

Women’s Health Excellence Award™ 2013 Methodology

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Introduction

The Healthgrades Women’s Health Excellence Award™ recognizes the best-performing hospitals in women’s health, which includes care provided to women for common conditions and procedures treated in the hospital.

To help consumers evaluate and compare hospital performance in women’s health, Healthgrades analyzed female patient outcome data for virtually every hospital in the country. A list of award recipients is available on the Internet at www.Healthgrades.com.

The women’s health ratings used to determine award recipients were based upon Healthgrades risk-adjustment methodology for 15 procedures/diagnoses described below.

Data Source

Healthgrades used Medicare inpatient data from the MedPAR database (purchased from the Centers for Medicare and Medicaid Services) for years 2009 through 2011.

Cohort Definitions and Outcomes

For each of the 15 patient cohorts, Healthgrades developed a list of specific procedures and diagnoses that define the cohort and a list of cohort-specific exclusions for rare and/or clinically complex diagnoses and procedures that cannot be adequately risk adjusted (*Appendix A*).

For each of these cohorts, only hospitals with at least 30 female cases across three years of data and at least five female cases in the most current year were included.

For eight of the cohorts, the outcome measure is mortality. For seven of the cohorts, the outcome of measure is in-hospital complications. For the cohorts where in-hospital complications are the outcome of study, complications are defined by using clinical and coding experts. A list of in-hospital complications by cohort can be found in *Appendix B*.

Healthgrades analyzed the following 15 procedures/diagnoses (cohorts) for each hospital's female patients:

Mortality-Based Cohorts

- Chronic Obstructive Pulmonary Disease
- Coronary Artery Bypass Graft (CABG) Surgery
- Coronary Interventional Procedures (PTCA/Angioplasty, Stent)
- Heart Attack
- Heart Failure
- Pneumonia
- Stroke
- Valve Repair/Replacement Surgery

Complication-Based Cohorts

- Back and Neck Surgery (Spinal Fusion)
- Back and Neck Surgery (except Spinal Fusion)
- Carotid Surgery
- Hip Fracture Treatment
- Hip Replacement
- Peripheral Vascular Bypass
- Total Knee Replacement

Healthgrades Risk-Adjustment Methodology

Healthgrades risk-adjustment methodology considers important differences in patient demographic and clinical characteristics. The purpose of risk adjustment is to obtain fair statistical comparisons between disparate populations or groups. Significant differences in demographic and clinical risk factors are found among patients treated in different hospitals. Risk adjustment of the data is needed to make accurate and valid comparisons of clinical outcomes at different hospitals.

This methodology defines risk factors as those clinical and demographic variables that influence patient outcomes in significant and systematic ways. Risk factors may include age, specific procedure performed, and comorbid conditions such as hypertension, chronic renal failure, congestive heart failure, and diabetes. These risk factors are incorporated into multivariate logistic regression models to carry out the risk adjustment.

Eligibility for the 2013 Women's Health Excellence Award™

To receive a rating (z-score) in a cohort, a hospital must have had all of the following:

- A minimum of 30 female discharges over the three years, and at least five female discharges in the most recent year in the cohort.
- For stroke, a hospital must have transferred out less than 10% of stroke patients (female or male) to another acute care hospital over three years (2009–2011).

To be eligible to receive a Women's Health Excellence Award, a hospital must be:

- Rated (have a z-score) in stroke.
- Rated in at least eight of the fifteen cohorts listed above.

Statistical Models and Award Calculations

Healthgrades used the following steps to determine Women's Health Excellence Award recipients:

1. For each patient cohort, unique, female-only statistical models were developed using logistic regression. For most mortality cohorts, separate models were created for in-hospital mortality, in-hospital +30-day mortality, and in-hospital +180-day mortality (chronic obstructive pulmonary disease and heart failure do not have in-hospital +30-day mortality models).
2. Comorbid diagnoses (e.g., hypertension, chronic renal failure, anemia, diabetes), demographic characteristics (e.g., age), and specific procedures were classified as possible risk factors. Some diagnosis codes were merged together (e.g., primary and secondary pulmonary hypertension) to minimize the impact of coding differences.

Healthgrades used logistic regression to determine which of these factors were correlated and to what extent with mortality or complications. Those conditions or demographics with statistically significant odds ratios stayed in the model as final risk factors.

Potential risk factors with odds ratios less than one were removed from the model except in a few cases. See *Appendix C* for a list of the top five risk factors for each procedure or diagnosis. The top five risk factors are procedures/diagnoses that are the most highly correlated with the outcome. They are not necessarily those with the highest volume.

The statistical models were checked for validity and finalized. All of the models were highly significant. These cohort specific models were then used to estimate the probability of death or complication for each patient in the cohort.

3. Patients were aggregated for each hospital to obtain the predicted outcome for each hospital.
4. For each hospital, cohort, and outcome, the observed and predicted numbers were summed and a z-score was calculated. Thus, the complication-based cohorts had a single z-score but most mortality-based cohorts had three z-scores (in-hospital, in-hospital +30 days, in-hospital +180 days).
5. The average of all z-scores was calculated across those cohorts for which the hospital had at least 30 female cases over the three-year period and at least five female cases in the most recent year. The eligible hospitals were then ordered from highest to lowest by their average z-score and the top 10% of eligible hospitals were recognized with the Healthgrades Women's Health Excellence Award.

Limitations of the Data Analysis

While these analyses may be valuable in identifying hospitals that perform better than others, one should not use this information alone to determine the quality of care provided at each hospital. The analyses are limited by the following factors:

- Cases may have been coded incorrectly or incompletely by the hospital.
- Healthgrades conditions and procedures models can only account for risk factors that are coded into the billing data. Therefore, if a particular risk factor was not coded into the billing data (such as a patient's socioeconomic status and health behavior) then it was not accounted for.
- Although Healthgrades has taken steps to carefully compile these data, no techniques are infallible; therefore, some information may be missing, outdated or incorrect.

Please note that a high z-score or rating of a particular hospital is not a recommendation or endorsement by Health Grades, Inc. of a particular hospital; it means that the data associated with a particular hospital has met the foregoing qualifications. Only individual patients can decide whether a particular hospital is suited for their unique needs.

Also note that if more than one hospital reported under a single provider ID, Healthgrades analyzed patient outcome data for those hospitals as a single unit. Throughout this document, therefore, "hospital" refers to one hospital or a group of hospitals reporting under a single provider ID.

Appendix A. Patient Cohorts and Related ICD-9-CM Codes

Excluded from each cohort were patients who have had any organ transplant or a complication thereof.

Back and Neck Surgery (Spinal Fusion)

Inclusions

Principal Procedure: 81.00, 81.01, 81.02, 81.03, 81.04, 81.05, 81.06, 81.07, 81.08, 81.62, 81.63, 81.64

Exclusions

Diagnoses (Primary or Secondary): 198.5, 996.45, 996.46, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, E812.0, E812.1, E812.2, E812.3, E812.4, E812.5, E812.6, E812.7, E812.8, E812.9, E813.0, E813.1, E813.2, E813.3, E813.4, E813.5, E813.6, E813.7, E813.8, E813.9, E814.7, E815.0, E816.0, E816.1, E819.0, E819.9, E828.2, E849.1, E849.5, E881.0, E882, E929.0, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9, V45.4

Principal Diagnosis: 996.41, 996.42, 996.43

Procedures (Primary or Secondary): 37.51, 37.52, 37.53, 37.54, 78.69, 81.30, 81.31, 81.32, 81.33, 81.34, 81.35, 81.36, 81.37, 81.38, 81.39, 81.65, 81.66, 84.59, 84.60, 84.61, 84.62, 84.63, 84.64, 84.65, 84.66, 84.67, 84.68, 84.69, 84.80, 84.81, 84.82, 84.83, 84.84, 84.85

Diagnosis and Procedure Combination: Procedure (Secondary) 03.02 occurring with any of the following diagnoses (Primary or Secondary): 722.80, 722.81, 722.82, 722.83

Back and Neck Surgery (except Spinal Fusion)

Inclusions

Principal Procedure: 03.09, 03.53, 80.50, 80.51, 80.59, 84.59, 84.60, 84.61, 84.62, 84.63, 84.64, 84.65, 84.80, 84.82, 84.84

Exclusions

Diagnoses (Primary or Secondary): 198.5, 996.45, 996.46, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, E812.0, E812.1, E812.2, E812.3, E812.4, E812.5, E812.6, E812.7, E812.8, E812.9, E813.0, E813.1, E813.2, E813.3, E813.4, E813.5, E813.6, E813.7, E813.8, E813.9, E814.7, E815.0, E816.0, E816.1, E819.0, E819.9, E828.2, E849.1, E849.5, E881.0, E882, E929.0, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9, V54.01, V54.09

Principal Diagnosis: 996.41, 996.42, 996.43, 996.47, 996.49, 996.78

Procedures (Primary or Secondary): 37.51, 37.52, 37.53, 37.54, 78.49, 78.69, 81.00, 81.01, 81.02, 81.03, 81.04, 81.05, 81.06, 81.07, 81.08, 81.30, 81.31, 81.32, 81.33, 81.34, 81.35, 81.36, 81.37, 81.38, 81.39, 81.62, 81.63, 81.64, 81.65, 81.66, 84.66, 84.67, 84.68, 84.69, 84.81, 84.83, 84.85

Diagnosis and Procedure Combination: Procedure (Secondary) 03.02 occurring with any of the following diagnoses (Primary or Secondary): 722.80, 722.81, 722.82, 722.83

Carotid Surgery

Inclusions

Principal Procedure: 00.61, 00.63, 38.12, 39.74

Exclusions

Diagnoses (Primary or Secondary): 430, 431, 432.1, 432.9, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9

Procedures (Primary or Secondary): 36.10, 36.11, 36.12, 36.13, 36.14, 36.15, 36.16, 36.17, 36.19, 37.51, 37.52, 37.53, 37.54, 37.62, 37.63, 38.08, 38.16, 38.18, 38.36, 39.24, 39.25, 39.29, 39.59, 39.90

Chronic Obstructive Pulmonary Disease (COPD)

Inclusions

Principal Diagnosis: 91.1, 491.20, 491.21, 491.22, 491.8, 491.9, 492.0, 492.8, 493.20, 493.21, 493.22, 494.0, 494.1, 496

Exclusions

Diagnoses (Primary or Secondary): 196.0, 196.1, 196.2, 196.3, 196.5, 196.6, 196.8, 196.9, 197.0, 197.1, 197.2, 197.3, 197.4, 197.5, 197.6, 197.7, 197.8, 198.0, 198.1, 198.2, 198.3, 198.4, 198.5, 198.6, 198.7, 198.81, 198.82, 198.89, 203.02, 203.12, 203.82, 204.02, 204.12, 204.22, 204.82, 204.92, 205.02, 205.12, 205.22, 205.82, 205.92, 206.02, 206.12, 206.22, 206.82, 206.92, 207.02, 207.12, 207.22, 207.82, 208.02, 208.12, 208.22, 208.82, 208.92, 480.3, 480.8, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9, V43.21, V46.11, V66.7
Procedures (Primary or Secondary): 33.51, 33.52, 37.51, 37.52, 37.53, 37.54, 37.62, 37.63

Coronary Artery Bypass Graft (CABG) Surgery

Inclusions

Principal Procedure: 36.10, 36.11, 36.12, 36.13, 36.14, 36.15, 36.16, 36.19

Exclusions

Diagnoses (Primary or Secondary): 414.06, 414.07, 441.00, 441.01, 441.02, 441.03, 441.2, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9
Procedures (Primary or Secondary): 35.10, 35.11, 35.12, 35.13, 35.14, 35.20, 35.21, 35.22, 35.23, 35.24, 35.25, 35.26, 35.27, 35.28, 35.33, 35.55, 35.96, 35.97, 36.31, 36.32, 36.33, 36.34, 37.51, 37.52, 37.53, 37.54, 37.62, 37.63, 38.12, 38.34, 38.44, 38.64, 39.71

Coronary Interventional Procedures

Inclusions

Principal Procedure: 00.66, 36.06, 36.07, 36.09

Principal Procedure (only when occurs with 00.66,36.06,36.07,36.09): 37.61

Exclusions

Diagnoses (Primary or Secondary): 414.06, 414.07, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9
Procedures (Primary or Secondary): 35.10, 35.11, 35.12, 35.13, 35.14, 35.20, 35.21, 35.22, 35.23, 35.24, 35.25, 35.26, 35.27, 35.28, 36.10, 36.11, 36.12, 36.13, 36.14, 36.15, 36.16, 36.19, 37.51, 37.52, 37.53, 37.54, 37.62, 37.63

