# CRITICAL CARE MEDICINE

*Certification Examination (CERT)*

High Relevance: Topics are very likely to appear on the assessment.

Medium Relevance: Topics are moderately likely to appear on the assessment.

Low Relevance: Topics will not appear on the assessment.

| Blueprint Code and Topic | Assessment Percentage | Diagnosis/ Testing 40% | Treatment/ Care Decisions 50% | RiskAssessment /Prognosis /Epidemiology 5% | Pathophysiology /Basic Science 5% |
|---|---|---|---|---|---|
| **1 Shock** | **15%** | | | | |
| **1.1 Cardiogenic shock** | 4% | HIGH | HIGH | HIGH | HIGH |
| 1.1.1 Medical management | | | | | |
| 1.1.2 Mechanical support | | | | | |
| **1.2 Distributive shock** | 5% | HIGH | HIGH | HIGH | HIGH |
| 1.2.1 Septic shock | | | | | |
| 1.2.2 Anaphalactic shock | | | | | |
| 1.2.3 Neurogenic shock | | | | | |
| **1.3 Hypovolemic shock** | 3% | HIGH | HIGH | HIGH | HIGH |
| 1.3.1 Hemorrhagic shock | | | | | |
| 1.3.2 Non-hemorrhagic shock | | | | | |
| **1.4 Obstructive shock** | 3% | HIGH | HIGH | HIGH | MEDIUM |
| 1.4.1 Cardiac tamponade | | | | | |
| 1.4.2 Pneumothorax | | | | | |
| 1.4.3 Pulmonary embolism | | | | | |
| **2 Renal, Endocrine, and Metabolic Disorders** | 13% | | | | |
| **2.1 Sodium-water balance** | <2% | HIGH | HIGH | MEDIUM | MEDIUM |
| 2.1.1 Hyponatremia | | | | | |
| 2.1.1.1 Syndrome of inappropriate antidiuretic hormone secretion | | | | | |
| 2.1.1.2 Cerebral salt wasting | | | | | |
| 2.1.1.3 Psychogenic polydipsia | | | | | |
| 2.1.1.4 Hypothyroidism | | | | | |
| 2.1.1.5 Iatrogenic | | | | | |
| 2.1.1.6 Exercise-induced | | | | | |
| 2.1.2 Hypernatremia | | | | | |
| 2.1.2.1 Central diabetes insipidus | | | | | |
| 2.1.2.2 Nephrogenic diabetes insipidus | | | | | |
| 2.1.2.3 Osmotic diuresis | | | | | |
| 2.1.2.4 Primary hypodipsia | | | | | |
| 2.1.2.5 Dehydration | | | | | |
| 2.1.2.6 Gastrointestinal fluid losses | | | | | |
| 2.1.3 Hypervolemia | | | | | |

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|---|---|---|---|---|---|
| 2.1.4 Hypovolemia | | | | | |
| **2.2 Potassium disorders** | <2% | HIGH | HIGH | MEDIUM | MEDIUM |
| 2.2.1 Hyperkalemia | | | | | |
| 2.2.1.1 Pseudohyperkalemia | | | | | |
| 2.2.1.2 Drug-induced | | | | | |
| 2.2.1.3 Adrenal insufficiency | | | | | |
| 2.2.2 Hypokalemia | | | | | |
| 2.2.2.1 Vomiting | | | | | |
| 2.2.2.2 Diarrhea | | | | | |
| 2.2.2.3 Renal losses | | | | | |
| **2.3 Acid-base disorders** | 3% | HIGH | HIGH | HIGH | HIGH |
| 2.3.1 Metabolic acidosis | | | | | |
| 2.3.1.1 Increased anion gap | | | | | |
| 2.3.1.2 Normal anion gap | | | | | |
| 2.3.1.3 Decreased anion gap in multiple myeloma | | | | | |
| 2.3.2 Metabolic alkalosis | | | | | |
| 2.3.2.1 Diuretic-induced (contraction alkalosis) | | | | | |
| 2.3.2.2 Other metabolic alkalosis topics (parenteral nutrition-induced, complications of citrate anticoagulation) | | | | | |
| 2.3.3 Mixed acid-base disorders | | | | | |
| 2.3.4 Respiratory acidosis | | | | | |
| 2.3.5 Respiratory alkalosis | | | | | |
| **2.4 Acute kidney injury** | 3% | HIGH | HIGH | MEDIUM | MEDIUM |
| 2.4.1 Pre-renal disease | | | | | |
| 2.4.2 Intrinsic disease | | | | | |
| 2.4.2.1 Glomerulonephritis | | | | | |
| 2.4.2.2 Interstitial nephritis | | | | | |
| 2.4.2.3 Acute tubular necrosis | | | | | |
| 2.4.3 Renal replacement therapy | | | | | |
| **2.5 Metabolic abnormalities of toxic ingestions** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 2.5.1 High osmolar gap | | | | | |
| 2.5.1.1 Ethanol | | | | | |
| 2.5.1.2 Methanol | | | | | |
| 2.5.1.3 Isopropyl alcohol | | | | | |
| 2.5.1.4 Ethylene glycol | | | | | |
| 2.5.1.5 Propylene glycol | | | | | |
| 2.5.2 Normal osmolar gap | | | | | |
| 2.5.2.1 Salicylates | | | | | |

