**MSF ATTACHMENT**

This attachment includes the following materials supporting the Measure Submission Form for the **All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facilities (IRFs)**:

* Equations 1-5 from Sections S.14 & S.18.
* Figures 1-3 from Section S.18.
* Table 1 and Figures 4-5 from Section 1b.2.
* Tables 2-5 from Section 1b.4.
* Appendix
  + **Appendix A** 
    - Appendix Table A1. Procedure Categories That Are Always Planned Regardless of Diagnosis Procedure
    - Appendix Table A2. Diagnosis Categories That Are Always Planned Regardless of Procedure
    - Appendix Table A3. List of Potentially Planned Procedure Categories
    - Appendix Table A4. Acute Diagnosis Categories That Disqualify a Readmission from Being Considered Planned
    - Appendix Table A5. Additions to List of Planned Readmissions Currently Used in the Hospital-Wide Readmission Measure,\* for Use in the IRF Measure
    - Appendix Table A6. Provisional Mapping of ICD-10 Procedure Codes to ICD-9 Procedure Codes Marking Planned Readmissions Added for PAC Settings
  + **APPENDIX B**
    - Figure B1. IRF Readmission Model (Logistic) ROC Curve -- Based on the 2010/2011 model
  + **APPENDIX C**
    - Appendix Table C1. Final All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facilities Models, Risk Variables, and Odds Ratios, 2009/2010 & 2010/2011: Hierarchical Logistic Regression Model
  + **APPENDIX D**
    - Documentation on HCC Groupings for IRF Model

**Equation 1 from Section S.14**

**S.14. Identify the statistical risk model method and variables**

We used the following model:

Let Yij, denote the outcome (equal to 1 if patient *i* is readmitted within 30 days, zero otherwise) for a patient *i* at IRF *j*; *Z*ijdenotes a set of risk factors. We assume the outcome is related linearly to the covariates via a logit function with dispersion:

logit(Prob(Yij =1)) = αj + β\*Zij + εij (1)

αj = μ + ωj ;  ωj ~ N(0, τ2)

where Z ij *=* (Z1, Z2, ... Zk) is a set of *k* patient-level covariates. αj represents the IRF specific intercept; μis the adjusted average outcome over all IRFs; and τ2 is the between IRF variance component and ε ~N(0,σ2) is the error term. The hierarchical logistic regression model is estimated using SAS software (PROC GLIMMIX: SAS/STAT User’s Guide, SAS Institute Inc.)

**Figures 1-3 from Section S.18**

**S.18. Calculation Algorithm/Measure Logic**

Figure 1  
IRF Discharge to Lower Level of Care, No Readmission

Figure 1 shows a scenario with a prior short-term acute hospital stay, the inpatient rehabilitation facility stay, and the observation window for readmissions. The figure shows a gap between the short-term acute stay and the long-term care hospital stay not exceeding 30 days. For the IRF stay a patient could have a possible undetected program interruption with an acute hospital stay up to 1 day without a discharge.  At the end of the IRF stay, to be in the measure, the patient would be discharged to a location other than an acute care hospital or another IRF.  Following discharge from the IRF, the eligible patient is observed for 30 days without readmission in this scenario; however, there are possible IRF, SNF, or HHA stays within this 30-day observation period.

HHA = home health agency; IRF = inpatient rehabilitation facility; SNF = skilled nursing facility.

Figure 2  
IRF Discharge to Lower Level of Care, Unplanned Readmission

Figure 2 shows a scenario similar to that in Figure 1, but after the patient is discharged from the IRF he or she is readmitted to either a long-term care hospital or short-term acute care within the 30-day post-discharge observation window.

IRF = inpatient rehabilitation facility; LTCH = long-term care hospital.

Figure 3  
IRF Discharge to Lower Level of Care, Planned Readmission

Figure 3 shows another variation of the scenario in Figures 1 and 2.  In this case there is a planned readmission within the 30-day post-discharge observation window. This planned readmission terminates the observation window.  After this readmission, which is not counted in the measure, the figure shows there could be an unplanned readmission within the 30 days following the planned readmission. This readmissions, though unplanned, is not counted in the numerator of the measure.

IRF = inpatient rehabilitation facility.

**Equations 2-5 from Section S.18**

*Step 1:* Identify patients meeting the denominator criteria.

*Step 2:* Identify patients meeting the numerator criteria taking into account the planned readmission algorithm.

*Step 3:* Identify presence or absence of risk adjustment variables for each patient.

*Step 4:* Calculate the predicted and expected number of readmissions for each IRF using the hierarchical logistic regression model as specified in Appendix C.

The predicted number of readmissions for each IRF is calculated as the sum of the predicted probability of readmission for each patient included in the measure discharged from the facility, including the IRF-specific effect. Using the notation of the previous section, the model specific risk standardized readmission ratio for each IRF is calculated as follows. To calculate the predicted number of readmissions predj for index IRF stays at IRFj, we used

predj = Σlogit-1(μ + ωi + β\*Zij) (2)

where the sum is over all stays in IRFj, and ωi is the random intercept. To calculate the expected number expj use

expj = Σlogit-1 (μ + β\*Zij) (3)

Then, as a measure of excess or reduced readmissions among index stays at IRFj, calculate the IRF-wide standardized risk ratio, SRRj, as

SRRj = predj/expj (4)

*Step 5:* Calculate the risk-standardized IRF 30-day readmission rate

The value obtained from equation (4) above, the SRRj, is the IRF-wide standardized risk ratio for IRFj. To aid interpretation, the IRF-wide standardized risk ratio, SRRj, is then multiplied by the overall national raw readmission rate for all IRF stays, Ῡ, to produce the IRF-wide risk-standardized readmission rate (RSRRj).

RSRR j = SRR j\*Ῡ (5)

**Table 1 and Figures 4-5 from Section 1b.2**

**1b.2. Provide performance scores** on the measure as specified

Table 1: Distribution of unadjusted and risk-standardized readmission rates among IRFs, 2010/2011

|  | **N** | **Mean** | **SD** | **Min** | **10th Pctl** | **25th Pctl** | **Median** | **75th Pctl** | **90th Pctl** | **Max** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Unadjusted readmission rate** | 1,171 | 13.1 | 4.6 | 0.0 | 8.7 | 10.7 | 12.9 | 15.1 | 17.2 | 100.0 |
| **Risk-standardized readmission rate** | 1,171 | 13.5 | 0.7 | 11.1 | 12.6 | 13.0 | 13.5 | 13.9 | 14.4 | 16.1 |

Source: RTI analysis of Medicare claims data, 2007-2012. (RTI program references: lc32\_RSRR\_IRF\_1011.xlsx)

Figure 4: Distribution of unadjusted readmission rates among IRFs

[N=1,171; Mean (StD) 13.1 (4.6)]

Source: RTI analysis of Medicare claims data, 2007-2012. (RTI program reference: lc22\_irf\_gv15\_ALL\_rsrr\_1011.xlsx)

Figure 5: Distribution of risk standardized readmission rates (RSRR) among IRFs

[N=1,171; Mean (StD) 13.5 (0.1)]

Source: RTI analysis of Medicare claims data, 2007-2012. (RTI program reference: lc22\_irf\_gv15\_ALL\_rsrr\_1011.xlsx)

**Tables 2-5 from Section 1b.4**

**1b.4. Provide disparities data from the measure as specified**

**Table 2: Sample Descriptives for Race and SES Risk-Adjusters**

|  |  |  |
| --- | --- | --- |
| Risk-Adjuster | IRF Post-Discharge 2010/2011 Readmission Model Sample  Unadjusted Rates  (n=590,120) | |
|  | % sample with covariate | % with unplanned readmission |
| White | 85.2 | 13.4 |
| Black | 10.2 | 15.5 |
| Other | 4.6 | 13.7 |
| Medicaid Buy-In | 18.7 | 16.0 |

Source: RTI International analysis of Medicare claims data, 2007-2012. (RTI program reference: lc35)

**Table 3: Odds Ratios for Race and SES Risk-Adjusters**

|  |  |  |
| --- | --- | --- |
| Risk-Adjuster | IRF Post-Discharge 2010/2011 Readmission Model | |
|  | Odds Ratio | 95% Confidence Interval |
| White | REF | REF |
| Black | 0.99 | 0.96-1.01 |
| Other | 0.91 | 0.88-0.95 |
| Medicaid Buy-In Indicator | 1.14 | 1.11-1.16 |

Note: Full set of risk-adjusters not shown.

Source: RTI International analysis of Medicare claims data, 2007-2012. (RTI program reference: lc35)

Table 4: Race: Distribution of Risk-Standardized Readmission Rate (%) by Facility Proportion Non-White Patients, 2010/2011

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| % of Facility Patients that are Non-White | N Obs (IRFs) | Mean | Minimum | 25th  Pctl | Median | 75th  Pctl | Maximum |
| 0 to <5% | 313 | 13.4 | 11.7 | 13.0 | 13.4 | 13.9 | 16.1 |
| 5 to <10% | 271 | 13.4 | 11.2 | 13.0 | 13.4 | 13.8 | 15.5 |
| 10 to <20% | 285 | 13.6 | 11.1 | 13.1 | 13.5 | 14.1 | 15.7 |
| 20% or more | 302 | 13.5 | 11.8 | 13.1 | 13.6 | 13.9 | 15.6 |
| Total IRFs | 1,171 | 13.5 | 11.1 | 13.0 | 13.5 | 13.9 | 16.1 |

Note: IRF=Inpatient rehabilitation facility; Obs=Observations; Pctl=Percentile.

Source: RTI analysis of Medicare claims data, 2007-2012. (RTI program references: lc38)

Table 5: SES: Distribution of Risk-Standardized Readmission Rate (%) by Facility Proportion of Patients with Buy-In, 2010/2011

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| % of Facility Patients with State Buy-In during 2010/2011 | N Obs (IRFs) | Mean | Minimum | 25th  Pctl | Median | 75th  Pctl | Maximum |
| 0 to <12% | 288 | 13.4 | 11.5 | 13.0 | 13.4 | 13.8 | 15.5 |
| 12 to <17% | 305 | 13.4 | 11.2 | 12.9 | 13.3 | 13.8 | 15.7 |
| 17 to <24% | 291 | 13.5 | 11.1 | 13.1 | 13.5 | 14.0 | 16.1 |
| 24% or more | 287 | 13.6 | 11.8 | 13.2 | 13.6 | 14.0 | 15.5 |
| Total IRFs | 1,171 | 13.5 | 11.1 | 13.0 | 13.5 | 13.9 | 16.1 |

Note: IRF=Inpatient rehabilitation facility; Obs=Observations; Pctl=Percentile.

Source: RTI analysis of Medicare claims data, 2007-2012. (RTI program references: lc38)

APPENDIX A  
TABLES

Appendix Table A1. Procedure Categories That Are Always Planned Regardless of Diagnosis Procedure

|  |  |
| --- | --- |
| AHRQ CCS Procedures | Name |
| 64 | Bone marrow transplant |
| 105 | Kidney transplant |
| 134 | Cesarean section |
| 135 | Forceps; vacuum; and breech delivery |
| 176 | Other organ transplantation |

Appendix Table A2. Diagnosis Categories That Are Always Planned Regardless of Procedure

|  |  |
| --- | --- |
| AHRQ CCS Diagnoses | Name |
| 45 | Maintenance chemotherapy |
| 194 | Forceps delivery |
| 196 | Normal pregnancy and/or delivery |
| 254 | Rehabilitation |

Appendix Table A3. List of Potentially Planned Procedure Categories

|  |  |
| --- | --- |
| AHRQ CCS Procedures | Name |
| 3 | Laminectomy; excision intervertebral disc |
| 5 | Insertion of catheter or spinal stimulator and injection into spinal |
| 9 | Other OR therapeutic nervous system procedures |
| 10 | Thyroidectomy; partial or complete |
| 12 | Other therapeutic endocrine procedures |
| 33 | Other OR therapeutic procedures on nose; mouth and pharynx |
| 36 | Lobectomy or pneumonectomy |
| 38 | Other diagnostic procedures on lung and bronchus |
| 40 | Other diagnostic procedures of respiratory tract and mediastinum |
| 43 | Heart valve procedures |
| 44 | Coronary artery bypass graft (CABG) |
| 45 | Percutaneous transluminal coronary angioplasty (PTCA) |
| 47 | Diagnostic cardiac catheterization; coronary arteriography |
| 48 | Insertion; revision; replacement; removal of cardiac pacemaker or cardioverter/defibrillator |
| 49 | Other OR heart procedures |
| 51 | Endarterectomy; vessel of head and neck |
| 52 | Aortic resection; replacement or anastomosis |
| 53 | Varicose vein stripping; lower limb |
| 55 | Peripheral vascular bypass |
| 56 | Other vascular bypass and shunt; not heart |
| 59 | Other OR procedures on vessels of head and neck |
| 62 | Other diagnostic cardiovascular procedures |
| 66 | Procedures on spleen |
| 67 | Other therapeutic procedures; hemic and lymphatic system |
| 74 | Gastrectomy; partial and total |
| 78 | Colorectal resection |
| 79 | Local excision of large intestine lesion (not endoscopic) |
| 84 | Cholecystectomy and common duct exploration |
| 85 | Inguinal and femoral hernia repair |
| 86 | Other hernia repair |
| 99 | Other OR gastrointestinal therapeutic procedures |
| 104 | Nephrectomy; partial or complete |
| 106 | Genitourinary incontinence procedures |
| 107 | Extracorporeal lithotripsy; urinary |

(continued)

Appendix Table A3. List of Potentially Planned Procedure Categories (continued)

|  |  |
| --- | --- |
| AHRQ CCS Procedures | Name |
| 109 | Procedures on the urethra |
| 112 | Other OR therapeutic procedures of urinary tract |
| 113 | Transurethral resection of prostate (TURP) |
| 114 | Open prostatectomy |
| 119 | Oophorectomy; unilateral and bilateral |
| 120 | Other operations on ovary |
| 124 | Hysterectomy; abdominal and vaginal |
| 129 | Repair of cystocele and rectocele; obliteration of vaginal vault |
| 132 | Other OR therapeutic procedures; female organs |
| 142 | Partial excision bone |
| 152 | Arthroplasty knee |
| 153 | Hip replacement; total and partial |
| 154 | Arthroplasty other than hip or knee |
| 157 | Amputation of lower extremity |
| 158 | Spinal fusion |
| 159 | Other diagnostic procedures on musculoskeletal system |
| 166 | Lumpectomy; quadrantectomy of breast |
| 167 | Mastectomy |
| 169 | Debridement of wound; infection or burn |
| 170 | Excision of skin lesion |
| 172 | Skin graft |
| 211 | Therapeutic radiology for cancer treatment |
| 224 | Cancer chemotherapy |

|  |  |
| --- | --- |
| ICD-9 Codes | Description |
| 30.1, 30.29, 30.3, 30.4, 31.74, 34.6 | Laryngectomy, revision of tracheostomy, scarification of pleura (from Proc CCS 42—Other OR Rx procedures on respiratory system and mediastinum) |
| 38.18 | Endarterectomy leg vessel (from Proc CCS 60—Embolectomy and endarterectomy of lower limbs) |
| 55.03, 55.04 | Percutaneous nephrostomy with and without fragmentation (from Proc CCS 103—Nephrotomy and nephrostomy) |
| 94.26, 94.27 | Electroshock therapy (from Proc CCS 218—Psychological and psychiatric evaluation and therapy) |

Appendix Table A4. Acute Diagnosis Categories That Disqualify a Readmission from Being Considered Planned

|  |  |
| --- | --- |
| Diagnosis CCS | Description |
| 1 | Tuberculosis |
| 2 | Septicemia (except in labor) |
| 3 | Bacterial infection; unspecified site |
| 4 | Mycoses |
| 5 | HIV infection |
| 7 | Viral infection |
| 8 | Other infections; including parasitic |
| 9 | Sexually transmitted infections (not HIV or hepatitis) |
| 54 | Gout and other crystal arthropathies |
| 55 | Fluid and electrolyte disorders |
| 60 | Acute posthemorrhagic anemia |
| 61 | Sickle cell anemia |
| 63 | Diseases of white blood cells |
| 76 | Meningitis (except that caused by tuberculosis or sexually transmitted disease) |
| 77 | Encephalitis (except that caused by tuberculosis or sexually transmitted disease) |
| 78 | Other CNS infection and poliomyelitis |
| 82 | Paralysis |
| 83 | Epilepsy; convulsions |
| 84 | Headache; including migraine |
| 85 | Coma; stupor; and brain damage |
| 87 | Retinal detachments; defects; vascular occlusion; and retinopathy |
| 89 | Blindness and vision defects |
| 90 | Inflammation; infection of eye (except that caused by tuberculosis or sexually transmitted disease) |
| 91 | Other eye disorders |
| 92 | Otitis media and related conditions |
| 93 | Conditions associated with dizziness or vertigo |
| 100 | Acute myocardial infarction (with the exception of ICD-9 codes 410.x2) |
| 102 | Nonspecific chest pain |
| 104 | Other and ill-defined heart disease |
| 107 | Cardiac arrest and ventricular fibrillation |
| 109 | Acute cerebrovascular disease |
| 112 | Transient cerebral ischemia |

(continued)

Appendix Table A4. Acute Diagnosis Categories That Disqualify a Readmission from Being Considered Planned (continued)

|  |  |
| --- | --- |
| Diagnosis CCS | Description |
| 116 | Aortic and peripheral arterial embolism or thrombosis |
| 118 | Phlebitis; thrombophlebitis and thromboembolism |
| 120 | Hemorrhoids |
| 122 | Pneumonia (except that caused by TB or sexually transmitted disease) |
| 123 | Influenza |
| 124 | Acute and chronic tonsillitis |
| 125 | Acute bronchitis |
| 126 | Other upper respiratory infections |
| 127 | Chronic obstructive pulmonary disease and bronchiectasis |
| 128 | Asthma |
| 130 | Pleurisy; pneumothorax; pulmonary collapse |
| 131 | Respiratory failure; insufficiency; arrest (adult) |
| 135 | Intestinal infection |
| 137 | Diseases of mouth; excluding dental |
| 139 | Gastroduodenal ulcer (except hemorrhage) |
| 140 | Gastritis and duodenitis |
| 142 | Appendicitis and other appendiceal conditions |
| 145 | Intestinal obstruction without hernia |
| 146 | Diverticulosis and diverticulitis |
| 148 | Peritonitis and intestinal abscess |
| 153 | Gastrointestinal hemorrhage |
| 154 | Noninfectious gastroenteritis |
| 157 | Acute and unspecified renal failure |
| 159 | Urinary tract infections |
| 165 | Inflammatory conditions of male genital organs |
| 168 | Inflammatory diseases of female pelvic organs |
| 169 | Debridement of wound; infection or burn |
| 172 | Ovarian cyst |
| 197 | Skin and subcutaneous tissue infections |
| 198 | Other inflammatory condition of skin |
| 225 | Joint disorders and dislocations; trauma-related |
| 226 | Fracture of neck of femur (hip) |
| 227 | Spinal cord injury |

(continued)

Appendix Table A4. Acute Diagnosis Categories That Disqualify a Readmission from Being Considered Planned (continued)

|  |  |
| --- | --- |
| Diagnosis CCS | Description |
| 228 | Skull and face fractures |
| 229 | Fracture of upper limb |
| 230 | Fracture of lower limb |
| 232 | Sprains and strains |
| 233 | Intracranial injury |
| 234 | Crushing injury or internal injury |
| 235 | Open wounds of head; neck; and trunk |
| 237 | Complication of device; implant or graft |
| 238 | Complications of surgical procedures or medical care |
| 239 | Superficial injury; contusion |
| 240 | Burns |
| 241 | Poisoning by psychotropic agents |
| 242 | Poisoning by other medications and drugs |
| 243 | Poisoning by nonmedicinal substances |
| 244 | Other injuries and conditions due to external causes |
| 245 | Syncope |
| 246 | Fever of unknown origin |
| 247 | Lymphadenitis |
| 249 | Shock |
| 250 | Nausea and vomiting |
| 251 | Abdominal pain |
| 252 | Malaise and fatigue |
| 253 | Allergic reactions |
| 259 | Residual codes; unclassified |
| 650 | Adjustment disorders |
| 651 | Anxiety disorders |
| 652 | Attention-deficit, conduct, and disruptive behavior disorders |
| 653 | Delirium, dementia, and amnestic and other cognitive disorders |
| 656 | Impulse control disorders, NEC |
| 658 | Personality disorders |
| 660 | Alcohol-related disorders |
| 661 | Substance-related disorders |
| 662 | Suicide and intentional self-inflicted injury |
| 663 | Screening and history of mental health and substance abuse codes |

(continued)

Appendix Table A4. Acute Diagnosis Categories That Disqualify a Readmission from Being Considered Planned (continued)

|  |  |
| --- | --- |
| Diagnosis CCS | Description |
| 670 | Miscellaneous disorders |
| ICD-9 Codes | Description |
| **Acute ICD-9 codes within Dx CCS 97: Peri-; endo-; and myocarditis; cardiomyopathy** | |
| 03282 | Diphtheritic myocarditis |
| 03640 | Meningococcal carditis nos |
| 03641 | Meningococcal pericarditis |
| 03642 | Meningococcal endocarditis |
| 03643 | Meningococcal myocarditis |
| 07420 | Coxsackie carditis nos |
| 07421 | Coxsackie pericarditis |
| 07422 | Coxsackie endocarditis |
| 07423 | Coxsackie myocarditis |
| 11281 | Candidal endocarditis |
| 11503 | Histoplasma capsulatum pericarditis |
| 11504 | Histoplasma capsulatum endocarditis |
| 11513 | Histoplasma duboisii pericarditis |
| 11514 | Histoplasma duboisii endocarditis |
| 11593 | Histoplasmosis pericarditis |
| 11594 | Histoplasmosis endocarditis |
| 1303 | Toxoplasma myocarditis |
| 3910 | Acute rheumatic pericarditis |
| 3911 | Acute rheumatic endocarditis |
| 3912 | Acute rheumatic myocarditis |
| 3918 | Acute rheumatic heart disease nec |
| 3919 | Acute rheumatic heart disease nos |
| 3920 | Rheumatic chorea w heart involvement |
| 3980 | Rheumatic myocarditis |
| 39890 | Rheumatic heart disease nos |
| 39899 | Rheumatic heart disease nec |
| 4200 | Acute pericarditis in other disease |
| 42090 | Acute pericarditis nos |
| 42091 | Acute idiopath pericarditis |
| 42099 | Acute pericarditis nec |
| 4210 | Acute/subacute bacterial endocarditis |

(continued)

Appendix Table A4. Acute Diagnosis Categories That Disqualify a Readmission from Being Considered Planned (continued)

|  |  |  |
| --- | --- | --- |
| Diagnosis CCS | | Description |
| 4211 | | Acute endocarditis in other diseases |
| 4219 | | Acute/subacute endocarditis nos |
| 4220 | | Acute myocarditis in other diseases |
| 42290 | | Acute myocarditis nos |
| 42291 | | Idiopathic myocarditis |
| 42292 | | Septic myocarditis |
| 42293 | | Toxic myocarditis |
| 42299 | | Acute myocarditis nec |
| 4230 | | Hemopericardium |
| 4231 | | Adhesive pericarditis |
| 4232 | | Constrictive pericarditis |
| 4233 | | Cardiac tamponade |
| 4290 | | Myocarditis nos |
| **Acute ICD-9 codes within Dx CCS 105: Conduction disorders** | | |
| 4260 | Atrioventricular block complete | |
| 42610 | Atrioventricular block nos | |
| 42611 | Atrioventricular block—1st degree | |
| 42612 | Atrioventricular block—mobitz ii | |
| 42613 | Atrioventricular block—2nd degree nec | |
| 4262 | Left bundle branch hemiblock | |
| 4263 | Left bundle branch block nec | |
| 4264 | Right bundle branch block | |
| 42650 | Bundle branch block nos | |
| 42651 | Right bundle branch block/left posterior fascicular block | |
| 42652 | Right bundle branch block/left ant fascicular block | |
| 42653 | Bilateral bundle branch block nec | |
| 42654 | Trifascicular block | |
| 4266 | Other heart block | |
| 4267 | Anomalous atrioventricular excitation | |
| 42681 | Lown-ganong-levine syndrome | |
| 42682 | Long qt syndrome | |
| 4269 | Conduction disorder nos | |

(continued)

Appendix Table A4. Acute Diagnosis Categories That Disqualify a Readmission from Being Considered Planned (continued)

|  |  |
| --- | --- |
| Diagnosis CCS | Description |
| **Acute ICD-9 codes within Dx CCS 106: Dysrhythmia** | |
| 4272 | Paroxysmal tachycardia nos |
| 7850 | Tachycardia nos |
| 42789 | Cardiac dysrhythmias nec |
| 4279 | Cardiac dysrhythmia nos |
| 42769 | Premature beats nec |
| **Acute ICD-9 codes within Dx CCS 108: Congestive heart failure; nonhypertensive** | |
| 39891 | Rheumatic heart failure |
| 4280 | Congestive heart failure |
| 4281 | Left heart failure |
| 42820 | Unspecified systolic heart failure |
| 42821 | Acute systolic heart failure |
| 42823 | Acute on chronic systolic heart failure |
| 42830 | Unspecified diastolic heart failure |
| 42831 | Acute diastolic heart failure |
| 42833 | Acute on chronic diastolic heart failure |
| 42840 | Unpec combined syst & dias heart failure |
| 42841 | Acute combined systolic & diastolic heart failure |
| 42843 | Acute on chronic combined systolic & diastolic heart failure |
| 4289 | Heart failure nos |