Heart Attack

Inclusions

Principal Diagnosis: 410.01, 410.11, 410.21, 410.31, 410.41, 410.51, 410.61, 410.71, 410.81, 410.91

Exclusions

Diagnoses (Primary or Secondary): 196.0, 196.1, 196.2, 196.3, 196.5, 196.6, 196.8, 196.9, 197.0, 197.1, 197.2, 197.3, 197.4, 197.5, 197.6, 197.7, 197.8, 198.0, 198.1, 198.2, 198.3, 198.4, 198.5, 198.6, 198.7, 198.81, 198.82, 198.89, 203.02, 203.12, 203.82, 204.02, 204.12, 204.22, 204.82, 204.92, 205.02, 205.12, 205.22, 205.82, 205.92, 206.02, 206.12, 206.22, 206.82, 206.92, 207.02, 207.12, 207.22, 207.82, 208.02, 208.12, 208.22, 208.82, 208.92, 414.06, 414.07, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9, V43.21, V46.11, V66.7
Procedures (Primary or Secondary): 37.51, 37.52, 37.53, 37.54, 37.62, 37.63

Heart Failure

Inclusions

Principal Diagnosis: 398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.20, 428.21, 428.22, 428.23, 428.30, 428.31, 428.32, 428.33, 428.40, 428.41, 428.42, 428.43, 428.9

Exclusions

Diagnoses (Primary or Secondary): 196.0, 196.1, 196.2, 196.3, 196.5, 196.6, 196.8, 196.9, 197.0, 197.1, 197.2, 197.3, 197.4, 197.5, 197.6, 197.7, 197.8, 198.0, 198.1, 198.2, 198.3, 198.4, 198.5, 198.6, 198.7, 198.81, 198.82, 198.89, 203.02, 203.12, 203.82, 204.02, 204.12, 204.22, 204.82, 204.92, 205.02, 205.12, 205.22, 205.82, 205.92, 206.02, 206.12, 206.22, 206.82, 206.92, 207.02, 207.12, 207.22, 207.82, 208.02, 208.12, 208.22, 208.82, 208.92, 414.06, 414.07, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9, V43.21, V46.11, V66.7

Procedures (Primary or Secondary): 37.51, 37.52, 37.53, 37.54, 37.62, 37.63, 39.95, 55.69

Hip Fracture Treatment

Inclusions

Principal Diagnosis: 820.00, 820.02, 820.03, 820.09, 820.20, 820.21, 820.22, 820.8

Exclusions

Diagnoses (Primary or Secondary): 733.14, 733.15, 733.42, 733.82, 733.96, 800.61, 800.62, 800.63, 800.64, 800.65, 800.66, 800.69, 820.01, 820.10, 820.11, 820.12, 820.13, 820.19, 820.30, 820.31, 820.32, 820.9, 821.00, 821.01, 821.10, 821.11, 821.20, 821.21, 821.22, 821.23, 821.29, 821.30, 821.31, 821.32, 821.33, 821.39, 996.40, 996.41, 996.42, 996.43, 996.44, 996.45, 996.46, 996.47, 996.49, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, E810.0, E810.1, E810.2, E810.3, E810.4, E810.5, E810.6, E810.7, E810.8, E810.9, E811.0, E811.1, E811.2, E811.3, E811.4, E811.5, E811.6, E811.7, E811.8, E811.9, E812.0, E812.1, E812.2, E812.3, E812.4, E812.5, E812.6, E812.7, E812.8, E812.9, E813.0, E813.1, E813.2, E813.3, E813.4, E813.5, E813.6, E813.7, E813.8, E813.9, E814.0, E814.1, E814.2, E814.3, E814.4, E814.5, E814.6, E814.7, E814.8, E814.9, E815.0, E815.1, E815.2, E815.3, E815.4, E815.5, E815.6, E815.7, E815.8, E815.9, E816.0, E816.1, E816.2, E816.3, E816.4, E816.5, E816.6, E816.7, E816.8, E816.9, E817.0, E817.1, E817.2, E817.3, E817.4, E817.5, E817.6, E817.7, E817.8, E817.9, E818.0, E818.1, E818.2, E818.3, E818.4, E818.5, E818.6, E818.7, E818.8, E818.9, E819.0, E819.1, E819.2, E819.3, E819.4, E819.5, E819.6, E819.7, E819.8, E819.9, E820.0, E820.1, E820.2, E820.3, E820.4, E820.5, E820.6, E820.7, E820.8, E820.9, E821.0, E821.1, E821.2, E821.3, E821.4, E821.5, E821.6, E821.7, E821.8, E821.9, E822.0, E822.1, E822.2, E822.3, E822.4, E822.5, E822.6, E822.7, E822.8, E822.9, E823.0, E823.1, E823.2, E823.3, E823.4, E823.5, E823.6, E823.7, E823.8, E823.9, E824.0, E824.1, E824.2, E824.3, E824.4, E824.5, E824.6, E824.7, E824.8, E824.9, E825.0, E825.1, E825.2, E825.3, E825.4, E825.5, E825.6, E825.7, E825.8, E825.9, E885.0, E919.5, E929.0, E958.5, E988.5, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9, V66.7

Principal Diagnosis: 996.78

Procedures (Primary or Secondary): 37.51, 37.52, 37.53, 37.54, 78.65, 78.66, 78.67, 80.05, 80.06, 81.54, 81.55

Procedures (Secondary only): 81.51, 81.53

Hip Replacement

Inclusions

Principal Procedure: 00.85, 00.86, 00.87, 81.51

Exclusions

Diagnoses (Primary or Secondary): 733.14, 820.00, 820.02, 820.03, 820.09, 820.20, 820.21, 820.22, 820.8, 996.45, 996.46, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, E800.0, E800.1, E800.2, E800.3, E800.8, E800.9, E801.0, E801.1, E801.2, E801.3, E801.8, E801.9, E802.0, E802.1, E802.2, E802.3, E802.8, E802.9, E803.0, E803.1, E803.2, E803.3, E803.8, E803.9, E804.0, E804.1, E804.2, E804.3, E804.8, E804.9, E805.0, E805.1, E805.2, E805.3, E805.8, E805.9, E806.0, E806.1, E806.2, E806.3, E806.8, E806.9, E807.0, E807.1, E807.2, E807.3, E807.8, E807.9, E810.0, E810.1, E810.2, E810.3, E810.4, E810.5, E810.6, E810.7, E810.8, E810.9, E811.0, E811.1, E811.2, E811.3, E811.4, E811.5, E811.6, E811.7, E811.8, E811.9, E812.0, E812.1, E812.2, E812.3, E812.4, E812.5, E812.6, E812.7, E812.8, E812.9, E813.0, E813.1, E813.2, E813.3, E813.4, E813.5, E813.6, E813.7, E813.8, E813.9, E814.0, E814.1, E814.2, E814.3, E814.4, E814.5, E814.6, E814.7, E814.8, E814.9, E815.0, E815.1, E815.2, E815.3, E815.4, E815.5, E815.6, E815.7, E815.8, E815.9, E816.0, E816.1, E816.2, E816.3, E816.4, E816.5, E816.6, E816.7, E816.8, E816.9, E817.0, E817.1, E817.2, E817.3, E817.4, E817.5, E817.6, E817.7, E817.8, E817.9, E818.0, E818.1, E818.2, E818.3, E818.4, E818.5, E818.6, E818.7, E818.8, E818.9, E819.0, E819.1, E819.2, E819.3, E819.4, E819.5, E819.6, E819.7, E819.8, E819.9, E820.0, E820.1, E820.2, E820.3, E820.4, E820.5, E820.6, E820.7, E820.8, E820.9,

E821.0, E821.1, E821.2, E821.3, E821.4, E821.5, E821.6, E821.7, E821.8, E821.9, E822.0, E822.1, E822.2, E822.3, E822.4, E822.5, E822.6, E822.7, E822.8, E822.9, E823.0, E823.1, E823.2, E823.3, E823.4, E823.5, E823.6, E823.7, E823.8, E823.9, E824.0, E824.1, E824.2, E824.3, E824.4, E824.5, E824.6, E824.7, E824.8, E824.9, E825.0, E825.1, E825.2, E825.3, E825.4, E825.5, E825.6, E825.7, E825.8, E825.9, E826.0, E826.1, E826.2, E826.3, E826.4, E826.8, E826.9, E827.0, E827.2, E827.3, E827.4, E827.8, E827.9, E828.0, E828.2, E828.4, E828.8, E828.9, E829.0, E829.4, E829.8, E829.9, E830.0, E830.1, E830.2, E830.3, E830.4, E830.5, E830.6, E830.8, E830.9, E831.0, E831.1, E831.2, E831.3, E831.4, E831.5, E831.6, E831.8, E832.0, E832.1, E832.2, E832.3, E832.4, E832.5, E832.6, E832.8, E832.9, E833.0, E833.1, E833.2, E833.3, E833.4, E833.5, E833.6, E833.8, E833.9, E834.0, E834.1, E834.2, E834.3, E834.4, E834.5, E834.6, E834.8, E834.9, E835.0, E835.1, E835.2, E835.3, E835.4, E835.5, E835.6, E835.8, E835.9, E836.0, E836.1, E836.2, E836.3, E836.4, E836.5, E836.6, E836.8, E836.9, E837.0, E837.1, E837.2, E837.3, E837.4, E837.5, E837.6, E837.8, E837.9, E838.0, E838.1, E838.2, E838.3, E838.4, E838.5, E838.6, E838.8, E838.9, E840.0, E840.1, E840.2, E840.3, E840.4, E840.5, E840.6, E840.7, E840.8, E840.9, E841.0, E841.1, E841.2, E841.3, E841.4, E841.5, E841.6, E841.7, E841.8, E841.9, E842.6, E842.7, E842.8, E842.9, E843.0, E843.1, E843.2, E843.3, E843.4, E843.5, E843.6, E843.7, E843.8, E843.9, E844.0, E844.1, E844.2, E844.3, E844.4, E844.5, E844.6, E844.7, E844.8, E844.9, E845.0, E845.8, E845.9, E846, E847, E848, E849.0, E849.1, E849.2, E849.3, E849.4, E849.5, E849.6, E849.7, E849.8, E849.9, E880.0, E880.1, E880.9, E881.0, E881.1, E882, E883.0, E883.1, E883.2, E883.9, E884.0, E884.1, E884.2, E884.3, E884.4, E884.5, E884.6, E884.9, E885.0, E885.1, E885.2, E885.3, E885.4, E885.9, E886.0, E886.9, E887, E888.0, E888.1, E888.8, E888.9, E890.0, E890.8, E891.8, E916, E917.0, E917.1, E917.2, E917.3, E917.4, E917.5, E917.6, E917.7, E917.8, E917.9, E918, E919.0, E919.1, E919.2, E919.3, E919.4, E919.5, E919.6, E919.7, E919.8, E919.9, E920.0, E920.1, E920.2, E920.3, E920.4, E920.5, E920.8, E920.9, E921.0, E921.1, E921.8, E921.9, E922.0, E922.1, E922.2, E922.3, E922.4, E922.5, E922.8, E922.9, E923.0, E923.1, E923.2, E923.8, E923.9, E928.8, E928.9, E929.0, E929.1, E929.2, E929.3, E929.4, E929.5, E929.8, E929.9, E955.0, E955.1, E955.2, E955.3, E955.4, E955.5, E955.6, E955.7, E955.9, E956, E957.0, E957.1, E957.2, E957.9, E958.0, E958.5, E958.6, E960.0, E965.0, E965.1, E965.2, E965.3, E965.4, E965.5, E965.6, E965.7, E965.8, E965.9, E966, E968.1, E968.2, E968.5, E968.6, E969, E970, E973, E974, E977, E985.0, E985.1, E985.2, E985.3, E985.4, E985.5, E985.6, E985.7, E986, E987.0, E987.1, E987.2, E987.9, E988.0, E988.5, E989, V15.5, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9, V58.43, V58.49

Principal Diagnosis: 996.41, 996.43

Procedures (Primary or Secondary): 00.70, 00.71, 00.72, 00.73, 00.80, 00.81, 00.82, 00.83, 00.84, 37.51, 37.52, 37.53, 37.54, 78.65, 78.67, 80.05, 80.06, 81.53, 81.54, 81.55

