

CSC® SUBSPECIALTY CERTIFICATION TEST PLAN

1. Patient Problems (52%)

A. Cardiothoracic Surgery (32%)

1. Cardiac arrhythmias (e.g., post-operative atrial fibrillation)
2. Patients who have had cardiopulmonary bypass
3. Complications of cardiac surgery
 - a. tamponade
 - b. post-operative bleeding
 - c. coagulopathy (e.g., DIC, HITTS, ReoPro-induced, heparin rebound)
 - d. open chest wound from the operating room
4. Abnormal pulsus paradoxus
5. Myocardial stunning/hibernation
6. Patients who have had surgery of the thoracic aorta
7. Patients who have had surgical treatment of
 - a. cardiac rhythm disorders (e.g., MAZE procedure/modified MAZE)
 - b. coronary artery disease
8. Patients with off-pump coronary artery bypass (OPCAB)
9. Patients who have had minimally invasive cardiac surgery
10. Patients who have had heart valve surgery involving
 - a. surgical repair
 - b. surgical replacement
11. Radial artery as an alternate arterial conduit

B. Pulmonary (5%)

1. Acute respiratory failure related to phrenic nerve damage
2. Air-leak syndromes (e.g., pneumopericardium, pneumomediastinum)
3. Pleural effusions
4. Atelectasis (e.g., left lower lobe)

C. Hematology (3%)

1. Inflammatory response (e.g., hyperdynamic state without documented infection)

2. Anaphylaxis (e.g., protamine reaction)

D. Neurology/Gastrointestinal (7%)

1. Encephalopathy (e.g., hypoxic-ischemic, metabolic)
2. Post-operative impaired cognition
3. Stroke (e.g., embolic, hemorrhagic)
4. Post-pump hepatic failure

E. Renal (5%)

1. Acute renal failure/insufficiency/azotemia
2. Life-threatening electrolyte imbalances (e.g., potassium, sodium, phosphorus, magnesium, calcium; may include imbalances not caused by renal problems; many imbalances caused by pump)

2. Nursing Interventions (48%)

- A. Antidysrhythmics
- B. Vasodilators
- C. Vasopressors
- D. Fluid volume management specific to cardiac surgery
- E. Hemodynamic monitoring (e.g., standard pulmonary artery catheter, SvO₂ catheter, intermittent mixed-venous sample interpretation)
- F. Incision assessment and management
- G. Pain management
- H. Epicardial pacing
 - I. Intraaortic balloon pump
 - J. Mediastinal drainage (characteristics of drainage and normal amounts)
- K. Emergent re-opening of the chest
- L. Assist with internal defibrillation
- M. Ventilator management/weaning/ABG interpretation
- N. Management of hyperglycemia and hypoglycemia
- O. Management of recovery from anesthesia