysarthria following nontraumatic intracerebral hemorrhage
	I69123	ICD-10 Dx	Fluency disorder following nontraumatic intracerebral hemorrhage
	I69128	ICD-10 Dx	Other speech and language deficits following nontraumatic intracerebral hemorrhage

	I69131	ICD-10 Dx	Monoplegia of upper limb following nontraumatic intracerebral hemorrhage affecting right dominant side
	I69132	ICD-10 Dx	Monoplegia of upper limb following nontraumatic intracerebral hemorrhage affecting left dominant side
	I69133	ICD-10 Dx	Monoplegia of upper limb following nontraumatic intracerebral hemorrhage affecting right non-dominant side
	I69134	ICD-10 Dx	Monoplegia of upper limb following nontraumatic intracerebral hemorrhage affecting left non-dominant side
	I69139	ICD-10 Dx	Monoplegia of upper limb following nontraumatic intracerebral hemorrhage affecting unspecified side
	I69141	ICD-10 Dx	Monoplegia of lower limb following nontraumatic intracerebral hemorrhage affecting right dominant side
	I69142	ICD-10 Dx	Monoplegia of lower limb following nontraumatic intracerebral hemorrhage affecting left dominant side
	I69143	ICD-10 Dx	Monoplegia of lower limb following nontraumatic intracerebral hemorrhage affecting right non-dominant side
	I69144	ICD-10 Dx	Monoplegia of lower limb following nontraumatic intracerebral hemorrhage affecting left non-dominant side
	I69149	ICD-10 Dx	Monoplegia of lower limb following nontraumatic intracerebral hemorrhage affecting unspecified side
	I69151	ICD-10 Dx	Hemiplegia and hemiparesis following nontraumatic intracerebral hemorrhage affecting right dominant side
	I69152	ICD-10 Dx	Hemiplegia and hemiparesis following nontraumatic intracerebral hemorrhage affecting left dominant side
	I69153	ICD-10 Dx	Hemiplegia and hemiparesis following nontraumatic intracerebral hemorrhage affecting right non-dominant side

	I69154	ICD-10 Dx	Hemiplegia and hemiparesis following nontraumatic intracerebral hemorrhage affecting left non-dominant side
	I69159	ICD-10 Dx	Hemiplegia and hemiparesis following nontraumatic intracerebral hemorrhage affecting unspecified side
	I69161	ICD-10 Dx	Other paralytic syndrome following nontraumatic intracerebral hemorrhage affecting right dominant side
	I69162	ICD-10 Dx	Other paralytic syndrome following nontraumatic intracerebral hemorrhage affecting left dominant side
	I69163	ICD-10 Dx	Other paralytic syndrome following nontraumatic intracerebral hemorrhage affecting right non-dominant side
	I69164	ICD-10 Dx	Other paralytic syndrome following nontraumatic intracerebral hemorrhage affecting left non-dominant side
	I69165	ICD-10 Dx	Other paralytic syndrome following nontraumatic intracerebral hemorrhage, bilateral
	I69169	ICD-10 Dx	Other paralytic syndrome following nontraumatic intracerebral hemorrhage affecting unspecified side
	I69190	ICD-10 Dx	Apraxia following nontraumatic intracerebral hemorrhage
	I69191	ICD-10 Dx	Dysphagia following nontraumatic intracerebral hemorrhage
	I69192	ICD-10 Dx	Facial weakness following nontraumatic intracerebral hemorrhage
	I69193	ICD-10 Dx	Ataxia following nontraumatic intracerebral hemorrhage
	I69198	ICD-10 Dx	Other sequelae of nontraumatic intracerebral hemorrhage
	I6920	ICD-10 Dx	Unspecified sequelae of other nontraumatic intracranial hemorrhage
	I6921	ICD-10 Dx	Cognitive deficits following other nontraumatic intracranial hemorrhage
	I69210	ICD-10 Dx	Attention and concentration deficit following other nontraumatic intracranial hemorrhage