Peripheral Vascular Bypass

Inclusions

Principal Diagnosis: 250.60, 250.61, 250.62, 250.63, 250.70, 250.71, 250.72, 250.73, 250.80, 250.81, 250.82, 250.83, 440.20, 440.21, 440.22, 440.23, 440.24, 440.29, 440.30, 440.32, 442.2, 442.3, 443.89, 443.9, 444.22, 444.81, 445.02, 447.1, 681.10, 682.6, 682.7, 686.8, 707.10, 707.12, 707.13, 707.14, 707.15, 707.19, 707.8, 730.06, 730.07, 730.16, 730.17, 730.18, 730.26, 730.27, 785.4, 902.53, 904.41

Principal Procedure: 39.29

Exclusions

Diagnoses (Primary or Secondary): 440.31, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9

Principal Diagnosis: 445.01, 996.74

Procedures (Primary or Secondary): 37.51, 37.52, 37.53, 37.54, 37.62, 37.63, 39.25, 39.49

Pneumonia

Inclusions

Principal Diagnosis: 481, 482.0, 482.1, 482.2, 482.30, 482.31, 482.32, 482.39, 482.40, 482.41, 482.42, 482.49, 482.81, 482.82, 482.83, 482.84, 482.89, 482.9, 483.0, 483.1, 483.8, 485, 486, 487.0

Exclusions

Diagnoses (Primary or Secondary): 196.0, 196.1, 196.2, 196.3, 196.5, 196.6, 196.8, 196.9, 197.0, 197.1, 197.2, 197.3, 197.4, 197.5, 197.6, 197.7, 197.8, 198.0, 198.1, 198.2, 198.3, 198.4, 198.5, 198.6, 198.7, 198.81, 198.82, 198.89, 203.02, 203.12, 203.82, 204.02, 204.12, 204.22, 204.82, 204.92, 205.02, 205.12, 205.22, 205.82, 205.92, 206.02, 206.12, 206.22, 206.82, 206.92, 207.02, 207.12, 207.22, 207.82, 208.02, 208.12, 208.22, 208.82, 208.92, 480.3, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9, V43.21, V46.11, V66.7

Procedures (Primary or Secondary): 37.51, 37.52, 37.53, 37.54, 37.62, 37.63

Stroke

Inclusions

Principal Diagnosis: 430, 431, 432.9, 433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.01, 434.11, 434.91

Exclusions

Diagnoses (Primary or Secondary): 196.0, 196.1, 196.2, 196.3, 196.5, 196.6, 196.8, 196.9, 197.0, 197.1, 197.2, 197.3, 197.4, 197.5, 197.6, 197.7, 197.8, 198.0, 198.1, 198.2, 198.3, 198.4, 198.5, 198.6, 198.7, 198.81, 198.82, 198.89, 203.02, 203.12, 203.82, 204.02, 204.12, 204.22, 204.82, 204.92, 205.02, 205.12, 205.22, 205.82, 205.92, 206.02, 206.12, 206.22, 206.82, 206.92, 207.02, 207.12, 207.22, 207.82, 208.02, 208.12, 208.22, 208.82, 208.92, 432.1, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9, V43.21, V46.11, V66.7

Procedures (Primary or Secondary): 37.51, 37.52, 37.53, 37.54, 37.62, 37.63

Total Knee Replacement

Inclusions

Principal Procedure: 81.54

Exclusions

Diagnoses (Primary or Secondary): 996.45, 996.46, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9

Principal Diagnosis: 996.43

Procedures (Primary or Secondary): 00.74, 00.75, 00.76, 00.80, 00.81, 00.82, 00.83, 00.84, 37.51, 37.52, 37.53, 37.54, 78.65, 78.67, 80.05, 80.06, 81.51, 81.52, 81.53, 81.55

Valve Repair/Replacement Surgery

Inclusions

Procedures (Primary or Secondary): 35.10, 35.11, 35.12, 35.13, 35.14, 35.20, 35.21, 35.22, 35.23, 35.24, 35.25, 35.26, 35.27, 35.28, 35.97

Exclusions

Diagnoses (Primary or Secondary): 414.06, 414.07, 441.00, 441.01, 441.02, 441.03, 441.2, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9

Procedures (Primary or Secondary): 35.55, 35.96, 36.31, 36.32, 36.33, 36.34, 37.51, 37.52, 37.53, 37.54, 37.62, 37.63, 38.12, 38.34, 38.44, 38.64, 39.71

Appendix B. Women's Health Complications

Back and Neck Surgery (except Spinal Fusion) – Independent Complications

Independent complications are conditions that are clearly hospital-acquired or by the coding definition are defined as postoperative. These conditions were not counted as complications if the POA indicator was "Yes" or "Clinically Undetermined."

038.0	STREPTOCOCCAL SEPTICEMIA	482.9	BACTERIAL PNEUMONIA NOS
038.10	STAPH SEPTICEMIA NOS	483.0	M. PNEUMONIAE PNEUMONIA
038.11	MSSA SEPTICEMIA	483.1	CHLAMYDIAL PNEUMONIA
038.12	MRSA SEPTICEMIA	483.8	PNEUMONIA D/T ORG NEC
038.19	STAPH SEPTICEMIA NEC	484.1	PNEUMONIA IN CMV DISEASE
038.2	PNEUMOCOCCAL SEPTICEMIA	484.3	PNEUMONIA IN WHOOP COUGH
038.3	ANAEROBIC SEPTICEMIA	484.6	PNEUM IN ASPERGILLOSIS
038.40	GRAM-NEG SEPTICEMIA NOS	484.7	PNEUM IN SYST MYCOSESNEC
038.41	H. INFLUENZAE SEPTICEMIA	486	PNEUMONIA ORGANISM NOS
038.42	E. COLI SEPTICEMIA	507.0	FOOD/VOMIT PNEUMONITIS
038.43	PSEUDOMONAS SEPTICEMIA	512.1	IATROGENIC PNEUMOTHORAX
038.44	SERRATIA SEPTICEMIA	514	PULMONARY CONGESTION
038.49	GRAM-NEG SEPTICEMIA NEC	518.5	PI FOLLOW TRAUMA & SURG
038.8	SEPTICEMIA NEC	518.51	AC RESP FAIL TRAUM/SURG
038.9	SEPTICEMIA NOS	518.52	PI NEC FOLLOW TRAUM/SURG
286.6	DEFIBRATION SYNDROME	518.53	A&C RESP FAIL TRAUM/SURG
292.12	DRG IND PSYCH W HALLUCIN	518.7	TRALI
292.81	DRUG INDUCED DELIRIUM	518.81	AC RESPIRATORY FAILURE
293.0	DELIRIUM D/T CCE	584.5	AC KF W TUBULAR NEPHR
349.31	ACC LAC DURA DURING PX	584.8	ACUTE KIDNEY FAILURE NEC
410.01	ANTEROLAT AMI-INITIAL	584.9	ACUTE KIDNEY FAILURE NOS
410.11	ANT AMI NEC-INITIAL	707.0	PRESSURE ULCER
410.21	INFEROLAT AMI-INITIAL	707.00	PRESSURE ULCER-SITE NOS
410.31	INFEROPOST AMI-INITIAL	707.01	PRESSURE ULCER-ELBOW
410.41	INF AMI NEC-INITIAL	707.02	PRESSURE ULCER-UP BACK
410.51	LAT AMI NEC-INITIAL	707.03	PRESSURE ULCER-LOW BACK
410.61	POSTERIOR AMI-INITIAL	707.04	PRESSURE ULCER-HIP
410.71	SUBEND INFARCT-INITIAL	707.05	PRESSURE ULCER-BUTTOCK
410.81	AMI NEC-INITIAL EPISODE	707.06	PRESSURE ULCER-ANKLE
410.91	AMI NOS-INITIAL EPISODE	707.07	PRESSURE ULCER-HEEL
415.11	IATRO PULM EMBOL/INFARCT	707.09	PRESSURE ULCER-SITE NEC
415.12	SEPTIC PULMON EMBOLISM	780.97	ALTERED MENTAL STATUS
415.19	PULMON EMBOL/INFARCT NEC	785.50	SHOCK NOS
423.3	CARDIAC TAMPONADE	785.51	CARDIOGENIC SHOCK
427.5	CARDIAC ARREST	785.52	SEPTIC SHOCK
449	SEPTIC ARTERIAL EMBOLISM	799.1	RESPIRATORY ARREST
453.40	ACUTE DVT LEG NOS	867.0	BLAD/URETHRA INJURY-CLSD
453.41	ACUTE DVT PROXIMAL LEG	995.91	SEPSIS
453.42	ACUTE DVT DISTAL LEG	995.92	SEVERE SEPSIS
480.0	ADENOVIRAL PNEUMONIA	997.02	IATROGEN CV INFARCT/HEM
480.1	RSV PNEUMONIA	997.09	NERV SYST SURG COMP NEC
480.2	PARAINFLUENZA VIR PNEUM	997.1	SURG COMP-HEART
480.3	SARS PNEUMONIA	997.3	SURG COMP-RESP NEC
480.8	VIRAL PNEUMONIA NEC	997.31	VENT ASSOC PNEUMONIA
481	PNEUMOCOCCAL PNEUMONIA	997.32	POSTPX ASP PNEUMONIA
482.0	K. PNEUMONIAE PNEUMONIA	997.39	OTH SURG COMP-RESP
482.1	PSEUDOMONAL PNEUMONIA	997.4	SURG COMP-DIGESTIVE
482.2	H. INFLUENZAE PNEUMONIA	997.5	SURG COMP-URINARY NEC

482.30	STREP PNEUMONIA NOS	998.0	POSTOPERATIVE SHOCK
482.31	GROUP A STREP PNEUMONIA	998.00	POSTOP SHOCK NOS
482.32	GROUP B STREP PNEUMONIA	998.01	POSTOP CARDIOGENIC SHOCK
482.39	STREP PNEUMONIA NEC	998.02	POSTOP SEPTIC SHOCK
482.40	STAPH PNEUMONIA NOS	998.09	POSTOP SHOCK NEC
482.41	MSSA PNEUMONIA	998.11	HEMORRHAGE COMP PX
482.42	MRSA PNEUMONIA	998.30	DISRUPTION WOUND NOS
482.49	STAPH PNEUMONIA NEC	998.31	DISRUPT INTERNAL OP WND
482.81	PNEUMONIA D/T ANAEROBES	998.32	DISRUPT EXTERNAL OP WND
482.82	E. COLI PNEUMONIA	998.59	POSTOP INFECTION NEC
482.83	GRAM-NEG PNEUMONIA NEC	999.31	INFECT NEC & NOS D/T CVC
482.84	LEGIONNAIRES' DISEASE	999.32	BLOODSTREAM INF D/T CVC
482.89	BACTERIAL PNEUMONIA NEC	999.34	AC INF POST TRANSFUSION
		999.39	INFECT COMP MED CARE NEC

Back and Neck Surgery (except Spinal Fusion) – Dependent Complications

Dependent complications are conditions that must either have the POA indicator set to "No," or if the POA indicator is set to "Unknown" or is missing, there must also be the listed 900 postoperative complication code present in the patient record.

Must occur with 997.02 IATROGENIC CEREBROVASCULAR INFARCTION OR HEMORRHAGE

434.11	CEREBRAL EMBOL W INFARCT	434.91	CEREB ART OCCL W INFARCT
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Must occur with 997.1 CARDIAC COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

427.0	PSVT	428.23	AC & CHR SYSTOLIC HF
427.1	PVT	428.31	ACUTE DIASTOLIC HF
427.31	ATRIAL FIBRILLATION	428.33	AC & CHR DIASTOLIC HF
427.32	ATRIAL FLUTTER	428.41	AC SYS & DIASTOLIC HF
428.0	CHF NOS	428.43	ACCHR SYS & DIASTOLIC HF
428.1	LEFT HEART FAILURE	428.9	HEART FAILURE NOS
428.21	ACUTE SYSTOLIC HF		

Must occur with 997.3 RESPIRATORY COMPLICATIONS or 997.39 OTHER RESPIRATORY COMPLICATIONS

485	BRONCHOPNEUMONIA ORG NOS	518.4	ACUTE LUNG EDEMA NOS
511.9	PLEURAL EFFUSION NOS	518.84	AC & CHR RESP FAILURE

Must occur with 997.4 DIGESTIVE SYSTEM COMPLICATION

560.1	PARALYTIC ILEUS
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Must occur with 997.5 URINARY COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

593.9	RENAL/URETER DISORD NOS	788.20	RETENTION OF URINE NOS
599.0	URINARY TRACT INF NOS	788.29	RETENTION OF URINE NEC

Must occur with 998.59 OTHER POSTOPERATIVE INFECTION

008.45	C. DIFFICILE ENTERITIS
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Must not occur with V15.88 PERSONAL HISTORY OF FALL, PRESENTING HAZARDS TO HEALTH or V42.4 BONE REPLACED BY TRANSPLANT or V43.64 HIP JOINT REPLACED BY OTHER MEANS or V43.65 KNEE JOINT REPLACED BY OTHER MEANS or V45.4 ARTHRODESIS STATUS or V54.01 ENCOUNTER FOR REMOVAL OF INTERNAL FIXATION DEVICE or V54.02 ENCOUNTER FOR LENGTHENING/ADJUSTMENT OF GROWTH ROD or V54.09 OTHER AFTERCARE INVOLVING INTERNAL FIXATION DEVICE

996.40	MECH COMP INT ORTH NOS	996.78	COMP NEC ORTH DEV NEC
996.49	MECH COMP INT ORTH NEC		

Back and Neck Surgery (Spinal Fusion) – Independent Complications

Independent complications are conditions that are clearly hospital-acquired or by the coding definition are defined as postoperative. These conditions were not counted as complications if the POA indicator was "Yes" or "Clinically Undetermined."

