**ICD-9 revision codes used to identify frailty**

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| --- | --- | --- |
| **ICD 9 Codes** | **ICD-9 Condition** | **Points** |
| 2900 | Senile dementia, uncomplicated | 7.1 |
| 2941 | Dementia in conditions classified elsewhere | 7.1 |
| 342 | Hemiplegia | 4.4 |
| 3310 | Alzheimer's disease | 4 |
| 438 | Late effects of Cerebrovascular disease | 3.7 |
| V1588 | History of fall | 3.6 |
| 788 | Symptoms involving urinary system | 3.2 |
| 6256 | Stress incontinence, female | 3.2 |
| 5990 | Urinary Tract infection | 3.2 |
| 2930 | Delirium due to conditions classified elsewhere | 3.2 |
| E8889 | Unspecified Fall | 3.2 |
| 920 | Contusion of face, scalp, and neck except eye(s) | 3.2 |
| 921 | Contusion of eye and adnexa | 3.2 |
| 5997 | Hematuria | 3 |
| 041 | Bacterial infection in conditions classified elsewhere and of unspecified site | 2.9 |
| 482 | Other bacterial pneumonia | 2.9 |
| 483 | Pneumonia due to other specified organism | 2.9 |
| 78097 | Altered mental status | 2.7 |
| 7812 | Abnormality of gait | 2.6 |
| 437 | Other and ill-defined cerebrovascular disease | 2.6 |
| 7803 | Convulsions | 2.6 |
| 7800 | Alterations of consciousness | 2.5 |
| 99676 | Other complications due to genitourinary device, implant, and graft | 2.4 |
| 850 | Concussion | 2.4 |
| 851 | Cerebral laceration and contusion | 2.4 |
| 852 | Subarachnoid subdural and extradural hemorrhage following injury | 2.4 |
| 853 | Other and unspecified intracranial hemorrhage following injury | 2.4 |
| 854 | Intracranial injury of other and unspecified nature | 2.4 |
| 810 | Fracture of clavicle | 2.3 |
| 811 | Fracture of scapula | 2.3 |
| 812 | Fracture of humerus | 2.3 |
| 818 | Ill-defined fractures of upper limb | 2.3 |
| 276 | Disorders of fluid electrolyte and acid-base balance | 2.3 |
| 719 | Other and unspecified disorders of joint | 2.3 |
| 797 | Senility without mention of psychosis | 2.2 |
| V57 | Care involving use of rehabilitation procedures | 2.1 |
| 2909 | Unspecified senile psychotic condition | 2.1 |
| V63 | Unavailability of other medical facilities for care | 2 |
| 2904 | Vascular Dementia | 2 |
| 924 | Contusion of lower limb and of other and unspecified sites | 2 |
| 682 | Other cellulitis and abscess | 2 |
| 369 | Blindness and low vision | 1.9 |
| 266 | Deficiency of b-complex components | 1.9 |
| V62 | Other psychosocial circumstances | 1.8 |
| 332 | Parkinson's disease | 1.8 |
| 7802 | Syncope and collapse | 1.8 |
| 807 | Fracture of rib(s) sternum larynx and trachea | 1.8 |
| 564 | Functional digestive disorders not elsewhere classified | 1.8 |
| 584 | Acute renal failure | 1.8 |
| 7070 | Pressure ulcer | 1.7 |
| 7072 | Pressure ulcer stages | 1.7 |
| V02 | Carrier of infectious disease | 1.7 |
| 7071 | Ulcer of lower limbs, except decubitus ulcer | 1.6 |
| 7801 | Hallucinations | 1.6 |
| 532 | Duodenal ulcer | 1.6 |
| 458 | Hypotension | 1.6 |
| 586 | Unspecified renal failure | 1.6 |
| 99591 | Sepsis | 1.6 |
| 038 | Septicemia | 1.6 |
| V12 | Personal history of certain other diseases | 1.5 |
| 5188 | Other diseases of lung | 1.5 |
| 715 | Osteoarthrosis and allied disorders | 1.5 |
| 345 | Epilepsy and recurrent seizures | 1.5 |
| 7330 | Osteoporosis | 1.4 |
| 821 | Fracture of other parts of femur | 1.4 |
| 820 | Fracture of neck of femur | 1.4 |
| 808 | Fracture of Pelvis | 1.4 |
