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Supplemental data

Table S1. ICD 9-CM codes for comorbidities

Comorbidities	Codes
Stable ischemic heart disease	413.0, 413.9, 414.0, 414.00, 414.01, 414.02, 414.03, 414.04, 414.05, 414.06, 414.07, 414.10, 414.2, 414.3, 414.4, 414.8, 414.9, 414.12
Hypertension	401.0, 401.1, 401.9, 402.0, 40200, 402.01, 402.1, 402.10, 402.11, 402.90, 402.91, 403.00, 403.01, 403.10, 403.11, 403.90, 403.91, 404.0, 404.02, 404.03, 404.1, 404.10, 404.11, 404.12, 404.13, 404.90, 404.91, 404.92, 404.93, 405.0, 405.01, 405.09, 405.1, 405.11, 405.19, 405.9, 405.91, 405.99, 416.0, 416.8
Diabetes mellitus	249.00-249.31, 250.00-250.33, 648.00-648.04, 249.40-249.91, 250.40-250.93, 775.1
AIDS	042-044.9
Liver disease	070.22, 070.23, 070.32, 070.33, 070.44, 070.54, 456.0, 456.1, 456.20, 456.21, 571.0, 571.2, 571.3, 571.40- 571.49, 571.5, 571.6, 571.8, 571.9, 572.3, 572.8, 573.5, V42.7
Obesity	278.0, 278.00, 278.01, 278.03, 649.10-649.14, 793.91, V85.30- V85.39, V85.41- V85.45, V85.54
Chronic pulmonary disease	490-492.8, 493.00- 493.92, 494-494.1, 495.0-505, 506.4
Renal failure	403.01, 403.11, 403.91, 404.02, 404.03, 404.12, 404.13, 404.92, 404.93, 585.3, 585.4, 585.5, 585.6, 585.9, 586, V42.0, V45.1, V45.11, V45.12, V56.0-V56.32, V56.8
Congestive heart failure	398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0-428.9
Rheumatoid arthritis/ Collagen vascular disease	701.0, 710.0- 710.9, 714.0- 714.9, 720.0- 720.9, 725
Metastatic cancer	196.0-199.1, 209.70, 209.71, 209.72, 209.73, 209.74, 209.75, 209.79, 789.51

Table S2. ICD 9-CM codes for complications

Complications	Codes
Venous thromboembolism	415.1, 415.11, 415.13, 415.19, 451.1, 451.11, 451.19, 451.81, 453.2, 453.4, 453.40, 453.41, 453.42
Acute coronary syndrome (STEMI/NSTEMI/UA)	410.0, 410.00, 410.01, 410.02, 410.1, 410.10, 410.11, 410.12, 410.2, 410.20, 410.21, 410.22, 410.3, 410.30, 410.31, 410.32, 410.4, 410.40, 410.41, 410.42, 410.5, 410.50, 410.51, 410.52, 410.6, 410.60, 410.61, 410.62, 410.8, 410.81, 410.80, 410.82, 410.9, 410.90, 410.91, 410.92, 411, 411.1, 411.81, 411.89, 410.7, 410.70, 410.71, 410.72
Acute ischemic stroke/Transient ischemic attack	433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.01, 434.11, 434.91, 436, 435, 435.0, 435.1, 435.2, 435.3, 435.8, 435.9
Bleeding complications	998.1, 998.11, 998.12, 285.1
Intracerebral hemorrhage	430, 431
Transfusion of red blood cells	99.0, 99.00, 99.02, 99.03, 99.04, V58.2
Surgical site infection	996.6, 996.66, 996.67, 996.69, 998.5, 998.51, 998.59, 682.6
Other infection	038, 038.0, 038.1, 038.2, 038.3, 038.4, 038.8, 038.9, 008.45, 466, 466.0, 466.1, 481, 482, 482.0, 482.1, 482.2, 482.3, 482.30, 482.31, 482.39, 482.4, 482.40, 482.41, 482.42, 482.43, 482.8, 482.81, 482.82, 482.83, 482.84, 482.89, 482.9, 485, 486, 510, 510.0, 510.9, 513, 513.0, 513.1, 590.1, 590.10, 590.11, 590.2, 590.3, 590.8, 590.80, 590.81, 590.9, 599.0, 790.7, 995.91, 995.92, 998.02, 041, 041.0, 041.1, 041.2, 041.3, 041.4, 041.5, 041.6, 041.7, 041.8, 041.9