038.0	STREPTOCOCCAL SEPTICEMIA	483.0	M. PNEUMONIAE PNEUMONIA
038.10	STAPH SEPTICEMIA NOS	483.1	CHLAMYDIAL PNEUMONIA
038.11	MSSA SEPTICEMIA	483.8	PNEUMONIA D/T ORG NEC
038.12	MRSA SEPTICEMIA	484.1	PNEUMONIA IN CMV DISEASE
038.19	STAPH SEPTICEMIA NEC	484.3	PNEUMONIA IN WHOOP COUGH
038.2	PNEUMOCOCCAL SEPTICEMIA	484.6	PNEUM IN ASPERGILLOSIS
038.3	ANAEROBIC SEPTICEMIA	484.7	PNEUM IN SYST MYCOSESNEC
038.40	GRAM-NEG SEPTICEMIA NOS	486	PNEUMONIA ORGANISM NOS
038.41	H. INFLUENZAE SEPTICEMIA	507.0	FOOD/VOMIT PNEUMONITIS
038.42	E. COLI SEPTICEMIA	512.1	IATROGENIC PNEUMOTHORAX
038.43	PSEUDOMONAS SEPTICEMIA	514	PULMONARY CONGESTION
038.44	SERRATIA SEPTICEMIA	518.5	PI FOLLOW TRAUMA & SURG
038.49	GRAM-NEG SEPTICEMIA NEC	518.51	AC RESP FAIL TRAUM/SURG
038.8	SEPTICEMIA NEC	518.52	PI NEC FOLLOW TRAUM/SURG
038.9	SEPTICEMIA NOS	518.53	A&C RESP FAIL TRAUM/SURG
286.6	DEFIBRATION SYNDROME	518.7	TRALI
292.12	DRG IND PSYCH W HALLUCIN	518.81	AC RESPIRATORY FAILURE
292.81	DRUG INDUCED DELIRIUM	584.5	AC KF W TUBULAR NEPHR
293.0	DELIRIUM D/T CCE	584.8	ACUTE KIDNEY FAILURE NEC
349.31	ACC LAC DURA DURING PX	584.9	ACUTE KIDNEY FAILURE NOS
410.01	ANTEROLAT AMI-INITIAL	707.0	PRESSURE ULCER
410.11	ANT AMI NEC-INITIAL	707.00	PRESSURE ULCER-SITE NOS
410.21	INFEROLAT AMI-INITIAL	707.01	PRESSURE ULCER-ELBOW
410.31	INFEROPOST AMI-INITIAL	707.02	PRESSURE ULCER-UP BACK
410.41	INF AMI NEC-INITIAL	707.03	PRESSURE ULCER-LOW BACK
410.51	LAT AMI NEC-INITIAL	707.04	PRESSURE ULCER-HIP
410.61	POSTERIOR AMI-INITIAL	707.05	PRESSURE ULCER-BUTTOCK
410.71	SUBEND INFARCT-INITIAL	707.06	PRESSURE ULCER-ANKLE
410.81	AMI NEC-INITIAL EPISODE	707.07	PRESSURE ULCER-HEEL
410.91	AMI NOS-INITIAL EPISODE	707.09	PRESSURE ULCER-SITE NEC
415.11	IATRO PULM EMBOL/INFARCT	780.97	ALTERED MENTAL STATUS
415.12	SEPTIC PULMON EMBOLISM	785.50	SHOCK NOS
415.19	PULMON EMBOL/INFARCT NEC	785.51	CARDIOGENIC SHOCK
423.3	CARDIAC TAMPONADE	785.52	SEPTIC SHOCK
427.5	CARDIAC ARREST	799.1	RESPIRATORY ARREST
449	SEPTIC ARTERIAL EMBOLISM	867.0	BLAD/URETHRA INJURY-CLSD
453.40	ACUTE DVT LEG NOS	995.91	SEPSIS
453.41	ACUTE DVT PROXIMAL LEG	995.92	SEVERE SEPSIS
453.42	ACUTE DVT DISTAL LEG	997.02	IATROGEN CV INFARCT/HEM
480.0	ADENOVIRAL PNEUMONIA	997.09	NERV SYST SURG COMP NEC
480.1	RSV PNEUMONIA	997.1	SURG COMP-HEART
480.2	PARAINFLUENZA VIR PNEUM	997.3	SURG COMP-RESP NEC
480.3	SARS PNEUMONIA	997.31	VENT ASSOC PNEUMONIA
480.8	VIRAL PNEUMONIA NEC	997.32	POSTPX ASP PNEUMONIA
481	PNEUMOCOCCAL PNEUMONIA	997.39	OTH SURG COMP-RESP
482.0	K. PNEUMONIAE PNEUMONIA	997.4	SURG COMP-DIGESTIVE
482.1	PSEUDOMONAL PNEUMONIA	997.5	SURG COMP-URINARY NEC
482.2	H. INFLUENZAE PNEUMONIA	998.0	POSTOPERATIVE SHOCK
482.30	STREP PNEUMONIA NOS	998.00	POSTOP SHOCK NOS
482.31	GROUP A STREP PNEUMONIA	998.01	POSTOP CARDIOGENIC SHOCK
482.32	GROUP B STREP PNEUMONIA	998.02	POSTOP SEPTIC SHOCK
482.39	STREP PNEUMONIA NEC	998.09	POSTOP SHOCK NEC

482.40	STAPH PNEUMONIA NOS	998.11	HEMORRHAGE COMP PX
482.41	MSSA PNEUMONIA	998.30	DISRUPTION WOUND NOS
482.42	MRSA PNEUMONIA	998.31	DISRUPT INTERNAL OP WND
482.49	STAPH PNEUMONIA NEC	998.32	DISRUPT EXTERNAL OP WND
482.81	PNEUMONIA D/T ANAEROBES	998.59	POSTOP INFECTION NEC
482.82	E. COLI PNEUMONIA	999.31	INFECT NEC & NOS D/T CVC
482.83	GRAM-NEG PNEUMONIA NEC	999.32	BLOODSTREAM INF D/T CVC
482.84	LEGIONNAIRES' DISEASE	999.34	AC INF POST TRANSFUSION
482.89	BACTERIAL PNEUMONIA NEC	999.39	INFECT COMP MED CARE NEC
482.9	BACTERIAL PNEUMONIA NOS		

Back and Neck Surgery (Spinal Fusion) – Dependent Complications

Dependent complications are conditions that must either have the POA indicator set to "No," or if the POA indicator is set to "Unknown" or is missing, there must also be the listed 900 postoperative complication code present in the patient record.

Must occur with 997.02 IATROGENIC CEREBROVASCULAR INFARCTION OR HEMORRHAGE

434.11	CEREBRAL EMBOL W INFARCT	434.91	CEREB ART OCCL W INFARCT
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Must occur with 997.1 CARDIAC COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

427.0	PSVT	428.23	AC & CHR SYSTOLIC HF
427.1	PVT	428.31	ACUTE DIASTOLIC HF
427.31	ATRIAL FIBRILLATION	428.33	AC & CHR DIASTOLIC HF
427.32	ATRIAL FLUTTER	428.41	AC SYS & DIASTOLIC HF
428.0	CHF NOS	428.43	ACCHR SYS & DIASTOLIC HF
428.1	LEFT HEART FAILURE	428.9	HEART FAILURE NOS
428.21	ACUTE SYSTOLIC HF		

Must occur with 997.3 RESPIRATORY COMPLICATIONS 997.39 OTHER RESPIRATORY COMPLICATIONS

485	BRONCHOPNEUMONIA ORG NOS	518.4	ACUTE LUNG EDEMA NOS
511.9	PLEURAL EFFUSION NOS	518.84	AC & CHR RESP FAILURE

Must occur with 997.4 DIGESTIVE SYSTEM COMPLICATION

560.1	PARALYTIC ILEUS
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Must occur with 997.5 URINARY COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

593.9	RENAL/URETER DISORD NOS	788.20	RETENTION OF URINE NOS
599.0	URINARY TRACT INF NOS	788.29	RETENTION OF URINE NEC

Must occur with 998.59 OTHER POSTOPERATIVE INFECTION

008.45	C. DIFFICILE ENTERITIS
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Must not occur with V15.88 PERSONAL HISTORY OF FALL, PRESENTING HAZARDS TO HEALTH or V42.4 BONE REPLACED BY TRANSPLANT or V43.64 HIP JOINT REPLACED BY OTHER MEANS or V43.65 KNEE JOINT REPLACED BY OTHER MEANS or V45.4 ARTHRODESIS STATUS or V54.01 ENCOUNTER FOR REMOVAL OF INTERNAL FIXATION DEVICE or V54.02 ENCOUNTER FOR LENGTHENING/ADJUSTMENT OF GROWTH ROD or V54.09 OTHER AFTERCARE INVOLVING INTERNAL FIXATION DEVICE

996.40	MECH COMP INT ORTH NOS	996.78	COMP NEC ORTH DEV NEC
996.49	MECH COMP INT ORTH NEC		

Carotid Surgery – Independent Complications

Independent complications are conditions that are clearly hospital-acquired or by the coding definition are defined as postoperative. These conditions were not counted as complications if the POA indicator was "Yes" or "Clinically Undetermined."