| 805 | Fracture of vertebral column without mention of spinal cord injury | 1.4 |
| 251 | Other disorders of pancreatic internal secretion | 1.4 |
| 794 | Abnormal results of function studies | 1.4 |
| 585 | Chronic kidney disease | 1.4 |
| 7882 | Retention of urine | 1.3 |
| 7999 | Other unknown and unspecified cause of morbidity and mortali | 1.3 |
| 593 | Other disorders of kidney and ureter | 1.3 |
| 78830 | Urinary incontinence, unspecified | 1.2 |
| 3311-3319 | Other cerebral degenerations (excluding Alzheimer’s) | 1.2 |
| 9590 | Other and unspecified injury to head face and neck | 1.2 |
| 7992 | Nervousness | 1.2 |
| 435 | Transient cerebral ischemia | 1.2 |
| V6089 | Other specified housing or economic circumstances | 1.1 |
| 729 | Other disorders of soft tissues | 1.1 |
| E8844 | Accidental fall from bed | 1.1 |
| 873 | Other open wound of head | 1.1 |
| 008 | Intestinal infections due to other organisms | 1.1 |
| 009 | Infectious colitis, enteritis, and gastroenteritis | 1.1 |
| 486 | Pneumonia, organism unspecified | 1.1 |
| 485 | Bronchopneumonia, organism unspecified | 1.1 |
| 481 | Pneumococcal pneumonia | 1.1 |
| 507 | Pneumonitis due to solids and liquids | 1 |
| 7845 | Other speech disturbance | 1 |
| 268 | Vitamin D deficiency | 1 |
| V44 | Artificial opening status | 1 |
| 7854 | Gangrene | 1 |
| 783 | Symptoms concerning nutrition metabolism and development | 0.9 |
| 3898 | Other specified forms of hearing loss | 0.9 |
| E880 | Accidental fall on or from stairs or steps | 0.9 |
| E885 | Fall on same level from slipping, tripping and stumbling | 0.9 |
| 242 | Thyrotoxicosis with or without goiter | 0.9 |
| 7373 | Kyphoscoliosis and scoliosis | 0.9 |
| 7872 | Dysphagia | 0.8 |
| V468 | Dependence on other enabling machines | 0.8 |
| V097 | Infection with microorganisms resistant to other specified antimycobacterial agents | 0.8 |
| 7331 | Pathologic fracture | 0.8 |
| 578 | Gastrointestinal hemorrhage | 0.8 |
| 538 | Gastrointestinal mucositis (ulcerative) | 0.8 |
| 56989 | Other specified disorders of intestine | 0.8 |
| 5699 | Unspecified disorder of intestine | 0.8 |
| 43401 | Cerebral thrombosis with cerebral infarction | 0.8 |
| 43411 | Cerebral embolism with cerebral infarction | 0.8 |
| 43491 | Cerebral artery occlusion, unspecified with cerebral infarction | 0.8 |
| 592 | Calculus of kidney and ureter | 0.7 |
| 303 | Alcohol dependence syndrome | 0.7 |
| 3050 | Nondependent alcohol abuse | 0.7 |
| 879 | Other procedures without mention of misadventure at the time of procedure as the cause of abnormal reaction of patient or of later complication | 0.7 |
| 7850 | Tachycardia, unspecified | 0.7 |
| 7851 | Palpitations | 0.7 |
| 7853 | Other abnormal heart sounds | 0.7 |
| 5198 | Other diseases of respiratory system, not elsewhere classified | 0.7 |
| V69 | Problems related to lifestyle | 0.6 |
| 7906 | Other abnormal findings of blood chemistry | 0.6 |
| V15 | Other personal history presenting hazards to health | 0.5 |
| 881 | Open wound of elbow forearm and wrist | 0.5 |
| 2962 | Major depressive disorder single episode | 0.5 |
| 2963 | Major depressive disorder recurrent episode | 0.5 |
| 7240 | Spinal stenosis other than cervical | 0.5 |
| 7230 | Spinal stenosis in cervical region | 0.5 |
| 275 | Disorders of mineral metabolism | 0.4 |
| 6868 | Other specified local infections of skin and subcutaneous tissue (approximate match) | 0.4 |