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|---|---|---|---|---|---|
| **2.6 Calcium, phosphate, and magnesium disorders** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 2.6.1 Hyperphosphatemia | | | | | |
| 2.6.2 Hypophosphatemia | | | | | |
| 2.6.3 Hypercalcemia | | | | | |
| 2.6.4 Hypocalcemia | | | | | |
| 2.6.5 Hypermagnesemia | | | | | |
| 2.6.6 Hypomagnesemia | | | | | |
| **2.7 Hyperammonemia** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| **2.8 Hyperglycemia** | <2% | MEDIUM | HIGH | MEDIUM | MEDIUM |
| **2.9 Hypoglycemia** | <2% | HIGH | HIGH | MEDIUM | MEDIUM |
| **2.10 Thyroid disorders** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 2.10.1 Thyroid storm | | | | | |
| 2.10.2 Myxedema coma | | | | | |
| 2.10.3 Hypothyroidism | | | | | |
| 2.10.4 Hyperthyroidism | | | | | |
| **2.11 Adrenal disorders** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 2.11.1 Adrenal insufficiency | | | | | |
| 2.11.1.1 Relative adrenal insufficiency in critical illness | | | | | |
| 2.11.2 Adrenal excess | | | | | |
| **2.12 Pituitary disorders** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| **3 Cardiovascular Disorders** | 13% | | | | |
| **3.1 Coronary artery disease** | 2% | HIGH | HIGH | MEDIUM | MEDIUM |
| 3.1.1 Non-ST-segment elevation myocardial infarction (NSTEMI) | | | | | |
| 3.1.2 ST-segment-elevation myocardial infarction (STEMI) | | | | | |
| 3.1.3 Complications of ischemia (arrythmia, valvular rupture, free wall rupture) | | | | | |
| 3.1.4 Demand/ischemia/non-coronary chest pain | | | | | |
| **3.2 Rhythm and conduction abnormalities** | 2.5% | HIGH | HIGH | MEDIUM | MEDIUM |
| 3.2.1 Atrial | | | | | |
| 3.2.2 Atrial fibrillation/ flutter | | | | | |
| 3.2.3 SVT | | | | | |
| 3.2.4 Ventricular | | | | | |
| 3.2.4.1 Ventricular tachycardia | | | | | |
| 3.2.4.2 Ventricular fibrillation | | | | | |
| 3.2.4.3 Long QT syndrome | | | | | |
| 3.2.5 Conduction abnormalities | | | | | |
| 3.2.6 Bradycardias | | | | | |
| 3.2.7 Implanted cardiac rhythm devices | | | | | |