008.45	C. DIFFICILE ENTERITIS	514	PULMONARY CONGESTION
041.04	GROUP D STREP INFECTION	518.0	PULMONARY COLLAPSE
041.11	MSSA	518.4	ACUTE LUNG EDEMA NOS
041.7	PSEUDOMONAS INFECT NOS	518.5	PI FOLLOW TRAUMA & SURG
286.6	DEFIBRATION SYNDROME	518.51	AC RESP FAIL TRAUM/SURG
292.81	DRUG INDUCED DELIRIUM	518.52	PI NEC FOLLOW TRAUM/SURG
293.0	DELIRIUM D/T CCE	518.53	A&C RESP FAIL TRAUM/SURG
348.1	ANOXIC BRAIN DAMAGE	518.7	TRALI
410.01	ANTEROLAT AMI-INITIAL	518.81	AC RESPIRATORY FAILURE
410.11	ANT AMI NEC-INITIAL	518.84	AC & CHR RESP FAILURE
410.21	INFEROLAT AMI-INITIAL	780.01	COMA
410.51	LAT AMI NEC-INITIAL	780.97	ALTERED MENTAL STATUS
410.61	POSTERIOR AMI-INITIAL	785.50	SHOCK NOS
410.71	SUBEND INFARCT-INITIAL	785.51	CARDIOGENIC SHOCK
410.81	AMI NEC-INITIAL EPISODE	785.52	SEPTIC SHOCK
410.91	AMI NOS-INITIAL EPISODE	788.29	RETENTION OF URINE NEC
415.12	SEPTIC PULMON EMBOLISM	867.0	BLAD/URETHRA INJURY-CLSD
415.19	PULMON EMBOL/INFARCT NEC	951.7	INJURY HYPOGLOSSAL NERVE
423.3	CARDIAC TAMPONADE	957.1	INJURY TO NERVE NEC
427.41	VENTRICULAR FIBRILLATION	995.91	SEPSIS
427.5	CARDIAC ARREST	995.92	SEVERE SEPSIS
434.01	CEREB THROMB W INFARCT	996.01	MECH COMP CARD PACEMAKER
449	SEPTIC ARTERIAL EMBOLISM	996.1	MECH COMP OTH VASC DEV
453.40	ACUTE DVT LEG NOS	996.74	COMP NEC D/T VASC DEVNEC
453.41	ACUTE DVT PROXIMAL LEG	997.00	NERV SYST SURG COMP NOS
453.42	ACUTE DVT DISTAL LEG	997.01	CNS SURG COMP
481	PNEUMOCOCCAL PNEUMONIA	997.02	IATROGEN CV INFARCT/HEM
482.0	K. PNEUMONIAE PNEUMONIA	997.09	NERV SYST SURG COMP NEC
482.1	PSEUDOMONAL PNEUMONIA	997.1	SURG COMP-HEART
482.2	H. INFLUENZAE PNEUMONIA	997.2	SURG COMP-PERIPH VASC
482.30	STREP PNEUMONIA NOS	997.3	SURG COMP-RESP NEC
482.31	GROUP A STREP PNEUMONIA	997.31	VENT ASSOC PNEUMONIA
482.32	GROUP B STREP PNEUMONIA	997.32	POSTPX ASP PNEUMONIA
482.39	STREP PNEUMONIA NEC	997.39	OTH SURG COMP-RESP
482.40	STAPH PNEUMONIA NOS	997.4	SURG COMP-DIGESTIVE
482.41	MSSA PNEUMONIA	997.5	SURG COMP-URINARY NEC
482.42	MRSA PNEUMONIA	997.91	SURG COMP-HYPERTENSION
482.49	STAPH PNEUMONIA NEC	998.0	POSTOPERATIVE SHOCK
482.81	PNEUMONIA D/T ANAEROBES	998.00	POSTOP SHOCK NOS
482.82	E. COLI PNEUMONIA	998.01	POSTOP CARDIOGENIC SHOCK
482.83	GRAM-NEG PNEUMONIA NEC	998.02	POSTOP SEPTIC SHOCK
482.84	LEGIONNAIRES' DISEASE	998.09	POSTOP SHOCK NEC
482.89	BACTERIAL PNEUMONIA NEC	998.11	HEMORRHAGE COMP PX
482.9	BACTERIAL PNEUMONIA NOS	998.2	ACCIDENTAL OP LACERATION
483.0	M. PNEUMONIAE PNEUMONIA	998.30	DISRUPTION WOUND NOS
483.1	CHLAMYDIAL PNEUMONIA	998.31	DISRUPT INTERNAL OP WND
483.8	PNEUMONIA D/T ORG NEC	998.32	DISRUPT EXTERNAL OP WND
484.3	PNEUMONIA IN WHOOP COUGH	998.59	POSTOP INFECTION NEC
484.6	PNEUM IN ASPERGILLOSIS	999.31	INFECT NEC & NOS D/T CVC
484.7	PNEUM IN SYST MYCOSESNEC	999.32	BLOODSTREAM INF D/T CVC
486	PNEUMONIA ORGANISM NOS	999.34	AC INF POST TRANSFUSION

507.0	FOOD/VOMIT PNEUMONITIS	999.39	INFECT COMP MED CARE NEC
512.1	IATROGENIC PNEUMOTHORAX		

Carotid Surgery – Dependent Complications

Dependent complications are conditions that must either have the POA indicator set to "No," or if the POA indicator is set to "Unknown" or is missing, there must also be the listed 900 postoperative complication code present in the patient record.

Must occur with 997.02 IATROGENIC CEREBROVASCULAR INFARCTION OR HEMORRHAGE

434.11	CEREBRAL EMBOL W INFARCT	434.91	CEREB ART OCCL W INFARCT
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Must occur with 997.1 CARDIAC COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

427.0	PSVT	428.21	ACUTE SYSTOLIC HF
427.1	PVT	428.23	AC & CHR SYSTOLIC HF
427.31	ATRIAL FIBRILLATION	428.31	ACUTE DIASTOLIC HF
427.32	ATRIAL FLUTTER	428.33	AC & CHR DIASTOLIC HF
427.89	OTH CARDIAC DYSRHYTHMIAS	428.41	AC SYS & DIASTOLIC HF
428.0	CHF NOS	428.43	ACCHR SYS & DIASTOLIC HF
428.1	LEFT HEART FAILURE	428.9	HEART FAILURE NOS

Must occur with 997.3 RESPIRATORY COMPLICATIONS or 997.39 OTHER RESPIRATORY COMPLICATIONS

485	BRONCHOPNEUMONIA ORG NOS
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Must occur with 997.4 DIGESTIVE SYSTEM COMPLICATION

560.1	PARALYTIC ILEUS
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Must occur with 997.5 URINARY COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

584.5	AC RF W TUBULAR NEPHR	593.9	RENAL/URETER DISORD NOS
584.8	ACUTE KIDNEY FAILURE NEC	599.0	URINARY TRACT INF NOS
584.9	ACUTE KIDNEY FAILURE NOS	788.20	RETENTION OF URINE NOS

Must occur with 998.59 OTHER POSTOPERATIVE INFECTION

038.0	STREPTOCOCCAL SEPTICEMIA	038.41	H. INFLUENZAE SEPTICEMIA
038.10	STAPH SEPTICEMIA NOS	038.42	E. COLI SEPTICEMIA
038.11	MSSA SEPTICEMIA	038.43	PSEUDOMONAS SEPTICEMIA
038.12	MRSA SEPTICEMIA	038.44	SERRATIA SEPTICEMIA
038.19	STAPH SEPTICEMIA NEC	038.49	GRAM-NEG SEPTICEMIA NEC
038.2	PNEUMOCOCCAL SEPTICEMIA	038.8	SEPTICEMIA NEC
038.3	ANAEROBIC SEPTICEMIA	038.9	SEPTICEMIA NOS
038.40	GRAM-NEG SEPTICEMIA NOS		

Hip Fracture Treatment – Independent Complications

Independent complications are conditions that are clearly hospital-acquired or by the coding definition are defined as postoperative. These conditions were not counted as complications if the POA indicator was "Yes" or "Clinically Undetermined."

286.6	DEFIBRATION SYNDROME	707.09	PRESSURE ULCER-SITE NEC
292.12	DRG IND PSYCH W HALLUCIN	780.97	ALTERED MENTAL STATUS
292.81	DRUG INDUCED DELIRIUM	785.50	SHOCK NOS
293.0	DELIRIUM D/T CCE	785.51	CARDIOGENIC SHOCK
415.11	IATRO PULM EMBOL/INFARCT	867.0	BLAD/URETHRA INJURY-CLSD
415.12	SEPTIC PULMON EMBOLISM	997.02	IATROGEN CV INFARCT/HEM
415.19	PULMON EMBOL/INFARCT NEC	997.09	NERV SYST SURG COMP NEC
423.3	CARDIAC TAMPONADE	997.1	SURG COMP-HEART
427.5	CARDIAC ARREST	997.3	SURG COMP-RESP NEC
449	SEPTIC ARTERIAL EMBOLISM	997.31	VENT ASSOC PNEUMONIA
453.40	ACUTE DVT LEG NOS	997.32	POSTPX ASP PNEUMONIA
453.41	ACUTE DVT PROXIMAL LEG	997.39	OTH SURG COMP-RESP
453.42	ACUTE DVT DISTAL LEG	997.4	SURG COMP-DIGESTIVE
512.1	IATROGENIC PNEUMOTHORAX	997.5	SURG COMP-URINARY NEC
514	PULMONARY CONGESTION	998.0	POSTOPERATIVE SHOCK
518.5	PI FOLLOW TRAUMA & SURG	998.00	POSTOP SHOCK NOS
518.51	AC RESP FAIL TRAUM/SURG	998.01	POSTOP CARDIOGENIC SHOCK
518.52	PI NEC FOLLOW TRAUM/SURG	998.02	POSTOP SEPTIC SHOCK
518.53	A&C RESP FAIL TRAUM/SURG	998.09	POSTOP SHOCK NEC
518.7	TRALI	998.11	HEMORRHAGE COMP PX
707.0	PRESSURE ULCER	998.2	ACCIDENTAL OP LACERATION
707.00	PRESSURE ULCER-SITE NOS	998.30	DISRUPTION WOUND NOS
707.01	PRESSURE ULCER-ELBOW	998.31	DISRUPT INTERNAL OP WND
707.02	PRESSURE ULCER-UP BACK	998.32	DISRUPT EXTERNAL OP WND
707.03	PRESSURE ULCER-LOW BACK	998.59	POSTOP INFECTION NEC
707.04	PRESSURE ULCER-HIP	999.31	INFECT NEC & NOS D/T CVC
707.05	PRESSURE ULCER-BUTTOCK	999.32	BLOODSTREAM INF D/T CVC
707.06	PRESSURE ULCER-ANKLE	999.34	AC INF POST TRANSFUSION
707.07	PRESSURE ULCER-HEEL	999.39	INFECT COMP MED CARE NEC

Hip Fracture Treatment – Dependent Complications

Dependent complications are conditions that must either have the POA indicator set to "No," or if the POA indicator is set to "Unknown" or is missing, there must also be the listed 900 postoperative complication code present in the patient record.

Must occur with 997.02 IATROGENIC CEREBROVASCULAR INFARCTION OR HEMORRHAGE

434.11	CEREBRAL EMBOL W INFARCT	434.91	CEREB ART OCCL W INFARCT
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Must occur with 997.1 CARDIAC COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

410.01	ANTEROLAT AMI-INITIAL	427.31	ATRIAL FIBRILLATION
410.11	ANT AMI NEC-INITIAL	427.32	ATRIAL FLUTTER
410.21	INFEROLAT AMI-INITIAL	428.0	CHF NOS
410.31	INFEROPOST AMI-INITIAL	428.1	LEFT HEART FAILURE
410.41	INF AMI NEC-INITIAL	428.21	ACUTE SYSTOLIC HF
410.51	LAT AMI NEC-INITIAL	428.23	AC & CHR SYSTOLIC HF
410.61	POSTERIOR AMI-INITIAL	428.31	ACUTE DIASTOLIC HF
410.71	SUBEND INFARCT-INITIAL	428.33	AC & CHR DIASTOLIC HF
410.81	AMI NEC-INITIAL EPISODE	428.41	AC SYS & DIASTOLIC HF
410.91	AMI NOS-INITIAL EPISODE	428.43	ACCHR SYS & DIASTOLIC HF
427.0	PSVT	428.9	HEART FAILURE NOS
427.1	PVT		

Must not occur with V15.88 PERSONAL HISTORY OF FALL, PRESENTING HAZARDS TO HEALTH or V42.4 BONE REPLACED BY TRANSPLANT or V43.64 HIP JOINT PREPLACED BY OTHER MEANS or V43.65 KNEE JOINT REPLACED BY OTHER MEANS or V45.4 ARTHRODESIS STATUS or V54.01 ENCOUNTER FOR REMOVAL OF INTERNAL FIXATION DEVICE or V54.02 ENCOUNTER FOR LENGTHENING/ADJUSTMENT OF GROWTH ROD or V54.09 OTHER AFTERCARE INVOLVING INTERNAL FIXATION DEVICE

996.78	COMP NEC ORTH DEV NEC
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Must not occur with V42.4 BONE REPLACED BY TRANSPLANT or V43.64 HIP JOINT REPLACED BY OTHER MEANS or V43.65 KNEE JOINT REPLACED BY OTHER MEANS or V45.4 ARTHRODESIS STATUS or V54.01 ENCOUNTER FOR REMOVAL OF INTERNAL FIXATION DEVICES or V54.02 ENCOUNTER FOR LENGTHENING/ ADJSTMENT FOR GROWTH ROD or V54.09 OTHER AFTERCARE INVOLVING INTERNAL FIXATION DEVICE

996.77	COMP NEC D/T JT PROSTH
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Must occur with 997.3 RESPIRATORY COMPLICATIONS or 997.39 OTHER RESPIRATORY COMPLICATIONS