	I69211	ICD-10 Dx	Memory deficit following other nontraumatic intracranial hemorrhage
	I69212	ICD-10 Dx	Visuospatial deficit and spatial neglect following other nontraumatic intracranial hemorrhage
	I69213	ICD-10 Dx	Psychomotor deficit following other nontraumatic intracranial hemorrhage
	I69214	ICD-10 Dx	Frontal lobe and executive function deficit following other nontraumatic intracranial hemorrhage
	I69215	ICD-10 Dx	Cognitive social or emotional deficit following other nontraumatic intracranial hemorrhage
	I69218	ICD-10 Dx	Other symptoms and signs involving cognitive functions following other nontraumatic intracranial hemorrhage
	I69219	ICD-10 Dx	Unspecified symptoms and signs involving cognitive functions following other nontraumatic intracranial hemorrhage
	I69220	ICD-10 Dx	Aphasia following other nontraumatic intracranial hemorrhage
	I69221	ICD-10 Dx	Dysphasia following other nontraumatic intracranial hemorrhage
	I69222	ICD-10 Dx	Dysarthria following other nontraumatic intracranial hemorrhage
	I69223	ICD-10 Dx	Fluency disorder following other nontraumatic intracranial hemorrhage
	I69228	ICD-10 Dx	Other speech and language deficits following other nontraumatic intracranial hemorrhage
	I69231	ICD-10 Dx	Monoplegia of upper limb following other nontraumatic intracranial hemorrhage affecting right dominant side
	I69232	ICD-10 Dx	Monoplegia of upper limb following other nontraumatic intracranial hemorrhage affecting left dominant side
	I69233	ICD-10 Dx	Monoplegia of upper limb following other nontraumatic intracranial hemorrhage affecting right non-dominant side

	I69234	ICD-10 Dx	Monoplegia of upper limb following other nontraumatic intracranial hemorrhage affecting left non-dominant side
	I69239	ICD-10 Dx	Monoplegia of upper limb following other nontraumatic intracranial hemorrhage affecting unspecified side
	I69241	ICD-10 Dx	Monoplegia of lower limb following other nontraumatic intracranial hemorrhage affecting right dominant side
	I69242	ICD-10 Dx	Monoplegia of lower limb following other nontraumatic intracranial hemorrhage affecting left dominant side
	I69243	ICD-10 Dx	Monoplegia of lower limb following other nontraumatic intracranial hemorrhage affecting right non-dominant side
	I69244	ICD-10 Dx	Monoplegia of lower limb following other nontraumatic intracranial hemorrhage affecting left non-dominant side
	I69249	ICD-10 Dx	Monoplegia of lower limb following other nontraumatic intracranial hemorrhage affecting unspecified side
	I69251	ICD-10 Dx	Hemiplegia and hemiparesis following other nontraumatic intracranial hemorrhage affecting right dominant side
	I69252	ICD-10 Dx	Hemiplegia and hemiparesis following other nontraumatic intracranial hemorrhage affecting left dominant side
	I69253	ICD-10 Dx	Hemiplegia and hemiparesis following other nontraumatic intracranial hemorrhage affecting right non-dominant side
	I69254	ICD-10 Dx	Hemiplegia and hemiparesis following other nontraumatic intracranial hemorrhage affecting left non-dominant side
	I69259	ICD-10 Dx	Hemiplegia and hemiparesis following other nontraumatic intracranial hemorrhage affecting unspecified side
	I69261	ICD-10 Dx	Other paralytic syndrome following other nontraumatic intracranial hemorrhage affecting right dominant side

