

## ***ACO # 43 Prevention Quality Indicator (PQI): Ambulatory Sensitive Condition Acute Composite***

### **Measure Information Form (MIF)**

#### **Data Source**

- Medicare inpatient claims
- Medicare outpatient claims
- Medicare beneficiary enrollment data
- Accountable Care Organization (ACO) assignment file

#### **Measure Set ID**

- ACO #43

#### **Version Number and Effective Date**

- Version 2017a, effective 01/01/2017
- The specifications reflect the most current available version of the AHRQ PQI #91 technical specifications.
- The measure will be calculated using the most current available version of the AHRQ PQI #91 technical specifications at the time of measure calculation (Spring 2018)

#### **CMS Approval Date**

- 10/05/2017

#### **NQF ID**

- N/A

#### **Care Setting**

- Hospitals

#### **Unit of Measurement**

- Accountable Care Organization (ACO)

#### **Measurement Duration**

- Calendar Year

#### **Measurement Period**

- Calendar Year

#### **Measure Type**

- Outcome

### Measure Scoring

- Risk adjusted rate of admissions for acute Prevention Quality Indicator (PQI) conditions

### Payer Source

- Medicare fee-for-service (FFS)

### Improvement Notation

- Lower rate of admissions indicate better quality

### Measure Steward

- Agency for Healthcare Research and Quality (AHRQ) with modifications by Centers for Medicare and Medicaid Services (CMS).

### Copyright / Disclaimer

- This Medicare ACO acute PQI composite measure is a modification of the general population acute PQI composite measure developed by AHRQ (AHRQ, 2016).

### Measure Description

- Risk adjusted rate of hospital discharges for acute PQI conditions with a principal diagnosis of dehydration, bacterial pneumonia, or urinary tract infection among ACO assigned Medicare fee-for-service (FFS) beneficiaries 18 years and older.

### Rationale

Hospital admissions for dehydration, bacterial pneumonia, or urinary tract infection are a Prevention Quality Indicator of interest to comprehensive health care delivery systems, including ACOs. These acute conditions can often be treated and addressed in an outpatient setting. Evidence suggests that these hospital admissions could potentially have been avoided through high quality outpatient care. Timely receipt of outpatient treatment and follow-up monitoring of treatment effectiveness may reduce the rate of occurrence for this event, and thus of hospital admissions.

This measure is intended to incentivize ACOs to provide high-quality, coordinated outpatient care that promotes smarter spending, healthier people, and higher care quality. Consistent with this mission, we envision that the measure will incentivize providers participating in ACOs to collaborate to provide the best system of clinical care and to partner with health and non-health related organizations in their communities, as appropriate, to improve the health of their patient population.

### Clinical Recommendation Statement

Research suggests that lower access to coordinated outpatient primary care is associated with higher rates of preventable hospital admissions [1-4]. High-quality outpatient care can lower the risk of hospitalizations for ambulatory care sensitive conditions, such as dehydration, bacterial pneumonia, and urinary tract infection. It is our vision that these measures will illuminate variation among ACOs in hospital admission rates and incentivize ACOs to develop efficient and coordinated care management strategies that anticipate and respond to patients' needs and preferences. This vision is consistent with ACOs' commitment to deliver patient-centered care that fulfills the goals of the Department of Health and Human Services' National Quality Strategy – improving population health, providing better care, and lowering healthcare costs [5].

## References

1. AHRQ. *Guide to Prevention Quality Indicators*. Rockville, Maryland: U.S. Agency for Healthcare Research and Quality, 2007.
2. Moy E, Barrett M, Ho K. *Potentially preventable hospitalizations – United States, 2004-2007*. Morbidity and Mortality Weekly Report 2011; 60(01):80-83.
3. Bindman AB, Grumbach K, Osmond D, et al. Preventable hospitalizations and access to health care. *JAMA* 1995;274(4):305-11.
4. Rosenthal GE, Harper DL, Shah A, et al. A regional evaluation of variation in low-severity hospital admissions. *J Gen Intern Med*. 1997;12(7):416-22.
5. U.S. Department of Health and Human Services. Multiple chronic conditions—A strategic framework: Optimum health and quality of life for individuals with multiple chronic conditions. December 2010; [http://www.hhs.gov/ash/initiatives/mcc/mcc\\_framework.pdf](http://www.hhs.gov/ash/initiatives/mcc/mcc_framework.pdf). Accessed March 20, 2014

## Release Notes / Summary of Changes

- The MIF has been updated to reflect that the measure will be calculated using the most current available technical specifications posted on the AHRQ website for PQI #91 at the time of measure calculation (Spring 2018).

## Technical Specifications

- Target Population: ACO-assigned or aligned Medicare beneficiaries

## Denominator

- Denominator Statement

Assigned/Aligned Medicare FFS beneficiaries aged 18 years and older.

- Denominator Details

The targeted patient population is Medicare FFS beneficiaries aged 18 years and older assigned to the ACO during the measurement period. To be included in the cohort, patients must be enrolled full-time in Part A during the measurement period, and enrolled full-time in both Part A and B during the year prior to the measurement period.

- Denominator Exceptions and Exclusions

1. Beneficiaries that do not have 12 months continuous enrollment in Medicare Part A during the measurement year. Beneficiaries with continuous enrollment until death are included for the portion of the measurement period that they are alive.

*Rationale:* We exclude these patients to ensure full data availability for outcome assessment (Part A during the measurement year). Beneficiaries with continuous enrollment who become deceased during the year are included only for the time they are alive.

2. Beneficiaries that do not have 12 months continuous enrollment in Medicare Part A and B during the year prior to the measurement year.

*Rationale:* This data is needed to attribute chronic conditions used for risk adjustment to assigned beneficiaries.

- Denominator Exceptions and Exclusions Details

1. Beneficiaries without continuous enrollment in Medicare Part A for the duration of the measurement period (or until death) are excluded. Lack of continuous enrollment in Medicare Part A is determined by patient enrollment status in a Medicare Denominator File. The enrollment indicators must be appropriately marked during the measurement year.

2. Beneficiaries without continuous enrollment in Medicare Part A and B during the year prior to the measurement year. Lack of continuous enrollment in Medicare Part A and B is determined by patient enrollment status in a Medicare Denominator File. The enrollment indicators must be appropriately marked during the year prior to the measurement year.

## Numerator

- Numerator Statement

Number of discharges per 100 person years from an acute care hospital or critical access hospital with a principal diagnosis of dehydration, bacterial pneumonia, or urinary tract infection for Medicare beneficiaries in the denominator population for this measure.

