

ICD9 codes for secondary outcomes**1. Aortic valve replacement**

35.21 Replacement of aortic valve with tissue graft

35.22 Other replacement of aortic valve

2. Mitral valve replacement

35.23 Replacement of mitral valve with tissue graft

35.24 Other replacement of mitral valve

3. Vascular Complications

868.04 Retroperitoneal hematoma

997.2 Peripheral vascular complications, NOS

997.7 Vascular complications of other vessels

999.2 Vascular complications, NEC

447.0 Arteriovenous fistula, acquired

901.0 Injury to thoracic aorta

902.0 Injury to abdominal aorta

904.0 Injury to common femoral artery

998.11 Hemorrhage complicating a procedure

998.12 Hematoma complicating a procedure

998.2 Accidental laceration during a procedure

7. Vascular Complications Requiring Surgery

39.31 Suture of artery

39.41 Control of hemorrhage

39.49 Other revision of vascular procedure

39.52 Repair of aneurysm

39.53 Repair of arteriovenous fistula

39.56 Repair of vessel with tissue patch

39.57 Repair of vessel with synthetic patch

39.58 Repair of vessel with unspecified patch

39.59 Repair of vessel, unspecified

8. Cardiogenic shock

785.51

9. Cardiac arrest

427.5

10. Stroke

434.91 Cerebral artery occlusion, unspecified with cerebral infarction
430 Subarachnoid hemorrhage
431 Intracerebral hemorrhage
432.0 Nontraumatic extradural hemorrhage
432.1 Subdural hemorrhage
432.9 Unspecified intracranial hemorrhage
433.01 Cerebral thrombus with infarction
433.11 Occlusion of carotid artery, with cerebral infarction
433.21 Occlusion of vertebral artery with cerebral infarction
433.31 Occlusion of bilateral precerebral arteries with infarction
433.81 Occlusion of other precerebral arteries with cerebral infarction
433.91 Occlusion of unspecified precerebral arteries with infarction
434.00 Cerebral infarction without mention of cerebral infarction
434.01 Cerebral infarction with cerebral infarction
434.10 Cerebral embolism without mention of cerebral infarction
434.11 Cerebral embolism with cerebral infarction
436 Acute cerebral vascular disease, ill-defined
997.02 Iatrogenic cerebral infarction

11. Acute Kidney Injury

584.5 Acute Kidney Injury with tubular necrosis
584.6 Acute Kidney Injury with lesion of renal cortical necrosis
584.6 Acute Kidney Injury with lesion of renal cortical necrosis
584.8 Acute Kidney Injury, other specified pathological lesion in kidney
584.9 Acute Kidney Injury, unspecified

12. Acute Kidney Injury Requiring Dialysis

39.95 Hemodialysis (in addition to acute kidney injury)
585.6 End stage renal disease – excluded

13. Pacemaker Implantation

00.50 Implantation of CRT-P, total system
00.51 Implantation of CRT-D, total system
00.52 Implantation of coronary sinus lead
00.53 Implantation of CRT-P generator only
00.54 Implantation of CRT-D generator only
37.70 Initial insertion of lead, NOS

- 37.71 Initial insertion of lead, ventricle
- 37.72 Initial insertion of lead, ventricle and atrium
- 37.73 Initial insertion of lead, atrium
- 37.80 Initial insertion of permanent pacemaker, NOS
- 37.81 Initial insertion of single-chamber pacemaker
- 37.82 Initial insertion of single-chamber pacemaker, rate responsive
- 37.83 Initial insertion of dual-chamber pacemaker
- 37.94 Implantation of ICD, total system
- 37.96 Implantation of ICD, generator only

14. Blood Transfusion CCS diagnosis

- 222 Blood transfusion

15. Cardiac Tamponade

- 423.3 Cardiac tamponade

16. Acquired Pneumonia

- 486 Pneumonia, organism unspecified
- 481 Pneumococcal pneumonia
- 482.8 Pneumonia due to other specified bacteria
- 482.3 Pneumonia due to streptococcus

17. Urinary Tract Infection

- 599.0 Urinary tract infection, site not specified
- 590.9 Infection of kidney, unspecified

18. Sepsis

- 995.91 Sepsis
- 038 Septicemia.
- 995.92 Severe sepsis
- 996.64 Infection and inflammatory reaction due to indwelling urinary catheter
- 999.31 Other and unspecified infection due to central venous catheter
- 999.32 Bloodstream infection due to central venous catheter

19. Mechanical Ventilation

- 96.72 Invasive mechanical ventilation

20. Tracheostomy

- 311 Temporary tracheostomy
- 31.21 Mediastinal tracheostomy
- 31.29 Other permanent tracheostomy

21. Gastrostomy

- 43.11 Percutaneous [endoscopic] Gastrostomy [PEG]

43.19 Other gastrostomy

22. Hepatic

570 hepatic necrosis

572.2 Hepatic encephalopathy

573.3 unspecified hepatitis

23. Hematologic

287.3, 287.4, 287.5 Thrombocytopenia

286.9 Coagulopathy

24. Metabolic/lactic acidosis

276.2