| 285 | Other and unspecified anemias | 0.4 |
| 686 | Other local infections of skin and subcutaneous tissue | 0.4 |
| 7870 | Nausea and vomiting | 0.3 |
| 558 | Other and unspecified noninfectious gastroenteritis and colitis | 0.3 |
| 7806 | Fever and other physiologic disturbances of temperature regulation | 0.1 |

**ICD-9-CM Coding Algorithm for Charlson Comorbidities**

|  |  |  |
| --- | --- | --- |
| **Comorbidities** | **Charlson’s ICD-9-CM** | **Weight** |
| Myocardial infarction | 410.x, 412.x | 1 |
| Congestive heart failure | 428.x | 1 |
| Peripheral vascular disease | 443.9, 441.x, 785.4, V43.4.  Procedure 38.48 | 1 |
| Cerebrovascular disease | 430.x-438.x | 1 |
| Dementia | 290.x | 1 |
| Chronic pulmonary disease | 490.x-505.x, 506.4 | 1 |
| Rheumatic disease | 710.0, 710.1, 710.4, 714.0-714.2, 714.81, 725.x | 1 |
| Peptic ulcer disease | 531.x-534.x | 1 |
| Mild liver disease | 571.2, 571.4-571.6 | 1 |
| Diabetes without chronic complication | 250.0-250.3, 250.7 | 1 |
| Diabetes with chronic complication | 250.4-250.6 | 1 |
| Hemiplegia or paraplegia | 344.1, 342.x | 2 |
| Renal disease | 582.x, 583-583.7, 585.x, 586.x, 588.x | 2 |
| Any malignancy, including lymphoma and leukemia, except malignant neoplasm of skin | 140.x-172.x, 174.x-195.8, 200.x-208.x | 2 |
| Moderate or severe liver disease | 456.0-456.21, 572.2-572.8 | 2 |
| Metastatic solid tumor | 196.x-199.1 | 6 |
| AIDS/HIV | 042.x-044.x | 6 |

**Diagnosis and procedure codes, ICD-9 CM and CCS, used in classifying patients**

|  |  |  |
| --- | --- | --- |
| **Diagnoses/Procedures** | **PRCCS (CCS Codes for procedures)**  **DXCCS (CCS codes for diagnoses)** | **Description of corresponding CCS codes** |
| **Procedures** | | |
| Gastrointestinal or hepatic procedures | 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 87, 88, 89, 90, 92, 93, 94, 95, 96, 97, 98, 99, 221 | 68 – Injection or ligation of esophageal varices  69 – Esophageal dilatation  70 – Upper gastrointestinal endoscopy, biopsy  71 – Gastrostomy, temporary and permanent  72 – Colostomy, temporary and permanent  73 – Ileostomy and other enterostomy  74 – Gastrectomy, partial and total  75 – Small bowel resection  76 – Colonoscopy and biopsy  77 – Proctoscopy and anorectal biopsy  78 – Colorectal resection  79 – Local excision of large intestine lesion (not endoscopy)  80 – Appendectomy  81 – Hemorrhoid procedures  82 – Endoscopic retrograde cannulation of pancreas (ERCP)  83 - Biopsy of liver  84 - Cholecystectomy and common duct exploration  87 – Laparoscopy  88 - Abdominal paracentesis  89 - Exploratory laparotomy  90 - Excision, lysis peritoneal adhesions  92 - Other bowel diagnostic procedures  93 - Other non-OR upper GI therapeutic procedures  94 – Other OR upper GI therapeutic procedures  95 – Other non-OR upper GI therapeutic procedures  96 – Other OR lower GI therapeutic procedures  97 – Other gastrointestinal diagnostic procedures  98 – Other non-OR gastrointestinal therapeutic procedures  99 – Other OR gastrointestinal therapeutic procedures  221 – Nasogastric tube |
| Gastrointestinal surgeries | 72, 73, 75, 78, 79, 89, 90 | 72 – Colostomy, temporary and permanent  73 – Ileostomy and other enterostomy  75 – Small bowel resection  78 – Colorectal resection  79 – Local excision of large of large intestine lesion (not endoscopic)  89 – Exploratory laparotomy  90 – Excision, lysis peritoneal adhesions |
| Blood transfusions | 222 |  |