- Numerator Details

The ICD-10 codes used to identify hospital discharges with any of the three acute conditions for this Medicare ACO PQI quality measure are as follows:

- An ICD-10 principal diagnosis code that indicates dehydration; or any secondary ICD-10 diagnosis codes for dehydration and a principal ICD-10 diagnosis code for hyperosmolality and/or hyponatremia, gastroenteritis, or acute kidney injury (Listed in Table 1), or
- An ICD-10 principal diagnosis code for bacterial pneumonia (Listed in **Table 1**), or
- An ICD-10 principal diagnosis code for urinary tract infection (Listed in **Table 1**)

These ICD-10 codes are used with Medicare Part A inpatient claims for the ACO's assigned beneficiaries in the measurement year to identify hospital discharges that are included in the numerator. Discharges that meet the inclusion and exclusion criteria for the numerator in more than one of the above PQIs are counted only once.

- Numerator Exceptions and Exclusions

1. Transfers from a hospital, a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF), or another health care facility are excluded from the numerator
2. Discharges are excluded from the numerator if the admission is associated with a diagnosis of chronic renal failure (for dehydration), sickle cell anemia or HB-S disease or immunocompromised state (for bacterial pneumonia), or kidney/urinary tract disorder or immunocompromised state (for urinary tract infection) (Listed in **Table 2**)

- Numerator Exceptions and Exclusions

1. The AHRQ PQI SAS software excludes admissions that are transfers to a hospital, SNF or ICF, or another healthcare facility, identifying these transfers using HCUP variables SID ASOURCE and POINTOFORIGINUB04 codes. The Medicare claims data available from the IDR does not include these codes. As a result, the Medicare ACO PQIs use the Medicare claims variable "Source of Admission (SRC\_ADMS)" to identify transfers. For the Medicare ACO PQIs patients were excluded with an SRC\_ADMS value of 4 (transfer from hospital), 5 (transfer from SNF), or 6 (transfer from another health care facility). The Medicare ACO PQI software also excludes beneficiaries with two Part A Inpatient claims admissions on the same day at two different facilities.
2. Discharge is excluded from the numerator if the admission is associated with any of the ICD-10 diagnosis codes as listed in **Table 2**.

### Stratification or Risk Adjustment

- Stratification: Not applicable. This measure is not stratified.
- Risk Adjustment:

We use a two-level hierarchical statistical regression model to estimate risk-adjusted rate of admissions per 100 person years for the acute PQI composite. This approach accounts for the clustering of patients within ACOs and variation in sample size.

Our approach to risk adjustment is tailored to and appropriate for a publicly reported outcome measure, as articulated in the American Heart Association (AHA) Scientific Statement, “Standards for Statistical Models Used for Public Reporting of Health Outcomes” [1-2]. The risk-standardization model includes sex, age, age as a quadratic functional form, relevant CMS Hierarchical Condition Categories (HCC) indicators that contribute to the risk of hospitalization, the number of condition categories, and a quadratic of the sum of the number of condition categories. We define clinical variables using ICD-10 diagnosis codes. Condition categories utilized in the acute PQI composite are listed in **Table 3**.

#### Citations

1. Krumholz HM, Brindis RG, Brush JE, et al. Standards for Statistical Models Used for Public Reporting of Health Outcomes: An American Heart Association Scientific Statement From the Quality of Care and Outcomes Research Interdisciplinary Writing Group: Cosponsored by the Council on Epidemiology and Prevention and the Stroke Council Endorsed by the American College of Cardiology Foundation. *Circulation*. 2006; 113 (3):456-462.
2. Normand S-LT, Shahian DM. Statistical and Clinical Aspects of Hospital Outcomes Profiling. *Stat Sci*. 2007; 22(2): 206-226.

### Sampling

- This is not based on a sample or survey.

### Calculation Algorithm

The risk-adjusted rate of admissions for each ACO is calculated as the number of “predicted” to the number of “expected” admissions per 100 person years, multiplied by the national rate of admissions for these conditions among all ACO beneficiaries.

1. Two-level hierarchical statistical models, accounting for clustering of patients within ACOs and patient level characteristics, are estimated. The measure uses a negative binomial model since our outcome is a count of the number of admissions for the three acute conditions in the PQI composite. The first level of the model adjusts for patient factors. The relationship between patient risk factors and the outcome of admission is determined based on the overall sample of patients within ACOs. The second level of the model estimates a random-intercept term that reflects the ACO’s contribution to admission risk, based on its actual PQI composite admission rate, the performance of other providers with similar case mix, and its sample size. The ACO-specific random intercept is used in the numerator calculation to derive an ACO-specific number of “predicted” admissions among eligible beneficiaries.
2. The expected number of admissions is calculated based on the ACO’s case mix and national average intercept.
3. The predicted number of admissions is calculated based on the ACO’s case mix and the estimated ACO-specific intercept term.
4. The measure score is the ratio of predicted admissions over the expected admissions, multiplied by the crude national admission rate for these conditions among all ACO beneficiaries. The predicted to expected ratio of admissions is analogous to an observed/expected ratio, but the numerator accounts for clustering and sample-size variation.

5. We multiply the ratio for each ACO by a constant, the crude national rate of admissions per 100 person years for hospitalization.