Appendix Table A5. Additions to List of Planned Readmissions Currently Used in the Hospital-Wide Readmission Measure,\* for Use in the IRF Measure

|  |  |  |
| --- | --- | --- |
| AHRQ CCS Single Level Procedures Codes | Description | Comment |
| 37 | Diagnostic Bronchoscopy and Biopsy of Bronchus |  |
| 71 | Gastrostomy: temporary and permanent |  |
| 82 | Endoscopic retrograde cannulation of pancreases (ERCP) |  |
| 87 | Laparoscopy (GI only) |  |
| 89 | Exploratory Laparotomy |  |
| 160 | Other therapeutic procedure on muscles and tendons |  |
| 164 | Other OR therapeutic procedures on musculoskeletal system |  |
| 171 | Suture of skin and subcutaneous tissue |  |

| ICD-9 Procedure Codes | Description | Comment |
| --- | --- | --- |
| **Amputation of Lower Extremity** | | |
| 83.82 | Graft of muscle or fascia |  |
| 86.87 | Fat graft of skin and subcutaneous tissue | Required, Diagnosis V58.41, encounter for planned postoperative wound closure |
| **Amputation of Upper Extremity** | | |
| 84.00 | Upper limb amputation, not otherwise specified |  |
| 84.01 | Amputation and disarticulation of finger |  |
| 84.02 | Amputation and disarticulation of thumb |  |
| 84.03 | Amputation through hand |  |
| 84.04 | Disarticulation of wrist |  |
| 84.05 | Amputation through forearm |  |
| 84.06 | Disarticulation of elbow |  |
| 84.07 | Amputation through humerus |  |
| 84.08 | Disarticulation of shoulder |  |
| 84.09 | Interthoracoscapular amputation |  |
| **Removal of Vascular Obstruction, Non-Coronary** | | |
| 38.18 | Endarterectomy, lower limb vessels |  |
| 38.08 | Embolectomy, lower limb arteries |  |
| 39.50 | Angioplasty or atherectomy of other non-coronary vessels |  |
| 00.55 | Insertion of drug-eluting stent(s) of other peripheral vessel(s) |  |
| 00.60 | Insertion of drug-eluting stent(s) of superficial femoral artery |  |
| 39.90 | Insertion of non-drug-eluting peripheral (non-coronary) vessel stent(s) |  |
| **Intestinal and Rectal Procedures, Selected** | | |
| 46.85 | Dilation of intestine (includes endosopic approach) |  |
| 96.08 | Insertion of naso-intestinal tube (includes for decompression) |  |
| 96.09 | Insertion of rectal tube |  |
| 46.50 | Closure of intestinal stoma, not otherwise specified | Required, Diagnosis code V55.2, attention to ileostomy, or V55.3, attention to colostomy |
| 46.51 | Closure of stoma of small intestine | Required, Diagnosis code V55.2, attention to ileostomy, or V55.3, attention to colostomy |
| 46.52 | Closure of stoma of large intestine | Required, Diagnosis code V55.2, attention to ileostomy, or V55.3, attention to colostomy |
| 46.86 | Endoscopic insertion of colonic stent(s) |  |
| 46.87 | Other insertion of colonic stent (s) |  |
| **Insertion of Feeding Tubes** | | |
| 44.39 | Other gastroenterostomy (GJ-tube) |  |
| 46.39 | Other enterostomy (J-tube) |  |
| **Routine Device Replacement** | | |
| 86.06 | Insertion of totally implanted infusion pump |  |
| **Routine Removal of Devices** | | |
| 84.57 | Removal of (cement) spacer (includes antibiotic impregnated spacer) |  |
| 97.41 | Removal of thoracotomy tube or pleural cavity drain (non-incisional) |  |
| 02.43 | Removal of ventricular shunt |  |
| 97.37 | Removal of tracheostomy tube (non-incisional) |  |
| 01.27 | removal of catheter(s) from cranial cavity or tissue |  |
| 86.05 | Incision with removal of foreign body or device from skin and subcutaneous tissue |  |
| 02.95 | Removal of skull tongs or halo traction device |  |
| 78.60–78.69 | Removal of implanted devices from bone(includes internal and external fixation) |  |
| 80.00–80.09 | Orthopedic implants arthrotomy for removal of prosthesis without replacement | This code became available in CY 2010 |
| **Pleurosclerosis** | | |
| 34.6 | Scarification of pleura |  |
| 34.92 | Injection into thoracic cavity |  |
| **Endoscope** | | |
| 51.14 | Other close (endoscopic) biopsy of biliary duct or sphincter of Oddi |  |
| 51.64 | Endoscopic excision or destruction of lesion of biliary ducts or sphincter of Oddi |  |
| 51.84 | Endoscopic dilation of ampulla and biliary duct |  |
| 51.85 | Endoscopic sphincterotomy and papillotomy |  |
| 51.86 | Endoscopic insertion of nasobiliary drainage tube |  |
| 51.87 | Endoscopic insertion of stent (tube) into bile duct |  |
| 51.88 | Endoscopic removal of stone(s)from biliary tract |  |
| **Fistula** | | |
| 42.84 | Repair of esophageal fistula, not elsewhere classified |  |
| 44.63 | Closure of other gastric fistula (include gastrocolic, gastrojejunocolic fistula) |  |
| 46.72 | Closure of fistula of duodenum |  |
| 46.74 | Closure of fistula of small intestine, except duodenum (includes enterocutaneous) |  |
| 46.76 | Closure of fistula of large intestine |  |
| 47.92 | Closure of appendiceal fistula |  |
| 48.73 | Closure of other rectal fistula |  |
| 48.93 | Repair of perirectal fistula |  |
| 49.11 | Anal fistulotomy |  |
| 49.12 | Anal fistulectomy |  |
| 49.73 | Closure of anal fistula |  |
| 19.9 | Other repair of middle ear (includes closure of mastoid fistula |  |
| 20.93 | Repair of oval and round windows (includes closure of fistula) |  |
| 21.82 | Closure of nasal fistula |  |
| 31.62 | Closure of fistula of larynx (includes laryngotracheal) |  |
| 31.73 | Closure of other fistula of trachea (includes tracheoesophageal) |  |
| 33.42 | Closure of bronchial fistula (includes bronchocutaneous, bronchoesophageal, bronchovisceral) |  |
| 34.73 | Closure of other fistula of thorax (includes bronchopleural, bronchopleurocutaneous, bronchopleuromediastinal) |  |
| 34.83 | Closure of fistula of diaphragm (includes thoracicoabdominal, thoracicogastric, thoracicointestinal) |  |
| 34.93 | Repair of pleura (includes closure of unspecified pleural fistula) |  |
| 61.42 | repair of scrotal fistula |  |
| **Tendon Repair (eye)** | | |
| 15.7 | Repair of injury of extraocular muscle (includes repair of tendon) |  |
| **Aneurysm** | | |
| 39.51 | Clipping of aneurysm |  |

Appendix Table A6. Provisional Mapping of ICD-10 Procedure Codes to ICD-9 Procedure Codes Marking Planned Readmissions Added for PAC Settings