	I69262	ICD-10 Dx	Other paralytic syndrome following other nontraumatic intracranial hemorrhage affecting left dominant side
	I69263	ICD-10 Dx	Other paralytic syndrome following other nontraumatic intracranial hemorrhage affecting right non-dominant side
	I69264	ICD-10 Dx	Other paralytic syndrome following other nontraumatic intracranial hemorrhage affecting left non-dominant side
	I69265	ICD-10 Dx	Other paralytic syndrome following other nontraumatic intracranial hemorrhage, bilateral
	I69269	ICD-10 Dx	Other paralytic syndrome following other nontraumatic intracranial hemorrhage affecting unspecified side
	I69290	ICD-10 Dx	Apraxia following other nontraumatic intracranial hemorrhage
	I69291	ICD-10 Dx	Dysphagia following other nontraumatic intracranial hemorrhage
	I69292	ICD-10 Dx	Facial weakness following other nontraumatic intracranial hemorrhage
	I69293	ICD-10 Dx	Ataxia following other nontraumatic intracranial hemorrhage
	I69298	ICD-10 Dx	Other sequelae of other nontraumatic intracranial hemorrhage
	I6930	ICD-10 Dx	Unspecified sequelae of cerebral infarction
	I6931	ICD-10 Dx	Cognitive deficits following cerebral infarction
	I69310	ICD-10 Dx	Attention and concentration deficit following cerebral infarction
	I69311	ICD-10 Dx	Memory deficit following cerebral infarction
	I69312	ICD-10 Dx	Visuospatial deficit and spatial neglect following cerebral infarction
	I69313	ICD-10 Dx	Psychomotor deficit following cerebral infarction
	I69314	ICD-10 Dx	Frontal lobe and executive function deficit following cerebral infarction

	I69315	ICD-10 Dx	Cognitive social or emotional deficit following cerebral infarction
	I69318	ICD-10 Dx	Other symptoms and signs involving cognitive functions following cerebral infarction
	I69319	ICD-10 Dx	Unspecified symptoms and signs involving cognitive functions following cerebral infarction
	I69320	ICD-10 Dx	Aphasia following cerebral infarction
	I69321	ICD-10 Dx	Dysphasia following cerebral infarction
	I69322	ICD-10 Dx	Dysarthria following cerebral infarction
	I69323	ICD-10 Dx	Fluency disorder following cerebral infarction
	I69328	ICD-10 Dx	Other speech and language deficits following cerebral infarction
	I69331	ICD-10 Dx	Monoplegia of upper limb following cerebral infarction affecting right dominant side
	I69332	ICD-10 Dx	Monoplegia of upper limb following cerebral infarction affecting left dominant side
	I69333	ICD-10 Dx	Monoplegia of upper limb following cerebral infarction affecting right non-dominant side
	I69334	ICD-10 Dx	Monoplegia of upper limb following cerebral infarction affecting left non-dominant side
	I69339	ICD-10 Dx	Monoplegia of upper limb following cerebral infarction affecting unspecified side
	I69341	ICD-10 Dx	Monoplegia of lower limb following cerebral infarction affecting right dominant side
	I69342	ICD-10 Dx	Monoplegia of lower limb following cerebral infarction affecting left dominant side
	I69343	ICD-10 Dx	Monoplegia of lower limb following cerebral infarction affecting right non-dominant side
	I69344	ICD-10 Dx	Monoplegia of lower limb following cerebral infarction affecting left non-dominant side
	I69349	ICD-10 Dx	Monoplegia of lower limb following cerebral infarction affecting unspecified side