**Table 1. Numerator Details: ICD-10 Diagnosis Codes Used to Identify Conditions in the Acute PQI Composite**

ICD-10 Code	Description
<b>ICD-10 Code</b>	<b>Dehydration*</b>
E860	Dehydration
E861	Hypovolemia
E869	Volume depletion, unspecified
<b>ICD-10 Code</b>	<b>Hyperosmolality and/or hyponatremia*</b>
E870	Hyperosmolality and hyponatremia
<b>ICD-10 Code</b>	<b>Gastroenteritis*</b>
A080	Rotaviral enteritis
A0811	Acute gastroenteropathy due to Norwalk agent
A0819	Acute gastroenteropathy due to other small round viruses
A082	Adenoviral enteritis
A0831	Calicivirus enteritis
A0832	Astrovirus enteritis
A0839	Other viral enteritis
A084	Viral intestinal infection, unspecified
A088	Other specified intestinal infections
A09	Infectious gastroenteritis and colitis, unspecified
K5289	Other specified noninfective gastroenteritis and colitis
K529	Noninfective gastroenteritis and colitis, unspecified
<b>ICD-10 Code</b>	<b>Acute kidney failure*</b>
N170	Acute kidney failure with tubular necrosis
N171	Acute kidney failure with acute cortical necrosis
N172	Acute kidney failure with medullary necrosis
N178	Other acute kidney failure
N179	Acute kidney failure, unspecified
N19	Unspecified kidney failure
N990	Postprocedural (acute) (chronic) kidney failure
<b>ICD-10 Code</b>	<b>Bacterial pneumonia</b>
J13	Pneumonia due to Streptococcus pneumoniae
J14	Pneumonia due to Hemophilus influenzae
J15211	Pneumonia due to Methicillin susceptible Staphylococcus aureus
J15212	Pneumonia due to Methicillin resistant Staphylococcus aureus
J153	Pneumonia due to streptococcus, group B
J154	Pneumonia due to other streptococci
J157	Pneumonia due to Mycoplasma pneumoniae
J159	Unspecified bacterial pneumonia
J160	Chlamydial pneumonia
J168	Pneumonia due to other specified infectious organisms
J180	Bronchopneumonia, unspecified organism
J181	Lobar pneumonia, unspecified organism
J188	Other pneumonia, unspecified organism
J189	Pneumonia, unspecified organism
<b>ICD-10 Code</b>	<b>Urinary tract infection</b>
N10	Acute tubulo-interstitial nephritis

(continued)

**Table 1. Numerator Details: ICD-10 Diagnosis Codes Used to Identify Conditions in the Acute PQI Composite (continued)**

ICD-10 Code	Description
N119	Chronic tubulo-interstitial nephritis, unspecified
N12	Tubulo-interstitial nephritis, not specified as acute or chronic
N151	Renal and perinephric abscess
N159	Renal tubulo-interstitial disease, unspecified
N16	Renal tubulo-interstitial disorders in diseases classified elsewhere
N2884	Pyelitis cystica
N2885	Pyeloureteritis cystica
N2886	Ureteritis cystica
N3000	Acute cystitis without hematuria
N3001	Acute cystitis with hematuria
N3090	Cystitis, unspecified without hematuria
N3091	Cystitis, unspecified with hematuria
N390	Urinary tract infection, site not specified

\* To identify hospital admissions for dehydration, there should exist an ICD-10 principal diagnosis code that indicates dehydration; or have any secondary ICD-10 diagnosis codes for dehydration and a principal ICD-10 diagnosis code for hyperosmolality and/or hyponatremia, gastroenteritis, or acute kidney injury.

**Table 2. Numerator details: exclusion criterion for the acute PQI composite\***

ICD-10 Code	Description
<b>ICD-10 Code</b>	<b>Chronic renal failure</b>
I120	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease
I1311	Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease
I132	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease
N185	Chronic kidney disease, stage 5
N186	End stage renal disease
<b>ICD-10 Code</b>	<b>Sickle cell anemia or HB-S disease</b>
D5700	Hb-SS disease with crisis, unspecified
D5701	Hb-SS disease with acute chest syndrome
D5702	Hb-SS disease with splenic sequestration
D571	Sickle-cell disease without crisis
D5720	Sickle-cell/Hb-C disease without crisis
D57211	Sickle-cell/Hb-C disease with acute chest syndrome
D57212	Sickle-cell/Hb-C disease with splenic sequestration
D57219	Sickle-cell/Hb-C disease with crisis, unspecified
D5740	Sickle-cell thalassemia without crisis
D57411	Sickle-cell thalassemia with acute chest syndrome
D57412	Sickle-cell thalassemia with splenic sequestration
D57419	Sickle-cell thalassemia with crisis, unspecified
D5780	Other sickle-cell disorders without crisis
D57811	Other sickle-cell disorders with acute chest syndrome
D57812	Other sickle-cell disorders with splenic sequestration
D57819	Other sickle-cell disorders with crisis, unspecified

(continued)



**Table 2. Numerator details: exclusion criterion for the acute PQI composite\* (continued)**

ICD-10 Code	Description
<b>ICD-10 Code</b>	<b>Immunocompromised state</b>
See relevant ICD-10 diagnosis codes and procedure codes in the <b>Appendix A</b>	
<b>ICD-10 Code</b>	<b>Kidney/urinary tract disorder</b>
N110	Nonobstructive reflux-associated chronic pyelonephritis
N111	Chronic obstructive pyelonephritis
N118	Other chronic tubulo-interstitial nephritis
N119	Chronic tubulo-interstitial nephritis, unspecified
N130	Hydronephrosis with ureteropelvic junction obstruction
N136	Pyonephrosis
N1370	Vesicoureteral-reflux, unspecified
N1371	Vesicoureteral-reflux without reflux nephropathy
N13721	Vesicoureteral-reflux with reflux nephropathy without hydroureter, unilateral
N13722	Vesicoureteral-reflux with reflux nephropathy without hydroureter, bilateral
N13729	Vesicoureteral-reflux with reflux nephropathy without hydroureter, unspecified
N13731	Vesicoureteral-reflux with reflux nephropathy with hydroureter, unilateral
N13732	Vesicoureteral-reflux with reflux nephropathy with hydroureter, bilateral
N13739	Vesicoureteral-reflux with reflux nephropathy with hydroureter, unspecified
N139	Obstructive and reflux uropathy, unspecified
Q6232	Cecoureterocele
Q6239	Other obstructive defects of renal pelvis and ureter
Q624	Agenesis of ureter
Q625	Duplication of ureter
Q6260	Malposition of ureter, unspecified
Q6261	Deviation of ureter
Q6262	Displacement of ureter
Q6263	Anomalous implantation of ureter
Q6269	Other malposition of ureter
Q627	Congenital vesico-uretero-renal reflux
Q628	Other congenital malformations of ureter
Q630	Accessory kidney
Q631	Lobulated, fused and horseshoe kidney
Q600	Renal agenesis, unilateral
Q601	Renal agenesis, bilateral
Q602	Renal agenesis, unspecified
Q603	Renal hypoplasia, unilateral
Q604	Renal hypoplasia, bilateral
Q605	Renal hypoplasia, unspecified
Q606	Potter's syndrome
Q6100	Congenital renal cyst, unspecified
Q6101	Congenital single renal cyst
Q6102	Congenital multiple renal cysts
Q6111	Cystic dilatation of collecting ducts
Q6119	Other polycystic kidney, infantile type
Q612	Polycystic kidney, adult type

(continued)