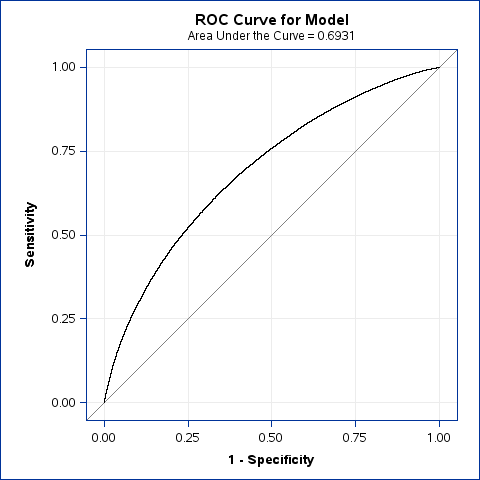
| Procedure Name | ICD-9 Procedure Codes | Description | Code | ICD-10 Procedure Codes |
| --- | --- | --- | --- | --- |
| Amputation of Lower Extremity | **83.82** | Graft of muscle or fascia | 0JRL\*\*\* | Subcut Tissue and Fascia, Replace, right upper leg |
| 0JRM\*\*\* | Subcut Tissue and Fascia, Replace, left upper leg |
|  | 0JRN\*\*\* | Subcut Tissue and Fascia, Replace, right lower leg |
|  |  | 0JRP\*\*\* | Subcut Tissue and Fascia, Replace, left lower leg |
|  |  | 0JRQ\*\*\* | Subcut Tissue and Fascia, Replace, right foot |
|  |  | 0JRR\*\*\* | Subcut Tissue and Fascia, Replace, left foot |
|  |  |  | 0JUL\*\*\* | Subcut Tissue and Fascia, Supplement, right upper leg |
|  |  |  | 0JUM\*\*\* | Subcut Tissue and Fascia, Supplement, left upper leg |
|  |  |  | 0JUN\*\*\* | Subcut Tissue and Fascia, Supplement, right lower leg |
|  |  |  | 0JUP\*\*\* | Subcut Tissue and Fascia, Supplement, left lower leg |
|  |  |  | 0JUQ\*\*\* | Subcut Tissue and Fascia, Supplement, right foot |
|  |  |  | 0JUR\*\*\* | Subcut Tissue and Fascia, Supplement, left foot |
|  |  |  | 0JX\*\*ZZ | Subcut Tissue and Fascia, Transfer |
|  |  |  | 0JXL\*ZZ | Subcut Tissue and Fascia, Transfer, right upper leg |
|  |  |  | 0JXM\*ZZ | Subcut Tissue and Fascia, Transfer, left upper leg |
|  |  |  | 0JXN\*ZZ | Subcut Tissue and Fascia, Transfer, right lower leg |
|  |  |  | 0JXP\*ZZ | Subcut Tissue and Fascia, Transfer, left lower leg |
|  |  |  | 0JXQ\*ZZ | Subcut Tissue and Fascia, Transfer, right foot |
|  |  |  | 0JXR\*ZZ | Subcut Tissue and Fascia, Transfer, left foot |
|  |  |  | 0KUQ\*\*\* | Muscles, Supplement, R Up Leg Muscle |
|  |  |  | 0KUR\*\*\* | Muscles, Supplement, L Up Leg Muscle |
|  |  |  | 0KUS\*\*\* | Muscles, Supplement, R Low Leg Muscle |
|  |  |  | 0KUT\*\*\* | Muscles, Supplement, L Low Leg Muscle |
|  |  |  | 0KUV\*\*\* | Muscles, Supplement, Right Foot Muscle |
|  |  |  | 0KUW\*\*\* | Muscles, Supplement, Left Foot Muscle |
|  | **86.87** | Fat graft of skin and subcutaneous tissue | 0JDL\*ZZ | Extraction of, Right Upper Leg, Subcu/Fascia |
|  | 0JDM\*ZZ | Extraction of, Left Upper Leg, Subcu/Fascia |
|  | 0JDN\*ZZ | Extraction of, Right Lower Leg, Subcu/Fascia |
|  | 0JDP\*ZZ | Extraction of, Left Lower Leg, Subcu/Fascia |
|  | 0JDQ\*ZZ | Extraction of, Right Foot, Subcu/Fascia |
|  | 0JDR\*ZZ | Extraction of, Left Foot, Subcu/Fascia |
| Amputation of Upper Extremity | **84.00** | Upper limb amputation, not otherwise specified | 0X680\*\* | Detachment at Right Upper Arm, Open Approach |
| 0X690\*\* | Detachment at Left Upper Arm, Open Approach |
| 0X6D0\*\* | Detachment at Right Lower Arm, Open Approach |
| 0X6F0\*\* | Detachment at Left Lower Arm, Open Approach |
| **84.01** | Amputation and disarticulation of finger | 0X6N0Z\* | Detachment at Right Index Finger, Open Approach |
| 0X6P0Z\* | Detachment at Left Index Finger, Open Approach |
| 0X6Q0Z\* | Detachment at Right Middle Finger, Open Approach |
| 0X6ROZ\* | Detachment at Left Middle Finger, Open Approach |
| 0X6SOZ\* | Detachment at Right Ring Finger, Open Approach |
| 0X6TOZ\* | Detachment at Left Ring Finger, Open Approach |
| 0X6VOZ\* | Detachment at Right Little Finger, Open Approach |
| 0X6WOZ\* | Detachment at Left Little Finger, Open Approach |
| **84.02** | Amputation and disarticulation of thumb | 0X6L0Z\* | Detachment at Right Thumb, Open Approach |
| 0X6M0Z\* | Detachment at Left Thumb, Open Approach |
|  | **84.03** | Amputation through hand | 0X6J0Z\* | Detachment at Right Hand, Open Approach |
| 0X6K0Z\* | Detachment at Left Hand, Partial Approach |
| **84.04** | Disarticulation of wrist | 0X6J0Z0 | Detachment at Right Hand, Complete, Open Approach |
| 0X6K0Z0 | Detachment at Left Hand, Complete, Open Approach |
| **84.05** | Amputation through forearm | 0X6D0Z\* | Detachment at Right Lower Arm , Open Approach |
| 0X6F0Z\* | Detachment at Left Lower Arm , Open Approach |
| **84.06** | Disarticulation of elbow | 0X6B0ZZ | Detachment at Right Elbow Region, Open Approach |
| 0X6C0ZZ | Detachment at Right Elbow Region, Open Approach |
| **84.07** | Amputation through humerus | 0X680Z\* | Detachment at Right Upper Arm, Open Approach |
| 0X690Z\* | Detachment at Left Upper Arm, Open Approach |
| **84.08** | Disarticulation of shoulder | 0X620ZZ | Detachment at Right Shoulder Region, Open Approach |
| 0X630ZZ | Detachment at Left Shoulder Region, Open Approach |
| **84.09** | Interthoracoscapular amputation | 0X600ZZ | Detachment at Right Forequarter, Open Approach |
| 0X610ZZ | Detachment at Left Forequarter, Open Approach |
| Removal of Vascular Obstruction, Non-Coronary | **38.18** | Endarterectomy, lower limb vessels | 04CK\*ZZ | Extirpation of Matter from R Femor Art |
| 04CL\*ZZ | Extirpation of Matter from L Femor Art |
| 04CM\*ZZ | Extirpation of Matter from R Poplit Art |
|  |  | 04CN\*ZZ | Extirpation of Matter from L Poplit Art |
|  |  | 04CP\*ZZ | Extirpation of Matter from R Ant Tib Art |
|  |  | 04CQ\*ZZ | Extirpation of Matter from L Ant Tib Art |
|  |  | 04CR\*ZZ | Extirpation of Matter from R Post Tib Art |
|  |  | 04CS\*ZZ | Extirpation of Matter from L Post Tib Art |
|  |  | 04CT\*ZZ | Extirpation of Matter from R Peroneal Tib Art |
|  |  | 04CU\*ZZ | Extirpation of Matter from L Peroneal Art |
|  |  | 04CV\*ZZ | Extirpation of Matter from Right Foot Art |
|  |  | 04CW\*ZZ | Extirpation of Matter from Left Foot Art |
|  |  |  | 04CY\*ZZ | Extirpation of Matter from Lower Artery, Perc Endo Approach |
|  | **38.08** | Embolectomy, lower limb arteries | 04CK\*ZZ | Extirpation of Matter from R Femor Art |
|  |  | 04CL\*ZZ | Extirpation of Matter from L Femor Art |
|  |  |  | 04CM\*ZZ | Extirpation of Matter from R Poplit Art |
|  |  |  | 04CN\*ZZ | Extirpation of Matter from L Poplit Art |
|  |  |  | 04CP\*ZZ | Extirpation of Matter from R Ant Tib Art |
|  |  |  | 04CQ\*ZZ | Extirpation of Matter from L Ant Tib Art |
|  |  |  | 04CR\*ZZ | Extirpation of Matter from R Post Tib Art |
|  |  |  | 04CS\*ZZ | Extirpation of Matter from L Post Tib Art |
|  |  |  | 04CT\*ZZ | Extirpation of Matter from R Peroneal Tib Art |
|  |  |  | 04CU\*ZZ | Extirpation of Matter from L Peroneal Art |
|  |  |  | 04CV\*ZZ | Extirpation of Matter from Right Foot Art |
|  |  |  | 04CW\*ZZ | Extirpation of Matter from Left Foot Art |
|  |  |  | 04CY\*ZZ | Extirpation of Matter from Lower Artery, Perc Endo Approach |
|  |  |  | 04HY3DZ | Insertion of Intraluminal Device into Low Art, Perc Approach |
|  |  |  | 04HY42Z | Insertion of Monitor Dev into Low Art, Perc Endo Approach |
|  |  |  | 04HY43Z | Insertion of Infusion Dev into Low Art, Perc Endo Approach |
|  |  |  | 04HY4DZ | Insertion of Intralum Dev into Low Art, Perc Endo Approach |
|  | **39.50** | Angioplasty or atherectomy of other non-coronary vessels | 0370\*\*Z | Dilate R Mammary Art, all approaches |
|  | 0371\*\*Z | Dilate L Mammary Art, all approaches |
|  | 0372\*\*Z | Dilate Innominate Art, all approaches |
|  | 0373\*\*Z | Dilate R Subclav Art, all approaches |
|  | 0374\*\*Z | Dilate L Subclav Art, all approaches |
|  |  |  | 0375\*\*Z | Dilate R Axilla Art |
|  |  |  | 0376\*\*Z | Dilate L Axilla Art |
|  |  |  | 0377\*\*Z | Dilate R Brachial Art |
|  |  |  | 0378\*\*Z | Dilate L Brachial Art |
|  |  |  | 0379\*\*Z | Dilate R Ulnar Art |
|  |  |  | 037A\*\*Z | Dilate L Ulnar Art |
|  |  |  | 037B\*\*Z | Dilate R Radial Art |
|  |  |  | 037C\*\*Z | Dilate L Radial Art |
|  |  |  | 037D\*\*Z | Dilate R Hand Art |
|  |  |  | 037F\*\*Z | Dilate L Hand Art |
|  |  |  | 037R\*\*Z | Dilate Face Artery |
|  |  |  | 037S\*\*Z | Dilate Right Temporal Artery |
|  |  |  | 037T\*\*Z | Dilate Left Temporal Artery |
|  |  |  | 037U\*\*Z | Dilate R Thyroid Art |
|  |  |  | 037V\*\*Z | Dilate L Thyroid Art |
|  |  |  | 037Y\*\*Z | Dilate Upper Artery |
|  |  |  | 03C0\*ZZ | Extirpation of Matter from R Intern Mammary Art, all approaches |
|  |  |  | 03C1\*ZZ | Extirpation of Matter from L Intern Mammary Art, all approaches |
|  |  |  | 03C2\*ZZ | Extirpation of Matter from Innominate Art, all approaches |
|  |  |  | 03C3\*ZZ | Extirpation of Matter from R Subclav Art, all approaches |
|  |  |  | 03C4\*ZZ | Extirpation of Matter from L Subclav Art, all approaches |
|  |  |  | 03C5\*ZZ | Extirpation of Matter from R Axilla Art |
|  |  |  | 03C6\*ZZ | Extirpation of Matter from L Axilla Art |
|  |  |  | 03C7\*ZZ | Extirpation of Matter from R Brachial Art |
|  |  |  | 03C8\*ZZ | Extirpation of Matter from L Brachial Art |
|  |  |  | 03C9\*ZZ | Extirpation of Matter from R Ulnar Art |
|  |  |  | 03CA\*ZZ | Extirpation of Matter from L Ulnar Art |
|  |  |  | 03CB\*ZZ | Extirpation of Matter from R Radial Art |
|  |  |  | 03CC\*ZZ | Extirpation of Matter from L Radial Art |
|  |  |  | 03CD\*ZZ | Extirpation of Matter from R Hand Art |
|  |  |  | 03CF\*ZZ | Extirpation of Matter from L Hand Art |
|  |  |  | 03CR\*ZZ | Extirpation of Matter from Face Artery, Open Approach |
|  |  |  | 03CS\*ZZ | Extirpation of Matter from Right Temporal Artery |
|  |  |  | 03CT\*ZZ | Extirpation of Matter from Left Temporal Artery |
|  |  |  | 03CU\*ZZ | Extirpation of Matter from R Thyroid Art |
|  |  |  | 03CV\*ZZ | Extirpation of Matter from L Thyroid Art |
|  |  |  | 03CY\*ZZ | Extirpation of Matter from Upper Artery |
|  |  |  | 0470\*\*Z | Dilation of Abdominal Aorta |
|  |  |  | 0471\*\*Z | Dilation of Celiac Artery |
|  |  |  | 0472\*\*Z | Dilation of Gastric Artery |
|  |  |  | 0473\*\*Z | Dilation of Hepatic Artery |
|  |  |  | 0474\*\*Z | Dilation of Splenic Artery |
|  |  |  | 0475\*\*Z | Dilation of Superior Mesenteric Artery |
|  |  |  | 0476\*\*Z | Dilation of Right Colic Artery |
| 0477\*\*Z | Dilation of Left Colic Artery |
|  | 0478\*\*Z | Dilation of Middle Colic Artery |
|  | 0479\*\*Z | Dilation of R Renal Art Artery |
|  | 047A\*\*Z | Dilation of L Renal Art Artery |
|  |  | 047B\*\*Z | Dilation of Inferior Mesenteric Artery |
|  |  | 047C\*\*Z | Dilation of Right Common Iliac Artery |
|  |  |  | 047D\*\*Z | Dilation of Left Common Iliac Artery |
|  |  |  | 047E\*\*Z | Dilation of Right Internal Iliac Artery |
|  |  |  | 047F\*\*Z | Dilation of Left Internal Iliac Artery |
|  |  |  | 047H\*\*Z | Dilation of Right External Iliac Artery |
|  |  |  | 047J\*\*Z | Dilation of Left External Iliac Artery |
|  |  |  | 047K\*\*Z | Dilation of Right Femoral Artery |
|  |  |  | 047L\*\*Z | Dilation of Left Femoral Artery |
|  |  |  | 047M\*\*Z | Dilation of Right Popliteal Artery |
|  |  |  | 047N\*\*Z | Dilation of Left Popliteal Artery |
|  |  |  | 047P\*\*Z | Dilation of Right Anterior Tibial Artery |
|  |  |  | 047Q\*\*Z | Dilation of Left Anterior Tibial Artery |
|  |  |  | 047R\*\*Z | Dilation of Right Posterior Tibial Artery |
|  |  |  | 047S\*\*Z | Dilation of Left Posterior Tibial Artery |
|  |  |  | 047T\*\*Z | Dilation of Right Peroneal Artery |
|  |  |  | 047U\*\*Z | Dilation of Left Peroneal Artery |
|  |  |  | 047V\*\*Z | Dilation of Right Foot Artery |
|  |  |  | 047W\*\*Z | Dilation of Left Foot Artery |
|  |  |  | 047Y\*\*Z | Dilation of Lower Artery |
|  |  |  | 04C0\*ZZ | Extirpation of Abdominal Aorta |
|  |  |  | 04C1\*\*Z | Extirpation of Celiac Artery |
|  |  |  | 04C2\*\*Z | Extirpation of Gastric Artery |
|  |  |  | 04C3\*\*Z | Extirpation of Hepatic Artery |
|  |  |  | 04C4\*\*Z | Extirpation of Splenic Artery |
|  |  |  | 04C5\*\*Z | Extirpation of Superior Mesenteric Artery |
|  |  |  | 04C6\*\*Z | Extirpation of Right Colic Artery |
|  |  |  | 04C7\*\*Z | Extirpation of Left Colic Artery |
|  |  |  | 04C8\*\*Z | Extirpation of Middle Colic Artery |
|  |  |  | 04C9\*\*Z | Extirpation of R Renal Art Artery |
|  |  |  | 04CA\*\*Z | Extirpation of L Renal Art Artery |
|  |  |  | 04CB\*\*Z | Extirpation of Inferior Mesenteric Artery |
|  |  |  | 04CC\*\*Z | Extirpation of Right Common Iliac Artery |
|  |  |  | 04CD\*\*Z | Extirpation of Left Common Iliac Artery |
|  |  |  | 04CE\*\*Z | Extirpation of Right Internal Iliac Artery |
|  |  |  | 04CF\*\*Z | Extirpation of Left Internal Iliac Artery |
|  |  |  | 04CH\*\*Z | Extirpation of Right External Iliac Artery |
|  |  |  | 04CJ\*\*Z | Extirpation of Left External Iliac Artery |
|  |  |  | 047K\*\*Z | Extirpation of Right Femoral Artery |
|  |  |  | 047L\*\*Z | Extirpation of Left Femoral Artery |
|  |  |  | 047M\*\*Z | Extirpation of Right Popliteal Artery |
|  |  |  | 047N\*\*Z | Extirpation of Left Popliteal Artery |
|  |  |  | 047P\*\*Z | Extirpation of Right Anterior Tibial Artery |
|  |  |  | 047Q\*\*Z | Extirpation of Left Anterior Tibial Artery |
| 047R\*\*Z | Extirpation of Right Posterior Tibial Artery |
|  | 047S\*\*Z | Extirpation of Left Posterior Tibial Artery |
|  | 047T\*\*Z | Extirpation of Right Peroneal Artery |
|  | 047U\*\*Z | Extirpation of Left Peroneal Artery |
|  |  | 047V\*\*Z | Extirpation of Right Foot Artery |
|  |  |  | 047W\*\*Z | Extirpation of Left Foot Artery |
|  |  |  | 047Y\*\*Z | Extirpation of Lower Artery |
|  |  |  | 04CK\*ZZ | Extirpation of Matter from R Femor Art |
|  |  |  | 04CL\*ZZ | Extirpation of Matter from L Femor Art |
|  |  |  | 04CM\*ZZ | Extirpation of Matter from R Poplit Art |
|  |  |  | 04CN\*ZZ | Extirpation of Matter from L Poplit Art |
|  |  |  | 04CP\*ZZ | Extirpation of Matter from R Ant Tib Art |
|  |  |  | 04CQ\*ZZ | Extirpation of Matter from L Ant Tib Art |
|  |  |  | 04CR\*ZZ | Extirpation of Matter from R Post Tib Art |
|  |  |  | 04CS\*ZZ | Extirpation of Matter from L Post Tib Art |
|  |  |  | 04CT\*ZZ | Extirpation of Matter from R Peroneal Tib Art |
|  |  |  | 04CU\*ZZ | Extirpation of Matter from L Peroneal Art |
|  |  |  | 04CV\*ZZ | Extirpation of Matter from Right Foot Art |
|  |  |  | 04CW\*ZZ | Extirpation of Matter from Left Foot Art |
|  |  |  | 04CY\*ZZ | Extirpation of Matter from Lower Artery, Perc Endo Approach |
|  |  |  | 0570\*\*Z | Dilation of the Azygos Vein |
|  |  |  | 0571\*\*Z | Dilation of Hemiazygos Vein |
|  |  |  | 0573\*\*Z | Dilation of Right Innominate Vein |
|  |  |  | 0574\*\*Z | Dilation of Left Innominate Vein |
|  |  |  | 0575\*\*Z | Dilation of Right Subclavian Vein |
|  |  |  | 0576\*\*Z | Dilation of Left Subclavian Vein |
|  |  |  | 0577\*\*Z | Dilation of Right Axillary Vein |
|  |  |  | 0578\*\*Z | Dilation of Left Axillary Vein |
|  |  |  | 0579\*\*Z | Dilation of Right Brachial Vein |
|  |  |  | 057A\*\*Z | Dilation of Left Brachial Vein |
|  |  |  | 057B\*\*Z | Dilation of Right Basilic Vein |
|  |  |  | 057C\*\*Z | Dilation of Left Basilic Vein |
|  |  |  | 057D\*\*Z | Dilation of Right Cephalic Vein |
|  |  |  | 057F\*\*Z | Dilation of Left Cephalic Vein |
|  |  |  | 057G\*\*Z | Dilation of Right Hand Vein |
|  |  |  | 057H\*\*Z | Dilation of Left Hand Vein |
|  |  |  | 057T\*\*Z | Dilation of Right Face Vein |
|  |  |  | 057V\*\*Z | Dilation of Left Face Vein |
|  |  |  | 057Y\*\*Z | Dilation of Upper Vein |
|  |  |  | 05C0\*ZZ | Extirpation of Matter from Azygos Vein |
|  |  |  | 05C1\*ZZ | Extirpation of Matter from Hemiazygos Vein |
|  |  |  | 05C3\*ZZ | Extirpation of Matter from Right Innominate Vein |
|  |  |  | 05C4\*ZZ | Extirpation of Matter from Left Innominate Vein |
|  |  |  | 05C5\*ZZ | Extirpation of Matter from Right Subclavian Vein |
|  |  |  | 05C6\*ZZ | Extirpation of Matter from Left Subclavian Vein |
|  |  |  | 05C7\*ZZ | Extirpation of Matter from Right Axillary Vein |
|  |  |  | 05C8\*ZZ | Extirpation of Matter from Left Axillary Vein |
|  |  |  | 05C9\*ZZ | Extirpation of Matter from Right Brachial Vein |
| 05CA\*ZZ | Extirpation of Matter from Left Brachial Vein |
|  | 05CB\*ZZ | Extirpation of Matter from Right Basilic Vein |
|  | 05CC\*ZZ | Extirpation of Matter from Left Basilic Vein |
|  | 05CD\*ZZ | Extirpation of Matter from Right Cephalic Vein |
|  | 05CF\*ZZ | Extirpation of Matter from Left Cephalic Vein |
|  |  | 05CG\*ZZ | Extirpation of Matter from Right Hand Vein |
|  |  |  | 05CH\*ZZ | Extirpation of Matter from Left Hand Vein |
|  |  |  | 05CT\*ZZ | Extirpation of Matter from Right Face Vein |
|  |  |  | 05CV\*ZZ | Extirpation of Matter from Left Face Vein |
|  |  |  | 05CY\*ZZ | Extirpation of Matter from Upper Vein |
|  |  |  | 0670\*\*Z | Dilation of Inferior Vena Cava |
|  |  |  | 0671\*\*Z | Dilation of Splenic Vein |
|  |  |  | 0672\*\*Z | Dilation of Gastric Vein |
|  |  |  | 0673\*\*Z | Dilation of Esophageal Vein |
|  |  |  | 0674\*\*Z | Dilation of Hepatic Vein |
|  |  |  | 0675\*\*Z | Dilation of Superior Mesenteric Vein |
|  |  |  | 0676\*\*Z | Dilation of Inferior Mesenteric Vein |
|  |  |  | 0677\*\*Z | Dilation of Colic Vein |
|  |  |  | 0678\*\*Z | Dilation of Portal Vein |
|  |  |  | 0679\*\*Z | Dilation of Right Renal Vein |
|  |  |  | 067B\*\*Z | Dilation of Left Renal Vein |
|  |  |  | 067C\*\*Z | Dilation of Right Common Iliac Vein |
|  |  |  | 067D\*\*Z | Dilation of Left Common Iliac Vein |
|  |  |  | 067F\*\*Z | Dilation of Right External Iliac Vein |
|  |  |  | 067G\*\*Z | Dilation of Left External Iliac Vein |
|  |  |  | 067H\*\*Z | Dilation of Right Hypogastric Vein |
|  |  |  | 067J\*\*Z | Dilation of Left Hypogastric Vein |
|  |  |  | 067M\*\*Z | Dilation of Right Femoral Vein |
|  |  |  | 067N\*\*Z | Dilation of Left Femoral Vein |
|  |  |  | 067P\*\*Z | Dilation of Right Greater Saphenous Vein |
|  |  |  | 067Q\*\*Z | Dilation of Left Greater Saphenous Vein |
|  |  |  | 067R\*\*Z | Dilation of Right Lesser Saphenous Vein |
|  |  |  | 067S\*\*Z | Dilation of Left Lesser Saphenous Vein |
|  |  |  | 067T\*\*Z | Dilation of Right Foot Vein |
|  |  |  | 067V\*\*Z | Dilation of Left Foot Vein |
|  |  |  | 06C0\*ZZ | Extirpation of Matter from Inferior Vena Cava |
|  |  |  | 06C1\*ZZ | Extirpation of Matter from Splenic Vein |
|  |  |  | 06C2\*ZZ | Extirpation of Matter from Gastric Vein |
|  |  |  | 06C3\*ZZ | Extirpation of Matter from Esophageal Vein |
|  |  |  | 06C4\*ZZ | Extirpation of Matter from Hepatic Vein |
|  |  |  | 06C5\*ZZ | Extirpation of Matter from Superior Mesenteric Vein |
|  |  |  | 06C6\*ZZ | Extirpation of Matter from Inferior Mesenteric Vein |
|  |  |  | 06C7\*ZZ | Extirpation of Matter from Colic Vein |
|  |  |  | 06C8\*ZZ | Extirpation of Matter from Portal Vein |
|  |  |  | 06C9\*ZZ | Extirpation of Matter from Right Renal Vein |
|  |  |  | 06CB\*ZZ | Extirpation of Matter from Left Renal Vein |
|  |  |  | 06CC\*ZZ | Extirpation of Matter from Right Common Iliac Vein |
|  |  |  | 06CD\*ZZ | Extirpation of Matter from Left Common Iliac Vein |
| 06CF\*ZZ | Extirpation of Matter from Right External Iliac Vein |
|  | 06CG\*ZZ | Extirpation of Matter from Left External Iliac Vein |
|  | 06CH\*ZZ | Extirpation of Matter from Right Hypogastric Vein |
|  | 06CJ\*ZZ | Extirpation of Matter from Left Hypogastric Vein |
|  | 06CM\*ZZ | Extirpation of Matter from Right Femoral Vein |
|  |  |  | 06CN\*ZZ | Extirpation of Matter from Left Femoral Vein |
|  |  |  | 06CP\*ZZ | Extirpation of Matter from Right Greater Saphenous Vein |
|  |  |  | 06CQ\*ZZ | Extirpation of Matter from Left Greater Saphenous Vein |
|  |  |  | 06CR\*ZZ | Extirpation of Matter from Right Lesser Saphenous Vein |
|  |  |  | 06CS\*ZZ | Extirpation of Matter from Left Lesser Saphenous Vein |
|  |  |  | 06CT\*ZZ | Extirpation of Matter from Right Foot Vein |
|  |  |  | 06CV\*ZZ | Extirpation of Matter from Left Foot Vein |
|  | **0.55** | Insertion of drug-eluting stent(s) of other peripheral vessel(s) | No PCS |  |
|  | **0.60** | Insertion of drug-eluting stent(s) of superficial femoral artery | No PCS |  |
|  | **39.90** | Insertion of non-drug-eluting peripheral (non-coronary) vessel stent(s) | No PCS |  |
|  |
| Colon and Rectal Proc, selected | **46.85** | Dilation of intestine (includes endosopic approach) | 0D7\*\*ZZ  0D7\*\*ZZ | Dilation of Intestine, Via Opening  Dilation of Intestine, Endo |
| **96.08** | Insertion of naso-intestinal tube (includes for decompression) | 0D9870Z | Drainage of Small Intestine with Drain Dev, Via Opening |
| 0D9880Z | Drainage of Small Intestine with Drainage Device, Endo |
| 0D9E70Z | Drainage of Large Intestine with Drain Dev, Via Opening |
|  | 0D9E80Z | Drainage of Large Intestine with Drainage Device, Endo |
|  | **96.09** | Insertion of rectal tube | 0D9P70Z | Drainage of Rectum with Drainage Device, Via Opening |
|  | 0D9P80Z | Drainage of Rectum with Drainage Device, Endo |
|  | **46.50** | Closure of intestinal stoma, not otherwise specified | 0DQ\*0ZZ | Repair of Intestine, Open Approach |
|  | 0WQFXZ2 | Repair Abdominal Wall, Stoma, External Approach |
|  | **46.51** | Closure of stoma of small intestine | 0DQ80ZZ | Repair Small Intestine, Open Approach |
|  | 0DQ90ZZ | Repair Duodenum, Open Approach |
|  | 0DQA0ZZ | Repair Jejunum, Open Approach |
|  | 0DQB0ZZ | Repair Small Intestine, Open Approach |
|  | 0WQFXZ2 | Repair Ileum, Open Approach |
|  |  | 0DQ80ZZ | Repair Abdominal Wall, Stoma, External Approach |
|  | **46.52** | Closure of stoma of large intestine | 0DQE0ZZ | Repair Large Intestine, Open Approach |
|  | 0DQH0ZZ | Repair Cecum, Open Approach |
|  | 0DQN0ZZ | Repair Sigmoid Colon, Open Approach |
|  |  | 0WQFXZ2 | Repair Abdominal Wall, Stoma, External Approach |
|  | **46.86** | Endoscopic insertion of colonic stent(s) | 0D788DZ | Dilation of Small Intestine with Intraluminal Device, Endo |
| 0D798DZ | Dilation of Duodenum with Intraluminal Device, Endo |
| 0D7A8DZ | Dilation of Jejunum with Intraluminal Device, Endo |
| 0D7B8DZ | Dilation of Ileum with Intraluminal Device, Endo |
| 0D7E8DZ | Dilation of Large Intestine with Intraluminal Device, Endo |
| 0DH88DZ | Insertion of Intraluminal Device into Small Intestine, Endo |
| 0DH98DZ | Insertion of Intraluminal Device into Duodenum, Endo |
| 0DHA8DZ | Insertion of Intraluminal Device into Jejunum, Endo |
| 0DHB8DZ | Insertion of Intraluminal Device into Ileum, Endo |
| 0DHE8DZ | Insertion of Intraluminal Device into Large Intestine, Endo |
| 0DHP8DZ | Insertion of Intraluminal Device into Rectum, Endo |
| **46.87** | Other insertion of colonic stent (s) | 0D780DZ | Dilation of Small Intestine with Intralum Dev, Open Approach |
|  | 0D783DZ | Dilation of Small Intestine with Intralum Dev, Perc Approach |
|  | 0D784DZ | Dilate of Small Intest with Intralum Dev, Perc Endo Approach |
|  | 0D787DZ | Dilation of Small Intestine with Intralum Dev, Via Opening |
|  | 0D790DZ | Dilation of Duodenum with Intraluminal Device, Open Appr |
|  | 0D793DZ | Dilation of Duodenum with Intraluminal Device, Perc Approach |
|  | 0D794DZ | Dilation of Duodenum with Intralum Dev, Perc Endo Approach |
|  | 0D797DZ | Dilation of Duodenum with Intralum Device, Via Opening |
|  | 0D7A0DZ | Dilation of Jejunum with Intraluminal Device, Open Approach |
|  | 0D7A3DZ | Dilation of Jejunum with Intralum Device, Percut Approach |
|  | 0D7A4DZ | Dilation of Jejunum with Intralum Device, Percut Endosc Appr |
|  | 0D7A7DZ | Dilation of Jejunum with Intralum Device, Via Natural or Artif Open |
|  | 0D7B0DZ | Dilation of Ileum with Intraluminal Device, Open Approach |
|  | 0D7B3DZ | Dilation of Ileum with Intraluminal Device, Perc Approach |
|  | 0D7B4DZ | Dilation of Ileum with Intralum Dev, Perc Endo Approach |
|  | 0D7B7DZ | Dilation of Ileum with Intraluminal Device, Via Opening |
|  | 0D7E0DZ | Dilation of Large Intestine with Intralum Dev, Open Approach |
|  | 0D7E3DZ | Dilation of Large Intestine with Intralum Dev, Perc Approach |
|  | 0D7E4DZ | Dilation of Lg Intest with Intralum Dev, Perc Endo Approach |
|  | 0D7E7DZ | Dilation of Large Intestine with Intralum Dev, Via Opening |
|  | 0DH8\*DZ | Insertion of Intraluminal Device into Small Intest |
|  | 0DH9\*DZ | Insertion of Intraluminal Device into Duodenum |
|  | 0DHA\*DZ | Insertion of Intraluminal Device into Jejunum |
|  | 0DHB\*DZ | Insertion of Intraluminal Device into Ileum |
|  | 0DHE\*DZ | Insertion of Intraluminal Device into Lg Intest |
|  |  |  | 0DHP\*DZ | Insertion of Intraluminal Device into Rectum |
| Insertion of Feeding Tubes | **44.39** | Other gastroenterostomy (GJ-tube) | 0D16079 | Bypass Stomach to Duodenum with Autologous Tissue Substitute, Open Approach |
| 0D1607A | Bypass Stomach to Jejunum with Autologous Tissue Substitute, Open Approach |
| 0D160J9 | Bypass Stomach to Duodenum with Synthetic Substitute, Open Approach |
| 0D160JA | Bypass Stomach to Jejunum with Synthetic Substitute, Open Approach |
|  | 0D160K9 | Bypass Stomach to Duodenum with Nonaut Sub, Open Appr |
|  | 0D160KA | Bypass Stomach to Jejunum with Nonaut Sub, Open Approach |
|  | 0D160Z9 | Bypass Stomach to Duodenum, Open Approach |
|  | 0D160ZA | Bypass Stomach to Jejunum, Open Approach |
|  | 0D16879 | Bypass Stomach to Duodenum with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic |
|  | 0D1687A | Bypass Stomach to Jejunum with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic |
|  | 0D168J9 | Bypass Stomach to Duodenum with Synthetic Substitute, Endo |
|  | 0D168JA | Bypass Stomach to Jejunum with Synthetic Substitute, Endo |
|  | 0D168K9 | Bypass Stomach to Duodenum with Nonaut Sub, Endo |
|  | 0D168KA | Bypass Stomach to Jejunum with Nonaut Sub, Endo |
|  | 0D168Z9 | Bypass Stomach to Duodenum, Endo |
|  | 0D168ZA | Bypass Stomach to Jejunum, Endo |
|  | **46.39** | Other enterostomy  (J-tube) | 0DH8\*UZ | Insert of Feeding Device into Small Intestine, all approaches |
| 0DH9\*UZ | Insertion of Feeding Device into Duodenum |
| 0DHA0UZ | Insertion of Feeding Device into Jejunum, Open Approach |
| 0DHA7UZ | Insertion of Feeding Device into Jejunum, Via Natural or Artificial Opening |
| Routine Device Replacement | **86.06** | Insertion of totally implanted infusion pump | 0JH\*\*VZ | Insert Infusion Pump |
| **84.57** | Removal of (cement) spacer (includes antibiotic impregnated spacer) | 0RP\*\*8Z  0SP\*\*8Z | Removal of Spacer |
|  | **97.41** | Removal of thoracotomy tube or pleural cavity drain (non-incisional) | 0WP9X0Z  0WPBX0Z | Removal of Drain Dev from R Pleural Cav, Extern Approach |
|  | Removal of Drainage Device from Left Pleural Cavity, External Approach |
|  | **2.43** | Removal of ventricular shunt | 00P6\*JZ | Removal of Synthetic Substitute from Cerebral Ventricle, all approaches |
|  | **97.37** | Removal of tracheostomy tube (non-incisional) | 0BP1XFZ | Removal of Tracheostomy Device from Trachea, Extern Approach |
|  | **1.27** | Removal of catheter(s) from cranial cavity or tissue | 0WP1\*3Z | Removal of Infusion Device from Cranial Cavity, External Approach |
|  | **86.05** | Incision with removal of foreign body or device from skin and subcutaneous tissue | 0HPPX7Z | Removal of Autologous Tissue Substitute from Skin, External Approach |
|  | 0HPQX7Z | Removal of Autologous Tissue Substitute from Finger Nail, External Approach |
|  | 0HPRX7Z | Removal of Autologous Tissue Substitute from Toe Nail, External Approach |
|  | 0HPSX7Z | Removal of Autologous Tissue Substitute from Hair, External Approach |
|  | 0JC\*\*ZZ | Extirpation of Matter from Subcutaneous Tissue and Fascia, All Approaches |
|  |  |  | 0JPS0\*Z | Removal of Device from Head and Neck Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPS3\*Z | Removal of Device from Head and Neck Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPT00Z | Removal of Drainage Device from Trunk Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPT01Z | Removal of Radioactive Element from Trunk Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPT02Z | Removal of Monitoring Device from Trunk Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPT03Z | Removal of Infusion Device from Trunk Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPT07Z | Removal of Autologous Tissue Substitute from Trunk Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPT0HZ | Removal of Contraceptive Device from Trunk Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPT0JZ | Removal of Synthetic Substitute from Trunk Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPT0KZ | Removal of Nonautologous Tissue Substitute from Trunk Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPT0MZ | Removal of Stimulator Generator from Trunk Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPT0NZ | Removal of Tissue Expander from Trunk Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPT0VZ | Removal of Infusion Pump from Trunk Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPT0WZ | Removal of Reservoir from Trunk Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPT0XZ | Removal of Vascular Access Device from Trunk Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPT30Z | Removal of Drainage Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPT31Z | Removal of Radioactive Element from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPT32Z | Removal of Monitoring Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPT33Z | Removal of Infusion Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPT37Z | Removal of Autologous Tissue Substitute from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPT3HZ | Removal of Contraceptive Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPT3JZ | Removal of Synthetic Substitute from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPT3KZ | Removal of Nonautologous Tissue Substitute from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPT3MZ | Removal of Stimulator Generator from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPT3NZ | Removal of Tissue Expander from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPT3VZ | Removal of Infusion Pump from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPT3WZ | Removal of Reservoir from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPT3XZ | Removal of Vascular Access Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPTXVZ | Removal of Infusion Pump from Trunk Subcutaneous Tissue and Fascia, External Approach |
| 0JPTXXZ | Removal of Vascular Access Device from Trunk Subcutaneous Tissue and Fascia, External Approach |
| 0JPV0\*Z | Removal of Device from Upper Extremity Subcutaneous Tissue and Fascia, Open Approach |
| 0JPV3\*Z | Removal of Device from Upper Extremity Subcutaneous Tissue and Fascia, Percutaneous Approach |
| 0JPVXHZ | Removal of Contraceptive Device from Upper Extremity Subcutaneous Tissue and Fascia, External Approach |
|  |  | 0JPVXVZ | Removal of Infusion Pump from Upper Extremity Subcutaneous Tissue and Fascia, External Approach |
|  |  |  | 0JPVXXZ | Removal of Vascular Access Device from Upper Extremity Subcutaneous Tissue and Fascia, External Approach |
|  |  |  | 0JPW0\*Z | Removal of Device from Lower Extremity Subcutaneous Tissue and Fascia, Open Approach |
|  |  |  | 0JPW3\*Z | Removal of Device from Lower Extremity Subcutaneous Tissue and Fascia, Percutaneous Approach |
|  |  |  | 0JPWXHZ | Removal of Contraceptive Device from Lower Extremity Subcutaneous Tissue and Fascia, External Approach |
|  |  |  | 0JPWXVZ | Removal of Infusion Pump from Lower Extremity Subcutaneous Tissue and Fascia, External Approach |
|  |  |  | 0JPWXXZ | Removal of Vascular Access Device from Lower Extremity Subcutaneous Tissue and Fascia, External Approach |
|  |  |  | 0WP00\*Z | Removal of Device from Head, Open Approach |
|  |  |  | 0WP03\*Z | Removal of Device from Head, Percutaneous Approach |
|  |  |  | 0WP04\*Z | Removal of Device from Head, Percutaneous Endoscopic Approach |
|  |  |  | 0WP0X7Z | Removal of Autologous Tissue Substitute from Head, External Approach |
|  |  |  | 0WP0XJZ | Removal of Synthetic Substitute from Head, External Approach |
|  |  |  | 0WP0XKZ | Removal of Nonautologous Tissue Substitute from Head, External Approach |
|  |  |  | 0WP20\*Z | Removal of Device from Face, Open Approach |
|  |  |  | 0WP23\*Z | Removal of Device from Face, Percutaneous Approach |
|  |  |  | 0WP24\*Z | Removal of Device from Face, Percutaneous Endoscopic Approach |
|  |  |  | 0WP2X7Z | Removal of Autologous Tissue Substitute from Face, External Approach |
|  |  |  | 0WP2XJZ | Removal of Synthetic Substitute from Face, External Approach |
|  |  |  | 0WP2XKZ | Removal of Nonautologous Tissue Substitute from Face, External Approach |
|  |  |  | 0WP40\*Z | Removal of Device from Upper Jaw, Open Approach |
|  |  |  | 0WP43\*Z | Removal of Device from Upper Jaw, Percutaneous Approach |
|  |  |  | 0WP44\*Z | Removal of Device from Upper Jaw, Percutaneous Endoscopic Approach |
|  |  |  | 0WP4X7Z | Removal of Autologous Tissue Substitute from Upper Jaw, External Approach |
|  |  |  | 0WP4XJZ | Removal of Synthetic Substitute from Upper Jaw, External Approach |