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| 3.2.8 AICDs | | | | | |
| 3.2.9 Pacemakers | | | | | |
| **3.3 Heart failure** | 2.5% | HIGH | HIGH | MEDIUM | MEDIUM |
| 3.3.1 Heart failure with reduced ejection fraction (HFrEF) | | | | | |
| 3.3.1.1 Peripartum cardiomyopathy | | | | | |
| 3.3.1.2 Stress cardiomyopathy | | | | | |
| 3.3.2 Heart failure with preserved ejection fraction (HFpEF) | | | | | |
| 3.3.3 Right ventricular failure and PH | | | | | |
| **3.4 Hemodynamic monitoring** | 3% | HIGH | HIGH | HIGH | LOW |
| 3.4.1 Interpretation of arterial catheterization | | | | | |
| 3.4.2 Pulmonary arterial catheterization | | | | | |
| 3.4.3 Central venous catheterization | | | | | |
| 3.4.4 Non-invasive hemodynamic monitoring | | | | | |
| **3.5 Vascular diseases** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 3.5.1 Aortic dissection and aneurysm | | | | | |
| 3.5.2 Hypertension | | | | | |
| **3.6 Structural and valvular heart disease** | <2% | MEDIUM | HIGH | MEDIUM | MEDIUM |
| 3.6.1 Aortic | | | | | |
| 3.6.2 Mitral | | | | | |
| 3.6.3 Tricuspid | | | | | |
| 3.6.4 Pulmononic | | | | | |
| **3.7 Pericardial diseases** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| **3.8 Myocardial diseases** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 3.8.1 Myocarditis | | | | | |
| 3.8.2 Hypertrophic cardiomyopathy | | | | | |
| **3.9 Mechanical circulatory support** | <2% | MEDIUM | HIGH | MEDIUM | MEDIUM |
| **4 Pulmonary Disease** | 17% | | | | |
| **4.1 Respiratory failure** | 2.5% | HIGH | HIGH | HIGH | HIGH |
| 4.1.1 Hypoxemic | | | | | |
| 4.1.2 Hypercapnic | | | | | |
| **4.2 Mechanical ventilation** | 6% | HIGH | HIGH | HIGH | HIGH |
| 4.2.1 Initiation and maintenance of mechanical ventilation | | | | | |
| 4.2.1.1 Endotracheal intubation and tracheostomy | | | | | |
| 4.2.1.2 Modes | | | | | |
| 4.2.1.3 Oxygenation | | | | | |
| 4.2.1.4 Ventilation (CO2) | | | | | |
| 4.2.1.5 Waveforms | | | | | |

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|---|---|---|---|---|---|
| 4.2.2 Complications of mechanical ventilation | | | | | |
| 4.2.2.1 Bronchopleural fistula | | | | | |
| 4.2.2.2 Ventilator-induced lung injury | | | | | |
| 4.2.2.4 Dynamic hyperinflation (auto-PEEP) | | | | | |
| 4.2.2.5 Intracardiac shunt | | | | | |
| 4.2.2.6 Complications of endotracheal tubes and tracheostomy | | | | | |
| 4.2.3 Liberation from mechanical ventilation | | | | | |
| 4.2.4 Noninvasive ventilation | | | | | |
| **4.3 Airway disease** | 2% | HIGH | HIGH | HIGH | HIGH |
| 4.3.1 Upper airway disease | | | | | |
| 4.3.1.1 Upper airway obstruction | | | | | |
| 4.3.1.2 Tracheoesophageal fistula | | | | | |
| 4.3.1.3 Airway management | | | | | |
| 4.3.2 Asthma | | | | | |
| 4.3.3 Chronic obstructive pulmonary disease (COPD) | | | | | |
| **4.4 Parenchymal lung disease** | 3% | HIGH | HIGH | HIGH | HIGH |
| 4.4.1 Acute respiratory distress syndrome (ARDS) | | | | | |
| 4.4.2 Pneumonia | | | | | |
| 4.4.2.1 Community-acquired pneumonia (CAP) | | | | | |
| 4.4.2.2 Hospital-acquired pneumonias | | | | | |
| 4.4.3 Noncardiogenic pulmonary edema | | | | | |
| 4.4.3.1 Neurogenic | | | | | |
| 4.4.3.2 Tocolytic | | | | | |
| 4.4.3.3 Negative-pressure | | | | | |
| 4.4.3.4 High-altitude | | | | | |
| 4.4.4 Interstitial lung disease | | | | | |
| 4.4.5 Diffuse alveolar hemorrhage | | | | | |
| 4.4.6 Atelectasis | | | | | |
| **4.5 Pulmonary vascular disorders** | 2% | HIGH | HIGH | MEDIUM | MEDIUM |
| 4.5.1 Pulmonary thromboembolism | | | | | |
| 4.5.1.1 Deep venous thrombosis (DVT) | | | | | |
| 4.5.1.2 Pulmonary embolism (PE) | | | | | |
| 4.5.2 Nonthrombotic embolism | | | | | |
| 4.5.2.1 Air | | | | | |
| 4.5.2.2 Tumor | | | | | |
| 4.5.2.3 Septic | | | | | |
| 4.5.3 Pulmonary hypertension | | | | | |