**Table 2. Numerator details: exclusion criterion for the acute PQI composite\* (continued)**

ICD-10 Code	Description
Q613	Polycystic kidney, unspecified
Q614	Renal dysplasia
Q615	Medullary cystic kidney
Q618	Other cystic kidney diseases
Q619	Cystic kidney disease, unspecified
Q620	Congenital hydronephrosis
Q6210	Congenital occlusion of ureter, unspecified
Q632	Ectopic kidney
Q633	Hyperplastic and giant kidney
Q638	Other specified congenital malformations of kidney
Q639	Congenital malformation of kidney, unspecified
Q6410	Exstrophy of urinary bladder, unspecified
Q6411	Supravesical fissure of urinary bladder
Q6412	Cloacal extrophy of urinary bladder
Q6419	Other exstrophy of urinary bladder
Q642	Congenital posterior urethral valves
Q6431	Congenital bladder neck obstruction
Q6432	Congenital stricture of urethra
Q6433	Congenital stricture of urinary meatus
Q6439	Other atresia and stenosis of urethra and bladder neck
Q645	Congenital absence of bladder and urethra
Q646	Congenital diverticulum of bladder
Q6470	Unspecified congenital malformation of bladder and urethra
Q6471	Congenital prolapse of urethra
Q6472	Congenital prolapse of urinary meatus
Q6473	Congenital urethrorectal fistula
Q6474	Double urethra
Q6211	Congenital occlusion of ureteropelvic junction
Q6212	Congenital occlusion of ureterovesical orifice
Q622	Congenital megaureter
Q6231	Congenital ureterocele, orthotopic
Q6475	Double urinary meatus
Q6479	Other congenital malformations of bladder and urethra
Q648	Other specified congenital malformations of urinary system
Q649	Congenital malformation of urinary system, unspecified

\* ICD-10 diagnosis codes for chronic renal failure are excluded for dehydration, ICD-10 diagnosis codes for sickle cell anemia or HB-S disease are excluded for bacterial pneumonia, ICD-10 diagnosis or procedure codes for immunocompromised state are excluded for both bacterial pneumonia and urinary tract infection, and ICD-10 diagnosis codes for kidney/urinary tract disorder are excluded for urinary tract infection.

**Table 3. Condition Categories Utilized in Acute PQI Composite**

CC #*	Description
2	Septicemia, Sepsis, Systemic Inflammatory Response Syndrome/Shock
6	Opportunistic Infections
7	Other Infectious Diseases

(continued)

**Table 3. Condition Categories Utilized in Acute PQI Composite (continued)**

CC #*	Description
8	Metastatic Cancer and Acute Leukemia
9	Lung and Other Severe Cancers
10	Lymphoma and Other Cancers
11	Colorectal, Bladder, and Other Cancers
12	Breast, Prostate, and Other Cancers and Tumors
13	Other Respiratory and Heart Neoplasms
17	Diabetes with Acute Complications
18	Diabetes with Chronic Complications
19	Diabetes without Complication
20	Type I Diabetes Mellitus
22	Morbid Obesity
23	Other Significant Endocrine and Metabolic Disorders
24	Disorders of Fluid/Electrolyte/Acid-Base Balance
26	Other Endocrine/Metabolic/Nutritional Disorders
27	End-Stage Liver Disease
28	Cirrhosis of Liver
35	Inflammatory Bowel Disease
38	Other Gastrointestinal Disorders
40	Rheumatoid Arthritis and Inflammatory Connective Tissue Disease
41	Disorders of the Vertebrae and Spinal Discs
46	Severe Hematological Disorders
48	Coagulation Defects and Other Specified Hematological Disorders
49	Iron Deficiency and Other/Unspecified Anemias and Blood Disease
50	Delirium and Encephalopathy
51	Dementia With Complications
52	Dementia Without Complication
53	Nonpsychotic Organic Brain Syndromes/Conditions
54	Drug/Alcohol Psychosis
55	Drug/Alcohol Dependence
56	Drug/Alcohol Abuse, Without Dependence
57	Schizophrenia
58	Major Depressive, Bipolar, and Paranoid Disorders
59	Reactive and Unspecified Psychosis
61	Depression
63	Other Psychiatric Disorders
67	Mild Intellectual Disability, Autism, Down Syndrome
70	Quadriplegia
71	Paraplegia
72	Spinal Cord Disorders/Injuries
74	Cerebral Palsy
75	Myasthenia Gravis/Myoneural Disorders and Guillain-Barre Syndrome/Inflammatory
77	Multiple Sclerosis
78	Parkinson's and Huntington's Diseases
79	Seizure Disorders and Convulsions
81	Polyneuropathy, Mononeuropathy, and Other Neurological Conditions/Injuries

(continued)

**Table 3. Condition Categories Utilized in Acute PQI Composite (continued)**

CC #*	Description
84	Cardio-Respiratory Failure and Shock
85	Congestive Heart Failure
87	Unstable Angina and Other Acute Ischemic Heart Disease
89	Coronary Atherosclerosis/Other Chronic Ischemic Heart Disease
95	Hypertension
96	Specified Heart Arrhythmias
97	Other Heart Rhythm and Conduction Disorders
100	Ischemic or Unspecified Stroke
101	Precerebral Arterial Occlusion and Transient Cerebral Ischemia
102	Cerebrovascular Atherosclerosis, Aneurysm, and Other Disease
103	Hemiplegia/Hemiparesis
105	Late Effects of Cerebrovascular Disease, Except Paralysis
106	Atherosclerosis of the Extremities with Ulceration or Gangrene
107	Vascular Disease with Complications
108	Vascular Disease
109	Other Circulatory Disease
111	Chronic Obstructive Pulmonary Disease
112	Fibrosis of Lung and Other Chronic Lung Disorders
113	Asthma
114	Aspiration and Specified Bacterial Pneumonias
115	Pneumococcal Pneumonia, Empyema, Lung Abscess
116	Viral and Unspecified Pneumonia, Pleurisy
118	Other Respiratory Disorders
119	Legally Blind
122	Proliferative Diabetic Retinopathy and Vitreous Hemorrhage
123	Diabetic and Other Vascular Retinopathies
124	Exudative Macular Degeneration
137	Chronic Kidney Disease, Severe (Stage 4)
138	Chronic Kidney Disease, Moderate (Stage 3)
139	Chronic Kidney Disease, Mild or Unspecified (Stages 1-2 or Unspecified)
141	Nephritis
142	Urinary Obstruction and Retention
143	Urinary Incontinence
144	Urinary Tract Infection
145	Other Urinary Tract Disorders
150	Ectopic and Molar Pregnancy
157	Pressure Ulcer of Skin with Necrosis Through to Muscle, Tendon, or Bone
159	Pressure Ulcer of Skin with Partial Thickness Skin Loss
160	Pressure Pre-Ulcer Skin Changes or Unspecified Stage
161	Chronic Ulcer of Skin, Except Pressure
164	Cellulitis, Local Skin Infection
168	Concussion or Unspecified Head Injury
169	Vertebral Fractures without Spinal Cord Injury
174	Other Injuries
175	Poisonings and Allergic and Inflammatory Reactions