|  |  |  | 0WP4XKZ | Removal of Nonautologous Tissue Substitute from Upper Jaw, External Approach |
|  |  |  | 0WP50\*Z | Removal of Device from Lower Jaw, Open Approach |
|  |  |  | 0WP53\*Z | Removal of Device from Lower Jaw, Percutaneous Approach |
|  |  |  | 0WP54\*Z | Removal of Device from Lower Jaw, Percutaneous Endoscopic Approach |
|  |  |  | 0WP5X7Z | Removal of Autologous Tissue Substitute from Lower Jaw, External Approach |
|  |  |  | 0WP5XJZ | Removal of Synthetic Substitute from Lower Jaw, External Approach |
|  |  |  | 0WP5XKZ | Removal of Nonautologous Tissue Substitute from Lower Jaw, External Approach |
|  |  |  | 0WP60\*Z | Removal of Device from Neck, Open Approach |
|  |  |  | 0WP63\*Z | Removal of Device from Neck, Percutaneous Approach |
|  |  |  | 0WP64\*Z | Removal of Device from Neck, Percutaneous Endoscopic Approach |
|  |  |  | 0WP6X7Z | Removal of Autologous Tissue Substitute from Neck, External Approach |
|  |  |  | 0WP6XJZ | Removal of Synthetic Substitute from Neck, External Approach |
|  |  |  | 0WP6XKZ | Removal of Nonautologous Tissue Substitute from Neck, External Approach |
|  |  |  | 0WPK0\*Z | Removal of Device from Upper Back, Open Approach |
|  |  |  | 0WPK3\*Z | Removal of Device from Upper Back, Percutaneous Approach |
|  |  |  | 0WPK4\*Z | Removal of Device from Upper Back, Percutaneous Endoscopic Approach |
|  |  |  | 0WPKX7Z | Removal of Autologous Tissue Substitute from Upper Back, External Approach |
|  |  |  | 0WPKXJZ | Removal of Synthetic Substitute from Upper Back, External Approach |
|  |  |  | 0WPKXKZ | Removal of Nonautologous Tissue Substitute from Upper Back, External Approach |
|  |  |  | 0WPL0\*Z | Removal of Device from Lower Back, Open Approach |
| 0WPL3\*Z | Removal of Device from Lower Back, Percutaneous Approach |
| 0WPL4\*Z | Removal of Device from Lower Back, Percutaneous Endoscopic Approach |
| 0WPLX7Z | Removal of Autologous Tissue Substitute from Lower Back, External Approach |
| 0WPLXJZ | Removal of Synthetic Substitute from Lower Back, External Approach |
|  | 0WPLXKZ | Removal of Nonautologous Tissue Substitute from Lower Back, External Approach |
|  |  | 0WPM00Z | Removal of Drainage Device from Male Perineum, Open Approach |
|  |  |  | 0WPM01Z | Removal of Radioactive Element from Male Perineum, Open Approach |
|  |  |  | 0WPM03Z | Removal of Infusion Device from Male Perineum, Open Approach |
|  |  |  | 0WPM0JZ | Removal of Synthetic Substitute from Male Perineum, Open Approach |
|  |  |  | 0WPM0YZ | Removal of Other Device from Male Perineum, Open Approach |
|  |  |  | 0WPM30Z | Removal of Drainage Device from Male Perineum, Percutaneous Approach |
|  |  |  | 0WPM31Z | Removal of Radioactive Element from Male Perineum, Percutaneous Approach |
|  |  |  | 0WPM33Z | Removal of Infusion Device from Male Perineum, Percutaneous Approach |
|  |  |  | 0WPM3JZ | Removal of Synthetic Substitute from Male Perineum, Percutaneous Approach |
|  |  |  | 0WPM3YZ | Removal of Other Device from Male Perineum, Percutaneous Approach |
|  |  |  | 0WPM40Z | Removal of Drainage Device from Male Perineum, Percutaneous Endoscopic Approach |
|  |  |  | 0WPM41Z | Removal of Radioactive Element from Male Perineum, Percutaneous Endoscopic Approach |
|  |  |  | 0WPM43Z | Removal of Infusion Device from Male Perineum, Percutaneous Endoscopic Approach |
|  |  |  | 0WPM4JZ | Removal of Synthetic Substitute from Male Perineum, Percutaneous Endoscopic Approach |
|  |  |  | 0WPM4YZ | Removal of Other Device from Male Perineum, Percutaneous Endoscopic Approach |
|  |  |  | 0XP60\*Z | Removal of Device from Right Upper Extremity, Open Approach |
|  |  |  | 0XP63\*Z | Removal of Device from Right Upper Extremity, Percutaneous Approach |
|  |  |  | 0XP64\*Z | Removal of Device from Right Upper Extremity, Percutaneous Endoscopic Approach |
|  |  |  | 0XP6X7Z | Removal of Autologous Tissue Substitute from Right Upper Extremity, External Approach |
|  |  |  | 0XP6XKZ | Removal of Nonautologous Tissue Substitute from Right Upper Extremity, External Approach |
|  |  |  | 0XP70\*Z | Removal of Device from Left Upper Extremity, Open Approach |
|  |  |  | 0XP73\*Z | Removal of Device from Left Upper Extremity, Percutaneous Approach |
|  |  |  | 0XP74\*Z | Removal of Device from Left Upper Extremity, Percutaneous Endoscopic Approach |
|  |  |  | 0XP7X7Z | Removal of Autologous Tissue Substitute from Left Upper Extremity, External Approach |
|  |  |  | 0XP7XKZ | Removal of Nonautologous Tissue Substitute from Left Upper Extremity, External Approach |
|  |  |  | 0YP90\*Z | Removal of Device from Right Lower Extremity, Open Approach |
|  |  |  | 0YP93\*Z | Removal of Device from Right Lower Extremity, Percutaneous Approach |
| 0YP94\*Z | Removal of Device from Right Lower Extremity, Percutaneous Endoscopic Approach |
|  | 0YP9X7Z | Removal of Autologous Tissue Substitute from Right Lower Extremity, External Approach |
|  | 0YP9XKZ | Removal of Nonautologous Tissue Substitute from Right Lower Extremity, External Approach |
|  | 0YPB0\*Z | Removal of Device from Left Lower Extremity, Open Approach |
|  |  |  | 0YPB3\*Z | Removal of Device from Left Lower Extremity, Percutaneous Approach |
|  |  |  | 0YPB4\*Z | Removal of Device from Left Lower Extremity, Percutaneous Endoscopic Approach |
|  |  |  | 0YPBX7Z | Removal of Autologous Tissue Substitute from Left Lower Extremity, External Approach |
|  |  |  | 0YPBXKZ | Removal of Nonautologous Tissue Substitute from Left Lower Extremity, External Approach |
|  | **2.95** | Removal of skull tongs or halo traction device | 0NP0\*5Z | Removal of External Fixation Device from Skull, all approaches |
|  |  |
|  | **78.60** | Removal of implanted devices from bone(includes internal and external fixation) | 0PP0\*4Z | Removal of Internal Fixation Device from Sternum, all approaches |
|  |  | 0PP1\*4Z | Removal of Internal Fixation Device from Right Rib, all approaches |
|  |  | 0PP2\*4Z | Removal of Internal Fixation Device from Left Rib, all approaches |
|  |  | 0PP3\*4Z | Removal of Internal Fixation Device from Cervical Vertebra, All Approaches |
|  |  | 0PP4\*4Z | Removal of Internal Fixation Device from Thoracic Vertebra, All Approaches |
|  |  |  | 0PP5\*4Z | Removal of Internal Fixation Device from Right Scapula, All Approaches |
|  | 0PP6\*4Z | Removal of Internal Fixation Device from Left Scapula, All Approaches |
|  | 0PP9\*4Z | Removal of Internal Fixation Device from Right Clavicle, All Approaches |
|  | 0PPB\*4Z | Removal of Internal Fixation Device from Left Clavicle, All Approaches |
|  |  | 0PPC\*4Z | Removal of Internal Fixation Device from Right Humeral Head, All Approaches |
|  |  | 0PPC\*5Z | Removal of External Fixation Device from Right Humeral Head, All Approaches |
|  |  |  | 0PPD\*4Z | Removal of Internal Fixation Device from Left Humeral Head, All Approaches |
|  |  |  | 0PPD\*5Z | Removal of External Fixation Device from Left Humeral Head, All Approaches |
|  |  |  | 0PPF\*4Z | Removal of Internal Fixation Device from Right Humeral Shaft, All Approaches |
|  |  |  | 0PPF\*5Z | Removal of External Fixation Device from Right Humeral Shaft, All Approaches |
|  |  |  | 0PPG\*4Z | Removal of Internal Fixation Device from Left Humeral Shaft, All Approaches |
|  |  |  | 0PPG\*5Z | Removal of External Fixation Device from Left Humeral Shaft, All Approaches |
|  |  |  | 0PPH\*4Z | Removal of Internal Fixation Device from Right Radius, All Approaches |
|  |  |  | 0PPH\*5Z | Removal of External Fixation Device from Right Radius, All Approaches |
|  |  |  | 0PPJ\*4Z | Removal of Internal Fixation Device from Left Radius, All Approaches |
|  |  |  | 0PPJ\*5Z | Removal of External Fixation Device from Left Radius, All Approaches |
|  |  |  | 0PPK\*4Z | Removal of Internal Fixation Device from Right Ulna, All Approaches |
|  |  |  | 0PPK\*5Z | Removal of External Fixation Device from Right Ulna, All Approaches |
|  |  |  | 0PPL\*4Z | Removal of Internal Fixation Device from Left Ulna, All Approaches |
|  |  |  | 0PPL\*5Z | Removal of External Fixation Device from Left Ulna, All Approaches |
|  |  |  | 0PPM\*4Z | Removal of Internal Fixation Device from Right Carpal, All Approaches |
|  |  |  | 0PPM\*5Z | Removal of External Fixation Device from Right Carpal, All Approaches |
|  |  |  | 0PPN\*4Z | Removal of Internal Fixation Device from Left Carpal, All Approaches |
|  |  |  | 0PPN\*5Z | Removal of External Fixation Device from Left Carpal, All Approaches |
|  |  |  | 0PPP\*4Z | Removal of Internal Fixation Device from Right Metacarpal, All Approaches |
|  |  |  | 0PPP\*5Z | Removal of External Fixation Device from Right Metacarpal, All Approaches |
|  |  |  | 0PPQ\*4Z | Removal of Internal Fixation Device from Left Metacarpal, All Approaches |
|  |  |  | 0PPQ\*5Z | Removal of External Fixation Device from Left Metacarpal, All Approaches |
|  |  |  | 0PPT\*4Z | Removal of Internal Fixation Device from Right Finger Phalanx, All Approaches |
|  |  |  | 0PPT\*5Z | Removal of External Fixation Device from Right Finger Phalanx, All Approaches |
|  |  |  | 0PPV\*4Z | Removal of Internal Fixation Device from Left Finger Phalanx, All Approaches |
| 0PPV\*5Z | Removal of External Fixation Device from Left Finger Phalanx, All Approaches |
|  | 0QP0\*4Z | Removal of Internal Fixation Device from Lumbar Vertebra, All Approaches |
|  |  |  | 0QP2\*4Z | Removal of Internal Fixation Device from Right Pelvic Bone, All Approaches |
|  |  |  | 0QP2\*5Z | Removal of External Fixation Device from Right Pelvic Bone, All Approaches |
|  |  |  | 0QP3\*4Z | Removal of Internal Fixation Device from Left Pelvic Bone, All Approaches |
|  |  |  | 0QP3\*5Z | Removal of External Fixation Device from Left Pelvic Bone, All Approaches |
|  |  |  | 0QP6\*4Z | Removal of Internal Fixation Device from Right Upper Femur, All Approaches |
|  |  |  | 0QP6\*5Z | Removal of External Fixation Device from Right Upper Femur, All Approaches |
|  |  |  | 0QP7\*4Z | Removal of Internal Fixation Device from Left Upper Femur, All Approaches |
|  |  |  | 0QP7\*5Z | Removal of External Fixation Device from Left Upper Femur, All Approaches |
|  |  |  | 0QP8\*4Z | Removal of Internal Fixation Device from Right Femoral Shaft, All Approaches |
|  |  |  | 0QP8\*5Z | Removal of External Fixation Device from Right Femoral Shaft, All Approaches |
|  |  |  | 0QP9\*4Z | Removal of Internal Fixation Device from Left Femoral Shaft, All Approaches |
|  |  |  | 0QP9\*5Z | Removal of External Fixation Device from Left Femoral Shaft, All Approaches |
|  |  |  | 0QPB\*4Z | Removal of Internal Fixation Device from Right Lower Femur, All Approaches |
|  |  |  | 0QPB\*5Z | Removal of External Fixation Device from Right Lower Femur, All Approaches |
|  |  |  | 0QPC\*4Z | Removal of Internal Fixation Device from Left Lower Femur, All Approaches |
|  |  |  | 0QPC\*5Z | Removal of External Fixation Device from Left Lower Femur, All Approaches |
|  | 0QPD\*4Z | Removal of Internal Fixation Device from Right Patella, All Approaches |
|  | 0QPD\*5Z | Removal of External Fixation Device from Right Patella, All Approaches |
|  | 0QPF\*4Z | Removal of Internal Fixation Device from Left Patella, All Approaches |
|  | 0QPF\*5Z | Removal of External Fixation Device from Left Patella, All Approaches |
|  |  | 0QPG\*4Z | Removal of Internal Fixation Device from Right Tibia, All Approaches |
|  |  | 0QPG\*5Z | Removal of External Fixation Device from Right Tibia, All Approaches |
|  |  |  | 0QPH\*4Z | Removal of Internal Fixation Device from Left Tibia, All Approaches |
|  |  |  | 0QPH\*5Z | Removal of External Fixation Device from Left Tibia, All Approaches |
|  |  |  | 0QPJ\*4Z | Removal of Internal Fixation Device from Right Fibula, All Approaches |
|  |  |  | 0QPJ\*5Z | Removal of External Fixation Device from Right Fibula, All Approaches |
|  |  |  | 0QPK\*4Z | Removal of Internal Fixation Device from Left Fibula, All Approaches |
|  |  |  | 0QPK\*5Z | Removal of External Fixation Device from Left Fibula, All Approaches |
|  |  |  | 0QPL\*4Z | Removal of Internal Fixation Device from Right Tarsal, All Approaches |
|  |  |  | 0QPL\*5Z | Removal of External Fixation Device from Right Tarsal, All Approaches |
|  |  |  | 0QPM\*4Z | Removal of Internal Fixation Device from Left Tarsal, All Approaches |
|  |  |  | 0QPM\*5Z | Removal of External Fixation Device from Left Tarsal, All Approaches |
|  |  |  | 0QPN\*4Z | Removal of Internal Fixation Device from Right Metatarsal, All Approaches |
|  |  |  | 0QPN\*5Z | Removal of External Fixation Device from Right Metatarsal, All Approaches |
|  |  |  | 0QPP\*4Z | Removal of Internal Fixation Device from Left Metatarsal, All Approaches |
|  |  |  | 0QPP\*5Z | Removal of External Fixation Device from Left Metatarsal, All Approaches |
|  |  |  | 0QPQ\*4Z | Removal of Internal Fixation Device from Right Toe Phalanx, All Approaches |
|  |  |  | 0QPQ\*5Z | Removal of External Fixation Device from Right Toe Phalanx, All Approaches |
|  |  |  | 0QPR\*4Z | Removal of Internal Fixation Device from Left Toe Phalanx, All Approaches |
|  |  |  | 0QPR\*5Z | Removal of External Fixation Device from Left Toe Phalanx, All Approaches |
|  |  |  | 0QPY\*MZ | Removal of Bone Growth Stimulator from Lower Bone, All Approaches |
|  | **78.61** |  | 0PP0\*4Z | Removal of Internal Fixation Device from Sternum, all approaches |
|  |  |  | 0PP1\*4Z | Removal of Internal Fixation Device from Right Rib, All Approaches |
|  |  |  | 0PP2\*4Z | Removal of Internal Fixation Device from Left Rib, All Approaches |
|  |  |  | 0PP5\*4Z | Removal of Internal Fixation Device from Right Scapula, All Approaches |
|  |  |  | 0PP6\*4Z | Removal of Internal Fixation Device from Left Scapula, All Approaches |
|  | 0PP9\*4Z | Removal of Internal Fixation Device from Right Clavicle, All Approaches |
|  |  | 0PPB\*4Z | Removal of Internal Fixation Device from Left Clavicle, All Approaches |
|  | **78.62** |  | 0PPC04Z | Removal of Internal Fixation Device from Right Humeral Head, Open Approach |
|  |  |  | 0PPC05Z | Removal of External Fixation Device from Right Humeral Head, Open Approach |
|  |  |  | 0PPC34Z | Removal of Internal Fixation Device from Right Humeral Head, Percutaneous Approach |
|  |  |  | 0PPC35Z | Removal of External Fixation Device from Right Humeral Head, Percutaneous Approach |
|  |  |  | 0PPC44Z | Removal of Internal Fixation Device from Right Humeral Head, Percutaneous Endoscopic Approach |
|  |  |  | 0PPC45Z | Removal of External Fixation Device from Right Humeral Head, Percutaneous Endoscopic Approach |
|  |  |  | 0PPD04Z | Removal of Internal Fixation Device from Left Humeral Head, Open Approach |
|  |  |  | 0PPD05Z | Removal of External Fixation Device from Left Humeral Head, Open Approach |
|  |  |  | 0PPD34Z | Removal of Internal Fixation Device from Left Humeral Head, Percutaneous Approach |
|  |  |  | 0PPD35Z | Removal of External Fixation Device from Left Humeral Head, Percutaneous Approach |
|  |  |  | 0PPD44Z | Removal of Internal Fixation Device from Left Humeral Head, Percutaneous Endoscopic Approach |
|  |  |  | 0PPD45Z | Removal of External Fixation Device from Left Humeral Head, Percutaneous Endoscopic Approach |
|  |  |  | 0PPF04Z | Removal of Internal Fixation Device from Right Humeral Shaft, Open Approach |
|  |  |  | 0PPF05Z | Removal of External Fixation Device from Right Humeral Shaft, Open Approach |
|  |  |  | 0PPF34Z | Removal of Internal Fixation Device from Right Humeral Shaft, Percutaneous Approach |
|  |  |  | 0PPF35Z | Removal of External Fixation Device from Right Humeral Shaft, Percutaneous Approach |
|  | 0PPF44Z | Removal of Internal Fixation Device from Right Humeral Shaft, Percutaneous Endoscopic Approach |
|  |  | 0PPF45Z | Removal of External Fixation Device from Right Humeral Shaft, Percutaneous Endoscopic Approach |
|  |  | 0PPG04Z | Removal of Internal Fixation Device from Left Humeral Shaft, Open Approach |
|  |  | 0PPG05Z | Removal of External Fixation Device from Left Humeral Shaft, Open Approach |
|  |  | 0PPG34Z | Removal of Internal Fixation Device from Left Humeral Shaft, Percutaneous Approach |
|  |  | 0PPG35Z | Removal of External Fixation Device from Left Humeral Shaft, Percutaneous Approach |
|  |  |  | 0PPG44Z | Removal of Internal Fixation Device from Left Humeral Shaft, Percutaneous Endoscopic Approach |
|  |  |  | 0PPG45Z | Removal of External Fixation Device from Left Humeral Shaft, Percutaneous Endoscopic Approach |
|  | **78.63** |  | 0PPH04Z | Removal of Internal Fixation Device from Right Radius, Open Approach |
|  |  |  | 0PPH05Z | Removal of External Fixation Device from Right Radius, Open Approach |
|  |  |  | 0PPH34Z | Removal of Internal Fixation Device from Right Radius, Percutaneous Approach |
|  |  |  | 0PPH35Z | Removal of External Fixation Device from Right Radius, Percutaneous Approach |
|  |  |  | 0PPH44Z | Removal of Internal Fixation Device from Right Radius, Percutaneous Endoscopic Approach |
|  |  |  | 0PPH45Z | Removal of External Fixation Device from Right Radius, Percutaneous Endoscopic Approach |
|  |  |  | 0PPJ04Z | Removal of Internal Fixation Device from Left Radius, Open Approach |
|  |  |  | 0PPJ05Z | Removal of External Fixation Device from Left Radius, Open Approach |
|  |  |  | 0PPJ34Z | Removal of Internal Fixation Device from Left Radius, Percutaneous Approach |
|  |  |  | 0PPJ35Z | Removal of External Fixation Device from Left Radius, Percutaneous Approach |
|  |  |  | 0PPJ44Z | Removal of Internal Fixation Device from Left Radius, Percutaneous Endoscopic Approach |
|  |  |  | 0PPJ45Z | Removal of External Fixation Device from Left Radius, Percutaneous Endoscopic Approach |
|  |  |  | 0PPK04Z | Removal of Internal Fixation Device from Right Ulna, Open Approach |
|  |  |  | 0PPK05Z | Removal of External Fixation Device from Right Ulna, Open Approach |
|  |  |  | 0PPK34Z | Removal of Internal Fixation Device from Right Ulna, Percutaneous Approach |
|  |  |  | 0PPK35Z | Removal of External Fixation Device from Right Ulna, Percutaneous Approach |
|  |  |  | 0PPK44Z | Removal of Internal Fixation Device from Right Ulna, Percutaneous Endoscopic Approach |
|  |  |  | 0PPK45Z | Removal of External Fixation Device from Right Ulna, Percutaneous Endoscopic Approach |
|  |  |  | 0PPL04Z | Removal of Internal Fixation Device from Left Ulna, Open Approach |
|  |  |  | 0PPL05Z | Removal of External Fixation Device from Left Ulna, Open Approach |
|  |  |  | 0PPL34Z | Removal of Internal Fixation Device from Left Ulna, Percutaneous Approach |
|  |  |  | 0PPL35Z | Removal of External Fixation Device from Left Ulna, Percutaneous Approach |
|  | 0PPL44Z | Removal of Internal Fixation Device from Left Ulna, Percutaneous Endoscopic Approach |
|  |  | 0PPL45Z | Removal of External Fixation Device from Left Ulna, Percutaneous Endoscopic Approach |
|  | **78.64** |  | 0PPM04Z | Removal of Internal Fixation Device from Right Carpal, Percutaneous Approach |
|  |  |  | 0PPM05Z | Removal of External Fixation Device from Right Carpal, Percutaneous Approach |
|  |  |  | 0PPM34Z | Removal of Internal Fixation Device from Right Carpal, Percutaneous Approach |
|  |  |  | 0PPM35Z | Removal of External Fixation Device from Right Carpal, Percutaneous Approach |
|  |  |  | 0PPM44Z | Removal of Internal Fixation Device from Right Carpal, Percutaneous Endoscopic Approach |
|  |  |  | 0PPM45Z | Removal of External Fixation Device from Right Carpal, Percutaneous Endoscopic Approach |
|  |  |  | 0PPN04Z | Removal of Internal Fixation Device from Left Carpal, Open Approach |
|  |  |  | 0PPN05Z | Removal of External Fixation Device from Left Carpal, Open Approach |
|  |  |  | 0PPN34Z | Removal of Internal Fixation Device from Left Carpal, Percutaneous Approach |
|  |  |  | 0PPN35Z | Removal of External Fixation Device from Left Carpal, Percutaneous Approach |
|  |  |  | 0PPN44Z | Removal of Internal Fixation Device from Left Carpal, Percutaneous Endoscopic Approach |
|  |  |  | 0PPN45Z | Removal of External Fixation Device from Left Carpal, Percutaneous Endoscopic Approach |
|  |  |  | 0PPP04Z | Removal of Internal Fixation Device from Right Metacarpal, Open Approach |
|  |  |  | 0PPP05Z | Removal of External Fixation Device from Right Metacarpal, Open Approach |
|  |  |  | 0PPP34Z | Removal of Internal Fixation Device from Right Metacarpal, Percutaneous Approach |
|  |  |  | 0PPP35Z | Removal of External Fixation Device from Right Metacarpal, Percutaneous Approach |
|  | 0PPP44Z | Removal of Internal Fixation Device from Right Metacarpal, Percutaneous Endoscopic Approach |
|  |  | 0PPP45Z | Removal of External Fixation Device from Right Metacarpal, Percutaneous Endoscopic Approach |
|  |  | 0PPQ04Z | Removal of Internal Fixation Device from Left Metacarpal, Open Approach |
|  |  | 0PPQ05Z | Removal of External Fixation Device from Left Metacarpal, Open Approach |
|  |  | 0PPQ34Z | Removal of Internal Fixation Device from Left Metacarpal, Percutaneous Approach |
|  |  | 0PPQ35Z | Removal of External Fixation Device from Left Metacarpal, Percutaneous Approach |
|  |  |  | 0PPQ44Z | Removal of Internal Fixation Device from Left Metacarpal, Percutaneous Endoscopic Approach |
|  |  |  | 0PPQ45Z | Removal of External Fixation Device from Left Metacarpal, Percutaneous Endoscopic Approach |
|  | **78.65** |  | 0QP604Z | Removal of Internal Fixation Device from Right Upper Femur, Open Approach |
|  |  |  | 0QP605Z | Removal of External Fixation Device from Right Upper Femur, Open Approach |
|  |  |  | 0QP634Z | Removal of Internal Fixation Device from Right Upper Femur, Percutaneous Approach |
|  |  |  | 0QP635Z | Removal of External Fixation Device from Right Upper Femur, Percutaneous Approach |
|  |  |  | 0QP644Z | Removal of Internal Fixation Device from Right Upper Femur, Percutaneous Endoscopic Approach |
|  |  |  | 0QP645Z | Removal of External Fixation Device from Right Upper Femur, Percutaneous Endoscopic Approach |
|  |  |  | 0QP704Z | Removal of Internal Fixation Device from Left Upper Femur, Open Approach |
|  |  |  | 0QP705Z | Removal of External Fixation Device from Left Upper Femur, Open Approach |
|  |  |  | 0QP734Z | Removal of Internal Fixation Device from Left Upper Femur, Percutaneous Approach |
|  |  |  | 0QP735Z | Removal of External Fixation Device from Left Upper Femur, Percutaneous Approach |
|  |  |  | 0QP744Z | Removal of Internal Fixation Device from Left Upper Femur, Percutaneous Endoscopic Approach |
|  |  |  | 0QP745Z | Removal of External Fixation Device from Left Upper Femur, Percutaneous Endoscopic Approach |
|  |  |  | 0QP804Z | Removal of Internal Fixation Device from Right Femoral Shaft, Open Approach |
|  |  |  | 0QP805Z | Removal of External Fixation Device from Right Femoral Shaft, Open Approach |
|  |  |  | 0QP834Z | Removal of Internal Fixation Device from Right Femoral Shaft, Percutaneous Approach |
|  |  |  | 0QP835Z | Removal of External Fixation Device from Right Femoral Shaft, Percutaneous Approach |
|  |  |  | 0QP844Z | Removal of Internal Fixation Device from Right Femoral Shaft, Percutaneous Endoscopic Approach |
|  |  |  | 0QP845Z | Removal of External Fixation Device from Right Femoral Shaft, Percutaneous Endoscopic Approach |
|  |  |  | 0QP904Z | Removal of Internal Fixation Device from Left Femoral Shaft, Open Approach |
|  |  |  | 0QP905Z | Removal of External Fixation Device from Left Femoral Shaft, Open Approach |
|  |  |  | 0QP934Z | Removal of Internal Fixation Device from Left Femoral Shaft, Percutaneous Approach |
|  |  |  | 0QP935Z | Removal of External Fixation Device from Left Femoral Shaft, Percutaneous Approach |
|  | 0QP944Z | Removal of Internal Fixation Device from Left Femoral Shaft, Percutaneous Endoscopic Approach |
|  |  | 0QP945Z | Removal of External Fixation Device from Left Femoral Shaft, Percutaneous Endoscopic Approach |
|  |  |  | 0QPB04Z | Removal of Internal Fixation Device from Right Lower Femur, Open Approach |
|  |  |  | 0QPB05Z | Removal of External Fixation Device from Right Lower Femur, Open Approach |
|  |  |  | 0QPB34Z | Removal of Internal Fixation Device from Right Lower Femur, Percutaneous Approach |
|  |  |  | 0QPB35Z | Removal of External Fixation Device from Right Lower Femur, Percutaneous Approach |
|  |  |  | 0QPB44Z | Removal of Internal Fixation Device from Right Lower Femur, Percutaneous Endoscopic Approach |
|  |  |  | 0QPB45Z | Removal of External Fixation Device from Right Lower Femur, Percutaneous Endoscopic Approach |
|  |  |  | 0QPC04Z | Removal of Internal Fixation Device from Left Lower Femur, Open Approach |
|  |  |  | 0QPC05Z | Removal of External Fixation Device from Left Lower Femur, Open Approach |
|  |  |  | 0QPC34Z | Removal of Internal Fixation Device from Left Lower Femur, Percutaneous Approach |
|  |  |  | 0QPC35Z | Removal of External Fixation Device from Left Lower Femur, Percutaneous Approach |
|  |  |  | 0QPC44Z | Removal of Internal Fixation Device from Left Lower Femur, Percutaneous Endoscopic Approach |
|  |  |  | 0QPC45Z | Removal of External Fixation Device from Left Lower Femur, Percutaneous Endoscopic Approach |
|  | **78.66** |  | 0QPD04Z | Removal of Internal Fixation Device from Right Patella, Open Approach |
|  |  | 0QPD05Z | Removal of External Fixation Device from Right Patella, Open Approach |
|  |  | 0QPD34Z | Removal of Internal Fixation Device from Right Patella, Percutaneous Approach |
|  |  | 0QPD35Z | Removal of External Fixation Device from Right Patella, Percutaneous Approach |
|  |  | 0QPD44Z | Removal of Internal Fixation Device from Right Patella, Percutaneous Endoscopic Approach |
|  |  | 0QPD45Z | Removal of External Fixation Device from Right Patella, Percutaneous Endoscopic Approach |
|  |  |  | 0QPF04Z | Removal of Internal Fixation Device from Left Patella, Open Approach |
|  |  |  | 0QPF05Z | Removal of External Fixation Device from Left Patella, Open Approach |
|  |  |  | 0QPF34Z | Removal of Internal Fixation Device from Left Patella, Percutaneous Approach |
|  |  |  | 0QPF35Z | Removal of External Fixation Device from Left Patella, Percutaneous Approach |
|  |  |  | 0QPF44Z | Removal of Internal Fixation Device from Left Patella, Percutaneous Endoscopic Approach |
|  |  |  | 0QPF45Z | Removal of External Fixation Device from Left Patella, Percutaneous Endoscopic Approach |
|  | **78.67** |  | 0QPG04Z | Removal of Internal Fixation Device from Right Tibia, Open Approach |
|  |  |  | 0QPG05Z | Removal of External Fixation Device from Right Tibia, Open Approach |
|  |  |  | 0QPG34Z | Removal of Internal Fixation Device from Right Tibia, Percutaneous Approach |
|  |  |  | 0QPG35Z | Removal of External Fixation Device from Right Tibia, Percutaneous Approach |
|  |  |  | 0QPG44Z | Removal of Internal Fixation Device from Right Tibia, Percutaneous Endoscopic Approach |
|  |  |  | 0QPG45Z | Removal of External Fixation Device from Right Tibia, Percutaneous Endoscopic Approach |
|  |  |  | 0QPH04Z | Removal of Internal Fixation Device from Left Tibia, Open Approach |
|  |  |  | 0QPH05Z | Removal of External Fixation Device from Left Tibia, Open Approach |
|  |  |  | 0QPH34Z | Removal of Internal Fixation Device from Left Tibia, Percutaneous Approach |
|  |  |  | 0QPH35Z | Removal of External Fixation Device from Left Tibia, Percutaneous Approach |
|  |  |  | 0QPH44Z | Removal of Internal Fixation Device from Left Tibia, Percutaneous Endoscopic Approach |
|  |  |  | 0QPH45Z | Removal of External Fixation Device from Left Tibia, Percutaneous Endoscopic Approach |
|  |  |  | 0QPJ04Z | Removal of Internal Fixation Device from Right Fibula, Open Approach |
|  |  |  | 0QPJ05Z | Removal of External Fixation Device from Right Fibula, Open Approach |
|  |  |  | 0QPJ34Z | Removal of Internal Fixation Device from Right Fibula, Percutaneous Approach |
|  |  |  | 0QPJ35Z | Removal of External Fixation Device from Right Fibula, Percutaneous Approach |
|  |  |  | 0QPJ44Z | Removal of Internal Fixation Device from Right Fibula, Percutaneous Endoscopic Approach |
|  |  |  | 0QPJ45Z | Removal of External Fixation Device from Right Fibula, Percutaneous Endoscopic Approach |
|  |  |  | 0QPK04Z | Removal of Internal Fixation Device from Left Fibula, Open Approach |
|  |  |  | 0QPK05Z | Removal of External Fixation Device from Left Fibula, Open Approach |
|  |  |  | 0QPK34Z | Removal of Internal Fixation Device from Left Fibula, Percutaneous Approach |
|  |  |  | 0QPK35Z | Removal of External Fixation Device from Left Fibula, Percutaneous Approach |
|  | 0QPK44Z | Removal of Internal Fixation Device from Left Fibula, Percutaneous Endoscopic Approach |
|  |  | 0QPK45Z | Removal of External Fixation Device from Left Fibula, Percutaneous Endoscopic Approach |
|  | **78.68** |  | 0QPL04Z | Removal of Internal Fixation Device from Right Tarsal, Open Approach |
|  |  |  | 0QPL05Z | Removal of External Fixation Device from Right Tarsal, Open Approach |
|  |  |  | 0QPL34Z | Removal of Internal Fixation Device from Right Tarsal, Percutaneous Approach |
|  |  |  | 0QPL35Z | Removal of External Fixation Device from Right Tarsal, Percutaneous Approach |
|  |  |  | 0QPL44Z | Removal of Internal Fixation Device from Right Tarsal, Percutaneous Endoscopic Approach |
|  |  |  | 0QPL45Z | Removal of External Fixation Device from Right Tarsal, Percutaneous Endoscopic Approach |
|  |  |  | 0QPM04Z | Removal of Internal Fixation Device from Left Tarsal, Open Approach |
|  |  |  | 0QPM05Z | Removal of External Fixation Device from Left Tarsal, Open Approach |
|  |  |  | 0QPM34Z | Removal of Internal Fixation Device from Left Tarsal, Percutaneous Approach |
|  |  |  | 0QPM35Z | Removal of External Fixation Device from Left Tarsal, Percutaneous Approach |
|  |  |  | 0QPM44Z | Removal of Internal Fixation Device from Left Tarsal, Percutaneous Endoscopic Approach |
|  |  |  | 0QPM45Z | Removal of External Fixation Device from Left Tarsal, Percutaneous Endoscopic Approach |
|  |  |  | 0QPN04Z | Removal of Internal Fixation Device from Right Metatarsal, Open Approach |
|  | 0QPN05Z | Removal of External Fixation Device from Right Metatarsal, Open Approach |
|  |  | 0QPN34Z | Removal of Internal Fixation Device from Right Metatarsal, Percutaneous Approach |
|  |  | 0QPN35Z | Removal of External Fixation Device from Right Metatarsal, Percutaneous Approach |
|  |  | 0QPN44Z | Removal of Internal Fixation Device from Right Metatarsal, Percutaneous Endoscopic Approach |
|  |  | 0QPN45Z | Removal of External Fixation Device from Right Metatarsal, Percutaneous Endoscopic Approach |
|  |  |  | 0QPP04Z | Removal of Internal Fixation Device from Left Metatarsal, Open Approach |
|  |  |  | 0QPP05Z | Removal of External Fixation Device from Left Metatarsal, Open Approach |
|  |  |  | 0QPP34Z | Removal of Internal Fixation Device from Left Metatarsal, Percutaneous Approach |
|  |  |  | 0QPP35Z | Removal of External Fixation Device from Left Metatarsal, Percutaneous Approach |
|  |  |  | 0QPP44Z | Removal of Internal Fixation Device from Left Metatarsal, Percutaneous Endoscopic Approach |
|  |  |  | 0QPP45Z | Removal of External Fixation Device from Left Metatarsal, Percutaneous Endoscopic Approach |
|  | **78.69** |  | 0PP3\*4Z | Removal of Internal Fixation Device from Cervical Vertebra, All Approaches |
|  |  |  | 0PP4\*4Z | Removal of Internal Fixation Device from Thoracic Vertebra, All Approaches |
|  |  |  | 0PPT\*4Z | Removal of Internal Fixation Device from Right Finger Phalanx, All Approaches |
|  |  |  | 0PPT\*5Z | Removal of External Fixation Device from Right Finger Phalanx, All Approaches |
|  |  |  | 0PPV\*4Z | Removal of Internal Fixation Device from Left Finger Phalanx, All Approaches |
|  |  |  | 0PPV\*5Z | Removal of External Fixation Device from Left Finger Phalanx, All Approaches |
|  |  |  | 0PPY0MZ | Removal of Bone Growth Stimulator from Upper Bone, Open Approach |
|  |  |  | 0PPY3MZ | Removal of Bone Growth Stimulator from Upper Bone, Percutaneous Approach |
|  |  |  | 0PPY4MZ | Removal of Bone Growth Stimulator from Upper Bone, Percutaneous Endoscopic Approach |
|  |  |  | 0QP004Z | Removal of Internal Fixation Device from Lumbar Vertebra, Open Approach |
|  |  |  | 0QP034Z | Removal of Internal Fixation Device from Lumbar Vertebra, Percutaneous Approach |
|  |  |  | 0QP044Z | Removal of Internal Fixation Device from Lumbar Vertebra, Percutaneous Endoscopic Approach |
|  |  |  | 0QP204Z | Removal of Internal Fixation Device from Right Pelvic Bone, Open Approach |
|  |  |  | 0QP205Z | Removal of External Fixation Device from Right Pelvic Bone, Open Approach |