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| 4.5.4 Acute chest syndrome in sickle cell disease | | | | | |
| 4.5.5 Pulmonary vasculitis | | | | | |
| **4.6 Hemoptysis** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 4.6.1 Massive | | | | | |
| 4.6.2 Submassive | | | | | |
| **4.7 Pleural disorders** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 4.7.1 Pleural effusion | | | | | |
| 4.7.1.1 Infectious (empyema) | | | | | |
| 4.7.1.2 Noninfectious | | | | | |
| 4.7.2 Pneumothorax | | | | | |
| 4.7.3 Hemothorax | | | | | |
| **5 Infectious Disease** | 10% | | | | |
| **5.1 Systemic infections** | <2% | HIGH | HIGH | HIGH | MEDIUM |
| 5.1.1 Sepsis and septic shock | | | | | |
| 5.1.2 Bacterial infections (typical and atypical) | | | | | |
| 5.1.2.1 Tuberculosis | | | | | |
| 5.1.2.2 Atypical mycobacterial infections | | | | | |
| 5.1.2.3 Plague | | | | | |
| 5.1.2.4 Rickettsial or Rickettsial-like infections | | | | | |
| 5.1.2.5 Spirochetal infections | | | | | |
| 5.1.3 Fungal infections | | | | | |
| 5.1.4 Viral infections | | | | | |
| 5.1.5 Parasitic diseases | | | | | |
| 5.1.5.1 Malaria | | | | | |
| 5.1.5.2 Babesiosis | | | | | |
| 5.1.5.3 Strongyloides hyperinfection syndrome | | | | | |
| **5.2 Central nervous system infections** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 5.2.1 Meningitis | | | | | |
| 5.2.1.1 Bacterial | | | | | |
| 5.2.1.2 Fungal | | | | | |
| 5.2.1.3 Mycobacterial | | | | | |
| 5.2.2 Encephalitis | | | | | |
| 5.2.2.1 Viral | | | | | |
| 5.2.2.2 Parasitic | | | | | |
| 5.2.3 Brain abscess | | | | | |
| 5.2.4 Epidural abscess | | | | | |
| **5.3 Head, neck, and upper airway infections** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |

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|---|---|---|---|---|---|
| 5.3.1 Eye and orbit | | | | | |
| 5.3.2 Septic cavernous sinus thrombosis | | | | | |
| 5.3.3 Soft tissue infections of the head and neck | | | | | |
| 5.3.4 Sinusitis | | | | | |
| 5.3.5 Epiglottitis | | | | | |
| **5.4 Cardiovascular infections** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 5.4.1 Pericarditis | | | | | |
| 5.4.2 Endocarditis | | | | | |
| 5.4.3 Device-related infections | | | | | |
| 5.4.4 Catheter-related infections (peripheral, central venous, arterial, pulmonary artery) | | | | | |
| **5.5 Gastrointestinal, hepatobiliary, and intra-abdominal infections** | <2% | HIGH | HIGH | MEDIUM | MEDIUM |
| 5.5.1 Esophageal | | | | | |
| 5.5.2 Liver | | | | | |
| 5.5.3 Gallbladder and biliary | | | | | |
| 5.5.4 Pancreatitis | | | | | |
| 5.5.4.1 Necrotizing (infected) | | | | | |
| 5.5.4.2 Pancreatic abscess | | | | | |
| 5.5.5 Acute lower gastrointestinal infections | | | | | |
| 5.5.5.1 Acute gastroenteritis and colitis | | | | | |
| 5.5.5.2 Clostridioides difficile infection | | | | | |
| 5.5.5.3 Diverticulitis | | | | | |
| 5.5.6 Parasitic | | | | | |
| 5.5.7 Necrotizing enterocolitis (typhlitis) | | | | | |
| 5.5.8 Cytomegalovirus colitis | | | | | |
| 5.5.9 Peritonitis | | | | | |
| 5.5.10 Small intestine and appendix | | | | | |
| **5.6 Genitourinary tract infections** | <2% | MEDIUM | HIGH | MEDIUM | MEDIUM |
| 5.6.1 Cystitis, including catheter-related | | | | | |
| 5.6.2 Pyelonephritis | | | | | |
| 5.6.3 Perinephric abscess | | | | | |
| **5.7 Bone and joint infections** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 5.7.1 Bites | | | | | |
| 5.7.2 Septic arthritis | | | | | |
| **5.8 Catheter- and device-associated infections** | <2% | HIGH | HIGH | HIGH | MEDIUM |
| **5.9 Antimicrobial therapy and resistance** | <2% | HIGH | HIGH | HIGH | MEDIUM |
| 5.9.1 Nonallergic toxicity | | | | | |
| 5.9.2 Allergic reactions | | | | | |