480.0	ADENOVIRAL PNEUMONIA	482.83	GRAM-NEG PNEUMONIA NEC
480.1	RSV PNEUMONIA	482.84	LEGIONNAIRES' DISEASE
480.2	PARAINFLUENZA VIR PNEUM	482.89	BACTERIAL PNEUMONIA NEC
480.3	SARS PNEUMONIA	482.9	BACTERIAL PNEUMONIA NOS
480.8	VIRAL PNEUMONIA NEC	483.0	M. PNEUMONIAE PNEUMONIA
481	PNEUMOCOCCAL PNEUMONIA	483.1	CHLAMYDIAL PNEUMONIA
482.0	K. PNEUMONIAE PNEUMONIA	483.8	PNEUMONIA D/T ORG NEC
482.1	PSEUDOMONAL PNEUMONIA	484.1	PNEUMONIA IN CMV DISEASE
482.2	H. INFLUENZAE PNEUMONIA	484.3	PNEUMONIA IN WHOOP COUGH
482.30	STREP PNEUMONIA NOS	484.6	PNEUM IN ASPERGILLOSIS
482.31	GROUP A STREP PNEUMONIA	484.7	PNEUM IN SYST MYCOSESNEC
482.32	GROUP B STREP PNEUMONIA	485	BRONCHOPNEUMONIA ORG NOS
482.39	STREP PNEUMONIA NEC	486	PNEUMONIA ORGANISM NOS
482.40	STAPH PNEUMONIA NOS	507.0	FOOD/VOMIT PNEUMONITIS
482.41	MSSA PNEUMONIA	511.9	PLEURAL EFFUSION NOS
482.42	MRSA PNEUMONIA	518.4	ACUTE LUNG EDEMA NOS
482.49	STAPH PNEUMONIA NEC	518.81	AC RESPIRATORY FAILURE
482.81	PNEUMONIA D/T ANAEROBES	518.84	AC & CHR RESP FAILURE
482.82	E. COLI PNEUMONIA	799.1	RESPIRATORY ARREST

Must occur with 997.4 DIGESTIVE SYSTEM COMPLICATION

560.1	PARALYTIC ILEUS
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Must occur with 997.5 URINARY COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

584.5	AC KF W TUBULAR NEPHR	599.0	URINARY TRACT INF NOS
584.8	ACUTE KIDNEY FAILURE NEC	788.20	RETENTION OF URINE NOS
584.9	ACUTE KIDNEY FAILURE NOS	788.29	RETENTION OF URINE NEC
593.9	RENAL/URETER DISORD NOS		

Must occur with 998.59 OTHER POSTOPERATIVE INFECTION

008.45	C. DIFFICILE ENTERITIS	038.42	E. COLI SEPTICEMIA
038.0	STREPTOCOCCAL SEPTICEMIA	038.43	PSEUDOMONAS SEPTICEMIA
038.10	STAPH SEPTICEMIA NOS	038.44	SERRATIA SEPTICEMIA
038.11	MSSA SEPTICEMIA	038.49	GRAM-NEG SEPTICEMIA NEC
038.12	MRSA SEPTICEMIA	038.8	SEPTICEMIA NEC
038.19	STAPH SEPTICEMIA NEC	038.9	SEPTICEMIA NOS
038.2	PNEUMOCOCCAL SEPTICEMIA	785.52	SEPTIC SHOCK
038.3	ANAEROBIC SEPTICEMIA	995.91	SEPSIS
038.40	GRAM-NEG SEPTICEMIA NOS	995.92	SEVERE SEPSIS
038.41	H. INFLUENZAE SEPTICEMIA		

Hip Replacement – Independent Complications

Independent complications are conditions that are clearly hospital-acquired or by the coding definition are defined as postoperative. These conditions were not counted as complications if the POA indicator was "Yes" or "Clinically Undetermined."

038.0	STREPTOCOCCAL SEPTICEMIA	484.1	PNEUMONIA IN CMV DISEASE
038.10	STAPH SEPTICEMIA NOS	484.3	PNEUMONIA IN WHOOP COUGH
038.11	MSSA SEPTICEMIA	484.6	PNEUM IN ASPERGILLOSIS
038.12	MRSA SEPTICEMIA	484.7	PNEUM IN SYST MYCOSESNEC
038.19	STAPH SEPTICEMIA NEC	485	BRONCHOPNEUMONIA ORG NOS
038.2	PNEUMOCOCCAL SEPTICEMIA	486	PNEUMONIA ORGANISM NOS
038.3	ANAEROBIC SEPTICEMIA	507.0	FOOD/VOMIT PNEUMONITIS
038.40	GRAM-NEG SEPTICEMIA NOS	512.1	IATROGENIC PNEUMOTHORAX
038.41	H. INFLUENZAE SEPTICEMIA	514	PULMONARY CONGESTION
038.42	E. COLI SEPTICEMIA	518.5	PI FOLLOW TRAUMA & SURG
038.43	PSEUDOMONAS SEPTICEMIA	518.51	AC RESP FAIL TRAUM/SURG
038.44	SERRATIA SEPTICEMIA	518.52	PI NEC FOLLOW TRAUM/SURG
038.49	GRAM-NEG SEPTICEMIA NEC	518.53	A&C RESP FAIL TRAUM/SURG
038.8	SEPTICEMIA NEC	518.7	TRALI
038.9	SEPTICEMIA NOS	518.81	AC RESPIRATORY FAILURE
286.6	DEFIBRATION SYNDROME	584.5	AC KF W TUBULAR NEPHR
292.12	DRG IND PSYCH W HALLUCIN	584.8	ACUTE KIDNEY FAILURE NEC
292.81	DRUG INDUCED DELIRIUM	584.9	ACUTE KIDNEY FAILURE NOS
293.0	DELIRIUM D/T CCE	707.0	PRESSURE ULCER
410.01	ANTEROLAT AMI-INITIAL	707.00	PRESSURE ULCER-SITE NOS
410.11	ANT AMI NEC-INITIAL	707.01	PRESSURE ULCER-ELBOW
410.21	INFEROLAT AMI-INITIAL	707.02	PRESSURE ULCER-UP BACK
410.31	INFEROPOST AMI-INITIAL	707.03	PRESSURE ULCER-LOW BACK
410.41	INF AMI NEC-INITIAL	707.04	PRESSURE ULCER-HIP
410.51	LAT AMI NEC-INITIAL	707.05	PRESSURE ULCER-BUTTOCK
410.61	POSTERIOR AMI-INITIAL	707.06	PRESSURE ULCER-ANKLE
410.71	SUBEND INFARCT-INITIAL	707.07	PRESSURE ULCER-HEEL
410.81	AMI NEC-INITIAL EPISODE	707.09	PRESSURE ULCER-SITE NEC
410.91	AMI NOS-INITIAL EPISODE	780.97	ALTERED MENTAL STATUS

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 Appendix B. Women's Health Complications

415.11	IATRO PULM EMBOL/INFARCT	785.50	SHOCK NOS
415.12	SEPTIC PULMON EMBOLISM	785.51	CARDIOGENIC SHOCK
415.19	PULMON EMBOL/INFARCT NEC	785.52	SEPTIC SHOCK
423.3	CARDIAC TAMPONADE	799.1	RESPIRATORY ARREST
427.5	CARDIAC ARREST	867.0	BLAD/URETHRA INJURY-CLSD
449	SEPTIC ARTERIAL EMBOLISM	995.91	SEPSIS
453.40	ACUTE DVT LEG NOS	995.92	SEVERE SEPSIS
453.41	ACUTE DVT PROXIMAL LEG	996.42	DISLOCATION JOINT PROSTH
453.42	ACUTE DVT DISTAL LEG	996.44	PERI-PROSTHETIC FRACTURE
480.0	ADENOVIRAL PNEUMONIA	997.02	IATROGEN CV INFARCT/HEM
480.1	RSV PNEUMONIA	997.09	NERV SYST SURG COMP NEC
480.2	PARAINFLUENZA VIR PNEUM	997.1	SURG COMP-HEART
480.3	SARS PNEUMONIA	997.3	SURG COMP-RESP NEC
480.8	VIRAL PNEUMONIA NEC	997.31	VENT ASSOC PNEUMONIA
481	PNEUMOCOCCAL PNEUMONIA	997.32	POSTPX ASP PNEUMONIA
482.0	K. PNEUMONIAE PNEUMONIA	997.39	OTH SURG COMP-RESP
482.1	PSEUDOMONAL PNEUMONIA	997.4	SURG COMP-DIGESTIVE
482.2	H. INFLUENZAE PNEUMONIA	997.5	SURG COMP-URINARY NEC
482.30	STREP PNEUMONIA NOS	998.0	POSTOPERATIVE SHOCK
482.31	GROUP A STREP PNEUMONIA	998.00	POSTOP SHOCK NOS
482.32	GROUP B STREP PNEUMONIA	998.01	POSTOP CARDIOGENIC SHOCK
482.39	STREP PNEUMONIA NEC	998.02	POSTOP SEPTIC SHOCK
482.40	STAPH PNEUMONIA NOS	998.09	POSTOP SHOCK NEC
482.41	MSSA PNEUMONIA	998.11	HEMORRHAGE COMP PX
482.42	MRSA PNEUMONIA	998.2	ACCIDENTAL OP LACERATION
482.49	STAPH PNEUMONIA NEC	998.30	DISRUPTION WOUND NOS
482.81	PNEUMONIA D/T ANAEROBES	998.31	DISRUPT INTERNAL OP WND
482.82	E. COLI PNEUMONIA	998.32	DISRUPT EXTERNAL OP WND
482.83	GRAM-NEG PNEUMONIA NEC	998.59	POSTOP INFECTION NEC
482.84	LEGIONNAIRES' DISEASE	999.31	INFECT NEC & NOS D/T CVC
482.89	BACTERIAL PNEUMONIA NEC	999.32	BLOODSTREAM INF D/T CVC
482.9	BACTERIAL PNEUMONIA NOS	999.34	AC INF POST TRANSFUSION
483.0	M. PNEUMONIAE PNEUMONIA	999.39	INFECT COMP MED CARE NEC
483.1	CHLAMYDIAL PNEUMONIA	999.8	TRANSF/INFUS RXN NEC&NOS
483.8	PNEUMONIA D/T ORG NEC		

Hip Replacement – Dependent Complications

Dependent complications are conditions that must either have the POA indicator set to "No," or if the POA indicator is set to "Unknown" or is missing, there must also be the listed 900 postoperative complication code present in the patient record.

Must occur with 997.02 IATROGENIC CEREBROVASCULAR INFARCTION OR HEMORRHAGE

434.11	CEREBRAL EMBOL W INFARCT	434.91	CEREB ART OCCL W INFARCT
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Must occur with 997.1 CARDIAC COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

427.0	PSVT	428.23	AC & CHR SYSTOLIC HF
427.1	PVT	428.31	ACUTE DIASTOLIC HF
427.31	ATRIAL FIBRILLATION	428.33	AC & CHR DIASTOLIC HF
427.32	ATRIAL FLUTTER	428.41	AC SYS & DIASTOLIC HF
428.0	CHF NOS	428.43	ACCHR SYS & DIASTOLIC HF
428.1	LEFT HEART FAILURE	428.9	HEART FAILURE NOS
428.21	ACUTE SYSTOLIC HF		

Must occur with 997.3 RESPIRATORY COMPLICATIONS or 997.39 OTHER RESPIRATORY COMPLICATIONS

511.9	PLEURAL EFFUSION NOS	518.84	AC & CHR RESP FAILURE
518.4	ACUTE LUNG EDEMA NOS		

Must occur with 997.4 DIGESTIVE SYSTEM COMPLICATION

560.1	PARALYTIC ILEUS
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Must occur with 997.5 URINARY COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

593.9	RENAL/URETER DISORD NOS	788.20	RETENTION OF URINE NOS
599.0	URINARY TRACT INF NOS	788.29	RETENTION OF URINE NEC

Must occur with 998.59 OTHER POSTOPERATIVE INFECTION

008.45	C. DIFFICILE ENTERITIS
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Must not occur with V15.88 PERSONAL HISTORY OF FALL, PRESENTING HAZARDS TO HEALTH or V42.4 BONE REPLACED BY TRANSPLANT or V43.64 HIP JOINT REPLACED BY OTHER MEANS or V43.65 KNEE JOINT REPLACED BY OTHER MEANS or V45.4 ARTHRODESIS STATUS or V54.01 ENCOUNTER FOR REMOVAL OF INTERNAL FIXATION DEVICE or V54.02 ENCOUNTER FOR LENGTHENING/ADJUSTMENT OF GROWTH ROD or V54.09 OTHER AFTERCARE INVOLVING INTERNAL FIXATION DEVICE

996.40	MECH COMP INT ORTH NOS	996.77	COMP NEC D/T JT PROSTH
996.47	MECH COMP JT PROSTH NEC	996.78	COMP NEC ORTH DEV NEC
996.49	MECH COMP INT ORTH NEC		

Peripheral Vascular Bypass – Independent Complications

Independent complications are conditions that are clearly hospital-acquired or by the coding definition are defined as postoperative. These conditions were not counted as complications if the POA indicator was "Yes" or "Clinically Undetermined."