|  |  |  | 0QP234Z | Removal of Internal Fixation Device from Right Pelvic Bone, Percutaneous Approach |
|  |  |  | 0QP235Z | Removal of External Fixation Device from Right Pelvic Bone, Percutaneous Approach |
|  |  |  | 0QP244Z | Removal of Internal Fixation Device from Right Pelvic Bone, Percutaneous Endoscopic Approach |
|  |  |  | 0QP245Z | Removal of External Fixation Device from Right Pelvic Bone, Percutaneous Endoscopic Approach |
|  |  |  | 0QP304Z | Removal of Internal Fixation Device from Left Pelvic Bone, Open Approach |
|  |  |  | 0QP305Z | Removal of External Fixation Device from Left Pelvic Bone, Open Approach |
|  |  |  | 0QP334Z | Removal of Internal Fixation Device from Left Pelvic Bone, Percutaneous Approach |
|  |  |  | 0QP335Z | Removal of External Fixation Device from Left Pelvic Bone, Percutaneous Approach |
|  | 0QP344Z | Removal of Internal Fixation Device from Left Pelvic Bone, Percutaneous Endoscopic Approach |
|  |  | 0QP345Z | Removal of External Fixation Device from Left Pelvic Bone, Percutaneous Endoscopic Approach |
|  |  |  | 0QPQ04Z | Removal of Internal Fixation Device from Right Toe Phalanx, Open Approach |
|  |  |  | 0QPQ05Z | Removal of External Fixation Device from Right Toe Phalanx, Open Approach |
|  |  |  | 0QPQ34Z | Removal of Internal Fixation Device from Right Toe Phalanx, Percutaneous Approach |
|  |  |  | 0QPQ35Z | Removal of External Fixation Device from Right Toe Phalanx, Percutaneous Approach |
|  |  |  | 0QPQ44Z | Removal of Internal Fixation Device from Right Toe Phalanx, Percutaneous Endoscopic Approach |
|  |  |  | 0QPQ45Z | Removal of External Fixation Device from Right Toe Phalanx, Percutaneous Endoscopic Approach |
|  |  |  | 0QPR04Z | Removal of Internal Fixation Device from Left Toe Phalanx, Open Approach |
|  |  |  | 0QPR05Z | Removal of External Fixation Device from Left Toe Phalanx, Open Approach |
|  |  |  | 0QPR34Z | Removal of Internal Fixation Device from Left Toe Phalanx, Percutaneous Approach |
|  |  |  | 0QPR35Z | Removal of External Fixation Device from Left Toe Phalanx, Percutaneous Approach |
|  |  |  | 0QPR44Z | Removal of Internal Fixation Device from Left Toe Phalanx, Percutaneous Endoscopic Approach |
|  |  |  | 0QPR45Z | Removal of External Fixation Device from Left Toe Phalanx, Percutaneous Endoscopic Approach |
|  |  |  | 0QPY0MZ | Removal of Bone Growth Stimulator from Lower Bone, Open Approach |
|  | 0QPY3MZ | Removal of Bone Growth Stimulator from Lower Bone, Percutaneous Approach |
|  |  | 0QPY4MZ | Removal of Bone Growth Stimulator from Lower Bone, Percutaneous Endoscopic Approach |
| **80.00-80.09** | Orthopedic implants arthrotomy for removal of prosthesis without replacement |  |  |
| **80.00** |  | 0RP0\*JZ | Removal of Synthetic Substitute from Occipital-cervical Joint |
|  |  | 0RP1\*JZ | Removal of Synthetic Substitute from Cervical Vertebral Joint |
|  |  |  | 0RP3\*JZ | Removal of Synthetic Substitute from Cervical Vertebral Disc |
|  |  |  | 0RP4\*JZ | Removal of Synthetic Substitute from Cervicothoracic Vertebral Joint |
|  |  |  | 0RP5\*JZ | Removal of Synthetic Substitute from Cervicothoracic Vertebral Disc |
|  |  |  | 0RP6\*JZ | Removal of Synthetic Substitute from Thoracic Vertebral Joint |
|  |  |  | 0RP9\*JZ | Removal of Synthetic Substitute from Thoracic Vertebral Disc |
|  |  |  | 0RPA\*JZ | Removal of Synthetic Substitute from Thoracolumbar Vertebral Joint |
|  |  |  | 0RPB\*JZ | Removal of Synthetic Substitute from Thoracolumbar Vertebral Disc |
|  |  |  | 0RPC\*JZ | Removal of Synthetic Substitute from Right Temporomandibular Joint |
|  |  |  | 0RPD\*JZ | Removal of Synthetic Substitute from Left Temporomandibular Joint |
|  |  |  | 0RPJ\*JZ | Removal of Synthetic Substitute from Right Shoulder Joint |
|  |  |  | 0RPK\*JZ | Removal of Synthetic Substitute from Left Shoulder Joint |
|  |  |  | 0RPL\*JZ | Removal of Synthetic Substitute from Right Elbow Joint |
|  |  |  | 0RPM\*JZ | Removal of Synthetic Substitute from Left Elbow Joint |
|  |  |  | 0RPN\*JZ | Removal of Synthetic Substitute from Right Wrist Joint |
|  |  |  | 0RPP\*JZ | Removal of Synthetic Substitute from Left Wrist Joint |
|  |  |  | 0RPQ\*JZ | Removal of Synthetic Substitute from Right Carpal Joint |
|  |  |  | 0RPR\*JZ | Removal of Synthetic Substitute from Left Carpal Joint |
|  |  |  | 0RPS\*JZ | Removal of Synthetic Substitute from Right Metacarpocarpal Joint |
|  |  |  | 0RPT\*JZ | Removal of Synthetic Substitute from Left Metacarpocarpal Joint |
|  |  |  | 0RPU\*JZ | Removal of Synthetic Substitute from Right Metacarpophalangeal Joint |
|  |  |  | 0RPV\*JZ | Removal of Synthetic Substitute from Left Metacarpophalangeal Joint |
|  |  |  | 0RPW\*JZ | Removal of Synthetic Substitute from Right Finger Phalangeal Joint |
|  |  |  | 0RPX\*JZ | Removal of Synthetic Substitute from Left Finger Phalangeal Joint |
|  |  |  | 0SP0\*JZ | Removal of Synthetic Substitute from Lumbar Vertebral Joint |
|  |  |  | 0SP2\*JZ | Removal of Synthetic Substitute from Lumbar Vertebral Disc |
|  |  |  | 0SP3\*JZ | Removal of Synthetic Substitute from Lumbosacral Joint |
|  |  |  | 0SP4\*JZ | Removal of Synthetic Substitute from Lumbosacral Disc |
|  |  |  | 0SP5\*JZ | Removal of Synthetic Substitute from Sacrococcygeal Joint |
|  |  |  | 0SP6\*JZ | Removal of Synthetic Substitute from Coccygeal Joint |
|  |  |  | 0SP7\*JZ | Removal of Synthetic Substitute from Right Sacroiliac Joint |
|  |  |  | 0SP8\*JZ | Removal of Synthetic Substitute from Left Sacroiliac Joint |
|  |  |  | 0SP9\*JZ | Removal of Synthetic Substitute from Right Hip Joint |
|  |  |  | 0SPB\*JZ | Removal of Synthetic Substitute from Left Hip Joint |
|  |  |  | 0SPC\*JZ | Removal of Synthetic Substitute from Right Knee Joint |
|  |  |  | 0SPD\*JZ | Removal of Synthetic Substitute from Left Knee Joint |
|  |  |  | 0SPF\*JZ | Removal of Synthetic Substitute from Right Ankle Joint |
|  |  |  | 0SPG\*JZ | Removal of Synthetic Substitute from Left Ankle Joint |
|  |  |  | 0SPK\*JZ | Removal of Synthetic Substitute from Right Metatarsal-Tarsal Joint |
|  |  |  | 0SPL\*JZ | Removal of Synthetic Substitute from Left Metatarsal-Tarsal Joint |
|  |  |  | 0SPM\*JZ | Removal of Synthetic Substitute from Right Metatarsal-Phalangeal Joint |
|  |  |  | 0SPN\*JZ | Removal of Synthetic Substitute from Left Metatarsal-Phalangeal Joint |
|  | 0SPP\*JZ | Removal of Synthetic Substitute from Right Toe Phalangeal Joint |
|  |  | 0SPQ\*JZ | Removal of Synthetic Substitute from Left Toe Phalangeal Joint |
| **80.01** |  | 0RPJ\*JZ | Removal of Synthetic Substitute from Right Shoulder Joint |
|  |  | 0RPK\*JZ | Removal of Synthetic Substitute from Left Shoulder Joint |
| **80.02** |  | 0RPL\*JZ | Removal of Synthetic Substitute from Right Elbow Joint |
|  |  | 0RPM\*JZ | Removal of Synthetic Substitute from Left Elbow Joint |
|  | **80.03** |  | 0RPN\*JZ | Removal of Synthetic Substitute from Right Wrist Joint |
|  |  |  | 0RPP\*JZ | Removal of Synthetic Substitute from Left Wrist Joint |
|  | **80.04** |  | 0RPQ\*JZ | Removal of Synthetic Substitute from Right Carpal Joint |
|  |  |  | 0RPR\*JZ | Removal of Synthetic Substitute from Left Carpal Joint |
|  |  |  | 0RPS\*JZ | Removal of Synthetic Substitute from Right Metacarpocarpal Joint |
|  |  |  | 0RPT\*JZ | Removal of Synthetic Substitute from Left Metacarpocarpal Joint |
|  |  |  | 0RPU\*JZ | Removal of Synthetic Substitute from Right Metacarpophalangeal Joint |
|  |  |  | 0RPV\*JZ | Removal of Synthetic Substitute from Left Metacarpophalangeal Joint |
|  |  |  | 0RPW\*JZ | Removal of Synthetic Substitute from Right Finger Phalangeal Joint |
|  |  |  | 0RPX\*JZ | Removal of Synthetic Substitute from Left Finger Phalangeal Joint |
|  | **80.05** |  | 0SP909Z | Removal of Liner from Right Hip Joint, Open Approach |
|  |  |  | 0SP9\*JZ | Removal of Synthetic Substitute from Right Hip Joint |
|  |  |  | 0SPB09Z | Removal of Liner from Left Hip Joint, Open Approach |
|  |  |  | 0SPB\*JZ | Removal of Synthetic Substitute from Left Hip Joint |
|  | **80.06** |  | 0SPC09Z | Removal of Liner from Right Knee Joint, Open Approach |
|  |  |  | 0SPC\*JZ | Removal of Synthetic Substitute from Right Knee Joint |
|  |  |  | 0SPD09Z | Removal of Liner from Left Knee Joint, Open Approach |
|  |  |  | 0SPD\*JZ | Removal of Synthetic Substitute from Left Knee Joint |
|  | **80.07** |  | 0SPF\*JZ | Removal of Synthetic Substitute from Right Ankle Joint |
|  |  |  | 0SPG\*JZ | Removal of Synthetic Substitute from Left Ankle Joint |
|  | **80.08** |  | 0SPH0JZ | Removal of Synthetic Substitute from Right Tarsal Joint, Open Approach |
|  |  |  | 0SPJ\*JZ | Removal of Synthetic Substitute from Left Tarsal Joint |
|  |  |  | 0SPK\*JZ | Removal of Synthetic Substitute from Right Metatarsal-Tarsal Joint |
|  |  |  | 0SPL\*JZ | Removal of Synthetic Substitute from Left Metatarsal-Tarsal Joint |
|  |  |  | 0SPM\*JZ | Removal of Synthetic Substitute from Right Metatarsal-Phalangeal Joint |
|  |  |  | 0SPN\*JZ | Removal of Synthetic Substitute from Left Metatarsal-Phalangeal Joint |
|  |  |  | 0SPP\*JZ | Removal of Synthetic Substitute from Right Toe Phalangeal Joint |
|  | 0SPQ\*JZ | Removal of Synthetic Substitute from Left Toe Phalangeal Joint |
|  | **80.09** |  | 0RP0\*JZ | Removal of Synthetic Substitute from Occipital-cervical Joint |
|  |  |  | 0RP1\*JZ | Removal of Synthetic Substitute from Cervical Vertebral Joint |
|  |  |  | 0RP3\*JZ | Removal of Synthetic Substitute from Cervical Vertebral Disc |
|  |  |  | 0RP4\*JZ | Removal of Synthetic Substitute from Cervicothoracic Vertebral Joint |
|  |  |  | 0RP5\*JZ | Removal of Synthetic Substitute from Cervicothoracic Vertebral Disc |
|  |  |  | 0RP6\*JZ | Removal of Synthetic Substitute from Thoracic Vertebral Joint |
|  |  |  | 0RP9\*JZ | Removal of Synthetic Substitute from Thoracic Vertebral Disc |
|  |  |  | 0RPA\*JZ | Removal of Synthetic Substitute from Thoracolumbar Vertebral Joint |
|  |  |  | 0RPB\*JZ | Removal of Synthetic Substitute from Thoracolumbar Vertebral Disc |
|  |  |  | 0SP0\*JZ | Removal of Synthetic Substitute from Lumbar Vertebral Joint |
|  |  |  | 0SP2\*JZ | Removal of Synthetic Substitute from Lumbar Vertebral Disc |
|  |  |  | 0SP3\*JZ | Removal of Synthetic Substitute from Lumbosacral Joint |
|  |  |  | 0SP4\*JZ | Removal of Synthetic Substitute from Lumbosacral Disc |
|  |  |  | 0SP5\*JZ | Removal of Synthetic Substitute from Sacrococcygeal Joint |
|  | 0SP6\*JZ | Removal of Synthetic Substitute from Coccygeal Joint |
|  |  | 0SP7\*JZ | Removal of Synthetic Substitute from Right Sacroiliac Joint |
|  |  | 0SP8\*JZ | Removal of Synthetic Substitute from Left Sacroiliac Joint |
| Pleurosclerosis |  |  | 0B5N\*ZZ | Destruction of Right Pleura, All Approaches |
|  |  | 0B5P\*ZZ | Destruction of Left Pleura, All Approaches |
|  |  | 3E0F\*TZ | Introduction of Destructive Agent into Respiratory Tract, All Approaches |
|  |  | 3E0L3GC | Introduction of Other Therapeutic Substance into Pleural Cavity, Percutaneous Approach |
|  |  |  | 3E0L3TZ | Introduction of Destructive Agent into Pleural Cavity, Percutaneous Approach |
|  |  |  | 3E0Y3GC | Introduction of Other Therapeutic Substance into Pericardial Cavity, Percutaneous Approach |
|  |  |  | 3E0Y3TZ | Introduction of Destructive Agent into Pericardial Cavity, Percutaneous Approach |
| Other GI procedures | **51.14** | Other close (endoscopic) biopsy of biliary duct or sphincter of Oddi | 0F95\*ZX | Drainage of Right Hepatic Duct, Diagnostic |
|  | 0F96\*ZX | Drainage of Left Hepatic Duct, Diagnostic |
|  | 0F98\*ZX | Drainage of Cystic Duct, Diagnostic |
|  | 0F99\*ZX | Drainage of Common Bile Duct, Diagnostic |
|  |  | 0F9C\*ZX | Drainage of Ampulla of Vater, Diagnostic |
|  |  |  | 0FB44ZX | Excision of Gallbladder, Percutaneous Endoscopic Approach, Diagnostic |
|  |  |  | 0FB5\*ZX | Excision of Right Hepatic Duct, Diagnostic |
|  |  |  | 0FB6\*ZX | Excision of Left Hepatic Duct, Diagnostic |
|  |  |  | 0FB8\*ZX | Excision of Cystic Duct, Diagnostic |
|  |  |  | 0FB9\*ZX | Excision of Common Bile Duct, Diagnostic |
|  |  |  | 0FBC\*ZX | Excision of Ampulla of Vater, Diagnostic |
|  | **51.64** | Endoscopic excision or destruction of lesion of biliary ducts or sphincter of Oddi | 0F558ZZ | Destruction of Right Hepatic Duct, Endo |
|  | 0F568ZZ | Destruction of Left Hepatic Duct, Endo |
|  | 0F588ZZ | Destruction of Cystic Duct, Endo |
|  | 0F598ZZ | Destruction of Common Bile Duct, Endo |
|  | 0F5C8ZZ | Destruction of Ampulla of Vater, Endo |
|  | 0FB58ZZ | Excision of Right Hepatic Duct, Endo |
|  | 0FB68ZZ | Excision of Left Hepatic Duct, Endo |
|  | 0FB88ZZ | Excision of Cystic Duct, Endo |
|  | 0FB98ZZ | Excision of Common Bile Duct, Endo |
|  | 0FBC8ZZ | Excision of Ampulla of Vater, Endo |
|  | **51.84** | Endoscopic dilation of ampulla and biliary duct | 0F758ZZ | Dilation of Right Hepatic Duct, Endo |
|  | 0F768ZZ | Dilation of Left Hepatic Duct, Endo |
|  | 0F788ZZ | Dilation of Cystic Duct, Endo |
|  | 0F798ZZ | Dilation of Common Bile Duct, Endo |
|  | 0F7C8DZ | Dilation of Ampulla of Vater with Intraluminal Device, Endo |
|  | 0F7C8ZZ | Dilation of Ampulla of Vater, Endo |
|  | **51.85** | Endoscopic sphincterotomy and papillotomy | 0F9C80Z | Drainage of Ampulla of Vater with Drainage Device, Via Natural or Artificial Opening Endoscopic |
|  |  | 0F9C8ZZ | Drainage of Ampulla of Vater, Via Natural or Artificial Opening Endoscopic |
|  | **51.86** | Endoscopic insertion of nasobiliary drainage tube | 0F9980Z | Drainage of Common Bile Duct with Drainage Device, Via Natural or Artificial Opening Endoscopic |
|  | **51.87** | Endoscopic insertion of stent (tube) into bile duct | 0F758DZ | Dilation of Right Hepatic Duct with Intraluminal Device, Via Natural or Artificial Opening Endoscopic |
|  | 0F768DZ | Dilation of Left Hepatic Duct with Intraluminal Device, Via Natural or Artificial Opening Endoscopic |
|  | 0F788DZ | Dilation of Cystic Duct with Intraluminal Device, Via Natural or Artificial Opening Endoscopic |
|  |  |  | 0F798DZ | Dilation of Common Bile Duct with Intraluminal Device, Via Natural or Artificial Opening Endoscopic |
| 0FHB4DZ | Insertion of Intraluminal Device into Hepatobiliary Duct, Percutaneous Endoscopic Approach |
| 0FHB8DZ | Insertion of Intraluminal Device into Hepatobiliary Duct, Via Natural or Artificial Opening Endoscopic |
| **51.88** | Endoscopic removal of stone(s) from biliary tract | 0FC58ZZ | Extirpation of Matter from Right Hepatic Duct, Endo |
|  |  | 0FC68ZZ | Extirpation of Matter from Left Hepatic Duct, Endo |
|  |  | 0FC88ZZ | Extirpation of Matter from Cystic Duct, Endo |
|  |  |  | 0FC98ZZ | Extirpation of Matter from Common Bile Duct, Endo |
|  |  |  | 0FCC8ZZ | Extirpation of Matter from Ampulla of Vater, Endo |
|  |  |  | 0FF48ZZ | Fragmentation in Gallbladder, Endo |
|  |  |  | 0FF58ZZ | Fragmentation in Right Hepatic Duct, Endo |
|  |  |  | 0FF68ZZ | Fragmentation in Left Hepatic Duct, Endo |
|  |  |  | 0FF88ZZ | Fragmentation in Cystic Duct, Endo |
|  |  |  | 0FF98ZZ | Fragmentation in Common Bile Duct, Endo |
|  |  |  | 0FFC8ZZ | Fragmentation in Ampulla of Vater, Endo |
| Fistula | **42.84** | Repair of esophageal fistula, not elsewhere classified | 0DQ5\*ZZ | Repair Esophagus |
|  |  | 0DQ6\*ZZ | Repair Stomach |
|  |  | 0HQ4XZZ | Repair Neck Skin, External Approach |
|  |  | 0HQ5XZZ | Repair Chest Skin, External Approach |
|  | **44.63** | Closure of other gastric fistula (include gastrocolic, gastrojejunocolic fistula) | 0DQ6\*ZZ | Repair Stomach |
|  |  | 0DQ8\*ZZ | Repair Small Intestine |
|  |  | 0DQA\*ZZ | Repair Jejunum |
|  |  | 0DQE\*ZZ | Repair Large Intestine |
|  | **46.72** | Closure of fistula of duodenum | 0DQ9\*ZZ | Repair Duodenum |
|  | **46.74** | Closure of fistula of small intestine, except duodenum (includes enterocutaneous) | 0DQ8\*ZZ | Repair Small Intestine |
|  |  | 0DQA\*ZZ | Repair Jejunum |
|  |  | 0DQB\*ZZ | Repair Ileum |
|  |  |  | 0DQE\*ZZ | Repair Large Intestine |
|  |  |  | 0DQN\*ZZ | Repair Sigmoid Colon |
|  |  |  | 0DQP\*ZZ | Repair Rectum |
|  |  |  | 0HQ6XZZ | Repair Back Skin, External Approach |
|  |  |  | 0HQ7XZZ | Repair Abdomen Skin, External Approach |
|  | **46.76** | Closure of fistula of large intestine | 0DQE\*ZZ | Repair Large Intestine |
|  |  | 0DQH\*ZZ | Repair Cecum |
|  |  |  | 0DQN\*ZZ | Repair Sigmoid Colon |
|  |  |  | 0HQ9XZZ | Repair Perineum Skin, External Approach |
|  | **47.92** | Closure of appendiceal fistula | 0DQJ\*ZZ | Repair Appendix |
|  |  |  | 0HQ6XZZ | Repair Back Skin, External Approach |
|  |  |  | 0HQ7XZZ | Repair Abdomen Skin, External Approach |
|  | **48.73** | Closure of other rectal fistula | 0DQP\*ZZ | Repair Rectum |
|  |  | 0DQQ0ZZ | Repair Anus, Open Approach |
|  |  | 0DQQ3ZZ | Repair Anus, Percutaneous Approach |
|  |  | 0DQQ4ZZ | Repair Anus, Percutaneous Endoscopic Approach |
|  |  | 0DQQ7ZZ | Repair Anus, Via Natural or Artificial Opening |
|  |  | 0DQQ8ZZ | Repair Anus, Via Natural or Artificial Opening Endoscopic |
|  |  |  | 0HQ9XZZ | Repair Perineum Skin, External Approach |
|  |  |  | 0UQM\*ZZ | Repair Vulva |
|  | **48.93** | Repair of perirectal fistula | 0DQP\*ZZ | Repair Rectum |
| **49.11** | Anal fistulotomy | 0H89XZZ | Division of Perineum Skin, External Approach |
| **49.12** | Anal fistulectomy | 0DBQ0ZZ | Excision of Anus, Open Approach |
|  |  | 0DBQ3ZX | Excision of Anus, Percutaneous Approach, Diagnostic |
|  |  |  | 0DBQ3ZZ | Excision of Anus, Percutaneous Approach |
|  | **49.73** | Closure of anal fistula | 0DQQ\*ZZ | Repair Anus |
|  | **19.9** | Other repair of middle ear (includes closure of mastoid fistula | 09Q50ZZ | Repair Right Middle Ear, Open Approach |
|  |  | 09Q60ZZ | Repair Left Middle Ear, Open Approach |
|  |  | 09R507Z | Replacement of Right Middle Ear with Autologous Tissue Substitute, Open Approach |
|  |  | 09R50JZ | Replacement of Right Middle Ear with Synthetic Substitute, Open Approach |
|  |  |  | 09R50KZ | Replacement of Right Middle Ear with Nonautologous Tissue Substitute, Open Approach |
|  |  |  | 09R607Z | Replacement of Left Middle Ear with Autologous Tissue Substitute, Open Approach |
|  |  |  | 09R60JZ | Replacement of Left Middle Ear with Synthetic Substitute, Open Approach |
|  |  |  | 09R60KZ | Replacement of Left Middle Ear with Nonautologous Tissue Substitute, Open Approach |
|  |  |  | 09U507Z | Supplement Right Middle Ear with Autologous Tissue Substitute, Open Approach |
|  |  |  | 09U50JZ | Supplement Right Middle Ear with Synthetic Substitute, Open Approach |
|  |  |  | 09U50KZ | Supplement Right Middle Ear with Nonautologous Tissue Substitute, Open Approach |
|  |  |  | 09U607Z | Supplement Left Middle Ear with Autologous Tissue Substitute, Open Approach |
|  |  |  | 09U60JZ | Supplement Left Middle Ear with Synthetic Substitute, Open Approach |
|  |  |  | 09U60KZ | Supplement Left Middle Ear with Nonautologous Tissue Substitute, Open Approach |
|  | **20.93** | Repair of oval and round windows (includes closure of fistula) | 09Q\*0ZZ | Repair Middle Ear, Open Approach |
|  | **21.82** | Closure of nasal fistula | 09QK0ZZ | Repair Nose, Open Approach |
|  |  | 09QK3ZZ | Repair Nose, Percutaneous Approach |
|  |  |  | 09QK4ZZ | Repair Nose, Percutaneous Endoscopic Approach |
|  |  |  | 0CQ0\*ZZ | Repair Upper Lip |
|  |  |  | 0CQ1\*ZZ | Repair Lower Lip |
|  |  |  | 0CQ5\*ZZ | Repair Upper Gingiva |
|  |  |  | 0CQM\*ZZ | Repair Pharynx |
|  | **31.62** | Closure of fistula of larynx (includes laryngotracheal) | 0CQS\*ZZ | Repair Larynx |
|  | **31.73** | Closure of other fistula of trachea (includes tracheoesophageal) | 0BQ1\*ZZ | Repair Trachea |
|  | 0DQ5\*ZZ | Repair Esophagus |
|  | **33.42** | Closure of bronchial fistula (includes bronchocutaneous, bronchoesophageal, bronchovisceral) | 0BQ3\*ZZ | Repair Right Main Bronchus |
|  | 0BQ4\*ZZ | Repair Right Upper Lobe Bronchus |
|  | 0BQ5\*ZZ | Repair Right Middle Lobe Bronchus |
|  |  | 0BQ6\*ZZ | Repair Right Lower Lobe Bronchus |
|  |  | 0BQ7\*ZZ | Repair Left Main Bronchus |
|  |  | 0BQ8\*ZZ | Repair Left Upper Lobe Bronchus |
|  |  | 0BQ9\*ZZ | Repair Lingula Bronchus |
|  |  |  | 0BQB\*ZZ | Repair Left Lower Lobe Bronchus |
|  |  |  | 0DQ5\*ZZ | Repair Esophagus |
|  |  |  | 0DQW\*ZZ | Repair Peritoneum |
|  |  |  | 0WQ8\*ZZ | Repair Chest Wall |
|  | **34.73** | Closure of other fistula of thorax (includes bronchopleural, bronchopleurocutaneous, bronchopleuromediastinal) | 0BQ3\*ZZ | Repair Right Main Bronchus |
|  | 0BQ4\*ZZ | Repair Right Upper Lobe Bronchus |
|  | 0BQ5\*ZZ | Repair Middle Lobe Bronchus |
|  | 0BQ6\*ZZ | Repair Right Lower Lobe Bronchus |
|  | 0BQ7\*ZZ | Repair Left Main Bronchus |
|  |  | 0BQ8\*ZZ | Repair Left Upper Lobe Bronchus |
|  |  | 0BQ9\*ZZ | Repair Lingula Bronchus |
|  |  | 0BQB\*ZZ | Repair Left Lower Lobe Bronchus |
|  |  |  | 0BQK\*ZZ | Repair Right Lung |
|  |  |  | 0BQL\*ZZ | Repair Left Lung |
|  |  |  | 0BQM\*ZZ | Repair Bilateral Lungs |
|  |  |  | 0BQN\*ZZ | Repair Right Pleura |
|  |  |  | 0BQP\*ZZ | Repair Left Pleura |
|  |  |  | 0DQ5\*ZZ | Repair Esophagus |
|  |  |  | 0FQ0\*ZZ | Repair Liver |
|  |  |  | 0WQ8\*ZZ | Repair Chest Wall |
|  |  |  | 0WQC\*ZZ | Repair Mediastinum |
|  | **34.83** | Closure of fistula of diaphragm (includes thoracicoabdominal, thoracicogastric, thoracicointestinal) | 0BQL\*ZZ | Repair Left Lung |
|  |  | 0BQM\*ZZ | Repair Bilateral Lungs |
|  |  | 0BQN\*ZZ | Repair Right Pleura |
|  |  | 0BQP\*ZZ | Repair Left Pleura |
|  |  | 0BQR\*ZZ | Repair Right Diaphragm |
|  |  | 0BQS\*ZZ | Repair Left Diaphragm |
|  |  |  | 0DQ6\*ZZ | Repair Stomach |
|  |  |  | 0DQ8\*ZZ | Repair Small Intestine |
|  |  |  | 0DQE\*ZZ | Repair Large Intestine |
|  |  |  | 0DQW\*ZZ | Repair Peritoneum |
|  |  |  | 0WQ80ZZ | Repair Chest Wall, Open Approach |
|  |  |  | 0WQ83ZZ | Repair Chest Wall, Percutaneous Approach |
|  |  |  | 0WQ84ZZ | Repair Chest Wall, Percutaneous Endoscopic Approach |
|  | **34.93** | Repair of pleura (includes closure of unspecified pleural fistula) | 0BQN\*ZZ | Repair Right Pleura |
|  |  | 0BQP\*ZZ | Repair Left Pleura |
|  | **61.42** | Repair of scrotal fistula | 0VQ5\*ZZ | Repair Scrotum |
| Tendon repair (eye) | **15.7** | Repair of injury of extraocular muscle (includes repair of tendon) | 08NL\*ZZ | Release Right Extraocular Muscle |
|  | 08NM\*ZZ | Release Left Extraocular Muscle |
|  | 08QL\*ZZ | Repair Right Extraocular Muscle |
|  |  | 08QM\*ZZ | Repair Left Extraocular Muscle |
| Aneurysm | **39.51** | Clipping of aneurysm | 02VP\*CZ | Restriction of Pulmonary Trunk with Extraluminal Device |
|  |  | 02VQ\*CZ | Restriction of Right Pulmonary Artery with Extraluminal Device |
|  |  | 02VR\*CZ | Restriction of Left Pulmonary Artery with Extraluminal Device |
|  |  |  | 02VR\*CT | Restriction of Ductus Arteriosus with Extraluminal Device |
|  |  |  | 02VS\*CZ | Restriction of Right Pulmonary Vein with Extraluminal Device |
|  |  |  | 02VT\*CZ | Restriction of Left Pulmonary Vein with Extraluminal Device |
|  |  |  | 02VW\*CZ | Restriction of Thoracic Aorta with Extraluminal Device |
|  |  |  | 03V0\*CZ | Restriction of Right Internal Mammary Artery with Extraluminal Device |
|  |  |  | 03V1\*CZ | Restriction of Left Internal Mammary Artery with Extraluminal Device |
|  |  |  | 03V2\*CZ | Restriction of Innominate Artery with Extraluminal Device |
|  |  |  | 03V3\*CZ | Restriction of Right Subclavian Artery with Extraluminal Device |
|  |  |  | 03V4\*CZ | Restriction of Left Subclavian Artery with Extraluminal Device |
| 03V5\*CZ | Restriction of Right Axillary Artery with Extraluminal Device |
|  |  | 03V6\*CZ | Restriction of Left Axillary Artery with Extraluminal Device |
|  |  | 03V7\*CZ | Restriction of Right Brachial Artery with Extraluminal Device |
|  |  | 03V8\*CZ | Restriction of Left Brachial Artery with Extraluminal Device |
|  |  |  | 03V9\*CZ | Restriction of Right Ulnar Artery with Extraluminal Device |
|  |  |  | 03VA\*CZ | Restriction of Left Ulnar Artery with Extraluminal Device |
|  |  |  | 03VB\*CZ | Restriction of Right Radial Artery with Extraluminal Device |
|  |  |  | 03VC\*CZ | Restriction of Left Radial Artery with Extraluminal Device |
|  |  |  | 03VD\*CZ | Restriction of Right Hand Artery with Extraluminal Device |
|  |  |  | 03VF\*CZ | Restriction of Left Hand Artery with Extraluminal Device |
|  |  |  | 03VG\*CZ | Restriction of Intracranial Artery with Extraluminal Device |
|  |  |  | 03VH\*CZ | Restriction of Right Common Carotid Artery with Extraluminal Device |
|  |  |  | 03VJ\*CZ | Restriction of Left Common Carotid Artery with Extraluminal Device |
|  |  |  | 03VK\*CZ | Restriction of Right Internal Carotid Artery with Extraluminal Device |
|  |  |  | 03VL\*CZ | Restriction of Left Internal Carotid Artery with Extraluminal Device |
|  |  |  | 03VM\*CZ | Restriction of Right External Carotid Artery with Extraluminal Device |
|  |  |  | 03VN\*CZ | Restriction of Left External Carotid Artery with Extraluminal Device |
|  |  |  | 03VP\*CZ | Restriction of Right Vertebral Artery with Extraluminal Device |
|  |  |  | 03VQ\*CZ | Restriction of Left Vertebral Artery with Extraluminal Device |
|  |  |  | 03VR\*CZ | Restriction of Face Artery with Extraluminal Device |
|  |  |  | 03VS\*CZ | Restriction of Right Temporal Artery with Extraluminal Device |
|  |  |  | 03VT\*CZ | Restriction of Left Temporal Artery with Extraluminal Device |
|  |  |  | 03VU\*CZ | Restriction of Right Thyroid Artery with Extraluminal Device |
|  |  |  | 03VV\*CZ | Restriction of Left Thyroid Artery with Extraluminal Device |
|  |  |  | 03VY\*CZ | Restriction of Upper Artery with Extraluminal Device |
|  |  |  | 04V0\*CZ | Restriction of Abdominal Aorta with Extraluminal Device |
|  |  |  | 04V1\*CZ | Restriction of Celiac Artery with Extraluminal Device |
|  |  |  | 04V2\*CZ | Restriction of Gastric Artery with Extraluminal Device |
|  |  |  | 04V3\*CZ | Restriction of Hepatic Artery with Extraluminal Device |
|  |  |  | 04V4\*CZ | Restriction of Splenic Artery with Extraluminal Device |
|  |  |  | 04V5\*CZ | Restriction of Superior Mesenteric Artery with Extraluminal Device |
|  |  |  | 04V6\*CZ | Restriction of Right Colic Artery with Extraluminal Device |
|  |  |  | 04V7\*CZ | Restriction of Left Colic Artery with Extraluminal Device |
|  |  |  | 04V8\*CZ | Restriction of Middle Colic Artery with Extraluminal Device |
|  |  |  | 04V9\*CZ | Restriction of Right Renal Artery with Extraluminal Device |
|  |  |  | 04VA\*CZ | Restriction of Left Renal Artery with Extraluminal Device |
|  |  |  | 04VB\*CZ | Restriction of Inferior Mesenteric Artery with Extraluminal Device |
|  |  |  | 04VC\*CZ | Restriction of Right Common Iliac Artery with Extraluminal Device |
|  |  |  | 04VD\*CZ | Restriction of Left Common Iliac Artery with Extraluminal Device |
|  |  |  | 04VE\*CZ | Restriction of Right Internal Iliac Artery with Extraluminal Device |
|  |  |  | 04VF\*CZ | Restriction of Left Internal Iliac Artery with Extraluminal Device |
|  |  |  | 04VH\*CZ | Restriction of Right External Iliac Artery with Extraluminal Device |
|  |  |  | 04VJ\*CZ | Restriction of Left External Iliac Artery with Extraluminal Device |
|  |  |  | 04VK\*CZ | Restriction of Right Femoral Artery with Extraluminal Device |
|  |  |  | 04VL\*CZ | Restriction of Left Femoral Artery with Extraluminal Device |
|  |  |  | 04VM\*CZ | Restriction of Right Popliteal Artery with Extraluminal Device |
|  |  |  | 04VN\*CZ | Restriction of Left Popliteal Artery with Extraluminal Device |
|  |  |  | 04VP\*CZ | Restriction of Right Anterior Tibial Artery with Extraluminal Device |
| 04VQ\*CZ | Restriction of Left Anterior Tibial Artery with Extraluminal Device |
|  |  | 04VR\*CZ | Restriction of Right Posterior Tibial Artery with Extraluminal Device |
|  |  | 04VS\*CZ | Restriction of Left Posterior Tibial Artery with Extraluminal Device |
|  |  | 04VT\*CZ | Restriction of Right Peroneal Artery with Extraluminal Device |
|  |  | 04VU\*CZ | Restriction of Left Peroneal Artery with Extraluminal Device |
|  |  |  | 04VV\*CZ | Restriction of Right Foot Artery with Extraluminal Device |
|  |  |  | 04VW\*CZ | Restriction of Left Foot Artery with Extraluminal Device, |
|  |  |  | 04VY\*CZ | Restriction of Lower Artery with Extraluminal Device |
|  |  |  | 05V0\*CZ | Restriction of Azygos Vein with Extraluminal Device, |
|  |  |  | 05V1\*CZ | Restriction of Hemiazygos Vein with Extraluminal Device |
|  |  |  | 05V3\*CZ | Restriction of Right Innominate Vein with Extraluminal Device |
|  |  |  | 05V4\*CZ | Restriction of Left Innominate Vein with Extraluminal Device |
|  |  |  | 05V5\*CZ | Restriction of Right Subclavian Vein with Extraluminal Device |
|  |  |  | 05V6\*CZ | Restriction of Left Subclavian Vein with Extraluminal Device |
|  |  |  | 05V7\*CZ | Restriction of Right Axillary Vein with Extraluminal Device |
|  |  |  | 05V8\*CZ | Restriction of Left Axillary Vein with Extraluminal Device |
|  |  |  | 05V9\*CZ | Restriction of Right Brachial Vein with Extraluminal Device |
|  |  |  | 05VA\*CZ | Restriction of Left Brachial Vein with Extraluminal Device |
|  |  |  | 05VB\*CZ | Restriction of Right Basilic Vein with Extraluminal Device |
|  |  |  | 05VC\*CZ | Restriction of Left Basilic Vein with Extraluminal Device |
|  |  |  | 05VD\*CZ | Restriction of Right Cephalic Vein with Extraluminal Device |
|  |  |  | 05VF\*CZ | Restriction of Left Cephalic Vein with Extraluminal Device |
|  |  |  | 05VG\*CZ | Restriction of Right Hand Vein with Extraluminal Device |
|  |  |  | 05VH\*CZ | Restriction of Left Hand Vein with Extraluminal Device |
|  |  |  | 05VL\*CZ | Restriction of Intracranial Vein with Extraluminal Device |
|  |  |  | 05VM\*CZ | Restriction of Right Internal Jugular Vein with Extraluminal Device |
|  |  |  | 05VN\*CZ | Restriction of Left Internal Jugular Vein with Extraluminal Device |
|  |  |  | 05VP\*CZ | Restriction of Right External Jugular Vein with Extraluminal Device |
|  |  |  | 05VQ\*CZ | Restriction of Left External Jugular Vein with Extraluminal Device |
|  |  |  | 05VR\*CZ | Restriction of Right Vertebral Vein with Extraluminal Device |
|  |  |  | 05VS\*CZ | Restriction of Left Vertebral Vein with Extraluminal Device |
|  |  |  | 05VT\*CZ | Restriction of Right Face Vein with Extraluminal Device |
|  |  |  | 05VV\*CZ | Restriction of Left Face Vein with Extraluminal Device |
|  |  |  | 05VY\*CZ | Restriction of Upper Vein with Extraluminal Device |
|  |  |  | 06V1\*CZ | Restriction of Splenic Vein with Extraluminal Device |
|  |  |  | 06V2\*CZ | Restriction of Gastric Vein with Extraluminal Device |
|  |  |  | 06V3\*CZ | Restriction of Esophageal Vein with Extraluminal Device |
|  |  |  | 06V4\*CZ | Restriction of Hepatic Vein with Extraluminal Device |
|  |  |  | 06V5\*CZ | Restriction of Superior Mesenteric Vein with Extraluminal Device |
|  |  |  | 06V6\*CZ | Restriction of Inferior Mesenteric Vein with Extraluminal Device |
|  |  |  | 06V7\*CZ | Restriction of Colic Vein with Extraluminal Device |
|  |  |  | 06V8\*CZ | Restriction of Portal Vein with Extraluminal Device |
|  |  |  | 06V9\*CZ | Restriction of Right Renal Vein with Extraluminal Device |
|  |  |  | 06VB\*CZ | Restriction of Left Renal Vein with Extraluminal Device |
|  |  |  | 06VC\*CZ | Restriction of Right Common Iliac Vein with Extraluminal Device |
|  |  |  | 06VD\*CZ | Restriction of Left Common Iliac Vein with Extraluminal Device |
|  |  |  | 06VF\*CZ | Restriction of Right External Iliac Vein with Extraluminal Device |
|  |  |  | 06VG\*CZ | Restriction of Left External Iliac Vein with Extraluminal Device |
| 06VH\*CZ | Restriction of Right Hypogastric Vein with Extraluminal Device |
|  |  | 06VJ\*CZ | Restriction of Left Hypogastric Vein with Extraluminal Device |
|  |  | 06VM\*CZ | Restriction of Right Femoral Vein with Extraluminal Device |
|  |  | 06VN\*CZ | Restriction of Left Femoral Vein with Extraluminal Device |
|  |  | 06VP\*CZ | Restriction of Right Greater Saphenous Vein with Extraluminal Device |
|  |  |  | 06VQ\*CZ | Restriction of Left Greater Saphenous Vein with Extraluminal Device |
|  |  |  | 06VR\*CZ | Restriction of Right Lesser Saphenous Vein with Extraluminal Device |
|  |  |  | 06VS\*CZ | Restriction of Left Lesser Saphenous Vein with Extraluminal Device |
|  |  |  | 06VT\*CZ | Restriction of Right Foot Vein with Extraluminal Device |
|  |  |  | 06VV\*CZ | Restriction of Left Foot Vein with Extraluminal Device |
|  |  |  | 06VY\*CZ | Restriction of Lower Vein with Extraluminal Device |