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| 5.9.3 Resistant organisms | | | | | |
| 5.9.3.1 Gram-positive organisms | | | | | |
| 5.9.3.2 Gram-negative organisms | | | | | |
| 5.9.3.3 Fungi and inherent susceptibility patterns and resistance | | | | | |
| **5.10 Antimicrobial pharmacokinetics and pharmacodynamics** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| **5.11 Infections in immunocompromised hosts** | <2% | HIGH | HIGH | HIGH | MEDIUM |
| 5.11.1 Opportunistic infections in human immunodeficiency virus | | | | | |
| 5.11.2 Neutropenia | | | | | |
| 5.11.3 Transplantation | | | | | |
| 5.11.3.1 Solid organ | | | | | |
| 5.11.3.2 Hematopoietic cell | | | | | |
| 5.11.4 Asplenia | | | | | |
| 5.11.5 Corticosteroid immunosuppression | | | | | |
| **5.12 Skin and soft tissue infections** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 5.12.1 Toxic shock | | | | | |
| 5.12.2 Necrotizing fasciitis | | | | | |
| **5.13 Bioterrorism** | <2% | MEDIUM | MEDIUM | LOW | LOW |
| **5.14 Infection prevention and antimicrobial stewardship** | <2% | MEDIUM | MEDIUM | MEDIUM | LOW |
| **6 Gastrointestinal Disorders** | 5% | | | | |
| **6.1 Esophagus disorders** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 6.1.1 Corrosive injury | | | | | |
| 6.1.2 Perforation and rupture | | | | | |
| 6.1.3 Fistula | | | | | |
| **6.2 Stomach disorders** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 6.2.1 Peptic ulcer disease | | | | | |
| 6.2.2 Non-peptic ulcer disease | | | | | |
| 6.2.3 Perforation | | | | | |
| 6.2.4 Mechanical disorders | | | | | |
| **6.3 Small intestine disorders** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 6.3.1 Perforation | | | | | |
| 6.3.2 Mechanical and motility disorders | | | | | |
| **6.4 Large intestine disorders** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 6.4.1 Perforation | | | | | |
| 6.4.2 Mechanical and motility disorders | | | | | |
| 6.4.3 Colonic ischemia | | | | | |
| **6.5 Hepatobiliary disorders** | 2% | HIGH | HIGH | MEDIUM | MEDIUM |
| 6.5.1 Hepatitis | | | | | |

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| 6.5.1.1 Autoimmune | | | | | |
| 6.5.1.2 Alcohol- and drug-induced | | | | | |
| 6.5.1.3 Toxin and solvent exposure | | | | | |
| 6.5.1.4 Ischemic (shock liver) | | | | | |
| 6.5.1.5 Budd-Chiari syndrome | | | | | |
| 6.5.2 Portal hypertension | | | | | |
| 6.5.2.1 Esophageal variceal hemorrhage | | | | | |
| 6.5.2.2 Gastric variceal hemorrhage | | | | | |
| 6.5.2.3 Hepatorenal syndrome | | | | | |
| 6.5.2.4 Hepatopulmonary syndrome | | | | | |
| 6.5.2.5 Portopulmonary hypertension | | | | | |
| 6.5.3 Fulminant hepatic failure | | | | | |
| 6.5.3.1 Infection | | | | | |
| 6.5.3.2 Alcohol- and drug-induced | | | | | |
| 6.5.3.3 Tumor | | | | | |
| 6.5.3.4 Infiltrative diseases and nonalcoholic steatohepatitis (NASH) | | | | | |
| 6.5.3.5 Toxin exposure | | | | | |
| 6.5.3.6 Encephalopathy | | | | | |
| 6.5.3.7 Cerebral edema | | | | | |
| 6.5.3.8 Hypotension | | | | | |
| **6.6 Pancreas** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 6.6.1 Pancreatitis | | | | | |
| 6.6.1.1 Gallbladder disease | | | | | |
| 6.6.1.2 Tumor | | | | | |
| 6.6.1.3 Alcohol- and drug-induced | | | | | |
| 6.6.1.4 Toxin exposure | | | | | |
| 6.6.1.5 Hypertriglyceridemia-induced | | | | | |
| 6.6.1.6 Complications | | | | | |
| **7 Neurologic Disorders** | 9% | | | | |
| **7.1 Brain death/death by neurologic criteria (physiology)** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| **7.2 Cerebrovascular disease** | 3% | HIGH | HIGH | HIGH | MEDIUM |
| 7.2.1 Ischemic stroke | | | | | |
| 7.2.2 Intracerebral hemorrhage | | | | | |
| 7.2.3 Reversible cerebral vasoconstriction syndrome | | | | | |
| 7.2.4 Posterior reversible encephalopathy syndrome | | | | | |
| 7.2.5 Subarachnoid hemorrhage and aneurysm | | | | | |
| 7.2.6 Cerebral vein and sinus thrombosis | | | | | |