	I69351	ICD-10 Dx	Hemiplegia and hemiparesis following cerebral infarction affecting right dominant side
	I69352	ICD-10 Dx	Hemiplegia and hemiparesis following cerebral infarction affecting left dominant side
	I69353	ICD-10 Dx	Hemiplegia and hemiparesis following cerebral infarction affecting right non-dominant side
	I69354	ICD-10 Dx	Hemiplegia and hemiparesis following cerebral infarction affecting left non-dominant side
	I69359	ICD-10 Dx	Hemiplegia and hemiparesis following cerebral infarction affecting unspecified side
	I69361	ICD-10 Dx	Other paralytic syndrome following cerebral infarction affecting right dominant side
	I69362	ICD-10 Dx	Other paralytic syndrome following cerebral infarction affecting left dominant side
	I69363	ICD-10 Dx	Other paralytic syndrome following cerebral infarction affecting right non-dominant side
	I69364	ICD-10 Dx	Other paralytic syndrome following cerebral infarction affecting left non-dominant side
	I69365	ICD-10 Dx	Other paralytic syndrome following cerebral infarction, bilateral
	I69369	ICD-10 Dx	Other paralytic syndrome following cerebral infarction affecting unspecified side
	I69390	ICD-10 Dx	Apraxia following cerebral infarction
	I69391	ICD-10 Dx	Dysphagia following cerebral infarction
	I69392	ICD-10 Dx	Facial weakness following cerebral infarction
	I69393	ICD-10 Dx	Ataxia following cerebral infarction
	I69398	ICD-10 Dx	Other sequelae of cerebral infarction
	I97810	ICD-10 Dx	Intraoperative cerebrovascular infarction during cardiac surgery
	I97811	ICD-10 Dx	Intraoperative cerebrovascular infarction during other surgery

	I97820	ICD-10 Dx	Postprocedural cerebrovascular infarction following cardiac surgery
	I97821	ICD-10 Dx	Postprocedural cerebrovascular infarction following other surgery
Oxygen use	31730	CPT	Transtracheal (percutaneous) introduction of needle wire dilator/stent or indwelling tube for oxygen therapy
	E0424	HCPC S	Stationary compressed gaseous oxygen system, rental; includes container, contents, regulator, flowmeter, humidifier, nebulizer, cannula or mask, and tubing
	E0425	HCPC S	Stationary compressed gas system, purchase; includes regulator, flowmeter, humidifier, nebulizer, cannula or mask, and tubing
	E0430	HCPC S	Portable gaseous oxygen system, purchase; includes regulator, flowmeter, humidifier, cannula or mask, and tubing
	E0431	HCPC S	Portable gaseous oxygen system, rental; includes portable container, regulator, flowmeter, humidifier, cannula or mask, and tubing
	E0433	HCPC S	Portable liquid oxygen system, rental; home liquefier used to fill portable liquid oxygen containers, includes portable containers, regulator, flowmeter, humidifier, cannula or mask and tubing, with or without supply reservoir and contents gauge
	E0434	HCPC S	Portable liquid oxygen system, rental; includes portable container, supply reservoir, humidifier, flowmeter, refill adaptor, contents gauge, cannula or mask, and tubing
	E0435	HCPC S	Portable liquid oxygen system, purchase; includes portable container, supply reservoir, flowmeter, humidifier, contents gauge, cannula or mask, tubing and refill adaptor
	E0439	HCPC S	Stationary liquid oxygen system, rental; includes container, contents, regulator, flowmeter, humidifier, nebulizer, cannula or mask, & tubing
	E0440	HCPC S	Stationary liquid oxygen system, purchase; includes use of reservoir, contents indicator, regulator, flowmeter, humidifier, nebulizer, cannula or mask, and tubing

	E0441	HCPC S	Stationary oxygen contents, gaseous, 1 month's supply = 1 unit
	E0442	HCPC S	Stationary oxygen contents, liquid, 1 month's supply = 1 unit
	E0443	HCPC S	Portable oxygen contents, gaseous, 1 month's supply = 1 unit
	E0444	HCPC S	Portable oxygen contents, liquid, 1 month's supply = 1 unit
	E0445	HCPC S	Oximeter device for measuring blood oxygen levels non-invasively
	E1390	HCPC S	Oxygen concentrator, single delivery port, capable of delivering 85 percent or greater oxygen concentration at the prescribed flow rate
	E1391	HCPC S	Oxygen concentrator, dual delivery port, capable of delivering 85 percent or greater oxygen concentration at the prescribed flow rate, each
	E1392	HCPC S	Portable oxygen concentrator, rental
	E1405	HCPC S	Oxygen and water vapor enriching system with heated delivery
	E1406	HCPC S	Oxygen and water vapor enriching system without heated delivery
	G0277	HCPC S	Hyperbaric oxygen under pressure, full body chamber, per 30 minute interval
	K0738	HCPC S	Portable gaseous oxygen system, rental; home compressor used to fill portable oxygen cylinders; includes portable containers, regulator, flowmeter, humidifier, cannula or mask, and tubing
	K0741	HCPC S	Portable gaseous oxygen system, rental, includes portable container, regulator, flowmeter, humidifier, cannula or mask, and tubing, for cluster headaches
	K0742	HCPC S	Portable oxygen contents, gaseous, 1 month's supply = 1 unit, for cluster headaches, for initial months supply or to replace used contents
	S8120	HCPC S	Oxygen contents, gaseous, 1 unit equals 1 cubic foot
	S8121	HCPC S	Oxygen contents, liquid, 1 unit equals 1 pound