APPENDIX B  
ADDITIONAL TESTING FOR RISK-ADJUSTMENT

***Quality Measure – Model Fit***

**Figure B1.**

**IRF Readmission Model (Logistic) ROC Curve—Based on the 2010/2011 model**

******

Source: RTI International analysis of Medicare claims data, 2007-2012. (RTI program references: lc19\_irf\_irf1011logistic.xlsx)

APPENDIX C  
RISK-ADJUSTMENT MODEL RESULTS

Appendix Table C1. Final All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facility Models, Risk Variables, and Odds Ratios, 2009/2010 & 2010/2011: Hierarchical Logistic Regression Model

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Covariate | **2009/2010** | | | | | **2010/2011** | | | | |
| Count | Percent | % with unplanned readmission | Odds Ratio | P value | Count | Percent | % with unplanned readmission | Odds Ratio | P value |
| Age-Sex Groups (Ref: Male 18-54) | | | | | | | | | | |
| Male age 55-59 | 7,630 | 1.3 | 15.7 | 1.041 | 0.3288 | 8,075 | 1.4 | 15.6 | 1.036 | 0.3888 |
| Male age 60-64 | 10,162 | 1.7 | 15.6 | 1.061 | 0.1225 | 10,814 | 1.8 | 15.8 | 1.064 | 0.1008 |
| Male age 65-69 | 32,448 | 5.5 | 13.3 | 1.050 | 0.1324 | 33,931 | 5.7 | 13.4 | 1.055 | 0.0908 |
| Male age 70-74 | 41,377 | 7.0 | 13.7 | 1.104 | 0.0018 | 41,769 | 7.1 | 13.6 | 1.104 | 0.0017 |
| Male age 75-79 | 45,797 | 7.8 | 14.5 | 1.207 | <.0001 | 45,740 | 7.8 | 14.4 | 1.209 | <.0001 |
| Male age 80-84 | 45,009 | 7.7 | 15.1 | 1.294 | <.0001 | 45,006 | 7.6 | 15.1 | 1.306 | <.0001 |
| Male age 85-89 | 30,083 | 5.1 | 15.4 | 1.386 | <.0001 | 30,608 | 5.2 | 15.3 | 1.368 | <.0001 |
| Male age 90+ | 11,515 | 2.0 | 15.9 | 1.496 | <.0001 | 12,069 | 2.0 | 16.2 | 1.539 | <.0001 |
| Female age 18-54 | 12,573 | 2.1 | 15.5 | 1.108 | 0.0047 | 12,921 | 2.2 | 15.4 | 1.120 | 0.0017 |
| Female age 55-59 | 8,627 | 1.5 | 14.8 | 1.087 | 0.0410 | 9,004 | 1.5 | 14.6 | 1.056 | 0.1753 |
| Female age 60-64 | 12,404 | 2.1 | 15.6 | 1.156 | <.0001 | 12,872 | 2.2 | 15.5 | 1.118 | 0.0024 |
| Female age 65-69 | 40,101 | 6.8 | 12.7 | 1.128 | 0.0001 | 41,176 | 7.0 | 12.5 | 1.115 | 0.0006 |
| Female age 70-74 | 55,059 | 9.4 | 12.3 | 1.137 | <.0001 | 54,872 | 9.3 | 12.5 | 1.155 | <.0001 |
| Female age 75-79 | 65,901 | 11.2 | 12.7 | 1.191 | <.0001 | 64,498 | 10.9 | 12.5 | 1.186 | <.0001 |
| Female age 80-84 | 71,953 | 12.2 | 13.0 | 1.250 | <.0001 | 69,911 | 11.8 | 13.0 | 1.264 | <.0001 |
| Female age 85-89 | 57,302 | 9.7 | 12.9 | 1.319 | <.0001 | 56,562 | 9.6 | 12.9 | 1.345 | <.0001 |
| Female age 90+ | 27,544 | 4.7 | 13.7 | 1.455 | <.0001 | 27,774 | 4.7 | 13.6 | 1.475 | <.0001 |
| **CCS Groupings**  - Based on principle diagnosis (Reference group includes Nerv Syst (84-94); Ot joint osteo (204, 206); Pregnancy (176-196); SprainSuperfic (232,239)) | | | | | | | | | | |
| Circ Syst: AMI & Cardiac arrst (100, 107) | 9,621 | 1.6 | 19.8 | 1.601 | <.0001 | 9,585 | 1.6 | 19.6 | 1.556 | <.0001 |
| Resp Syst: Adlt Resp Fl (131) | 5,995 | 1.0 | 22.6 | 1.417 | <.0001 | 6,082 | 1.0 | 22.4 | 1.373 | <.0001 |
| Circ Syst: Aneurysm (115) | 2,397 | 0.4 | 16.1 | 1.305 | <.0001 | 2,347 | 0.4 | 15.6 | 1.307 | <.0001 |

(continued)