| Parenteral or enteral nutrition | 223 |  |
| Inflammatory bowel related procedures | 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 81, 87, 89, 92, 93, 94, 95, 96, 97, 98, 99 | 70 – Upper gastrointestinal endoscopy, biopsy  71 – Gastrostomy, temporary and permanent  72 – Colostomy, temporary and permanent  73 – Ileostomy and other enterostomy  74 – Gastrectomy, partial and total  75 – Small bowel resection  76 – Colonoscopy and biopsy  77 – Proctoscopy and anorectal biopsy  78 – Colorectal resection  79 – Local excision of large intestine lesion (not endoscopy)  81 – Hemorrhoid procedures  87 – Laparoscopy  89 - Exploratory laparotomy  92 - Other bowel diagnostic procedures  93 - Other non-OR upper GI therapeutic procedures  94 – Other OR upper GI therapeutic procedures  95 – Other non-OR upper GI therapeutic procedures  96 – Other OR lower GI therapeutic procedures  97 – Other gastrointestinal diagnostic procedures  98 – Other non-OR gastrointestinal therapeutic procedures  99 – Other OR gastrointestinal therapeutic procedures |
| **Surgeries** | | |
| Colostomy | 72 |  |
| Ileostomy | 73 |  |
| Small bowel resection | 75 |  |
| Colorectal resection | 78 |  |
| Local excision of large intestine lesion | 79 |  |
| Exploratory laparotomy | 89 |  |
| Excision, lysis peritoneal adhesions | 90 |  |

**Diagnosis codes used in grouping causes of admission**

|  |  |
| --- | --- |
| **Diagnoses/Procedures** | **DXCCS (CCS Codes for diagnoses)** |
| Cardiac | 96, 97, 100, 101, 102, 104, 105, 106, 107, 108 |
| Cerebrovascular | 109, 110, 111, 112 |
| Respiratory | 122, 125, 127, 128, 129, 130, 131, 132, 133, 134 |
| Infections | 1, 2, 3, 4, 7, 8, 76, 77, 123, 124, 126, 135, 159, 197, 201, 246 |
| Genitourinary | 156, 157, 158, 160, 161, 162, 163, 165, 166 |
| Gastrointestinal | 14, 15, 60, 137, 138, 139, 140, 141, 142, 143, 145, 146, 147, 148, 149, 151, 152, 153, 154, 155, 250, 251 |
| Endocrine/metabolic | 48, 49, 50, 51, 52, 53, 54, 55 |
| Neuropsychiatric | 83, 84, 85, 93, 95, 65, 66, 67, 68, 69, 70, 71, 72 |
| Malignancies | 11, 12, 13, 16, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44 |
| Fractures | 226, 229, 230, 231 |
| Thromboembolism | 116, 118 |
| Inflammatory bowel disease specific | 144 |
| Others | 150, 199, 204, 209, 211, 252, 253, 254, 257, 233, 235, 239, 242, 244, 259 |

**ICD-9-CM Coding For Agency for Agency for Healthcare Research and Quality (AHRQ) Preventive Quality Indicators (PQI)\***

|  |  |  |  |
| --- | --- | --- | --- |
| **PQI Number** | **Preventive Quality Indicator** | **Definition\*** | **ICD-9 Codes** |
| 1 | Diabetes short term complications | Discharges with a principal ICD-9-CM diagnosis for diabetes short-term complications (ketoacidosis, hyperosmolarity, or coma) | 250.10, 250.11, 250.12, 250.13, 250.20, 250.21, 250.22, 250.23, 250.30, 250.31, 250.32, 250.33 |
| 2 | Perforated appendix | Discharges with any listed-listed ICD-9-CM diagnosis codes for perforations or abscesses of appendix | 540.0, 540.1, 540.9, 541 |
| 3 | Diabetes long term complications | Discharges with a principal ICD-9-CM diagnosis code for diabetes with long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified) | 250.40, 250.41, 250.42, 250.43, 250.50, 250.51, 250.52, 250.53, 250.60, 250.61, 250.62, 250.63, 250.70, 250.71, 250.72, 250.73, 250.80, 250.81, 250.82, 250.83, 250.90, 250.91, 250.92, 250.93 |