(continued)

**Table 3. Condition Categories Utilized in Acute PQI Composite (continued)**

CC #*	Description
176	Complications of Specified Implanted Device or Graft
178	Major Symptoms, Abnormalities
188	Artificial Openings for Feeding or Elimination
189	Amputation Status, Lower Limb/Amputation Complications
191	Post-Surgical States/Aftercare/Elective
193	Chemotherapy
196	History of Disease
197	Supplemental Oxygen
199	Patient Lifts, Power Operated Vehicles, Beds
200	Wheelchairs, Commodes

\* CC-condition category

### **Appendix Table**

**Table 1. Immunocompromised State Diagnosis and Procedure Codes\***

ICD-10 Code	Description
<b>Diagnosis code:</b>	
B20	Human immunodeficiency virus [HIV] disease
B59	Pneumocystosis
C802	Malignant neoplasm associated with transplanted organ
C888	Other malignant immunoproliferative diseases
C9440	Acute panmyelosis with myelofibrosis not having achieved remission
C9441	Acute panmyelosis with myelofibrosis, in remission
C9442	Acute panmyelosis with myelofibrosis, in relapse
C946	Myelodysplastic disease, not classified
D4622	Refractory anemia with excess of blasts 2
D471	Chronic myeloproliferative disease
D479	Neoplasm of uncertain behavior of lymphoid, hematopoietic and related tissue, unspecified
D47Z1	Post-transplant lymphoproliferative disorder (PTLD)
D47Z2	Castleman disease
D47Z9	Other specified neoplasms of uncertain behavior of lymphoid, hematopoietic and related tissue
D6109	Other constitutional aplastic anemia
D61810	Antineoplastic chemotherapy induced pancytopenia
D61811	Other drug-induced pancytopenia
D61818	Other pancytopenia
D700	Congenital agranulocytosis
D701	Agranulocytosis secondary to cancer chemotherapy
D702	Other drug-induced agranulocytosis
D704	Cyclic neutropenia
D708	Other neutropenia
D709	Neutropenia, unspecified
D71	Functional disorders of polymorphonuclear neutrophils
D720	Genetic anomalies of leukocytes
D72810	Lymphocytopenia
D72818	Other decreased white blood cell count

(continued)

**Table 1. Immunocompromised State Diagnosis and Procedure Codes\* (continued)**

ICD-10 Code	Description
D72819	Decreased white blood cell count, unspecified
D7381	Neutropenic splenomegaly
D7581	Myelofibrosis
D761	Hemophagocytic lymphohistiocytosis
D762	Hemophagocytic syndrome, infection-associated
D763	Other histiocytosis syndromes
D800	Hereditary hypogammaglobulinemia
D801	Nonfamilial hypogammaglobulinemia
D802	Selective deficiency of immunoglobulin A [IgA]
D803	Selective deficiency of immunoglobulin G [IgG] subclasses
D804	Selective deficiency of immunoglobulin M [IgM]
D805	Immunodeficiency with increased immunoglobulin M [IgM]
D806	Antibody deficiency with near-normal immunoglobulins or with hyperimmunoglobulinemia
D807	Transient hypogammaglobulinemia of infancy
D808	Other immunodeficiencies with predominantly antibody defects
D809	Immunodeficiency with predominantly antibody defects, unspecified
D810	Severe combined immunodeficiency [SCID] with reticular dysgenesis
D811	Severe combined immunodeficiency [SCID] with low T- and B-cell numbers
D812	Severe combined immunodeficiency [SCID] with low or normal B-cell numbers
D814	Nezelof's syndrome
D816	Major histocompatibility complex class I deficiency
D817	Major histocompatibility complex class II deficiency
D8189	Other combined immunodeficiencies
D819	Combined immunodeficiency, unspecified
D820	Wiskott-Aldrich syndrome
D821	Di George's syndrome
D822	Immunodeficiency with short-limbed stature
D823	Immunodeficiency following hereditary defective response to Epstein-Barr virus
D824	Hyperimmunoglobulin E [IgE] syndrome
D828	Immunodeficiency associated with other specified major defects
D829	Immunodeficiency associated with major defect, unspecified
D830	Common variable immunodeficiency with predominant abnormalities of B-cell numbers and function
D831	Common variable immunodeficiency with predominant immunoregulatory T-cell disorders
D832	Common variable immunodeficiency with autoantibodies to B- or T-cells
D838	Other common variable immunodeficiencies
D839	Common variable immunodeficiency, unspecified
D840	Lymphocyte function antigen-1 [LFA-1] defect
D841	Defects in the complement system
D848	Other specified immunodeficiencies
D849	Immunodeficiency, unspecified
D893	Immune reconstitution syndrome
D89810	Acute graft-versus-host disease
D89811	Chronic graft-versus-host disease
D89812	Acute on chronic graft-versus-host disease
D8989	Other specified disorders involving the immune mechanism, not elsewhere classified

(continued)

**Table 1. Immunocompromised State Diagnosis and Procedure Codes\* (continued)**

ICD-10 Code	Description
D89813	Graft-versus-host disease, unspecified
D8982	Autoimmune lymphoproliferative syndrome [ALPS]
D899	Disorder involving the immune mechanism, unspecified
E40	Kwashiorkor
E41	Nutritional marasmus
E42	Marasmic kwashiorkor
E43	Unspecified severe protein-calorie malnutrition
I120	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease
I1311	Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease
I132	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease
K912	Postsurgical malabsorption, not elsewhere classified
N185	Chronic kidney disease, stage 5
N186	End stage renal disease
T8600	Unspecified complication of bone marrow transplant
T8601	Bone marrow transplant rejection
T8602	Bone marrow transplant failure
T8603	Bone marrow transplant infection
T8609	Other complications of bone marrow transplant
T8610	Unspecified complication of kidney transplant
T8611	Kidney transplant rejection
T8612	Kidney transplant failure
T8613	Kidney transplant infection
T8619	Other complication of kidney transplant
T8620	Unspecified complication of heart transplant
T8621	Heart transplant rejection
T8622	Heart transplant failure
T8623	Heart transplant infection
T86290	Cardiac allograft vasculopathy
T86298	Other complications of heart transplant
T8630	Unspecified complication of heart-lung transplant
T8631	Heart-lung transplant rejection
T8632	Heart-lung transplant failure
T8633	Heart-lung transplant infection
T8639	Other complications of heart-lung transplant
T8640	Unspecified complication of liver transplant
T8641	Liver transplant rejection
T8642	Liver transplant failure
T8643	Liver transplant infection
T8649	Other complications of liver transplant
T865	Complications of stem cell transplant
T86810	Lung transplant rejection
T86811	Lung transplant failure