Appendix Table C1. Final All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facility Models, Risk Variables, and Odds Ratios, 2009/2010 & 2010/2011: Hierarchical Logistic Regression Model (continued)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Covariate | **2009/2010** | | | | | **2010/2011** | | | | |
| Count | Percent | % with unplanned readmission | Odds Ratio | P value | Count | Percent | % with unplanned readmission | Odds Ratio | P value |
| Fx arm (229) | 4,994 | 0.8 | 10.8 | 1.185 | 0.0012 | 5,146 | 0.9 | 10.8 | 1.227 | <.0001 |
| Circ Syst: Art embolism & Ot circul dx (116-117) | 3,358 | 0.6 | 18.5 | 1.341 | <.0001 | 3,274 | 0.6 | 17.8 | 1.326 | <.0001 |
| Resp Syst: Asp Pneumonia (129) | 2,765 | 0.5 | 21.4 | 1.515 | <.0001 | 2,805 | 0.5 | 20.6 | 1.433 | <.0001 |
| Back problem (205) | 28,318 | 4.8 | 9.6 | 1.096 | 0.0036 | 29,118 | 4.9 | 9.7 | 1.191 | <.0001 |
| Biliary Dx, Liver Dx, Other Liver Dx, Pancreas (149-152) | 3,724 | 0.6 | 19.4 | 1.357 | <.0001 | 3,817 | 0.6 | 19.0 | 1.371 | <.0001 |
| Diseases of blood and blood-forming organs (56-57, 59-64) | 2,159 | 0.4 | 21.6 | 1.591 | <.0001 | 2,202 | 0.4 | 20.7 | 1.521 | <.0001 |
| Circ Syst: CHF; NONHP (108) | 11,502 | 2.0 | 24.9 | 1.567 | <.0001 | 11,596 | 2.0 | 25.8 | 1.609 | <.0001 |
| Resp Syst: COPD & Asthma (127-128) | 6,173 | 1.1 | 25.3 | 1.843 | <.0001 | 6,603 | 1.1 | 24.6 | 1.772 | <.0001 |
| Circ Syst: CVD (109-111, 113) | 99,177 | 16.9 | 12.6 | 1.310 | <.0001 | 100,008 | 16.9 | 12.4 | 1.313 | <.0001 |
| Circ Syst: Carditis & Other hart dx (97, 104) | 795 | 0.1 | 19.9 | 1.484 | <.0001 | 827 | 0.1 | 18.8 | 1.350 | 0.0013 |
| Circ Syst: Heart Valve (96) | 6,135 | 1.0 | 17.6 | 1.504 | <.0001 | 6,548 | 1.1 | 17.1 | 1.418 | <.0001 |
| Circ Syst: HTN & Htn complicn (98-99) | 2,518 | 0.4 | 22.4 | 1.458 | <.0001 | 2,654 | 0.4 | 22.1 | 1.404 | <.0001 |
| Complic Devi & Complic Proc (237-238) | 26,470 | 4.5 | 16.3 | 1.394 | <.0001 | 26,592 | 4.5 | 16.3 | 1.411 | <.0001 |
| Circ Syst: Conduction & Dysrhythmia (105-106) | 8,397 | 1.4 | 18.8 | 1.494 | <.0001 | 8,540 | 1.4 | 18.9 | 1.512 | <.0001 |
| Congenital Anomalies: 213-217 | 1,326 | 0.2 | 11.2 | 1.268 | 0.0115 | 1,285 | 0.2 | 9.9 | 1.175 | 0.1069 |
| Circ Syst: Coron Athero & Chest pain (101-102) | 9,977 | 1.7 | 16.8 | 1.490 | <.0001 | 9,655 | 1.6 | 17.2 | 1.519 | <.0001 |
| Crush Injury (234) | 1,361 | 0.2 | 12.3 | 1.210 | 0.0314 | 1,409 | 0.2 | 12.6 | 1.265 | 0.0066 |
| Diabetes based on 49-50 | 7,104 | 1.2 | 19.2 | 1.415 | <.0001 | 7,061 | 1.2 | 18.8 | 1.378 | <.0001 |
| Diseases of Digestive System (135-144, 146-148, 154-155) | 9,966 | 1.7 | 19.3 | 1.414 | <.0001 | 10,430 | 1.8 | 19.8 | 1.475 | <.0001 |
| Endocrine includes 48, 51, 53, 54 | 1,464 | 0.2 | 19.0 | 1.644 | <.0001 | 1,521 | 0.3 | 18.0 | 1.519 | <.0001 |
| Dis Nerv Syst: Epilepsy/CNV (83) | 2,943 | 0.5 | 17.0 | 1.407 | <.0001 | 3,020 | 0.5 | 16.1 | 1.309 | <.0001 |

(continued)

Appendix Table C1. Final All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facility Models, Risk Variables, and Odds Ratios, 2009/2010 & 2010/2011: Hierarchical Logistic Regression Model (continued)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Covariate | **2009/2010** | | | | | **2010/2011** | | | | |
| Count | Percent | % with unplanned readmission | Odds Ratio | P value | Count | Percent | % with unplanned readmission | Odds Ratio | P value |
| Fluid/elc dx (55) | 3,936 | 0.7 | 17.5 | 1.418 | <.0001 | 4,019 | 0.7 | 17.7 | 1.456 | <.0001 |
| GI Hemorrhag (153) | 2,833 | 0.5 | 19.7 | 1.381 | <.0001 | 3,110 | 0.5 | 18.9 | 1.275 | <.0001 |
| Gangrene (from Sx, Sign, Ill-defined conditions) (248) | 3,570 | 0.6 | 20.3 | 1.531 | <.0001 | 3,431 | 0.6 | 21.4 | 1.660 | <.0001 |
| Diseases of the genitourinary system (156, 160-166, 168-175) | 1,447 | 0.2 | 18.2 | 1.458 | <.0001 | 1,471 | 0.2 | 17.7 | 1.497 | <.0001 |
| Fx hip (226) | 75,257 | 12.8 | 10.6 | 1.273 | <.0001 | 71,819 | 12.2 | 10.2 | 1.285 | <.0001 |
| Infect Arth (201) | 1,430 | 0.2 | 17.3 | 1.298 | 0.0006 | 1,504 | 0.3 | 16.0 | 1.304 | 0.0004 |
| Infectious and parasitic diseases (1, 3-10) | 1,347 | 0.2 | 19.8 | 1.476 | <.0001 | 1,359 | 0.2 | 19.2 | 1.390 | <.0001 |
| Digestive System-Int Obstruct (145) | 3,015 | 0.5 | 17.4 | 1.300 | <.0001 | 2,937 | 0.5 | 17.1 | 1.257 | <.0001 |
| Intracrn Inj (233) | 13,899 | 2.4 | 13.8 | 1.352 | <.0001 | 14,040 | 2.4 | 13.4 | 1.301 | <.0001 |
| Joint injury (225) | 825 | 0.1 | 10.6 | 1.309 | 0.0211 | 849 | 0.1 | 11.1 | 1.417 | 0.0021 |
| Fx leg (230) | 13,057 | 2.2 | 9.6 | 1.116 | 0.0030 | 13,165 | 2.2 | 9.3 | 1.130 | 0.0011 |
| Dis Nerv Syst: Meningitis, Encephalitis, Other CNS infx (76-78) | 1,385 | 0.2 | 16.8 | 1.532 | <.0001 | 1,459 | 0.2 | 16.6 | 1.502 | <.0001 |
| Mental Illness (650-670) | 3,345 | 0.6 | 14.7 | 1.267 | <.0001 | 3,360 | 0.6 | 14.3 | 1.224 | 0.0006 |
| Secondary Malignant Neoplasm (42) | 2,210 | 0.4 | 21.6 | 1.975 | <.0001 | 2,309 | 0.4 | 22.2 | 2.102 | <.0001 |
| Neoplasms-Benign (44-47) Neoplasms-Low (22-26, 28-31, 36) | 3,721 | 0.6 | 14.9 | 1.575 | <.0001 | 3,668 | 0.6 | 13.8 | 1.509 | <.0001 |
| Neoplasms-Hi (16-17, 19, 27, 35 | 3,074 | 0.5 | 19.2 | 1.816 | <.0001 | 3,099 | 0.5 | 19.4 | 1.912 | <.0001 |
| Neoplasms-Medium (11-15, 18, 20-21, 32-34, 37-41, 43) | 4,096 | 0.7 | 18.7 | 1.453 | <.0001 | 4,195 | 0.7 | 18.3 | 1.510 | <.0001 |
| Nutrit defic and oth nutrit dx (52, 58) | 954 | 0.2 | 18.1 | 1.444 | <.0001 | 1,014 | 0.2 | 17.9 | 1.492 | <.0001 |
| Opn wnd head & extrem (235-236), Burns (240), Other Inj (244) | 1,602 | 0.3 | 13.7 | 1.183 | 0.0320 | 1,660 | 0.3 | 13.6 | 1.186 | 0.0277 |

(continued)

Appendix Table C1. Final All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facility Models, Risk Variables, and Odds Ratios, 2009/2010 & 2010/2011: Hierarchical Logistic Regression Model (continued)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Covariate | **2009/2010** | | | | | **2010/2011** | | | | |
| Count | Percent | % with unplanned readmission | Odds Ratio | P value | Count | Percent | % with unplanned readmission | Odds Ratio | P value |
| Ot bone dx (212) | 4,024 | 0.7 | 10.4 | 1.188 | 0.0019 | 3,997 | 0.7 | 10.5 | 1.283 | <.0001 |
| Dis Nerv Syst: Oth Nerv Dx (95) | 7,531 | 1.3 | 15.0 | 1.306 | <.0001 | 7,725 | 1.3 | 14.6 | 1.317 | <.0001 |
| Dis Nerv Syst: Parkinsons, MS, Ot hered CNS, Paralysis(79-82) | 7,925 | 1.3 | 13.1 | 1.284 | <.0001 | 7,549 | 1.3 | 12.6 | 1.271 | <.0001 |
| Patholog Fx (207) | 6,136 | 1.0 | 14.7 | 1.568 | <.0001 | 5,772 | 1.0 | 15.2 | 1.726 | <.0001 |
| Circ Syst: Perip Athero (114) | 4,104 | 0.7 | 19.7 | 1.530 | <.0001 | 4,211 | 0.7 | 20.4 | 1.608 | <.0001 |
| Circ Syst: Phlebitis, Vericose vn, Hemorrhoids, Oth vein dx (118-121) | 2,271 | 0.4 | 16.5 | 1.241 | 0.0004 | 2,363 | 0.4 | 18.2 | 1.433 | <.0001 |
| Resp Syst: Pneum, Influ, Bronc, Ot up rsp (122-123, 125-126) | 9,749 | 1.7 | 20.2 | 1.444 | <.0001 | 10,352 | 1.8 | 20.3 | 1.457 | <.0001 |
| Circ Syst: Pulm hart dx (103) | 2,372 | 0.4 | 16.7 | 1.211 | 0.0016 | 2,446 | 0.4 | 16.6 | 1.215 | 0.0012 |
| Genitourinary: Ac & Chr renl fail (157-158) | 6,012 | 1.0 | 21.8 | 1.526 | <.0001 | 7,064 | 1.2 | 21.7 | 1.577 | <.0001 |
| Resp Syst: Pleurisy, Lung externl, Oth low resp, Ot uppr resp, Tonsillitis (124, 130, 132-134) | 2,299 | 0.4 | 20.3 | 1.403 | <.0001 | 2,360 | 0.4 | 20.8 | 1.485 | <.0001 |
| Rheum arth (202), SLE (210), OtConnTiss (211) | 4,789 | 0.8 | 12.9 | 1.275 | <.0001 | 4,747 | 0.8 | 13.1 | 1.331 | <.0001 |
| Spin cor inj (227) | 1,494 | 0.3 | 12.8 | 1.424 | <.0001 | 1,511 | 0.3 | 13.2 | 1.617 | <.0001 |
| Infect & Paras Dx: Septicemia (2) | 13,645 | 2.3 | 20.5 | 1.313 | <.0001 | 15,419 | 2.6 | 20.3 | 1.330 | <.0001 |
| Diseases of the skin and subcutaneous tissue (167, 197-200) | 3,748 | 0.6 | 18.3 | 1.466 | <.0001 | 4,127 | 0.7 | 18.4 | 1.477 | <.0001 |
| Fx skull fac (228) and Oth fracture (231) | 18,870 | 3.2 | 11.0 | 1.224 | <.0001 | 19,041 | 3.2 | 11.0 | 1.279 | <.0001 |
| Symptoms, Signs, and Ill-Defined Conditions & Factors influencing health status (no gangrene) (245-247, 249-259) | 5,700 | 1.0 | 16.2 | 1.360 | <.0001 | 5,927 | 1.0 | 16.6 | 1.432 | <.0001 |
| Circ Syst: TIA (112) | 3,269 | 0.6 | 14.3 | 1.402 | <.0001 | 3,292 | 0.6 | 13.4 | 1.315 | <.0001 |
| Genitourinary: UTI (159) | 6,518 | 1.1 | 17.9 | 1.469 | <.0001 | 6,959 | 1.2 | 17.5 | 1.448 | <.0001 |

(continued)

Appendix Table C1. Final All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facility Models, Risk Variables, and Odds Ratios, 2009/2010 & 2010/2011: Hierarchical Logistic Regression Model (continued)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Covariate | **2009/2010** | | | | | **2010/2011** | | | | |
| Count | Percent | % with unplanned readmission | Odds Ratio | P value | Count | Percent | % with unplanned readmission | Odds Ratio | P value |
| Surgical Groups | | | | | | | | | | |
| General surgery, Obstetrics/Gynecology, and urologic surgical Procedures | 36,742 | 6.3 | 18.2 | 0.918 | <.0001 | 37,230 | 6.3 | 18.0 | 0.872 | <.0001 |
| Cardio Thoracic | 23,472 | 4.0 | 17.4 | 0.886 | <.0001 | 24,162 | 4.1 | 17.5 | 0.896 | <.0001 |
| Otolaryngology | 1,431 | 0.2 | 14.1 | 0.820 | 0.0116 | 1,487 | 0.3 | 13.5 | 0.828 | 0.0151 |
| Plastic Surgery | 9,503 | 1.6 | 14.6 | 1.011 | 0.7262 | 10,082 | 1.7 | 14.2 | 0.978 | 0.4679 |
| Dialysis Indicator | | | | | | | | | | |
| Dialysis in acute hospital where HCC133 not indicated | 4,995 | 0.8 | 24.1 | 1.150 | 0.0001 | 4,793 | 0.8 | 24.0 | 1.065 | 0.0907 |
| **Modified CMG Groupings** (Ref: Fracture of lower extremity (M>42.15)(M>34.15 and M<42.15)(M>28.15 and M<34.15) & Replacement of lower extremity joint (M>49.44)(M>37.05 <49.55)(M>28.65 M<37.05 A>83.5)(M>28.65 M<37.05 A<83.5) | | | | | | | | | | |
| Stroke: Motor score >44.45 (CMGs: 0101-0103) | 13,323 | 2.3 | 9.1 | 1.118 | 0.0047 | 13,239 | 2.2 | 8.9 | 1.154 | 0.0003 |
| Stroke: Motor score 26.15-44.45 (CMGs: 0104-0107) | 51,645 | 8.8 | 11.9 | 1.329 | <.0001 | 51,312 | 8.7 | 11.8 | 1.386 | <.0001 |
| Stroke: Motor score 22.35-26.15 (CMGs: 0108-0109) | 21,334 | 3.6 | 15.2 | 1.657 | <.0001 | 20,998 | 3.6 | 14.9 | 1.712 | <.0001 |
| Stroke: Motor score <22.35 and Age <84.5 (CMG: 0110) | 33,707 | 5.7 | 15.9 | 1.790 | <.0001 | 33,816 | 5.7 | 15.4 | 1.816 | <.0001 |
| Traumatic brain injury: Motor score >28.75 (CMGs: 0201-0205) | 9,309 | 1.6 | 12.2 | 1.250 | <.0001 | 9,254 | 1.6 | 12.2 | 1.360 | <.0001 |
| Traumatic brain injury: Motor score <28.75 (CMGs: 0206-0207) | 7,795 | 1.3 | 15.5 | 1.592 | <.0001 | 8,087 | 1.4 | 15.0 | 1.622 | <.0001 |
| Non-traumatic brain injury: Motor score >35.05 (CMGs:0301-0302) | 8,685 | 1.5 | 15.8 | 1.360 | <.0001 | 8,884 | 1.5 | 15.5 | 1.378 | <.0001 |
| Non-traumatic brain injury: Motor score <35.05 (CMGs:0303-0304) | 15,564 | 2.6 | 18.6 | 1.606 | <.0001 | 16,384 | 2.8 | 18.5 | 1.615 | <.0001 |
| Traumatic spinal cord injury: All (CMGs: 0401-0405) | 3,745 | 0.6 | 12.9 | 1.386 | <.0001 | 3,657 | 0.6 | 12.1 | 1.269 | <.0001 |

(continued)

Appendix Table C1. Final All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facility Models, Risk Variables, and Odds Ratios, 2009/2010 & 2010/2011: Hierarchical Logistic Regression Model (continued)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Covariate | **2009/2010** | | | | | **2010/2011** | | | | |
| Count | Percent | % with unplanned readmission | Odds Ratio | P value | Count | Percent | % with unplanned readmission | Odds Ratio | P value |
| Non-traumatic spinal cord injury: Motor score >31.25 (CMGs: 0501-0503) | 8,947 | 1.5 | 9.4 | 1.199 | <.0001 | 9,079 | 1.5 | 9.5 | 1.224 | <.0001 |
| Non-traumatic spinal cord injury: Motor score <31.25 (CMGs: 0504-0506) | 11,842 | 2.0 | 13.6 | 1.533 | <.0001 | 12,224 | 2.1 | 13.1 | 1.454 | <.0001 |
| Neurological: Motor score >37.35 (CMGs: 0601-0602) | 11,412 | 1.9 | 14.9 | 1.409 | <.0001 | 12,013 | 2.0 | 14.5 | 1.377 | <.0001 |
| Neurological: Motor score <37.35 (CMGs: 0603-0604) | 36,258 | 6.2 | 17.3 | 1.575 | <.0001 | 39,436 | 6.7 | 17.2 | 1.609 | <.0001 |
| Fracture of lower extremity: Motor score <28.15 (CMG: 0704) | 55,765 | 9.5 | 12.3 | 1.337 | <.0001 | 53,702 | 9.1 | 11.9 | 1.312 | <.0001 |
| Replacement of lower extremity joint: Motor score <28.65 (CMGs: 0805-0806) | 22,228 | 3.8 | 8.8 | 1.354 | <.0001 | 21,806 | 3.7 | 8.9 | 1.399 | <.0001 |
| Other orthopedic: Motor score >24.15 (CMGs: 0901-0903) | 12,970 | 2.2 | 9.1 | 1.183 | <.0001 | 13,045 | 2.2 | 8.7 | 1.076 | 0.0505 |
| Other orthopedic: Motor score <24.15 (CMG: 0904) | 24,245 | 4.1 | 12.0 | 1.462 | <.0001 | 25,390 | 4.3 | 11.9 | 1.500 | <.0001 |
| Amputation, lower extremity: Motor score >36.25 (CMGs:1001-1002) | 3,527 | 0.6 | 14.7 | 1.264 | <.0001 | 3,468 | 0.6 | 14.6 | 1.337 | <.0001 |
| Amputation, lower extremity: Motor score <36.25 (CMG:1003) & Amputation, non-lower extremity: All (CMGs: 1101-1102) | 11,200 | 1.9 | 20.7 | 1.382 | <.0001 | 10,959 | 1.9 | 20.9 | 1.460 | <.0001 |
| Osteoarthritis: All (CMGs: 1201-1203) | 1,923 | 0.3 | 12.1 | 1.501 | <.0001 | 1,761 | 0.3 | 12.5 | 1.521 | <.0001 |
| Rheumatoid, Other arthritis: All (CMGs: 1301-1303) | 3,032 | 0.5 | 15.8 | 1.473 | <.0001 | 2,907 | 0.5 | 16.6 | 1.560 | <.0001 |
| Cardiac: Motor score >38.55 (CMGs: 1401-1402) | 9,396 | 1.6 | 17.7 | 1.390 | <.0001 | 9,370 | 1.6 | 17.0 | 1.353 | <.0001 |
| Cardiac: Motor score <38.55 (CMGs: 1403-1404) & Pulmonary: Motor score <39.05 (CMGs: 1503-1504) | 26,236 | 4.5 | 22.1 | 1.626 | <.0001 | 27,444 | 4.7 | 22.4 | 1.703 | <.0001 |
| Pulmonary: Motor score >39.05 (CMGs: 1501-1502) | 3,444 | 0.6 | 21.5 | 1.527 | <.0001 | 3,719 | 0.6 | 21.7 | 1.551 | <.0001 |
| Pain syndrome: All (CMGs: 1601-1603) | 5,454 | 0.9 | 12.3 | 1.567 | <.0001 | 4,779 | 0.8 | 11.8 | 1.458 | <.0001 |

(continued)

Appendix Table C1. Final All-Cause Unplanned Readmission Measure for 30 Days Post Discharge Inpatient Rehabilitation Facility Models, Risk Variables, and Odds Ratios, 2009/2010 & 2010/2011: Hierarchical Logistic Regression Model (continued)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Covariate | **2009/2010** | | | | | **2010/2011** | | | | |
| Count | Percent | % with unplanned readmission | Odds Ratio | P value | Count | Percent | % with unplanned readmission | Odds Ratio | P value |
| Major multiple trauma without brain or spinal cord injury: All (CMGs: 1701-1704) | 8,493 | 1.4 | 9.9 | 1.206 | <.0001 | 8,728 | 1.5 | 9.8 | 1.202 | <.0001 |
| Major multiple trauma with brain or spinal cord injury; All (CMGs: 1801-1803) | 2,078 | 0.4 | 9.8 | 1.099 | 0.2342 | 2,160 | 0.4 | 10.0 | 1.176 | 0.0342 |
| Guillain Barre: All (CMGs; 1901-1903) | 1,017 | 0.2 | 10.6 | 1.057 | 0.6091 | 1,005 | 0.2 | 11.2 | 1.089 | 0.4318 |
| Miscellaneous: All (CMGs: 2001-2004); Burns (CMG 2101); Short-stay cases (CMG: 5001) | 68,549 | 11.7 | 18.8 | 1.490 | <.0001 | 71,537 | 12.1 | 18.9 | 1.538 | <.0001 |
| **HCC Comorbidities**\* | | | | | | | | | | |
| Septicemia, Sepsis, Systemic Inflamm Response Syndrome/Shock (HCC2), Bacterial, Fungal, and Parasitic CNS Infx (HCC3), Viral/Late Effects CNS Infx (HCC4), Other Infx Dis (HCC7) | 60,097 | 10.2 | 18.2 | 1.028 | 0.0419 | 73,446 | 12.4 | 18.2 | 0.993 | 0.5962 |
| Metastatic Cancer and Acute Leukemia | 10,335 | 1.8 | 21.4 | 1.376 | <.0001 | 10,615 | 1.8 | 21.3 | 1.341 | <.0001 |
| Lung and Other Severe Cancers/Other Respiratory and Heart Neoplasms | 6,774 | 1.2 | 23.0 | 1.342 | <.0001 | 6,937 | 1.2 | 22.6 | 1.295 | <.0001 |
| Lymphoma and Other Cancers | 7,736 | 1.3 | 18.4 | 1.140 | <.0001 | 7,746 | 1.3 | 18.4 | 1.167 | <.0001 |
| Diabetes with Acute Complications/Diabetes with Chronic Complications/Diabetes without Complication/Type I Diabetes Mellitus | 144,342 | 24.6 | 14.2 | 1.075 | <.0001 | 169,975 | 28.8 | 15.0 | 1.058 | <.0001 |
| Protein-Calorie Malnutrition | 29,830 | 5.1 | 19.4 | 1.093 | <.0001 | 34,303 | 5.8 | 19.4 | 1.043 | 0.0056 |
| Morbid Obesity | 20,411 | 3.5 | 14.3 | 1.058 | 0.0098 | 26,938 | 4.6 | 15.5 | 1.059 | 0.0026 |
| Other Significant Endocrine and Metabolic Disorders | 14,764 | 2.5 | 18.3 | 1.049 | 0.0369 | 16,992 | 2.9 | 19.5 | 1.080 | 0.0002 |
| Disorders of Fluid/Electrolyte/Acid-Base Balance | 133,393 | 22.7 | 16.2 | 1.068 | <.0001 | 157,906 | 26.8 | 16.6 | 1.058 | <.0001 |
| Disorders of Lipoid Metabolism | 216,840 | 36.9 | 13.5 | 0.905 | <.0001 | 263,993 | 44.7 | 14.1 | 0.909 | <.0001 |
| End-Stage Liver Disease | 3,218 | 0.5 | 26.3 | 1.377 | <.0001 | 3,700 | 0.6 | 26.8 | 1.373 | <.0001 |
| Cirrhosis of Liver | 2,637 | 0.4 | 20.2 | 1.204 | 0.0002 | 3,344 | 0.6 | 20.3 | 1.199 | <.0001 |
| Chronic Hepatitis | 1,842 | 0.3 | 19.3 | 1.108 | 0.1003 | 2,081 | 0.4 | 20.1 | 1.156 | 0.0114 |

(continued)

Appendix Table C1. Final All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facility Models, Risk Variables, and Odds Ratios, 2009/2010 & 2010/2011: Hierarchical Logistic Regression Model (continued)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Covariate | **2009/2010** | | | | | **2010/2011** | | | | |
| Count | Percent | % with unplanned readmission | Odds Ratio | P value | Count | Percent | % with unplanned readmission | Odds Ratio | P value |
| Peptic Ulcer, Hemorrhage, Other Specified Gastrointestinal Disorders | 22,074 | 3.8 | 19.7 | 1.108 | <.0001 | 24,696 | 4.2 | 20.1 | 1.100 | <.0001 |
| Bone/Joint/Muscle Infections/Necrosis | 14,029 | 2.4 | 17.8 | 0.867 | <.0001 | 14,588 | 2.5 | 18.3 | 0.898 | <.0001 |
| Rheumatoid Arthritis and Inflammatory Connective Tissue Disease | 27,346 | 4.7 | 15.7 | 1.088 | <.0001 | 31,040 | 5.3 | 16.2 | 1.114 | <.0001 |
| Disorders of the Vertebrae and Spinal Discs | 56,661 | 9.6 | 12.9 | 0.959 | 0.0052 | 68,039 | 11.5 | 13.4 | 0.961 | 0.0031 |
| Osteoporosis and Other Bone/Cartilage Disorders | 73,146 | 12.4 | 12.6 | 0.930 | <.0001 | 82,446 | 14.0 | 13.3 | 0.945 | <.0001 |
| Congenital/Developmental Skeletal and Connective Tissue Disorders/ Other Musculoskeletal and Connective Tissue Disorders | 157,587 | 26.8 | 13.7 | 0.941 | <.0001 | 193,533 | 32.8 | 14.3 | 0.944 | <.0001 |
| Severe Hematological Disorders | 6,115 | 1.0 | 21.1 | 1.120 | 0.0006 | 6,592 | 1.1 | 22.0 | 1.188 | <.0001 |
| Coagulation Defects and Other Specified Hematological Disorders | 27,079 | 4.6 | 15.9 | 1.071 | 0.0001 | 35,131 | 6.0 | 16.2 | 1.030 | 0.0619 |
| Delirium and Encephalopathy | 35,112 | 6.0 | 17.5 | 1.047 | 0.0033 | 38,747 | 6.6 | 17.5 | 1.018 | 0.2297 |
| Dementia With Complications/ Dementia Without Complication | 46,080 | 7.8 | 13.9 | 1.053 | 0.0005 | 54,119 | 9.2 | 14.7 | 1.070 | <.0001 |
| Schizo/Major Depressive/Reactive and Unspecified Psychosis/Personality/Depression/Anxiety/Other Psychiatric Disorders | 97,518 | 16.6 | 14.8 | 1.019 | 0.0850 | 126,538 | 21.4 | 15.3 | 1.028 | 0.0045 |
| Amyotrophic Lateral Sclerosis and Other Motor Neuron Disease | 329 | 0.1 | 12.8 | 0.932 | 0.6789 | 325 | 0.1 | 15.5 | 1.321 | 0.0724 |
| Cerebral Palsy | 1,028 | 0.2 | 10.3 | 0.947 | 0.6027 | 1,084 | 0.2 | 9.2 | 0.787 | 0.0281 |
| Polyneuropathy/ Mononeuropathy, Other Neurological Conditions/Injuries | 46,686 | 7.9 | 14.1 | 1.062 | <.0001 | 63,746 | 10.8 | 14.9 | 1.039 | 0.0025 |
| Parkinson's and Huntington's Diseases | 18,426 | 3.1 | 14.3 | 0.963 | 0.0955 | 19,372 | 3.3 | 14.3 | 0.962 | 0.0777 |
| Seizure Disorders and Convulsions | 18,745 | 3.2 | 15.7 | 1.105 | <.0001 | 22,655 | 3.8 | 15.9 | 1.064 | 0.0017 |