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| **7.3 Seizures and status epilepticus** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 7.3.1 Seizures complicating critical illness | | | | | |
| 7.3.2 Status epilepticus | | | | | |
| **7.4 Neuromuscular diseases** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 7.4.1 Guillain-Barre syndrome | | | | | |
| 7.4.2 Critical illness myopathy | | | | | |
| 7.4.3 Critical illness polyneuropathy | | | | | |
| 7.4.4 Tetanus | | | | | |
| 7.4.5 Myasthenia gravis | | | | | |
| 7.4.6 Botulism | | | | | |
| 7.4.7 Tick paralysis | | | | | |
| **7.5 Intracranial hypertension** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| **7.6 Head trauma** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 7.6.1 Paroxysmal sympathetic hyperactivity syndrome | | | | | |
| **7.7 Spinal cord injury** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 7.7.1 Autonomic dysreflexia | | | | | |
| 7.7.2 Spinal shock | | | | | |
| **7.8 Coma, encephalopathy, and delirium** | <2% | HIGH | HIGH | HIGH | MEDIUM |
| 7.8.1 Anoxic/hypoxic brain injury | | | | | |
| 7.8.2 Metabolic encephalopathy | | | | | |
| 7.8.3 Drug-induced encephalopathy | | | | | |
| 7.8.3.1 CAR T-cell-associated neurotoxicity | | | | | |
| 7.8.3.2 Immune Effector Cell-Associated Neurotoxicity syndrome (ICANs) | | | | | |
| 7.8.4 Drug and alcohol withdrawal | | | | | |
| 7.8.5 ICU-related delirium | | | | | |
| 7.8.6 Targeted temperature control | | | | | |
| **7.9 Analgesia, sedation, and neuromuscular junction blockade** | <2% | HIGH | HIGH | HIGH | HIGH |
| 7.9.1 Analgesia | | | | | |
| 7.9.2 Sedation | | | | | |
| 7.9.3 Neuromuscular junction blockade | | | | | |
| **8 Hematologic and Oncologic Disorders** | 5% | | | | |
| **8.1 Red blood cell diseases** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 8.1.1 Anemias | | | | | |
| 8.1.2 Polycythemias | | | | | |
| 8.1.3 Hemoglobinopathies | | | | | |
| **8.2 White blood cell diseases** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 8.2.1 Leukopenia (immune, drug-related) | | | | | |

| Blueprint Code and Topic | Assessment Percentage | Diagnosis/ Testing 40% | Treatment/ Care Decisions 50% | RiskAssessment /Prognosis /Epidemiology 5% | Pathophysiology /Basic Science 5% |
|---|---|---|---|---|---|
| 8.2.2 Hematologic malignancy | | | | | |
| 8.2.3 Leukemias | | | | | |
| 8.2.4 Lymphoma | | | | | |
| 8.2.5 Multiple myeloma | | | | | |
| **8.3 Platelet disorders** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 8.3.1 Thrombocytosis | | | | | |
| 8.3.2 Thrombocytopenia | | | | | |
| 8.3.3 Platelet dysfunction | | | | | |
| **8.4 Coagulopathies** | <2% | HIGH | HIGH | MEDIUM | MEDIUM |
| 8.4.1 Disseminated intravascular coagulation (DIC) | | | | | |
| 8.4.2 Factor deficiencies | | | | | |
| 8.4.3 Anticoagulant-associated coagulopathy | | | | | |
| 8.4.4 Hypothermia | | | | | |
| **8.5 Hypercoagulable states** | <2% | MEDIUM | HIGH | MEDIUM | MEDIUM |
| 8.5.1 Proteins C and S, and antithrombin deficiency | | | | | |
| 8.5.2 Factor V Leiden mutation | | | | | |
| 8.5.3 Malignancy | | | | | |
| 8.5.4 Hormone replacement therapy and oral contraceptives | | | | | |
| 8.5.5 Antiphospholipid antibody syndrome | | | | | |
| **8.6 Transfusion medicine** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 8.6.1 Blood products | | | | | |
| 8.6.2 Apheresis | | | | | |
| 8.6.3 Adverse effects of transfusion | | | | | |
| **8.7 Solid tumors** | <2% | MEDIUM | MEDIUM | MEDIUM | LOW |
| **8.8 Oncologic syndromes** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 8.8.1 Superior vena cava syndrome | | | | | |
| 8.8.2 Tumor lysis syndrome | | | | | |
| 8.8.3 Spinal cord compression | | | | | |
| 8.8.4 Hyperviscosity syndrome | | | | | |
| **8.9 Hematopoietic cell transplantation** | <2% | MEDIUM | MEDIUM | LOW | LOW |
| 8.9.1 Thrombotic microangiopathy | | | | | |
| 8.9.2 Hepatic sinusoidal obstruction syndrome (veno-occlusive disease) | | | | | |
| 8.9.3 Respiratory distress | | | | | |
| **8.10 Complications of immunosuppressive drugs and chemotherapy** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 8.10.1 Corticosteroids | | | | | |
| 8.10.2 Cytokine release syndrome | | | | | |
| 8.10.3 Non-steroid immunosuppressants | | | | | |

