
Table S1. ICD 9 and 10 procedure codes for insertion of an implantable heart assist system

ICD-9

- 37.52 Implantation of total internal biventricular heart replacement system
- 37.6 Implantation of heart and circulatory assist system(s)
- 37.66 Insertion of implantable heart assist system

ICD-10

- 02RK0JZ Replacement of right ventricle with synthetic substitute
 - 02RL0JZ Replacement of left ventricle with synthetic substitute
 - 02HA0QZ Insertion of implantable heart assist system
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Table S2. ICD 9 and 10 diagnosis codes for readmission by category

Congestive Heart Failure

ICD-9

- V53.39 Adjust cardiac device NEC
- 427.5 Cardiac arrest
- 428 Congestive heart failure NOS
- 428.9 Heart failure NOS
- 428.20 Systolic heart failure NOS
- 428.42 Chronic systolic and diastolic heart failure
- 428.23 Acute and chronic systolic heart failure
- 428.40 Systolic and diastolic heart failure NOS
- 428.43 Acute on chronic systolic and diastolic heart failure
- 785.51 Cardiogenic shock
- 789.59 Ascites NEC

ICD-10

- I11.0 Hypertensive heart disease with heart failure
- I13.0 Hypertensive heart & chronic kidney disease with heart failure and stage 1-4 or unspecified chronic kidney disease
- I50.50 Systolic heart failure NOS
- I50.22 Chronic systolic heart failure
- I50.23 Acute on chronic systolic heart failure
- I50.42 Chronic systolic and diastolic heart failure
- I50.43 Acute on chronic systolic and diastolic heart failure
- I50.9 Heart failure NOS
- R53.83 Fatigue NEC

Infection

ICD-9

- 008.8 Viral enteritis NOS
- 009.0 Infectious enteritis NOS
- 038.0 Streptococcal septicemia
- 079.99 Viral infection NOS
- 112.5 Disseminated candidiasis
- 465.9 Acute upper respiratory infections NOS
- 480.8 Pneumonia due to other virus NEC

- 486 Pneumonia, unspecified organism
- 487.1 Influenza with other respiratory manifestations
- 599.0 Urinary tract infection NOS
- 780.60 Fever NOS
- 790.7 Bacteremia
- 996.61 Infection and inflammatory reaction due to cardiac device, implant and graft
- 998.59 Other postoperative infection
- 999.32 Bloodstream infection due to central venous catheter

ICD-10

- A04.7 Enterocolitis due to Clostridium difficile
- A08.4 Viral intestinal infection, unspecified
- A08.11 Acute gastroenteropathy due to Norwalk agent
- B25.9 Cytomegaloviral disease NOS
- B60.0 Babesiosis
- G03.0 Nonpyogenic meningitis
- I33.0 Acute and subacute infective endocarditis
- J06.9 Acute upper respiratory infections NOS
- J10.1 Influenza due to other identified influenza virus with other respiratory manifestations
- J15.211 Pneumonia due to methicillin-susceptible Staphylococcus aureus
- J18.9 Pneumonia, unspecified organism
- J32.8 Chronic sinusitis NEC
- L02.411 Cutaneous abscess of right axilla
- L02.416 Cutaneous abscess of left lower limb
- L03.311 Cellulitis abdominal wall
- R50.9 Fever NOS
- T80.211A Bloodstream infection due to central venous catheter, initial encounter
- T81.4XXA Infection following a procedure, initial encounter
- T82.7XXA Infection and inflammatory reaction due to other cardiac and vascular devices, implants and grafts, initial encounter
- T85.79XA Infection and inflammatory reaction due to other internal prosthetic devices, implants and grafts, initial encounter

Hematologic

ICD-9

- 283.2 Hemolytic hemoglobinuria
- 286.9 Coagulation defects NEC & NOS
- 453.9 Venous thrombosis NOS
- 531.40 Chronic gastric ulcer with hemorrhage without obstruction
- 599.70 Hematuria NOS
- 626.20 Excessive menstruation
- 784.7 Epistaxis
- 790.4 Elevated transaminase or LDH
- V58.83 Encounter for therapeutic drug monitoring

ICD-10

- D64.89 Anemias NEC
- D64.9 Anemia NOS

D68.0	Von Willebrand's disease
D68.8	Coagulation defects NEC
I51.3	Intracardiac thrombosis NEC
K92.2	Gastrointestinal hemorrhage NOS
M96.841	Postprocedural hematoma of a musculoskeletal structure following procedure NEC
R04.0	Epistaxis
R79.1	Abnormal coagulation profile
T82.867A	Thrombosis due to cardiac prosthetic devices, implants and grafts, initial encounter
Z51.81	Encounter for therapeutic drug level monitoring

Arrhythmia

ICD-9

427.1	Paroxysmal ventricular tachycardia
427.32	Atrial flutter
427.41	Ventricular fibrillation
427.89	Cardiac dysrhythmias NEC
V53.32	Fitting and adjustment of automatic implantable cardiac defibrillator

ICD-10

I47.1	Supraventricular tachycardia
I47.2	Ventricular tachycardia
I48.92	Atrial flutter NOS
I49.01	Ventricular fibrillation
R00.2	Palpitations
R55	Syncope and collapse

Neurologic

ICD-9

431	Intracerebral hemorrhage
784.59	Speech disturbance NEC

ICD-10

H53.8	Visual disturbances NEC
I61.5	Nontraumatic intracerebral hemorrhage, intraventricular
I61.9	Nontraumatic intracerebral hemorrhage NOS
I62.01	Nontraumatic acute subdural hemorrhage
I63.12	Cerebral infarction due to embolism of basilar artery
I63.40	Cerebral infarction due to embolism of cerebral artery NOS
I63.511	Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery
I63.8	Cerebral infarction NEC
I63.9	Cerebral infarction NOS
G43.709	Chronic migraine without aura not intractable without status migrainosus
G43.801	Migraine NEC not intractable with status migrainosus
G43.909	Migraine NOS not intractable without status migrainosus
G44.229	Chronic tension-type headache not intractable
G45.9	Transient cerebral ischemic attack NOS
R56.9	Convulsions NOS

Fluids, Electrolytes, Nutrition

ICD-9

- 276.51 Dehydration
- 558.9 Noninfectious gastroenteritis NEC
- 787.91 Diarrhea

ICD-10

- E43 Severe protein-calorie malnutrition NOS
- E86.0 Dehydration
- R11.10 Vomiting NOS
- R19.7 Diarrhea NOS

Other

ICD-9

- 359.1 Hereditary progressive muscular dystrophy
- 359.22 Myotonia congenita
- 584.9 Acute kidney failure NOS
- 693.0 Drug dermatitis NOS
- 782.0 Skin sensation disturbance
- 789.00 Abdominal pain, unspecified site

ICD-10

- G47.33 Obstructive sleep apnea
 - G71.0 Muscular dystrophy
 - I10 Essential (primary) hypertension
 - J38.5 Laryngeal spasm
 - M95.2 Acquired deformity of head NEC
 - N12 Tubulo-interstitial nephritis, not specified as acute or chronic
 - R07.9 Chest pain NOS
 - R10.9 Abdominal pain NOS
 - R45.851 Suicidal ideations
 - S90.01XA Contusion of right ankle, initial encounter
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