(continued)

Appendix Table C1. Final All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facility Models, Risk Variables, and Odds Ratios, 2009/2010 & 2010/2011: Hierarchical Logistic Regression Model (continued)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Covariate | **2009/2010** | | | | | **2010/2011** | | | | |
| Count | Percent | % with unplanned readmission | Odds Ratio | P value | Count | Percent | % with unplanned readmission | Odds Ratio | P value |
| Congestive Heart Failure | 105,170 | 17.9 | 19.9 | 1.133 | <.0001 | 118,064 | 20.0 | 20.0 | 1.109 | <.0001 |
| Acute Myocardial Infarction | 10,070 | 1.7 | 19.9 | 1.212 | <.0001 | 10,396 | 1.8 | 20.0 | 1.196 | <.0001 |
| Unstable Angina and Other Acute Ischemic Heart Disease | 5,609 | 1.0 | 18.2 | 1.088 | 0.0294 | 6,120 | 1.0 | 19.1 | 1.103 | 0.0076 |
| Coronary Atherosclerosis/Other Chronic Ischemic Heart Disease | 121,611 | 20.7 | 15.0 | 1.081 | <.0001 | 147,199 | 24.9 | 15.9 | 1.068 | <.0001 |
| Valvular and Rheumatic Heart Disease | 45,430 | 7.7 | 17.3 | 0.989 | 0.4345 | 55,831 | 9.5 | 17.7 | 0.979 | 0.1026 |
| Major Congenital Cardiac/Circulatory Defect/ Other Congenital Heart/Circulatory Disease | 3,485 | 0.6 | 14.9 | 0.986 | 0.7726 | 3,577 | 0.6 | 13.3 | 0.873 | 0.0072 |
| Hypertensive Heart Disease | 8,455 | 1.4 | 14.0 | 0.927 | 0.0215 | 8,218 | 1.4 | 13.5 | 0.904 | 0.0030 |
| Hypertension | 275,203 | 46.8 | 11.1 | 0.927 | <.0001 | 283,862 | 48.1 | 11.1 | 0.932 | <.0001 |
| Specified Heart Arrhythmias | 114,292 | 19.4 | 16.5 | 1.098 | <.0001 | 131,268 | 22.2 | 17.0 | 1.095 | <.0001 |
| Hemiplegia/Hemiparesis | 73,810 | 12.6 | 14.6 | 0.960 | 0.0037 | 74,626 | 12.6 | 14.4 | 0.956 | 0.0012 |
| Atherosclerosis of the Extremities with Ulceration or Gangrene | 7,199 | 1.2 | 20.7 | 1.102 | 0.0137 | 7,201 | 1.2 | 20.9 | 1.092 | 0.0247 |
| Vascular Disease with Complications | 8,407 | 1.4 | 17.2 | 1.040 | 0.1959 | 8,811 | 1.5 | 17.7 | 1.071 | 0.0199 |
| Vascular Disease | 36,321 | 6.2 | 16.3 | 1.065 | <.0001 | 49,210 | 8.3 | 17.1 | 1.039 | 0.0040 |
| Chronic Obstructive Pulmonary Disease | 102,729 | 17.5 | 19.0 | 1.155 | <.0001 | 114,866 | 19.5 | 19.2 | 1.167 | <.0001 |
| Fibrosis of Lung and Other Chronic Lung Disorders | 6,661 | 1.1 | 16.8 | 1.031 | 0.3712 | 7,247 | 1.2 | 17.1 | 1.063 | 0.0617 |
| Pneumococcal Pneumonia, Empyema, Lung Abscess/Viral and Unspecified Pneumonia, Pleurisy | 31,231 | 5.3 | 19.6 | 1.054 | 0.0010 | 32,312 | 5.5 | 19.4 | 1.016 | 0.3041 |
| Pleural Effusion/Pneumothorax | 19,111 | 3.3 | 19.8 | 1.092 | <.0001 | 19,988 | 3.4 | 20.1 | 1.086 | <.0001 |
| Other Respiratory Disorders | 73,163 | 12.4 | 16.8 | 0.936 | <.0001 | 87,687 | 14.9 | 17.0 | 0.938 | <.0001 |
| Legally Blind | 2,057 | 0.3 | 13.2 | 1.037 | 0.5902 | 3,029 | 0.5 | 15.9 | 1.107 | 0.0500 |

(continued)

Appendix Table C1. Final All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facility Models, Risk Variables, and Odds Ratios, 2009/2010 & 2010/2011: Hierarchical Logistic Regression Model (continued)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Covariate | **2009/2010** | | | | | **2010/2011** | | | | |
| Count | Percent | % with unplanned readmission | Odds Ratio | P value | Count | Percent | % with unplanned readmission | Odds Ratio | P value |
| Glaucoma | 14,859 | 2.5 | 11.9 | 0.875 | <.0001 | 18,770 | 3.2 | 12.6 | 0.880 | <.0001 |
| Kidney Transplant Status | 3,225 | 0.5 | 24.6 | 1.512 | <.0001 | 3,368 | 0.6 | 25.6 | 1.657 | <.0001 |
| End Stage Renal Disease | 18,332 | 3.1 | 25.4 | 1.440 | <.0001 | 19,266 | 3.3 | 26.0 | 1.492 | <.0001 |
| Acute Renal Failure | 63,608 | 10.8 | 19.6 | 1.216 | <.0001 | 69,613 | 11.8 | 19.6 | 1.238 | <.0001 |
| Chronic Kidney Disease, Stage 5 | 895 | 0.2 | 25.6 | 1.372 | <.0001 | 676 | 0.1 | 26.3 | 1.546 | <.0001 |
| Chronic Kidney Disease, Severe (Stage 4) | 4,245 | 0.7 | 21.9 | 1.415 | <.0001 | 4,809 | 0.8 | 21.5 | 1.348 | <.0001 |
| Chronic Kidney Disease, Moderate (Stage 3) | 9,548 | 1.6 | 16.6 | 1.126 | <.0001 | 14,588 | 2.5 | 16.5 | 1.104 | <.0001 |
| Chronic Kidney Disease, Mild or Unspecified (Stages 1-2 or Unspecified) | 26,256 | 4.5 | 16.5 | 1.117 | <.0001 | 28,764 | 4.9 | 16.9 | 1.137 | <.0001 |
| Urinary Obstruction and Retention | 20,536 | 3.5 | 14.8 | 1.074 | 0.0008 | 30,044 | 5.1 | 15.2 | 1.038 | 0.0371 |
| Urinary Tract Infection | 81,659 | 13.9 | 16.2 | 1.049 | <.0001 | 83,646 | 14.2 | 16.3 | 1.044 | 0.0002 |
| Other Urinary Tract Disorders | 15,672 | 2.7 | 14.7 | 1.054 | 0.0271 | 21,704 | 3.7 | 15.8 | 1.054 | 0.0079 |
| Male Genital Disorders | 34,903 | 5.9 | 14.6 | 0.922 | <.0001 | 46,359 | 7.9 | 15.6 | 0.964 | 0.0156 |
| Pressure Ulcer of Skin with Necrosis Through to Muscle, Tendon, or Bone/ Pressure Ulcer of Skin with Full Thickness Skin Loss | 2,542 | 0.4 | 21.2 | 1.061 | 0.2355 | 2,992 | 0.5 | 22.2 | 1.099 | 0.0384 |
| Cellulitis, Local Skin Infection | 14,738 | 2.5 | 19.2 | 1.050 | 0.0305 | 15,760 | 2.7 | 19.6 | 1.046 | 0.0421 |
| Vertebral Fractures without Spinal Cord Injury | 10,489 | 1.8 | 14.0 | 1.088 | 0.0057 | 10,983 | 1.9 | 13.9 | 1.067 | 0.0315 |
| Hip Fracture/Dislocation | 10,613 | 1.8 | 11.5 | 1.001 | 0.9645 | 10,378 | 1.8 | 11.8 | 1.049 | 0.1516 |
| Major Fracture, Except of Skull, Vertebrae, or Hip | 8,508 | 1.4 | 13.3 | 0.995 | 0.8947 | 8,786 | 1.5 | 12.8 | 0.924 | 0.0224 |
| Other Organ Transplant Status/Replacement | 575 | 0.1 | 17.0 | 0.862 | 0.2122 | 987 | 0.2 | 17.2 | 0.833 | 0.0432 |
| Artificial Openings for Feeding or Elimination | 2,636 | 0.4 | 19.5 | 1.137 | 0.0120 | 4,450 | 0.8 | 21.1 | 1.187 | <.0001 |
| Post-Surgical States/Aftercare/Elective | 166,895 | 28.4 | 14.6 | 0.920 | <.0001 | 239,440 | 40.6 | 15.1 | 0.948 | <.0001 |
| Supplemental Oxygen | 3,775 | 0.6 | 20.4 | 1.192 | <.0001 | 7,928 | 1.3 | 22.0 | 1.222 | <.0001 |

(continued)

Appendix Table C1. Final All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facility Models, Risk Variables, and Odds Ratios, 2009/2010 & 2010/2011: Hierarchical Logistic Regression Model (continued)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Covariate | **2009/2010** | | | | | **2010/2011** | | | | |
| Count | Percent | % with unplanned readmission | Odds Ratio | P value | Count | Percent | % with unplanned readmission | Odds Ratio | P value |
| Original Reason for Entitlement Codes | | | | | | | | | | |
| Original reason for entitlement: 1-Disability Insurance Benefits (DIB) | 118,495 | 20.2 | 15.1 | 1.113 | <.0001 | 122,810 | 20.8 | 15.1 | 1.117 | <.0001 |
| Prior Acute ICU/CCU Days (ref: 0 ICU/CCU days) |  |  |  |  |  |  |  |  |  |  |
| 1-3 ICU/CCU days associated with prior acute stay | 97,652 | 16.6 | 14.2 | 1.048 | <.0001 | 101,252 | 17.2 | 14.1 | 1.052 | <.0001 |
| 4-6 ICU/CCU days associated with prior acute stay | 71,624 | 12.2 | 16.4 | 1.075 | <.0001 | 74,146 | 12.6 | 16.2 | 1.068 | <.0001 |
| 7-9 ICU/CCU days associated with prior acute stay | 37,069 | 6.3 | 18.3 | 1.062 | 0.0003 | 37,645 | 6.4 | 18.4 | 1.068 | <.0001 |
| 10-13 ICU/CCU days associated with prior acute stay | 22,582 | 3.8 | 19.6 | 1.078 | 0.0004 | 22,907 | 3.9 | 19.5 | 1.048 | 0.0282 |
| 14-20 ICU/CCU days associated with prior acute stay | 15,851 | 2.7 | 20.4 | 1.076 | 0.0060 | 15,911 | 2.7 | 20.6 | 1.076 | 0.0061 |
| 21+ ICU/CCU days associated with prior acute stay | 9,722 | 1.7 | 20.3 | 1.056 | 0.1179 | 9,483 | 1.6 | 20.8 | 1.074 | 0.0427 |
| **Prior Acute Care Length of Stay** (Ref: LOS\_psych) |  |  |  |  |  |  |  |  |  |  |
| Prior Acute Length of Stay 1-3 days | 160,954 | 27.4 | 9.6 | 0.992 | 0.9499 | 167,282 | 28.3 | 9.6 | 1.078 | 0.5798 |
| Prior Acute Length of Stay 4-5 days | 162,622 | 27.7 | 12.0 | 1.065 | 0.6106 | 161,886 | 27.4 | 12.0 | 1.161 | 0.2699 |
| Prior Acute Length of Stay 6-8 days | 128,501 | 21.9 | 15.5 | 1.183 | 0.1754 | 127,357 | 21.6 | 15.6 | 1.290 | 0.0594 |
| Prior Acute Length of Stay 9-13 days | 76,731 | 13.1 | 18.3 | 1.259 | 0.0636 | 76,147 | 12.9 | 18.6 | 1.420 | 0.0096 |
| Prior Acute Length of Stay 14-30 days | 51,451 | 8.8 | 20.2 | 1.346 | 0.0173 | 50,483 | 8.6 | 20.4 | 1.489 | 0.0034 |
| Prior Acute Length of Stay 30+ days | 6,841 | 1.2 | 21.2 | 1.430 | 0.0058 | 6,330 | 1.1 | 21.8 | 1.621 | 0.0006 |
| **Prior Acute Care Utilization-Count of prior stays** | | | | | | | | | | |
| 1 Stay - Acute history | 140,247 | 23.9 | 14.4 | 1.501 | <.0001 | 140,060 | 23.7 | 14.5 | 1.513 | <.0001 |
| 2 Stays - Acute history | 49,654 | 8.4 | 18.0 | 1.833 | <.0001 | 49,454 | 8.4 | 18.1 | 1.832 | <.0001 |
| 3 Stays - Acute history | 33,954 | 5.8 | 22.6 | 2.402 | <.0001 | 33,877 | 5.7 | 22.6 | 2.380 | <.0001 |
| 4 Stays - Acute history | 12,973 | 2.2 | 24.7 | 2.601 | <.0001 | 12,949 | 2.2 | 25.2 | 2.626 | <.0001 |
| 5 Stays - Acute history | 10,880 | 1.9 | 26.6 | 3.012 | <.0001 | 10,668 | 1.8 | 27.3 | 3.064 | <.0001 |

(continued)

Appendix Table C1. Final All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facility Models, Risk Variables, and Odds Ratios, 2009/2010 & 2010/2011: Hierarchical Logistic Regression Model (continued)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Covariate | **2009/2010** | | | | | **2010/2011** | | | | |
| Count | Percent | % with unplanned readmission | Odds Ratio | P value | Count | Percent | % with unplanned readmission | Odds Ratio | P value |
| 6 Stays - Acute history | 5,567 | 0.9 | 31.2 | 3.392 | <.0001 | 5,645 | 1.0 | 32.7 | 3.732 | <.0001 |
| 7 Stays - Acute history | 4,309 | 0.7 | 32.0 | 3.858 | <.0001 | 4,518 | 0.8 | 31.5 | 3.773 | <.0001 |
| 8 Stays - Acute history | 2,116 | 0.4 | 32.6 | 3.803 | <.0001 | 2,177 | 0.4 | 33.9 | 3.967 | <.0001 |
| 9 Stays - Acute history | 2,320 | 0.4 | 33.7 | 4.202 | <.0001 | 2,340 | 0.4 | 34.0 | 4.105 | <.0001 |
| 10+ Stays - Acute history | 5,633 | 1.0 | 39.4 | 5.228 | <.0001 | 6,011 | 1.0 | 40.5 | 5.398 | <.0001 |

Note: Number of observations: 2009/2010: 587,810; 2010/2011: 590,120. There were 79,128 in 2009/2010 and 79,553 in 2010/2011 unplanned readmissions. The c-statistic was .69 for both models.

Source: RTI International analysis of Medicare claims data, 2007-2012. (RTI program reference: lc22\_irf\_gv150910.xlsx; lc22\_lc22\_irf0910par.xlsx; lc22\_irf\_gv15\_mean\_0910.xlsx; lc22\_irf\_gv151011.xlsx; lc22\_lc22\_irf1011par.xlsx; lc22\_irf\_gv15\_mean\_1011.xlsx)

\* HCCs are derived from the prior acute claim secondary diagnoses or all inpatient claims in the year prior to the IRF admission. See Appendix D for documentation on the HCC groupings.

APPENDIX D  
DOCUMENTATION ON HIERARCHICAL CONDITION CATEGORIES (HCC) GROUPINGS

Appendix Table D1. Documentation on Hierarchical Condition Categories (HCC) Groupings for IRF Model

| Hierarchical Condition Category (HCC) Grouping  used in Risk-Adjustment Model | Description | Based on prior acute | Based on 365-day look-back |
| --- | --- | --- | --- |
| Septicemia, Sepsis, Systemic Inflamm Response Syndrome/Shock (HCC2), Bacterial, Fungal, and Parasitic CNS Infx (HCC3), Viral/Late Effects CNS Infx (HCC4), Other Infx Dis (HCC7) | HCC 2: Septicemia, Sepsis, Systemic Inflammatory Response Syndrome/Shock; HCC 3: Bacterial, Fungal, and Parasitic Central Nervous System Infections; HCC 4: Viral and Late Effects Central Nervous System Infections; HCC 7: Other Infectious Diseases | X |  |
| Metastatic Cancer and Acute Leukemia | HCC 8: Metastatic Cancer and Acute Leukemia |  | X |
| Lung and Other Severe Cancers/Other Respiratory and Heart Neoplasms | HCC 9: Lung and Other Severe Cancers; HCC 13 Other Respiratory and Heart Neoplasms |  | X |
| Lymphoma and Other Cancers | HCC 10: Lymphoma and Other Cancers |  | X |
| Diabetes with Acute Complications/Diabetes with Chronic Complications/Diabetes without Complication/Type I Diabetes Mellitus | HCC 17: Diabetes with Acute Complications; HCC 18: Diabetes with Chronic Complications; HCC 19: Diabetes without Complication; HCC 20: Type 1 Diabetes Mellitus | X |  |
| Protein-Calorie Malnutrition | HCC 21: Protein-Calorie Malnutrition | X |  |
| Morbid Obesity | HCC 22: Morbid Obesity | X |  |
| Other Significant Endocrine and Metabolic Disorders | HCC 23: Other Significant Endocrine and Metabolic Disorders | X |  |
| Disorders of Fluid/Electrolyte/Acid-Base Balance | HCC 24: Disorders of Fluid/Electrolyte/Acid-Base Balance | X |  |
| Disorders of Lipoid Metabolism | HCC 25: Disorders of Lipoid Metabolism |  | X |
| End-Stage Liver Disease | HCC 27: End-Stage Liver Disease |  | X |
| Cirrhosis of Liver | HCC 28: Cirrhosis of Liver |  | X |
| Chronic Hepatitis | HCC 29: Chronic Hepatitis |  | X |
| Peptic Ulcer, Hemorrhage, Other Specified Gastrointestinal Disorders | HCC 36: Peptic Ulcer, Hemorrhage, Other Specified Gastrointestinal Disorders | X |  |
| Bone/Joint/Muscle Infections/Necrosis | HCC 39: Bone/Joint/Muscle Infections/Necrosis |  | X |
| Rheumatoid Arthritis and Inflammatory Connective Tissue Disease | HCC 40: Rheumatoid Arthritis and Inflammatory Connective Tissue Disease |  | X |
| Disorders of the Vertebrae and Spinal Discs | HCC 41: Disorders of the Vertebrae and Spinal Discs |  | X |
| Osteoporosis and Other Bone/Cartilage Disorders | HCC 43: Osteoporosis and Other Bone/Cartilage Disorders |  | X |
| Congenital/Developmental Skeletal and Connective Tissue Disorders/ Other Musculoskeletal and Connective Tissue Disorders | HCC 44: Congenital/Developmental Skeletal and Connective Tissue Disorders; HCC 45: Other Musculoskeletal and Connective Tissue Disorders |  | X |
| Severe Hematological Disorders | HCC 46: Severe Hematological Disorders | X |  |
| Coagulation Defects and Other Specified Hematological Disorders | HCC 48: Coagulation Defects and Other Specified Hematological Disorders | X |  |
| Delirium and Encephalopathy | HCC 50: Delirium and Encephalopathy | X |  |
| Dementia With Complications/ Dementia Without Complication | HCC 51: Dementia with Complications; HCC 52: Dementia without Complication | X |  |
| Schizo/Major Depressive/Reactive and Unspecified Psychosis/Personality/Depression/Anxiety/Other Psychiatric Disorders | HCC57\_thru\_63: Schizophrenia; HCC 58: Major Depressive, Bipolar, and Paranoid Disorders; HCC 59: Reactive and Unspecified Psychosis; HCC 60: Personality Disorders; HCC 61: Depression; HCC 62: Anxiety Disorders; HCC 63: Other Psychiatric Disorders |  | X |
| Amyotrophic Lateral Sclerosis and Other Motor Neuron Disease | HCC 73: Amyotrophic Lateral Sclerosis and Other Motor Neuron Disease | X |  |
| Cerebral Palsy | HCC 74: Cerebral Palsy | X |  |
| Polyneuropathy/ Mononeuropathy, Other Neurological Conditions/Injuries | HCC 75: Polyneuropathy; HCC 81: Mononeuropathy, Other Neurological Conditions/Injuries | X |  |
| Parkinson's and Huntington's Diseases | HCC 78: Parkinson's and Huntington's Diseases |  | X |
| Seizure Disorders and Convulsions | HCC 79: Seizure Disorders and Convulsions | X |  |
| Congestive Heart Failure | HCC 85: Congestive Heart Failure | X |  |
| Acute Myocardial Infarction | HCC 86: Acute Myocardial Infarction | X |  |
| Unstable Angina and Other Acute Ischemic Heart Disease | HCC 87: Unstable Angina and Other Acute Ischemic Heart Disease | X |  |
| Coronary Atherosclerosis/Other Chronic Ischemic Heart Disease | HCC 89: Coronary Atherosclerosis/Other Chronic Ischemic Heart Disease | X |  |
| Valvular and Rheumatic Heart Disease | HCC 91: Valvular and Rheumatic Heart Disease |  | X |
| Major Congenital Cardiac/Circulatory Defect/ Other Congenital Heart/Circulatory Disease | HCC 92: Major Congenital Cardiac/Circulatory Defect; HCC 93: Other Congenital Heart/Circulatory Disease |  | X |
| Hypertensive Heart Disease | HCC 94: Hypertensive Heart Disease |  | X |
| Hypertension | HCC 95: Hypertension |  | X |
| Specified Heart Arrhythmias | HCC 96: Specified Heart Arrhythmias | X |  |
| Hemiplegia/Hemiparesis | HCC 103: Hemiplegia/Hemiparesis |  | X |
| Atherosclerosis of the Extremities with Ulceration or Gangrene | HCC 106: Atherosclerosis of the Extremities with Ulceration or Gangrene | X |  |
| Vascular Disease with Complications | HCC 107: Vascular Disease with Complications | X |  |
| Vascular Disease | HCC 108: Vascular Disease | X |  |
| Chronic Obstructive Pulmonary Disease | HCC 111: Chronic Obstructive Pulmonary Disease |  | X |
| Fibrosis of Lung and Other Chronic Lung Disorders | HCC 112: Fibrosis of Lung and Other Chronic Long Disorders |  | X |
| Pneumococcal Pneumonia, Empyema, Lung Abscess/Viral and Unspecified Pneumonia, Pleurisy | HCC 115: Pneumococcal Pneumonia, Empyema, Lung Abscess; HCC 116: Viral and Unspecified Pneumonia, Pleurisy | X |  |
| Pleural Effusion/Pneumothorax | HCC 117: Pleural Effusion/Pneumothorax | X |  |
| Other Respiratory Disorders | HCC 118: Other Respiratory Disorders |  | X |
| Legally Blind | HCC 119: Legally Blind | X |  |
| Glaucoma | HCC 126: Glaucoma |  | X |
| Kidney Transplant Status | HCC 132: Kidney Transplant Status |  | X |
| End Stage Renal Disease | HCC 133: End Stage Renal Disease |  | X |
| Acute Renal Failure | HCC 135: Acute Renal Failure | X |  |
| Chronic Kidney Disease, Stage 5 | HCC 136: Chronic Kidney Disease, Stage 5 | X |  |
| Chronic Kidney Disease, Severe (Stage 4) | HCC 137: Chronic Kidney Disease, Severe (Stage 4) | X |  |
| Chronic Kidney Disease, Moderate (Stage 3) | HCC 138: Chronic Kidney Disease, Moderate (Stage 3) | X |  |
| Chronic Kidney Disease, Mild or Unspecified (Stages 1-2 or Unspecified) | HCC 139: Chronic Kidney Disease, Mild or Unspecified (Stages 1-2 or Unspecified) | X |  |
| Urinary Obstruction and Retention | HCC 142: Urinary Obstruction and Retention | X |  |
| Urinary Tract Infection | HCC 144: Urinary Tract Infection | X |  |
| Other Urinary Tract Disorders | HCC 145: Other Urinary Tract Disorders | X |  |
| Male Genital Disorders | HCC 149: Male Genital Disorders |  | X |
| Pressure Ulcer of Skin with Necrosis Through to Muscle, Tendon, or Bone/ Pressure Ulcer of Skin with Full Thickness Skin Loss | HCC 157: Pressure Ulcer of Skin with Necrosis Through to Muscle, Tendon, or Bone; HCC 158: Pressure Ulcer of Skin with Full Thickness Skin Loss | X |  |
| Cellulitis, Local Skin Infection | HCC 164: Cellulitis, Local Skin Infection | X |  |
| Vertebral Fractures without Spinal Cord Injury | HCC 169: Vertebral Fractures without Spinal Cord Injury | X |  |
| Hip Fracture/Dislocation | HCC 170: Hip Fracture/Dislocation | X |  |
| Major Fracture, Except of Skull, Vertebrae, or Hip | HCC 171: Major Fracture, Except of Skull, Vertebrae, or Hip |  | X |
| Other Organ Transplant Status/Replacement | HCC 187: Other Organ Transplant Status/Replacement |  | X |
| Artificial Openings for Feeding or Elimination | HCC 188: Artificial Openings for Feeding or Elimination | X |  |
| Post-Surgical States/Aftercare/Elective | HCC 191: Post-Surgical States/Aftercare/Elective |  | X |
| Supplemental Oxygen | HCC 197: Supplemental Oxygen | X |  |