| Blueprint Code and Topic | Assessment Percentage | Diagnosis/ Testing 40% | Treatment/ Care Decisions 50% | RiskAssessment /Prognosis /Epidemiology 5% | Pathophysiology /Basic Science 5% |
|---|---|---|---|---|---|
| **9 Surgical Specialties** | 5% | | | | |
| **9.1 Cardiovascular and vascular surgery** | <2% | HIGH | HIGH | MEDIUM | MEDIUM |
| **9.2 Abdominal and gastrointestinal** | <2% | MEDIUM | HIGH | MEDIUM | MEDIUM |
| 9.2.1 Acute abdomen | | | | | |
| 9.2.2 Postoperative complications | | | | | |
| 9.2.3 Mesenteric ischemia and ischemic colitis | | | | | |
| 9.2.4 Abdominal compartment syndrome | | | | | |
| **9.3 Genitourinary and obstetric emergencies** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 9.3.1 Urologic | | | | | |
| 9.3.2 Obstetric and gynecologic | | | | | |
| 9.3.3 Complications of pregnancy | | | | | |
| 9.3.4 Physiological changes of pregnancy | | | | | |
| 9.3.5 Acute compartment syndrome | | | | | |
| **9.4 Environmental injury** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 9.4.1 Inhalation injury | | | | | |
| 9.4.2 Hypothermia | | | | | |
| 9.4.3 Submersion injury, near-drowning, and diving trauma | | | | | |
| 9.4.4 Altitude injury | | | | | |
| 9.4.5 Electrical injury and lightning strike | | | | | |
| 9.4.6 Radiation injury | | | | | |
| 9.4.7 Bioterrorism, noninfectious | | | | | |
| 9.4.8 Heatstroke | | | | | |
| 9.4.9 Burn injury | | | | | |
| **9.5 General postoperative management** | <2% | MEDIUM | MEDIUM | MEDIUM | LOW |
| **9.6 Trauma** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 9.6.1 Flail chest | | | | | |
| 9.6.2 Pulmonary contusion | | | | | |
| 9.6.3 Hemothorax | | | | | |
| 9.6.4 Great vessel injury | | | | | |
| 9.6.5 Airway injury, tracheobronchial laceration and rupture | | | | | |
| 9.6.6 Foreign body aspiration | | | | | |
| 9.6.7 Blunt myocardial injury | | | | | |
| 9.6.8 Fat embolism syndrome | | | | | |
| 9.6.9 Intra-abdominal injury | | | | | |
| **9.7 Solid organ transplantation** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 9.7.1 Heart | | | | | |
| 9.7.2 Lung | | | | | |