(continued)

**Table 1. Immunocompromised State Diagnosis and Procedure Codes\* (continued)**

ICD-10 Code	Description
T86812	Lung transplant infection
T86818	Other complications of lung transplant
T86819	Unspecified complication of lung transplant
T86830	Bone graft rejection
T86831	Bone graft failure
T86832	Bone graft infection
T86838	Other complications of bone graft
T86839	Unspecified complication of bone graft
T86850	Intestine transplant rejection
T86851	Intestine transplant failure
T86852	Intestine transplant infection
T86858	Other complications of intestine transplant
T86859	Unspecified complication of intestine transplant
T86890	Other transplanted tissue rejection
T86891	Other transplanted tissue failure
T86892	Other transplanted tissue infection
T86898	Other complications of other transplanted tissue
T86899	Unspecified complication of other transplanted tissue
T8690	Unspecified complication of unspecified transplanted organ and tissue
T8691	Unspecified transplanted organ and tissue rejection
T8692	Unspecified transplanted organ and tissue failure
T8693	Unspecified transplanted organ and tissue infection
T8699	Other complications of unspecified transplanted organ and tissue
Z4821	Encounter for aftercare following heart transplant
Z4822	Encounter for aftercare following kidney transplant
Z4823	Encounter for aftercare following liver transplant
Z4824	Encounter for aftercare following lung transplant
Z48280	Encounter for aftercare following heart-lung transplant
Z48288	Encounter for aftercare following multiple organ transplant
Z48290	Encounter for aftercare following bone marrow transplant
Z48298	Encounter for aftercare following other organ transplant
Z4901	Encounter for fitting and adjustment of extracorporeal dialysis catheter
Z4902	Encounter for fitting and adjustment of peritoneal dialysis catheter
Z4931	Encounter for adequacy testing for hemodialysis
Z4932	Encounter for adequacy testing for peritoneal dialysis
Z940	Kidney transplant status
Z941	Heart transplant status
Z942	Lung transplant status
Z943	Heart and lungs transplant status
Z944	Liver transplant status
Z9481	Bone marrow transplant status
Z9482	Intestine transplant status
Z9483	Pancreas transplant status
Z9484	Stem cells transplant status
Z9489	Other transplanted organ and tissue status

(continued)



**Table 1. Immunocompromised State Diagnosis and Procedure Codes\* (continued)**

ICD-10 Code	Description
Z992	Dependence on renal dialysis
<b>Procedure code:</b>	
02YA0Z0	Transplantation of Heart, Allogeneic, Open Approach
02YA0Z2	Transplantation of Heart, Zooplastic, Open Approach
0BYC0Z0	Transplantation of Right Upper Lung Lobe, Allogeneic, Open Approach
0BYC0Z2	Transplantation of Right Upper Lung Lobe, Zooplastic, Open Approach
0BYD0Z0	Transplantation of Right Middle Lung Lobe, Allogeneic, Open Approach
0BYD0Z2	Transplantation of Right Middle Lung Lobe, Zooplastic, Open Approach
0BYF0Z0	Transplantation of Right Lower Lung Lobe, Allogeneic, Open Approach
0BYF0Z2	Transplantation of Right Lower Lung Lobe, Zooplastic, Open Approach
0BYG0Z0	Transplantation of Left Upper Lung Lobe, Allogeneic, Open Approach
0BYG0Z2	Transplantation of Left Upper Lung Lobe, Zooplastic, Open Approach
0BYH0Z0	Transplantation of Lung Lingula, Allogeneic, Open Approach
0BYH0Z2	Transplantation of Lung Lingula, Zooplastic, Open Approach
0BYJ0Z0	Transplantation of Left Lower Lung Lobe, Allogeneic, Open Approach
0BYJ0Z2	Transplantation of Left Lower Lung Lobe, Zooplastic, Open Approach
0BYK0Z0	Transplantation of Right Lung, Allogeneic, Open Approach
0BYK0Z2	Transplantation of Right Lung, Zooplastic, Open Approach
0BYL0Z0	Transplantation of Left Lung, Allogeneic, Open Approach
0BYL0Z2	Transplantation of Left Lung, Zooplastic, Open Approach
0BYM0Z0	Transplantation of Bilateral Lungs, Allogeneic, Open Approach
0BYM0Z2	Transplantation of Bilateral Lungs, Zooplastic, Open Approach
0FSG0Z2	Reposition Pancreas, Open Approach
0FSG4Z2	Reposition Pancreas, Percutaneous Endoscopic Approach
0FY00Z0	Transplantation of Liver, Allogeneic, Open Approach
0FY00Z2	Transplantation of Liver, Zooplastic, Open Approach
0FYG0Z0	Transplantation of Pancreas, Allogeneic, Open Approach
0FYG0Z2	Transplantation of Pancreas, Zooplastic, Open Approach
0TY00Z0	Transplantation of Right Kidney, Allogeneic, Open Approach
0TY00Z2	Transplantation of Right Kidney, Zooplastic, Open Approach
0TY10Z0	Transplantation of Left Kidney, Allogeneic, Open Approach
0TY10Z2	Transplantation of Left Kidney, Zooplastic, Open Approach
0WY20Z0	Transplantation of Face, Allogeneic, Open Approach
0XYJ0Z0	Transplantation of Right Hand, Allogeneic, Open Approach
0XYK0Z0	Transplantation of Left Hand, Allogeneic, Open Approach
30230AZ	Transfusion of Embryonic Stem Cells into Peripheral Vein, Open Approach
30230G0	Transfusion of Autologous Bone Marrow into Peripheral Vein, Open Approach
30230G1	Transfusion of Nonautologous Bone Marrow into Peripheral Vein, Open Approach
30230G2	Transfusion of Allogeneic Related Bone Marrow into Peripheral Vein, Open Approach
30230G3	Transfusion of Allogeneic Unrelated Bone Marrow into Peripheral Vein, Open Approach
30230G4	Transfusion of Allogeneic Unspecified Bone Marrow into Peripheral Vein, Open Approach
30230X0	Transfusion of Autologous Cord Blood Stem Cells into Peripheral Vein, Open Approach
30230X1	Transfusion of Nonautologous Cord Blood Stem Cells into Peripheral Vein, Open Approach
30230X2	Transfusion of Allogeneic Related Cord Blood Stem Cells into Peripheral Vein, Open Approach