286.6	DEFIBRATION SYNDROME	957.1	INJURY TO NERVE NEC
292.81	DRUG INDUCED DELIRIUM	995.91	SEPSIS
293.0	DELIRIUM D/T CCE	996.01	MECH COMP CARD PACEMAKER
348.1	ANOXIC BRAIN DAMAGE	996.1	MECH COMP OTH VASC DEV
415.12	SEPTIC PULMON EMBOLISM	996.74	COMP NEC D/T VASC DEVNEC
415.19	PULMON EMBOL/INFARCT NEC	997.01	CNS SURG COMP
423.3	CARDIAC TAMPONADE	997.02	IATROGEN CV INFARCT/HEM
427.41	VENTRICULAR FIBRILLATION	997.09	NERV SYST SURG COMP NEC
427.5	CARDIAC ARREST	997.1	SURG COMP-HEART
434.01	CEREB THROMB W INFARCT	997.2	SURG COMP-PERIPH VASC
434.11	CEREBRAL EMBOL W INFARCT	997.3	SURG COMP-RESP NEC
434.91	CEREB ART OCCL W INFARCT	997.31	VENT ASSOC PNEUMONIA
449	SEPTIC ARTERIAL EMBOLISM	997.32	POSTPX ASP PNEUMONIA
453.40	ACUTE DVT LEG NOS	997.39	OTH SURG COMP-RESP
453.41	ACUTE DVT PROXIMAL LEG	997.4	SURG COMP-DIGESTIVE
453.42	ACUTE DVT DISTAL LEG	997.5	SURG COMP-URINARY NEC
512.1	IATROGENIC PNEUMOTHORAX	997.91	SURG COMP-HYPERTENSION
514	PULMONARY CONGESTION	998.0	POSTOPERATIVE SHOCK
518.0	PULMONARY COLLAPSE	998.00	POSTOP SHOCK NOS
518.4	ACUTE LUNG EDEMA NOS	998.01	POSTOP CARDIOGENIC SHOCK
518.5	PI FOLLOW TRAUMA & SURG	998.02	POSTOP SEPTIC SHOCK
518.51	AC RESP FAIL TRAUM/SURG	998.09	POSTOP SHOCK NEC
518.52	PI NEC FOLLOW TRAUM/SURG	998.11	HEMORRHAGE COMP PX
518.53	A&C RESP FAIL TRAUM/SURG	998.2	ACCIDENTAL OP LACERATION
518.7	TRALI	998.30	DISRUPTION WOUND NOS
518.84	AC & CHR RESP FAILURE	998.31	DISRUPT INTERNAL OP WND
780.01	COMA	998.32	DISRUPT EXTERNAL OP WND
780.97	ALTERED MENTAL STATUS	998.59	POSTOP INFECTION NEC
785.50	SHOCK NOS	999.31	INFECT NEC & NOS D/T CVC
785.51	CARDIOGENIC SHOCK	999.32	BLOODSTREAM INF D/T CVC
785.52	SEPTIC SHOCK	999.34	AC INF POST TRANSFUSION
788.29	RETENTION OF URINE NEC	999.39	INFECT COMP MED CARE NEC
867.0	BLAD/URETHRA INJURY-CLSD		

Peripheral Vascular Bypass – Dependent Complications

Dependent complications are conditions that must either have the POA indicator set to "No," or if the POA indicator is set to "Unknown" or is missing, there must also be the listed 900 postoperative complication code present in the patient record.

Must occur with 997.1 CARDIAC COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

410.01	ANTEROLAT AMI-INITIAL	427.32	ATRIAL FLUTTER
410.11	ANT AMI NEC-INITIAL	427.89	OTH CARDIAC DYSRHYTHMIAS
410.21	INFEROLAT AMI-INITIAL	428.0	CHF NOS
410.51	LAT AMI NEC-INITIAL	428.1	LEFT HEART FAILURE
410.61	POSTERIOR AMI-INITIAL	428.21	ACUTE SYSTOLIC HF
410.71	SUBEND INFARCT-INITIAL	428.23	AC & CHR SYSTOLIC HF
410.81	AMI NEC-INITIAL EPISODE	428.31	ACUTE DIASTOLIC HF
410.91	AMI NOS-INITIAL EPISODE	428.33	AC & CHR DIASTOLIC HF
427.01	PSVT	428.41	AC SYS & DIASTOLIC HF
427.1	PVT	428.43	ACCHR SYS & DIASTOLIC HF
427.31	ATRIAL FIBRILLATION	428.9	HEART FAILURE NOS

Must occur with 997.3 RESPIRATORY COMPLICATIONS or 997.39 OTHER RESPIRATORY COMPLICATIONS

481	PNEUMOCOCCAL PNEUMONIA	482.83	GRAM-NEG PNEUMONIA NEC
482.0	K. PNEUMONIAE PNEUMONIA	482.84	LEGIONNAIRES' DISEASE
482.1	PSEUDOMONAL PNEUMONIA	482.89	BACTERIAL PNEUMONIA NEC
482.2	H. INFLUENZAE PNEUMONIA	482.9	BACTERIAL PNEUMONIA NOS
482.30	STREP PNEUMONIA NOS	483.0	M. PNEUMONIAE PNEUMONIA
482.31	GROUP A STREP PNEUMONIA	483.1	CHLAMYDIAL PNEUMONIA
482.32	GROUP B STREP PNEUMONIA	483.8	PNEUMONIA D/T ORG NEC
482.39	STREP PNEUMONIA NEC	484.3	PNEUMONIA IN WHOOP COUGH
482.40	STAPH PNEUMONIA NOS	484.6	PNEUM IN ASPERGILLOSIS
482.41	MSSA PNEUMONIA	484.7	PNEUM IN SYST MYCOSESNEC
482.42	MRSA PNEUMONIA	485	BRONCHOPNEUMONIA ORG NOS
482.49	STAPH PNEUMONIA NEC	486	PNEUMONIA ORGANISM NOS
482.81	PNEUMONIA D/T ANAEROBES	507.0	FOOD/VOMIT PNEUMONITIS
482.82	E. COLI PNEUMONIA	518.81	AC RESPIRATORY FAILURE

Must occur with 997.4 DIGESTIVE SYSTEM COMPLICATION

560.1	PARALYTIC ILEUS
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Must occur with 997.5 URINARY COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

584.5	AC KF W TUBULAR NEPHR	593.9	RENAL/URETER DISORD NOS
584.8	ACUTE KIDNEY FAILURE NEC	599.0	URINARY TRACT INF NOS
584.9	ACUTE KIDNEY FAILURE NOS	788.20	RETENTION OF URINE NOS

Must occur with 998.59 OTHER POSTOPERATIVE INFECTION

008.45	C. DIFFICILE ENTERITIS	038.41	H. INFLUENZAE SEPTICEMIA
038.0	STREPTOCOCCAL SEPTICEMIA	038.42	E. COLI SEPTICEMIA
038.10	STAPH SEPTICEMIA NOS	038.43	PSEUDOMONAS SEPTICEMIA
038.11	MSSA SEPTICEMIA	038.44	SERRATIA SEPTICEMIA
038.12	MRSA SEPTICEMIA	038.49	GRAM-NEG SEPTICEMIA NEC
038.19	STAPH SEPTICEMIA NEC	038.8	SEPTICEMIA NEC
038.2	PNEUMOCOCCAL SEPTICEMIA	038.9	SEPTICEMIA NOS
038.3	ANAEROBIC SEPTICEMIA	995.92	SEVERE SEPSIS
038.40	GRAM-NEG SEPTICEMIA NOS		

Must occur with 998.59 OTHER POSTOPERATIVE INFECTION or 998.51 INFECTED POSTOPERATIVE SEROMA

041.04	GROUP D STREP INFECTION	041.7	PSEUDOMONAS INFECT NOS
041.11	MSSA		

Total Knee Replacement – Independent Complications

Independent complications are conditions that are clearly hospital-acquired or by the coding definition are defined as postoperative. These conditions were not counted as complications if the POA indicator was "Yes" or "Clinically Undetermined."

038.0	STREPTOCOCCAL SEPTICEMIA	483.8	PNEUMONIA D/T ORG NEC
038.10	STAPH SEPTICEMIA NOS	484.1	PNEUMONIA IN CMV DISEASE
038.11	MSSA SEPTICEMIA	484.3	PNEUMONIA IN WHOOP COUGH
038.12	MRSA SEPTICEMIA	484.6	PNEUM IN ASPERGILLOSIS
038.19	STAPH SEPTICEMIA NEC	484.7	PNEUM IN SYST MYCOSESNEC
038.2	PNEUMOCOCCAL SEPTICEMIA	485	BRONCHOPNEUMONIA ORG NOS
038.3	ANAEROBIC SEPTICEMIA	486	PNEUMONIA ORGANISM NOS
038.40	GRAM-NEG SEPTICEMIA NOS	507.0	FOOD/VOMIT PNEUMONITIS
038.41	H. INFLUENZAE SEPTICEMIA	512.1	IATROGENIC PNEUMOTHORAX
038.42	E. COLI SEPTICEMIA	514	PULMONARY CONGESTION
038.43	PSEUDOMONAS SEPTICEMIA	518.5	PI FOLLOW TRAUMA & SURG
038.44	SERRATIA SEPTICEMIA	518.51	AC RESP FAIL TRAUM/SURG
038.49	GRAM-NEG SEPTICEMIA NEC	518.52	PI NEC FOLLOW TRAUM/SURG
038.8	SEPTICEMIA NEC	518.53	A&C RESP FAIL TRAUM/SURG
038.9	SEPTICEMIA NOS	518.7	TRALI
286.6	DEFIBRATION SYNDROME	518.81	AC RESPIRATORY FAILURE
292.12	DRG IND PSYCH W HALLUCIN	584.5	AC KF W TUBULAR NEPHR
292.81	DRUG INDUCED DELIRIUM	584.8	ACUTE KIDNEY FAILURE NEC
293.0	DELIRIUM D/T CCE	584.9	ACUTE KIDNEY FAILURE NOS
410.01	ANTEROLAT AMI-INITIAL	707.0	PRESSURE ULCER
410.11	ANT AMI NEC-INITIAL	707.00	PRESSURE ULCER-SITE NOS
410.21	INFEROLAT AMI-INITIAL	707.01	PRESSURE ULCER-ELBOW
410.31	INFEROPOST AMI-INITIAL	707.02	PRESSURE ULCER-UP BACK
410.41	INF AMI NEC-INITIAL	707.03	PRESSURE ULCER-LOW BACK
410.51	LAT AMI NEC-INITIAL	707.04	PRESSURE ULCER-HIP
410.61	POSTERIOR AMI-INITIAL	707.05	PRESSURE ULCER-BUTTOCK
410.71	SUBEND INFARCT-INITIAL	707.06	PRESSURE ULCER-ANKLE
410.81	AMI NEC-INITIAL EPISODE	707.07	PRESSURE ULCER-HEEL
410.91	AMI NOS-INITIAL EPISODE	707.09	PRESSURE ULCER-SITE NEC
415.11	IATRO PULM EMBOL/INFARCT	780.97	ALTERED MENTAL STATUS
415.12	SEPTIC PULMON EMBOLISM	785.50	SHOCK NOS
415.19	PULMON EMBOL/INFARCT NEC	785.51	CARDIOGENIC SHOCK
423.3	CARDIAC TAMPONADE	785.52	SEPTIC SHOCK
427.5	CARDIAC ARREST	799.1	RESPIRATORY ARREST
428.31	ACUTE DIASTOLIC HF	867.0	BLAD/URETHRA INJURY-CLSD
428.33	AC & CHR DIASTOLIC HF	995.91	SEPSIS
449	SEPTIC ARTERIAL EMBOLISM	995.92	SEVERE SEPSIS
453.40	ACUTE DVT LEG NOS	996.42	DISLOCATION JOINT PROSTH
453.41	ACUTE DVT PROXIMAL LEG	996.44	PERI-PROSTHETIC FRACTURE
453.42	ACUTE DVT DISTAL LEG	997.02	IATROGEN CV INFARCT/HEM
480.0	ADENOVIRAL PNEUMONIA	997.09	NERV SYST SURG COMP NEC
480.1	RSV PNEUMONIA	997.1	SURG COMP-HEART
480.2	PARAINFLUENZA VIR PNEUM	997.3	SURG COMP-RESP NEC
480.3	SARS PNEUMONIA	997.31	VENT ASSOC PNEUMONIA
480.8	VIRAL PNEUMONIA NEC	997.32	POSTPX ASP PNEUMONIA
481	PNEUMOCOCCAL PNEUMONIA	997.39	OTH SURG COMP-RESP
482.0	K. PNEUMONIAE PNEUMONIA	997.4	SURG COMP-DIGESTIVE
482.1	PSEUDOMONAL PNEUMONIA	997.5	SURG COMP-URINARY NEC
482.2	H. INFLUENZAE PNEUMONIA	998.0	POSTOPERATIVE SHOCK
482.30	STREP PNEUMONIA NOS	998.00	POSTOP SHOCK NOS
482.31	GROUP A STREP PNEUMONIA	998.01	POSTOP CARDIOGENIC SHOCK
482.32	GROUP B STREP PNEUMONIA	998.02	POSTOP SEPTIC SHOCK