| Blueprint Code and Topic | Assessment Percentage | Diagnosis/ Testing 40% | Treatment/ Care Decisions 50% | RiskAssessment /Prognosis /Epidemiology 5% | Pathophysiology /Basic Science 5% |
|---|---|---|---|---|---|
| 9.7.3 Liver | | | | | |
| 9.7.4 Kidney | | | | | |
| 9.7.5 Pancreas and intestines | | | | | |
| 9.7.6 Organ donation | | | | | |
| 9.7.6.1 Donation after Cardiac Death (DCD) | | | | | |
| 9.7.6.2 Normothermic regional perfusion | | | | | |
| 9.7.7 Bone marrow | | | | | |
| 9.7.8 Stem cell | | | | | |
| **10 Pharmacology and Toxicology** | 5% | | | | |
| **10.1 Basic pharmacologic principles** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 10.1.1 Pharmacokinetics | | | | | |
| 10.1.2 Dosing adjustments for disease states | | | | | |
| **10.2 Drug-drug interactions** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| **10.3 Adverse effects of drugs** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 10.3.1 Immunologic adverse drug reactions | | | | | |
| 10.3.1.1 Anaphylaxis | | | | | |
| 10.3.1.2 Thrombotic thrombocytopenic purpura | | | | | |
| 10.3.1.3 Stevens-Johnson syndrome | | | | | |
| 10.3.2 Nonimmunologic adverse effects of drugs | | | | | |
| 10.3.2.1 Electrolyte and metabolic | | | | | |
| 10.3.2.2 Hyperthermia | | | | | |
| 10.3.2.3 Neurologic | | | | | |
| 10.3.2.4 Renal | | | | | |
| 10.3.2.5 Hematologic | | | | | |
| 10.3.2.6 Cardiac | | | | | |
| 10.3.2.7 Pulmonary | | | | | |
| **10.4 Toxicology, drug overdose, and poisoning** | <2% | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| 10.4.1 Acetaminophen | | | | | |
| 10.4.2 Beta-adrenergic blockers | | | | | |
| 10.4.3 Calcium channel blockers | | | | | |
| 10.4.4 Cyanide | | | | | |
| 10.4.5 Tricyclic antidepressants | | | | | |
| 10.4.6 Antihyperglycemic medications | | | | | |
| 10.4.7 Organophosphates | | | | | |
| 10.4.8 Salicylates | | | | | |
| 10.4.9 Selective serotonin reuptake inhibitors (SSRIs) | | | | | |
| 10.4.10 Psychotropic drugs | | | | | |

| Blueprint Code and Topic | Assessment Percentage | Diagnosis/ Testing 40% | Treatment/ Care Decisions 50% | RiskAssessment /Prognosis /Epidemiology 5% | Pathophysiology /Basic Science 5% |
|---|---|---|---|---|---|
| 10.4.11 Xanthines | | | | | |
| 10.4.12 Iron toxicity | | | | | |
| 10.4.13 Antibiotic toxicity | | | | | |
| 10.4.14 Carbon monoxide | | | | | |
| 10.4.15 Methemoglobinemia | | | | | |
| 10.4.16 Toxic alcohols | | | | | |
| **11 Research, Administration, and Ethics** | 1% | | | | |
| **11.1 Intensive care unit (ICU) administration** | | LOW | HIGH | MEDIUM | LOW |
| 11.1.1 Regulatory and finance issues | | | | | |
| 11.1.2 Continuous quality improvement and patient safety | | | | | |
| **11.2 Ethical considerations** | | LOW | HIGH | HIGH | LOW |
| 11.2.1 Patient autonomy | | | | | |
| 11.2.2 Legal surrogates | | | | | |
| 11.2.3 Informed consent for medical procedures | | | | | |
| **11.3 Ethics of brain death** | | LOW | MEDIUM | MEDIUM | LOW |
| **11.4 Withholding or withdrawing life-sustaining therapies** | | LOW | HIGH | HIGH | LOW |
| **11.5 Advanced care planning** | | LOW | HIGH | MEDIUM | LOW |
| **11.6 Patient confidentiality and Health Insurance Portability and Accountability Act (HIPAA) regulations** | | LOW | MEDIUM | MEDIUM | LOW |
| **11.7 Organ donation** | | MEDIUM | MEDIUM | MEDIUM | LOW |
| **11.8 Medically nonbeneficial treatments** | | LOW | MEDIUM | MEDIUM | LOW |
| **11.9 Medical research** | | MEDIUM | MEDIUM | LOW | LOW |
| 11.9.1 Statistical analysis | | | | | |
| 11.9.2 Institutional review boards | | | | | |
| **11.10 Patient safety and quality improvement** | | MEDIUM | HIGH | MEDIUM | LOW |
| **12 Critical Care Ultrasound Scanning** | 2% | | | | |
| **12.1 Cardiac** | | HIGH | HIGH | MEDIUM | LOW |
| **12.2 Pulmonary** | | HIGH | HIGH | MEDIUM | LOW |
| **12.3 Abdominal** | | MEDIUM | MEDIUM | MEDIUM | LOW |
| **12.4 Vascular** | | MEDIUM | MEDIUM | MEDIUM | LOW |