(continued)

**Table 1. Immunocompromised State Diagnosis and Procedure Codes\* (continued)**

ICD-10 Code	Description
30230X3	Transfusion of Allogeneic Unrelated Cord Blood Stem Cells into Peripheral Vein, Open Approach
30230X4	Transfusion of Allogeneic Unspecified Cord Blood Stem Cells into Peripheral Vein, Open Approach
30230Y0	Transfusion of Autologous Hematopoietic Stem Cells into Peripheral Vein, Open Approach
30230Y1	Transfusion of Nonautologous Hematopoietic Stem Cells into Peripheral Vein, Open Approach
30230Y2	Transfusion of Allogeneic Related Hematopoietic Stem Cells into Peripheral Vein, Open Approach
30230Y3	Transfusion of Allogeneic Unrelated Hematopoietic Stem Cells into Peripheral Vein, Open Approach
30230Y4	Transfusion of Allogeneic Unspecified Hematopoietic Stem Cells into Peripheral Vein, Open Approach
30233AZ	Transfusion of Embryonic Stem Cells into Peripheral Vein, Percutaneous Approach
30233G0	Transfusion of Autologous Bone Marrow into Peripheral Vein, Percutaneous Approach
30233G1	Transfusion of Nonautologous Bone Marrow into Peripheral Vein, Percutaneous Approach
30233G2	Transfusion of Allogeneic Related Bone Marrow into Peripheral Vein, Percutaneous Approach
30233G3	Transfusion of Allogeneic Unrelated Bone Marrow into Peripheral Vein, Percutaneous Approach
30233G4	Transfusion of Allogeneic Unspecified Bone Marrow into Peripheral Vein, Percutaneous Approach
30233X0	Transfusion of Autologous Cord Blood Stem Cells into Peripheral Vein, Percutaneous Approach
30233X1	Transfusion of Nonautologous Cord Blood Stem Cells into Peripheral Vein, Percutaneous Approach
30233X2	Transfusion of Allogeneic Related Cord Blood Stem Cells into Peripheral Vein, Percutaneous Approach
30233X3	Transfusion of Allogeneic Unrelated Cord Blood Stem Cells into Peripheral Vein, Percutaneous Approach
30233X4	Transfusion of Allogeneic Unspecified Cord Blood Stem Cells into Peripheral Vein, Percutaneous Approach
30233Y0	Transfusion of Autologous Hematopoietic Stem Cells into Peripheral Vein, Percutaneous Approach
30233Y1	Transfusion of Nonautologous Hematopoietic Stem Cells into Peripheral Vein, Percutaneous Approach
30233Y2	Transfusion of Allogeneic Related Hematopoietic Stem Cells into Peripheral Vein, Percutaneous Approach
30233Y3	Transfusion of Allogeneic Unrelated Hematopoietic Stem Cells into Peripheral Vein, Percutaneous Approach
30233Y4	Transfusion of Allogeneic Unspecified Hematopoietic Stem Cells into Peripheral Vein, Percutaneous Approach
30240AZ	Transfusion of Embryonic Stem Cells into Central Vein, Open Approach
30240G0	Transfusion of Autologous Bone Marrow into Central Vein, Open Approach
30240G1	Transfusion of Nonautologous Bone Marrow into Central Vein, Open Approach
30240G2	Transfusion of Allogeneic Related Bone Marrow into Central Vein, Open Approach
30240G3	Transfusion of Allogeneic Unrelated Bone Marrow into Central Vein, Open Approach
30240G4	Transfusion of Allogeneic Unspecified Bone Marrow into Central Vein, Open Approach
30240X0	Transfusion of Autologous Cord Blood Stem Cells into Central Vein, Open Approach
30240X1	Transfusion of Nonautologous Cord Blood Stem Cells into Central Vein, Open Approach
30240X2	Transfusion of Allogeneic Related Cord Blood Stem Cells into Central Vein, Open Approach
30240X3	Transfusion of Allogeneic Unrelated Cord Blood Stem Cells into Central Vein, Open Approach
30240X4	Transfusion of Allogeneic Unspecified Cord Blood Stem Cells into Central Vein, Open Approach
30240Y0	Transfusion of Autologous Hematopoietic Stem Cells into Central Vein, Open Approach
30240Y1	Transfusion of Nonautologous Hematopoietic Stem Cells into Central Vein, Open Approach
30240Y2	Transfusion of Allogeneic Related Hematopoietic Stem Cells into Central Vein, Open Approach
30240Y3	Transfusion of Allogeneic Unrelated Hematopoietic Stem Cells into Central Vein, Open Approach
30240Y4	Transfusion of Allogeneic Unspecified Hematopoietic Stem Cells into Central Vein, Open Approach
30243AZ	Transfusion of Embryonic Stem Cells into Central Vein, Percutaneous Approach
30243G0	Transfusion of Autologous Bone Marrow into Central Vein, Percutaneous Approach

(continued)