Table S3. ICD 9-CM codes for readmission

Readmission diagnosis category	Codes	Diagnosis
Hemophilia/Coagulation defect		
	286.0	Congenital factor VIII disorder
	286.9	Other and unspecified coagulation defects
Bleeding or anemia		
	285.1	Acute posthemorrhagic anemia
	285.9	Anemia, unspecified
	719.16	Hemarthrosis, lower leg
	998.12	Hematoma complicating a procedure
	578.9	Hemorrhage of gastrointestinal tract, unspecified
	569.3	Hemorrhage of rectum and anus
	459.0	Hemorrhage, unspecified
Venous thromboembolism		
	453.42	Acute venous embolism and thrombosis of deep vessels of distal lower extremity
	453.41	Acute venous embolism and thrombosis of deep vessels of proximal lower extremity
	453.40	Acute venous embolism and thrombosis of unspecified deep vessels of lower extremity
	415.19	Other pulmonary embolism and infarction
	I26.99*	Other pulmonary embolism without acute cor pulmonale
Surgical complications		
	996.42	Dislocation of prosthetic joint
	998.32	Disruption of external operation (surgical) wound
	996.66	Infection and inflammatory reaction due to internal joint prosthesis
	996.69	Infection and inflammatory reaction due to other internal prosthetic device, implant, and graft
	996.41	Mechanical loosening of prosthetic joint
	879.8	Open wound(s) (multiple) of unspecified site(s), without mention of complication
	996.77	Other complications due to internal joint prosthesis
	996.75	Other complications due to nervous system device, implant, and graft
	996.74	Other complications due to other vascular device, implant, and graft
	998.59	Other postoperative infection
	998.13	Seroma complicating a procedure
	998.9	Unspecified complication of procedure, not elsewhere classified
Infection		
	682.6	Cellulitis and abscess of leg, except foot
	682.9	Cellulitis and abscess of unspecified sites
	038.9	Septicemia NOS
	996.68	Infection and inflammatory reaction due to peritoneal dialysis catheter
Respiratory diagnosis		
	518.81	Acute respiratory failure
	786.09	Other respiratory abnormalities
	511.89	Other specified forms of effusion, except tuberculous
	486	Pneumonia, organism unspecified
	507.0	Pneumonitis due to inhalation of food or vomitus
	786.05	Shortness of breath
Cardiovascular diagnosis		
	410.01	Acute myocardial infarction of anterolateral wall, initial episode of care
	410.41	Acute myocardial infarction of other inferior wall, initial episode of care
	427.31	Atrial fibrillation
	458.9	Hypotension, unspecified
	411.1	Intermediate coronary syndrome
	427.89	Other specified cardiac dysrhythmias
	785.1	Palpitations
	427.1	Paroxysmal ventricular tachycardia
	410.71	Subendocardial infarction, initial episode of care
	785.0	Tachycardia, unspecified
	459.9	Unspecified circulatory system disorder
Gastrointestinal diagnosis		
	789.09	Abdominal pain, other specified site
	789.01	Abdominal pain, right upper quadrant
	789.00	Abdominal pain, unspecified site
	564.00	Constipation, unspecified
	560.9	Unspecified intestinal obstruction

Readmission diagnosis category	Codes	Diagnosis
Kidney/electrolytes		
	276.1	Hyposmolality and/or hyponatremia
	788.0	Renal colic
Neurological diagnosis		
	436	Acute, but ill-defined, cerebrovascular disease
	780.97	Altered mental status
	345.90	Epilepsy, unspecified, without mention of intractable epilepsy
	435.9	Unspecified transient cerebral ischemia
Orthopedic diagnosis		
	823.20	Closed fracture of shaft of tibia alone
	821.00	Closed fracture of unspecified part of femur
	820.8	Closed fracture of unspecified part of neck of femur
	719.07	Effusion of joint, ankle and foot
	715.36	Osteoarthritis, localized, not specified whether primary or secondary, lower leg
Trauma/injuries		
	959.6	Hip and thigh injury
Unspecified pain		
	786.50	Chest pain, unspecified
	786.59	Other chest pain
	719.46	Pain in joint, lower leg
	719.45	Pain in joint, pelvic region and thigh
	729.5	Pain in limb
	786.51	Precordial pain
Others/ non-specific symptoms		
	780.4	Dizziness and giddiness
	782.3	Edema
	780.60	Fever, unspecified
	787.01	Nausea with vomiting
	E876	Other and unspecified misadventures during medical care
	780.99	Other general symptoms
	780.79	Other malaise and fatigue
	790.99	Other nonspecific findings on examination of blood
	284.19	Other pancytopenia
	300.01	Panic disorder without agoraphobia
	536.2	Persistent vomiting
	527.2	Sialoadenitis
	729.81	Swelling of limb
	784.2	Swelling, mass, or lump in head and neck
	780.2	Syncope and collapse

*ICD 10 code