	E0447	HCPCS	Portable oxygen contents, liquid, 1 month's supply = 1 unit, prescribed amount at rest or nighttime exceeds 4 liters per minute (lpm)
	Z9981	ICD-10 Dx	Dependence on supplemental oxygen
	0277	Revenue Code	Medical/Surgical Supplies and Devices - Take-home oxygen
	0413	Revenue Code	Respiratory Services - Hyperbaric oxygen therapy
	0600	Revenue Code	Home Health Oxygen - General
	0601	Revenue Code	Home Health Oxygen - Stat/Equip/Supply or contents
	0602	Revenue Code	Home Health Oxygen - Stat/Equip/Supply Under 1 LPM
	0603	Revenue Code	Home Health Oxygen - Stat/Equip Over 4 LPM
	0604	Revenue Code	Home Health Oxygen - Portable Add-on
	0609	Revenue Code	Home Health Oxygen - Other
	4030F	CPT	Long-term oxygen therapy prescribed (more than 15 hours per day) (COPD)
	A4608	HCPCS	Transtracheal oxygen catheter, each
	E0455	HCPCS	Oxygen tent, excluding croup or pediatric tents (?)
	V46.2	ICD-9 Dx	Supplemental oxygen
	93.96	ICD-9 Proc	Other oxygen enrichment
	0544	Revenue Code	Oxygen
Tobacco use	305.1	ICD-9 Dx	Nondependent tobacco use disorder
	989.84	ICD-9 Dx	Toxic effect of tobacco

	V15.82	ICD-9 Dx	Personal history of tobacco use, presenting hazards to health
	HZ80ZZZ	ICD-10 Proc	Medication Management for Substance Abuse Treatment, Nicotine Replacement
	HZ90ZZZ	ICD-10 Proc	Pharmacotherapy for Substance Abuse Treatment, Nicotine Replacement
	F17200	ICD-10 Dx	Nicotine dependence, unspecified, uncomplicated
	F17201	ICD-10 Dx	Nicotine dependence, unspecified, in remission
	F17203	ICD-10 Dx	Nicotine dependence unspecified, with withdrawal
	F17208	ICD-10 Dx	Nicotine dependence, unspecified, with other nicotine-induced disorders
	F17209	ICD-10 Dx	Nicotine dependence, unspecified, with unspecified nicotine-induced disorders
	F17210	ICD-10 Dx	Nicotine dependence, cigarettes, uncomplicated
	F17211	ICD-10 Dx	Nicotine dependence, cigarettes, in remission
	F17213	ICD-10 Dx	Nicotine dependence, cigarettes, with withdrawal
	F17218	ICD-10 Dx	Nicotine dependence, cigarettes, with other nicotine-induced disorders
	F17219	ICD-10 Dx	Nicotine dependence, cigarettes, with unspecified nicotine-induced disorders
	F17220	ICD-10 Dx	Nicotine dependence, chewing tobacco, uncomplicated
	F17221	ICD-10 Dx	Nicotine dependence, chewing tobacco, in remission
	F17223	ICD-10 Dx	Nicotine dependence, chewing tobacco, with withdrawal
	F17228	ICD-10 Dx	Nicotine dependence, chewing tobacco, with other nicotine-induced disorders
	F17229	ICD-10 Dx	Nicotine dependence, chewing tobacco, with unspecified nicotine-induced disorders