482.39	STREP PNEUMONIA NEC	998.09	POSTOP SHOCK NEC
482.40	STAPH PNEUMONIA NOS	998.11	HEMORRHAGE COMP PX
482.41	MSSA PNEUMONIA	998.2	ACCIDENTAL OP LACERATION
482.42	MRSA PNEUMONIA	998.30	DISRUPTION WOUND NOS
482.49	STAPH PNEUMONIA NEC	998.31	DISRUPT INTERNAL OP WND
482.81	PNEUMONIA D/T ANAEROBES	998.32	DISRUPT EXTERNAL OP WND
482.82	E. COLI PNEUMONIA	998.59	POSTOP INFECTION NEC
482.83	GRAM-NEG PNEUMONIA NEC	999.31	INFECT NEC & NOS D/T CVC
482.84	LEGIONNAIRES' DISEASE	999.32	BLOODSTREAM INF D/T CVC
482.89	BACTERIAL PNEUMONIA NEC	999.34	AC INF POST TRANSFUSION
482.9	BACTERIAL PNEUMONIA NOS	999.39	INFECT COMP MED CARE NEC
483.0	M. PNEUMONIAE PNEUMONIA	999.8	TRANSF/INFUS RXN NEC&NOS
483.1	CHLAMYDIAL PNEUMONIA		

Total Knee Replacement – Dependent Complications

Dependent complications are conditions that must either have the POA indicator set to "No," or if the POA indicator is set to "Unknown" or is missing, there must also be the listed 900 postoperative complication code present in the patient record.

Must occur with 997.02 IATROGENIC CEREBROVASCULAR INFARCTION OR HEMORRHAGE

434.11	CEREBRAL EMBOL W INFARCT	434.91	CEREB ART OCCL W INFARCT
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Must occur with 997.1 CARDIAC COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

427.0	PSVT	428.21	ACUTE SYSTOLIC HF
427.1	PVT	428.23	AC & CHR SYSTOLIC HF
427.31	ATRIAL FIBRILLATION	428.41	AC SYS & DIASTOLIC HF
427.32	ATRIAL FLUTTER	428.43	ACCHR SYS & DIASTOLIC HF
428.0	CHF NOS	428.9	HEART FAILURE NOS
428.1	LEFT HEART FAILURE		

Must occur with 997.3 RESPIRATORY COMPLICATIONS or 997.39 OTHER RESPIRATORY COMPLICATIONS

511.9	PLEURAL EFFUSION NOS	518.84	AC & CHR RESP FAILURE
518.4	ACUTE LUNG EDEMA NOS		

Must occur with 997.4 DIGESTIVE SYSTEM COMPLICATION

560.1	PARALYTIC ILEUS
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Must occur with 997.5 URINARY COMPLICATIONS, NOT ELSEWHERE CLASSIFIED

593.9	RENAL/URETER DISORD NOS	788.20	RETENTION OF URINE NOS
599.0	URINARY TRACT INF NOS	788.29	RETENTION OF URINE NEC

Must occur with 998.59 OTHER POSTOPERATIVE INFECTION

008.45	C. DIFFICILE ENTERITIS
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Must not occur with V15.88 PERSONAL HISTORY OF FALL, PRESENTING HAZARDS TO HEALTH or V42.4 BONE REPLACED BY TRANSPLANT or V43.64 HIP JOINT REPLACED BY OTHER MEANS or V43.65 KNEE JOINT REPLACED BY OTHER MEANS or V45.4 ARTHRODESIS STATUS or V54.01 ENCOUNTER FOR REMOVAL OF INTERNAL FIXATION DEVICE or V54.02 ENCOUNTER FOR LENGTHENING/ADJUSTMENT OF GROWTH ROD or V54.09 OTHER AFTERCARE INVOLVING INTERNAL FIXATION DEVICE

996.40	MECH COMP INT ORTH NOS	996.49	MECH COMP INT ORTH NEC
996.47	MECH COMP JT PROSTH NEC	996.78	COMP NEC ORTH DEV NEC

Must not occur with V42.4 BONE REPLACED BY TRANSPLANT or V43.64 HIP JOINT REPLACED BY OTHER MEANS or V43.65 KNEE JOINT REPLACED BY OTHER MEANS or V45.4 ARTHRODESIS STATUS or V54.01 ENCOUNTER FOR REMOVAL OF INTERNAL FIXATION DEVICES or V54.02 ENCOUNTER FOR LENGTHENING/ADJUSTMENT FOR GROWTH ROD or V54.09 OTHER AFTERCARE INVOLVING INTERNAL FIXATION DEVICE

996.77	COMP NEC D/T JT PROSTH
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Appendix C. Top Five Risk Factors by Procedure or Diagnosis

Back and Neck Surgery (Spinal Fusion)	
Proc 81.04	DORSAL AND DORSOLUMBAR FUSION OF THE ANTERIOR COLUMN, ANTERIOR TECHNIQUE
Diag 260, 261, 262, 263.0, 263.1, 263.2, 263.8, 263.9	MALNUTRITION
Diag 348.30, 348.31, 348.39, 349.82	ENCEPHALOPATHY
Diag 344.00	QUADRIPLEGIA, UNSPECIFIED
Proc 81.05	DORSAL AND DORSOLUMBAR FUSION OF THE POSTERIOR COLUMN, POSTERIOR TECHNIQUE
Back and Neck Surgery (Except Spinal Fusion)	
Proc 99.04	TRANSFUSION OF PACKED CELLS
Diag 260, 261, 262, 263.0, 263.1, 263.2, 263.8, 263.9	MALNUTRITION
Proc 03.53	REPAIR OF VERTEBRAL FRACTURE
Diag 324.1	INTRASPINAL ABSCESS
Diag 348.30, 348.31, 348.39, 349.82	ENCEPHALOPATHY
Carotid Surgery	
Proc 39.74	ENDOVASCULAR REMOVAL OF OBSTRUCTION FROM HEAD AND NECK VESSEL(S)
Diag 428.31, 428.33	ACUTE DIASTOLIC HEART FAILURE
Diag 428.21, 428.23	ACUTE SYSTOLIC HEART FAILURE
Diag 585.4	CHRONIC KIDNEY DISEASE, STAGE IV (SEVERE)
Diag 491.0, 491.1, 491.20, 491.21, 491.22, 491.8, 491.9	CHRONIC BRONCHITIS
Chronic Obstructive Pulmonary Disease (COPD)	
Diag 038.0, 038.10, 038.11, 038.19, 038.2, 038.3, 038.40, 038.41, 038.42, 038.43, 038.44, 038.49, 038.8, 038.9	SEPSIS
Diag 507.0	PNEUMONITIS DUE TO INHALATION OF FOOD OR VOMITUS
Diag 518.81	ACUTE RESPIRATORY FAILURE
Diag 410.71	ACUTE MYOCARDIAL INFARCTION, SUBENDOCARDIAL INFARCTION, INITIAL EPISODE OF CARE
Diag 518.84	ACUTE AND CHRONIC RESPIRATORY FAILURE
Coronary Artery Bypass Graft (CABG) Surgery	
Proc 37.61	IMPLANT OF PULSATION BALLOON
Diag 585.6	END STAGE RENAL DISEASE
Diag 427.5	CARDIAC ARREST
Proc 37.33	EXCISION OR DESTRUCTION OF OTHER LESION OR TISSUE OF HEART, OPEN APPROACH
Diag 585.4	CHRONIC KIDNEY DISEASE, STAGE IV (SEVERE)
Coronary Interventional Procedures (Angioplasty/Stent)	
Proc 37.61	IMPLANT OF PULSATION BALLOON
Diag 410.01, 410.11, 410.21, 410.51, 410.61, 410.81, 410.91	ANTERIOR/LATERAL WALL AMI
Diag 585.6	END STAGE RENAL DISEASE
Diag 410.31, 410.41	INFERIOR WALL AMI
Diag 427.5	CARDIAC ARREST

Heart Attack	
Diag 348.1	ANOXIC BRAIN DAMAGE
Proc 37.61	IMPLANT OF PULSATION BALLOON
Diag 427.5	CARDIAC ARREST
Diag 410.01, 410.11, 410.21, 410.51, 410.61, 410.81, 410.91	ANTERIOR/LATERAL WALL AMI
Diag 585.6	END STAGE RENAL DISEASE
Heart Failure	
Diag 410.01, 410.11, 410.21, 410.51, 410.61, 410.81, 410.91	ANTERIOR/LATERAL WALL AMI
Diag 507.0	PNEUMONITIS DUE TO INHALATION OF FOOD OR VOMITUS
Diag 585.6	END STAGE RENAL DISEASE
Diag 518.81	ACUTE RESPIRATORY FAILURE
Proc 36.15	SINGLE INTERNAL MAMMARY-CORONARY ARTERY BYPASS
Hip Fracture Treatment	
Proc 43.11	PERCUTANEOUS [ENDOSCOPIC] GASTROSTOMY [PEG]
Diag 428.21, 428.23	ACUTE SYSTOLIC HEART FAILURE
Diag 038.0, 038.10, 038.11, 038.19, 038.2, 038.3, 038.40, 038.41, 038.42, 038.43, 038.44, 038.49, 038.8, 038.9	SEPSIS
Diag 428.31, 428.33	ACUTE DIASTOLIC HEART FAILURE
Diag 276.2	ACIDOSIS
Hip Replacement	
Diag 276.50, 276.51, 276.52	DEHYDRATION
Diag 250.02	DIABETES MELLITUS WITHOUT MENTION OF COMPLICATION, TYPE II OR UNSPECIFIED TYPE, UNCONTROLLED
Diag 403.10, 403.90	NON-MALIGNANT RENAL DISEASE W/O FAILURE
Diag 416.0, 416.1, 416.8, 416.9	PULMONARY HYPERTENSION
Diag 428.30, 428.32	CHRONIC DIASTOLIC HEART FAILURE
Peripheral Vascular Bypass	
Diag 428.21, 428.23	ACUTE SYSTOLIC HEART FAILURE
Diag 260, 261, 262, 263.0, 263.1, 263.2, 263.8, 263.9	MALNUTRITION
Diag 444.0	EMBOLISM AND THROMBOSIS OF ABDOMINAL AORTA
Diag 585.4	CHRONIC KIDNEY DISEASE, STAGE IV (SEVERE)
Diag 428.31, 428.33	ACUTE DIASTOLIC HEART FAILURE
Pneumonia	
Diag 518.81	ACUTE RESPIRATORY FAILURE
Diag 162.9	MALIGNANT NEOPLASM OF BRONCHUS AND LUNG, UNSPECIFIED
Diag 995.92	SEVERE SEPSIS
Diag 518.82	OTHER PULMONARY INSUFFICIENCY, NOT ELSEWHERE CLASSIFIED
Proc 99.04	TRANSFUSION OF PACKED CELLS
Stroke	
Diag 780.01	COMA
Diag 518.81	ACUTE RESPIRATORY FAILURE
Diag 348.4	COMPRESSION OF BRAIN
Diag 410.01, 410.11, 410.21, 410.51, 410.61, 410.81, 410.91	ANTERIOR/LATERAL WALL AMI
Diag 038.12	METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS SEPTICEMIA

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 Appendix C. Top Five Risk Factors by Procedure or Diagnosis

Total Knee Replacement	
Diag 276.50, 276.51, 276.52	DEHYDRATION
Diag 403.10, 403.90	NON-MALIGNANT RENAL DISEASE W/O FAILURE
Diag 416.0, 416.1, 416.8, 416.9	PULMONARY HYPERTENSION
Diag 276.7	HYPERPOTASSEMIA
Diag 428.30, 428.32	CHRONIC DIASTOLIC HEART FAILURE
Valve Repair/Replacement Surgery	
Proc 37.61	IMPLANT OF PULSATION BALLOON
Diag 585.6	END STAGE RENAL DISEASE
Diag 427.5	CARDIAC ARREST
Proc 35.27	OPEN AND OTHER REPLACEMENT OF TRICUSPID VALVE WITH TISSUE GRAFT
Diag 996.61	INFECTION AND INFLAMMATORY REACTION DUE TO CARDIAC DEVICE, IMPLANT, AND GRAFT