| 5 | Chronic obstructive pulmonary disease or Asthma in Older Adults | Discharges with a principal ICD-9-CM diagnosis code for COPD or asthma  Excluded cases  Any listed ICD-9-CM codes for cystic fibrosis and anomalies of the respiratory system | COPD (excluding acute bronchitis)  491.0, 491.1, 491.20, 491.21, 491.22, 491.8, 491.9, 492.0, 492.8, 494, 494.0, 494.1, 496  Asthma  493.00, 493.01, 493.02, 493.10, 493.11, 493.12, 493.20, 493.21, 493.22, 493.81, 493.82, 493.90, 493.91, 493.92  Excluded cases  277.0, 277.01, 277.02, 277.03, 277.09, 51661, 516.62, 516.63, 516.64, 516.69, 747.21, 748.3, 748.4, 748.5, 748.60, 748.61, 748.69, 748.8, 748.9, 750.3, 759.3, 770.7 |
| 7 | Hypertension | Discharges with a principal ICD-9-CM diagnosis code for hypertension  Excluded cases  With any listed ICD-9-CM procedure codes for cardiac procedure or any listed ICD-9-CM diagnosis codes for Stage I-IV kidney disease, only if accompanied by any listed ICD-9-CM procedure codes for dialysis access | 401.0, 401.9, 402.00, 402.10, 402.90, 403.00, 403.10, 403.90, 404.00, 404.10, 404.90  Excluded cases  403.00, 403.10, 404.00, 404.10, 404.90  *Procedure codes*  00.50, 00.51, 00.52, 00.53, 00.54, 00.56, 00.57, 00.66, 17.51, 17.52, 17.55, 35.00, 35.01, 35.02, 35.03, 35.04, 35.05, 35.06, 35.07, 35.08, 35.09, 35.10, 35.11, 35.12, 35.13, 35.14, 35.20, 35.22, 35.23, 35.24, 35.25, 35.26, 35.27, 35.28, 35.31, 3532, 35.33, 35.34, 35.35, 35.39, 35.41, 35.42, 35.35, 35.39, 35.41, 35.42, 35.50, 35.51, 35.52, 35.53, 35.54, 35.55, 35.60, 35.61, 35.62, 35.63, 35.70, 35.71, 35.72, 35.73, 35.81, 35.82, 35.83, 35.84 ,35.91, 35.92, 35.93, 35.94, 35.95, 35.96, 35.97, 35.98, 35.99, 36.01, 36.02, 36.03, 36.04, 36.05, 36.06, 36.07, 36.09 , 36.10, 36.11, 36.12, 36.13, 36.14, 36.15, 36.16, 36.17, 36.19, 362, 363, 3631, 36.32, 36.33, 36.34, 36.39, 36.91, 36.99, 37.31, 37.32, 37.33, 37.34, 37.35, 37.36, 37.37, 37.41, 375, 37.51, 37.52, 37.53, 37.54, 37.55, 37.60 37.61, 37.62, 37.63, 37.64, 37.65, 37.66, 37.70, 37.71, 37.72, 37.73, 37.74, 37.75, 37.76, 37.77, 37.78, 37.79, 37.80, 37.81, 37.82, 37.83, 37.85, 37.86, 37.87, 37.89, 37.94, 37.95, 37.96, 37.97, 37.98, 38.26  38.95, 39.27, 39.29, 39.42, 39.43, 39.93, 39.94 |
| 8 | Congestive heart failure | Discharges with a principal ICD-9-CM diagnosis code for heart failure | 398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.20, 428.21, 428.22, 428.23, 428.30, 428.31, 428.32, 428.33, 428.40, 428.41, 428.42, 428.43, 428.9 |
| 10 | Dehydration | Discharges with either a principal ICD-9-CM diagnosis code for dehydration or any secondary ICD-9-CM diagnosis codes for dehydration and a principal ICD-9-CM diagnosis code for hyperosmolality and/or hypernatremia, gastroenteritis, or acute kidney injury  Excluded cases  Any listed ICD-9-CM diagnosis codes for chronic renal failure | 276.5, 276.50, 276.51, 276,52, 276.0, 008.61, 008.62, 008.63, 008.64, 008.65, 008.66, 008.67, 008.69, 008.8, 009.0, 009.1, 009.2, 009.3, 558.9, 584.5, 584.6, 584.7, 584.8, 584.9, 586, 997.5  Exclude cases  403.01, 403.11, 403.91, 404.02, 404.03, 404.12, 404.13, 404.92, 404.93, 585.5, 585.6 |