	F17290	ICD-10 Dx	Nicotine dependence, other tobacco product, uncomplicated
	F17291	ICD-10 Dx	Nicotine dependence, other tobacco product, in remission
	F17293	ICD-10 Dx	Nicotine dependence, other tobacco product, with withdrawal
	F17298	ICD-10 Dx	Nicotine dependence, other tobacco product, with other nicotine-induced disorders
	F17299	ICD-10 Dx	Nicotine dependence, other tobacco product, with unspecified nicotine-induced disorders
	T65211A	ICD-10 Dx	Toxic effect of chewing tobacco, accidental (unintentional), initial encounter
	T65211D	ICD-10 Dx	Toxic effect of chewing tobacco, accidental (unintentional), subsequent encounter
	T65211S	ICD-10 Dx	Toxic effect of chewing tobacco, accidental (unintentional), sequela
	T65214A	ICD-10 Dx	Toxic effect of chewing tobacco, undetermined, initial encounter
	T65214D	ICD-10 Dx	Toxic effect of chewing tobacco, undetermined, subsequent encounter
	T65214S	ICD-10 Dx	Toxic effect of chewing tobacco, undetermined, sequela
	T65221A	ICD-10 Dx	Toxic effect of tobacco cigarettes, accidental (unintentional), initial encounter
	T65221D	ICD-10 Dx	Toxic effect of tobacco cigarettes, accidental (unintentional), subsequent encounter
	T65221S	ICD-10 Dx	Toxic effect of tobacco cigarettes, accidental (unintentional), sequela
	T65224A	ICD-10 Dx	Toxic effect of tobacco cigarettes, undetermined, initial encounter
	T65224D	ICD-10 Dx	Toxic effect of tobacco cigarettes, undetermined, subsequent encounter
	T65224S	ICD-10 Dx	Toxic effect of tobacco cigarettes, undetermined, sequela
	T65291A	ICD-10 Dx	Toxic effect of other tobacco and nicotine, accidental (unintentional), initial encounter

	T65291D	ICD-10 Dx	Toxic effect of other tobacco and nicotine, accidental (unintentional), subsequent encounter
	T65291S	ICD-10 Dx	Toxic effect of other tobacco and nicotine, accidental (unintentional), sequela
	T65294A	ICD-10 Dx	Toxic effect of other tobacco and nicotine, undetermined, initial encounter
	T65294D	ICD-10 Dx	Toxic effect of other tobacco and nicotine, undetermined, subsequent encounter
	T65294S	ICD-10 Dx	Toxic effect of other tobacco and nicotine, undetermined, sequela
	Z716	ICD-10 Dx	Tobacco abuse counseling
	Z720	ICD-10 Dx	Tobacco use
	Z87891	ICD-10 Dx	Personal history of nicotine dependence
	G0436	HCPC S	Smoking and tobacco cessation counseling visit for the asymptomatic patient; intermediate, greater than 3 minutes, up to 10 minutes
	G0437	HCPC S	Smoking and tobacco cessation counseling visit for the asymptomatic patient; intensive, greater than 10 minutes
	G9016	HCPC S	Smoking cessation counseling, individual, in the absence of or in addition to any other evaluation and management service, per session (6-10 minutes) [demo project code only]
	G9276	HCPC S	Documentation that patient is a current tobacco user
	G9458	HCPC S	Patient documented as tobacco user and received tobacco cessation intervention (must include at least one of the following: advice given to quit smoking or tobacco use, counseling on the benefits of quitting smoking or tobacco use, assistance with or referral to external smoking or tobacco cessation support programs, or current enrollment in smoking or tobacco use cessation program) if identified as a tobacco user