**Table 1. Immunocompromised State Diagnosis and Procedure Codes\* (continued)**

ICD-10 Code	Description
30243G1	Transfusion of Nonautologous Bone Marrow into Central Vein, Percutaneous Approach
30243G2	Transfusion of Allogeneic Related Bone Marrow into Central Vein, Percutaneous Approach
30243G3	Transfusion of Allogeneic Unrelated Bone Marrow into Central Vein, Percutaneous Approach
30243G4	Transfusion of Allogeneic Unspecified Bone Marrow into Central Vein, Percutaneous Approach
30243X0	Transfusion of Autologous Cord Blood Stem Cells into Central Vein, Percutaneous Approach
30243X1	Transfusion of Nonautologous Cord Blood Stem Cells into Central Vein, Percutaneous Approach
30243X2	Transfusion of Allogeneic Related Cord Blood Stem Cells into Central Vein, Percutaneous Approach
30243X3	Transfusion of Allogeneic Unrelated Cord Blood Stem Cells into Central Vein, Percutaneous Approach
30243X4	Transfusion of Allogeneic Unspecified Cord Blood Stem Cells into Central Vein, Percutaneous Approach
30243Y0	Transfusion of Autologous Hematopoietic Stem Cells into Central Vein, Percutaneous Approach
30243Y1	Transfusion of Nonautologous Hematopoietic Stem Cells into Central Vein, Percutaneous Approach
30243Y2	Transfusion of Allogeneic Related Hematopoietic Stem Cells into Central Vein, Percutaneous Approach
30243Y3	Transfusion of Allogeneic Unrelated Hematopoietic Stem Cells into Central Vein, Percutaneous Approach
30243Y4	Transfusion of Allogeneic Unspecified Hematopoietic Stem Cells into Central Vein, Percutaneous Approach
30250G0	Transfusion of Autologous Bone Marrow into Peripheral Artery, Open Approach
30250G1	Transfusion of Nonautologous Bone Marrow into Peripheral Artery, Open Approach
30250X0	Transfusion of Autologous Cord Blood Stem Cells into Peripheral Artery, Open Approach
30250X1	Transfusion of Nonautologous Cord Blood Stem Cells into Peripheral Artery, Open Approach
30250Y0	Transfusion of Autologous Hematopoietic Stem Cells into Peripheral Artery, Open Approach
30250Y1	Transfusion of Nonautologous Hematopoietic Stem Cells into Peripheral Artery, Open Approach
30253G0	Transfusion of Autologous Bone Marrow into Peripheral Artery, Percutaneous Approach
30253G1	Transfusion of Nonautologous Bone Marrow into Peripheral Artery, Percutaneous Approach
30253X0	Transfusion of Autologous Cord Blood Stem Cells into Peripheral Artery, Percutaneous Approach
30253X1	Transfusion of Nonautologous Cord Blood Stem Cells into Peripheral Artery, Percutaneous Approach
30253Y0	Transfusion of Autologous Hematopoietic Stem Cells into Peripheral Artery, Percutaneous Approach
30253Y1	Transfusion of Nonautologous Hematopoietic Stem Cells into Peripheral Artery, Percutaneous Approach
30260G0	Transfusion of Autologous Bone Marrow into Central Artery, Open Approach
30260G1	Transfusion of Nonautologous Bone Marrow into Central Artery, Open Approach
30260X0	Transfusion of Autologous Cord Blood Stem Cells into Central Artery, Open Approach
30260X1	Transfusion of Nonautologous Cord Blood Stem Cells into Central Artery, Open Approach
30260Y0	Transfusion of Autologous Hematopoietic Stem Cells into Central Artery, Open Approach
30260Y1	Transfusion of Nonautologous Hematopoietic Stem Cells into Central Artery, Open Approach
30263G0	Transfusion of Autologous Bone Marrow into Central Artery, Percutaneous Approach
30263G1	Transfusion of Nonautologous Bone Marrow into Central Artery, Percutaneous Approach
30263X0	Transfusion of Autologous Cord Blood Stem Cells into Central Artery, Percutaneous Approach
30263X1	Transfusion of Nonautologous Cord Blood Stem Cells into Central Artery, Percutaneous Approach
30263Y0	Transfusion of Autologous Hematopoietic Stem Cells into Central Artery, Percutaneous Approach
30263Y1	Transfusion of Nonautologous Hematopoietic Stem Cells into Central Artery, Percutaneous Approach
3E03005	Introduction of Other Antineoplastic into Peripheral Vein, Open Approach
3E0300M	Introduction of Monoclonal Antibody into Peripheral Vein, Open Approach
3E030U1	Introduction of Nonautologous Pancreatic Islet Cells into Peripheral Vein, Open Approach
3E030WL	Introduction of Immunosuppressive into Peripheral Vein, Open
3E03305	Introduction of Other Antineoplastic into Peripheral Vein, Percutaneous Approach

(continued)

**Table 1. Immunocompromised State Diagnosis and Procedure Codes\* (continued)**

ICD-10 Code	Description
3E0330M	Introduction of Monoclonal Antibody into Peripheral Vein, Percutaneous Approach
3E033U1	Introduction of Nonautologous Pancreatic Islet Cells into Peripheral Vein, Percutaneous Approach
3E033WL	Introduction of Immunosuppressive into Peripheral Vein, Percutaneous
3E04005	Introduction of Other Antineoplastic into Central Vein, Open Approach
3E0400M	Introduction of Monoclonal Antibody into Central Vein, Open Approach
3E040WL	Introduction of Immunosuppressive into Central Vein, Open
3E04305	Introduction of Other Antineoplastic into Central Vein, Percutaneous Approach
3E0430M	Introduction of Monoclonal Antibody into Central Vein, Percutaneous Approach
3E043WL	Introduction of Immunosuppressive into Central Vein, Percutaneous
3E05005	Introduction of Other Antineoplastic into Peripheral Artery, Open Approach
3E0500M	Introduction of Monoclonal Antibody into Peripheral Artery, Open Approach
3E050WL	Introduction of Immunosuppressive into Peripheral Artery, Open
3E05305	Introduction of Other Antineoplastic into Peripheral Artery, Percutaneous Approach
3E0530M	Introduction of Monoclonal Antibody into Peripheral Artery, Percutaneous Approach
3E053WL	Introduction of Immunosuppressive into Peripheral Artery, Percutaneous
3E06005	Introduction of Other Antineoplastic into Central Artery, Open Approach
3E0600M	Introduction of Monoclonal Antibody into Central Artery, Open Approach
3E060WL	Introduction of Immunosuppressive into Central Artery, Open
3E06305	Introduction of Other Antineoplastic into Central Artery, Percutaneous Approach
3E0630M	Introduction of Monoclonal Antibody into Central Artery, Percutaneous Approach
3E063WL	Introduction of Immunosuppressive into Central Artery, Percutaneous
3E0J3U1	Introduction of Nonautologous Pancreatic Islet Cells into Biliary and Pancreatic Tract, Percutaneous Approach
3E0J7U1	Introduction of Nonautologous Pancreatic Islet Cells into Biliary and Pancreatic Tract, Via Natural or Artificial Opening
3E0J8U1	Introduction of Nonautologous Pancreatic Islet Cells into Biliary and Pancreatic Tract, Via Natural or Artificial Opening Endoscopic

\* ICD-10 diagnosis or procedure codes for immunocompromised state are excluded for both bacterial pneumonia and urinary tract infection.