| 11 | Bacterial pneumonia | Discharges with a principal ICD-9-CM diagnosis code for bacterial pneumonia  Excluded cases  Any listed ICD-9CM diagnosis codes for sickle cell anemia or HB-S disease. Any listed ICD-9-CM diagnosis codes or any listed ICD-9-CM procedure codes for immunocompromised state | 481, 4822, 48230, 48231, 48232, 48239, 48240, 48241, 48242, 48249, 4829, 4830, 4831, 4838, 485, 486  Excluded cases  42, 136.3, 199.2, 238.73, 238.76, 238.77, 238.79, 260, 261, 262, 279.00, 279.01, 279.02, 279.03, 279.04, 279.05, 279.06, 279.09, 279.10, 279.11, 279.12, 279.13, 279.19, 279.2, 279.3, 279.4, 27941, 279.50, 279.51, 27952, 279.53, 279.8, 279.9, 284.09, 284.1, 284.11, 284.1, 284.19, 288.0, 288.00, 288.01, 288.02, 288.03, 288.09, 288.1, 288.2, 288.4, 288.50, 288.51, 288.59, 289.53, 289.83, 403.01, 403.11, 439.1, 404.02, 404.03, 404.12, 404.13, 404.92, 404.93, 579.3, 585, 585.5, 585.6, 996.8, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.88, 996.89, V420, V421, V426, V427, V428, V4281, V428.2, V428.3, V4284, V4289, V451, V451.1, V560, V561, V562  *Procedure codes*  00.18, 33.5, 33.50, 33.51, 33.52, 33.6, 37.5, 37.51, 41.0, 41.00, 41.01, 41.02, 41.03, 41.04, 41.05, 41.06, 41.07, 41.08, 41.09, 4697, 50.51, 50.59, 52.80, 52.81, 52.82, 52.83, 52.85, 52.86, 55.69 |
| 12 | Urinary tract infection | Discharges with a principal ICD-9-CM diagnosis code for urinary tract infection  Excluded cases  With any listed ICD-9-CM diagnosis codes for kidney/urinary tract disorder. With any listed ICD-9-CM diagnosis codes or any listed ICD-9-CM procedure codes for immunocompromised state | 590.10, 590.11, 590.2, 590.3, 590.80, 590.81, 590.9, 595.0, 595.9, 599.0  Excluded cases  590.00, 590.01, 593.70, 593.71, 593.72, 593.73, 753.0, 753.10, 753.11, 753.12, 753.13, 753.14, 753.15, 753.16, 753.17, 753.19, 753.20, 753.21, 753.22, 753.23, 753.29, 753.3, 753.4, 753.5, 753.6, 753.8, 753.9 |
| 13 | Angina without procedure | Discharges with a principal diagnosis code for angina  Excluded cases  With any listed ICD-9-CM procedure codes for cardiac procedure | 411.81, 411.89, 413.0, 413.1, 413.9 |
| 14 | Uncontrolled diabetes | Discharges with a principal diagnosis code for uncontrolled diabetes without mention of a short-term or long-term complication | 250.02, 250.03 |
| 15 | Asthma in younger adults | Discharges with a principal ICD-9-CM diagnosis code for asthma  Excluded cases  With any listed ICD-9 diagnosis codes for cystic fibrosis and anomalies of the respiratory system | 493.00, 493.01, 493.02, 493.10, 493.11, 493.12, 493.20, 493.21, 493.22, 493.81, 493.82 493.90, 493.91, 493.92 |
| 16 | Lower-extremity amputation among diabetics | Any listed ICD-9-CM procedure codes for lower-extremity amputation and any-listed ICD-9-CM diagnosis codes for diabetes  Excluded cases  89.50, 89.51, 89.60, 89.61, 89.62, 89.63, 89.70, 89.71, 89.72, 89.73, 89.72, 89.73, 89.74, 89.75, 89.76, 89.77 | *Procedure codes*  84.10, 84.12, 84.13, 84.14, 84.15, 84.16, 84.17, 84.18, 84.19  *Diagnosis codes*  250.00, 250.01, 250.02, 250.03, 250.10, 250.11, 250.12, 250.13, 250.20, 250.21, 250.22, 250.23, 250.30, 250.31, 250.32, 250.33, 250.40, 250.41, 250.42, 250.43, 250.50, 250.51, 250.52, 250.53, 250.60, 250.61, 250.62, 250.63, 250.70, 250.71, 250.72, 250.73, 250.80, 250.81, 250.82, 250.83, 250.90, 250.91, 250.92, 250.93 |

\*ICD9 codes for Prevention Quality Indicators (PQIs), which are a set of measures that can be used with hospital inpatient discharge data to identify quality of care for ambulatory conditions for which good outpatient care can potentially prevent hospitalization, complications, or more severe disease. PQIs were developed by the Agency for Healthcare Research and Quality (AHRQ).