	G9497	HCPC S	Received instruction from the anesthesiologist or proxy prior to the day of surgery to abstain from smoking on the day of surgery
	G9642	HCPC S	Current smokers (e.g., cigarette, cigar, pipe, e-cigarette or marijuana)
	G9644	HCPC S	Patients who abstained from smoking prior to anesthesia on the day of surgery or procedure
	G9645	HCPC S	Patients who did not abstain from smoking prior to anesthesia on the day of surgery or procedure
	G9792	HCPC S	Most recent tobacco status is not tobacco free
	G9902	HCPC S	Patient screened for tobacco use and identified as a tobacco user
	G9906	HCPC S	Patient identified as a tobacco user received tobacco cessation intervention (counseling and/or pharmacotherapy)
	G9907	HCPC S	Documentation of medical reason(s) for not providing tobacco cessation intervention (e.g., limited life expectancy, other medical reason)
	G9908	HCPC S	Patient identified as tobacco user did not receive tobacco cessation intervention (counseling and/or pharmacotherapy), reason not given
	G9909	HCPC S	Documentation of medical reason(s) for not providing tobacco cessation intervention if identified as a tobacco user (e.g., limited life expectancy, other medical reason)
	S4990	HCPC S	Nicotine patches, legend
	S4991	HCPC S	Nicotine patches, nonlegend
	S4995	HCPC S	Smoking cessation gum
	S9453	HCPC S	Smoking cessation classes, nonphysician provider, per session
	99406	CPT	Smoking and tobacco use cessation counseling visit; intermediate, greater than 3 minutes up to 10 minutes

	99407	CPT	Smoking and tobacco use cessation counseling visit; intensive, greater than 10 minutes
	1032F	CPT	Current tobacco smoker OR currently exposed to secondhand smoke (asthma)
	1033F	CPT	Current tobacco nonsmoker AND not currently exposed to secondhand smoke (Asthma)
	1034F	CPT	Current tobacco smoker (CAD, CAP, COPD, PV) (DM)
	1035F	CPT	Current smokeless tobacco user (eg, chew, snuff) (PV)
	4000F	CPT	Tobacco use cessation intervention, counseling (COPD, CAP, CAD, Asthma)(DM)(PV)
	4001F	CPT	Tobacco use cessation intervention, pharmacologic therapy (COPD, CAP,CAD, Asthma)(DM)(PV)

ANNEX 4. REVIEWERS AND APPROVAL SIGNATURES

The NIS Protocol must be sent for review to the following individuals **prior to approval**.

Reviewer	NIS involving BI product(s)	NIS not involving BI product(s)	
		Global NIS	Local NIS
NIS Lead	X	X	X
Global TM Epi	X	X	X
Global TMM / TMMA / TM Market Access	X	X	
Global Project Statistician	X	X	
Global TM RA	X		
Global PVWG Chair	X		
GPV SC	X	X	X
Global CTIS representative	X		
Local Medical Director	X (if local study)		X
Local Head MAcc / HEOR Director	X (if local study)		X
Global TA Head Epi*	X	X	
Global TA Head Clinical Development / Medical Affairs / Market Access*	X	X	
Global TA Head PV RM*	X		
RWE CoE	X	X	
PSTAT / PSTAT-MA (for NISnd only)	X	X	X
NIS DM	X	X	X
Local Head MA/Clinical Development			X (does not apply to NISed without chart abstraction)

* After review by Global TM for function

APPROVAL / SIGNATURE PAGE**Document Number:** c37262534**Technical Version Number:**1.0**Document Name:** nis-us-heor-stiolto-vs-trelegy-study-protocol

Title: Health Care Resource Utilization, Cost and Other Outcomes of Patients Diagnosed with COPD Initiating Tiotropium Bromide/Olodaterol versus Fluticasone Furoate/Umeclidinium/Vilanterol

Signatures (obtained electronically)

Meaning of Signature	Signed by	Date Signed
Approval		31 Mar 2022 15:44 CEST
Approval		31 Mar 2022 15:52 CEST
Approval		31 Mar 2022 16:54 CEST

(Continued) Signatures (obtained electronically)

Meaning of Signature	Signed by	Date Signed
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