Critical Care Medicine
Certification Examination Blueprint

Purpose of the exam

The exam is designed to evaluate the knowledge, diagnostic reasoning, and clinical judgment skills expected of the certified critical care medicine specialist in the broad domain of the discipline. The ability to make appropriate diagnostic and management decisions that have important consequences for patients will be assessed. The exam may require recognition of common as well as rare clinical problems for which patients may consult a certified critical care medicine specialist.

Exam content

Exam content is determined by a pre-established blueprint, or table of specifications. The blueprint is developed by the ABIM and is reviewed annually and updated as needed for currency. Trainees, training program directors, and certified practitioners in the discipline are surveyed periodically to provide feedback and inform the blueprinting process.

The primary medical content categories of the blueprint are shown below, with the percentage assigned to each for a typical exam:

<table>
<thead>
<tr>
<th>Medical Content Category</th>
<th>% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renal, Endocrine, and Metabolic Disorders</td>
<td>15.0%</td>
</tr>
<tr>
<td>Cardiovascular Disorders</td>
<td>17.5%</td>
</tr>
<tr>
<td>Pulmonary Disease</td>
<td>20.0%</td>
</tr>
<tr>
<td>Infectious Disease</td>
<td>12.0%</td>
</tr>
<tr>
<td>Gastrointestinal Disorders</td>
<td>5.0%</td>
</tr>
<tr>
<td>Neurologic Disorders</td>
<td>9.5%</td>
</tr>
<tr>
<td>Hematologic and Oncologic Disorders</td>
<td>5.5%</td>
</tr>
<tr>
<td>Surgery, Trauma, and Transplantation</td>
<td>7.0%</td>
</tr>
<tr>
<td>Pharmacology and Toxicology</td>
<td>4.5%</td>
</tr>
<tr>
<td>Research, Administration, and Ethics</td>
<td>2.0%</td>
</tr>
<tr>
<td>Critical Care Ultrasound Scanning</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

100%
Exam questions in the content areas above may also address clinical topics in general internal medicine that are relevant to the practice of critical care medicine (including some general pediatrics with an emphasis on adolescent medicine).

**Exam format**

The exam is composed of multiple-choice questions with a single best answer, predominantly describing patient scenarios. Questions ask about the work done (that is, tasks performed) by physicians in the course of practice:

- Making a diagnosis
- Ordering and interpreting results of tests
- Recommending treatment or other patient care
- Assessing risk, determining prognosis, and applying principles from epidemiologic studies
- Understanding the underlying pathophysiology of disease and basic science knowledge applicable to patient care

Clinical information presented may include various media illustrating relevant findings, such as diagnostic imaging studies. Some questions require interpretation of pictorial material, such as pressure tracings, ultrasound scans, magnetic resonance imaging scans, electrocardiograms, radiographs, computed tomograms, radionuclide scans, and photomicrographs.


The blueprint can be expanded for additional detail as shown below. Each of the medical content categories is listed there, and below each major category are the content subsections and specific topics that *may* appear in the exam. Please note: actual exam content may vary.

<table>
<thead>
<tr>
<th>Renal, Endocrine, and Metabolic Disorders</th>
<th>15% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sodium-water balance</strong></td>
<td>2%</td>
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<tr>
<td>Hyponatremia</td>
<td></td>
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<tr>
<td>Syndrome of inappropriate antidiuretic hormone secretion</td>
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<tr>
<td>Cerebral salt wasting</td>
<td></td>
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<tr>
<td>Psychogenic polydipsia</td>
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<tr>
<td>Hypothyroidism</td>
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<tr>
<td>Iatrogenic</td>
<td></td>
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<tr>
<td>Exercise-induced</td>
<td></td>
</tr>
</tbody>
</table>
Hypernatremia
- Central diabetes insipidus
- Nephrogenic diabetes insipidus
- Osmotic diuresis
- Primary hypodipsia
- Dehydration
- Gastrointestinal fluid losses

Hypovolemia
Hypovolemia

**Potassium disorders**

Hyperkalemia
- Pseudohyperkalemia
- Drug-induced
- Adrenal insufficiency
- Renal tubular acidosis

Hypokalemia
- Vomiting
- Diarrhea
- Renal losses
  - Drug-induced
  - Renal tubular acidosis

**Acid-base disorders**

Metabolic acidosis
- Increased anion gap
  - Lactic acidosis
  - Ketoacidosis
  - Hypoalbuminemia
- Normal anion gap
  - Diarrhea
  - Saline resuscitation-associated
  - Drug-induced
  - Renal tubular acidosis
- Decreased anion gap in multiple myeloma

Metabolic alkalosis
- Diuretic-induced (contraction alkalosis)
- Other metabolic alkalosis topics (parenteral nutrition-induced, complications of citrate anticoagulation)

Mixed acid-base disorders
Respiratory acidosis
Respiratory alkalosis
Toxic ingestions  <2%
  High osmolar gap
  Ethanol
  Methanol
  Isopropyl alcohol
  Ethylene glycol
  Propylene glycol
Normal osmolar gap
  Salicylates
Calcium, phosphate, and magnesium disorders  <2%
  Hyperphosphatemia
  Hypophosphatemia
  Hypercalcemia
  Hypocalcemia
  Hypermagnesemia
  Hypomagnesemia
Hyperammonemia  <2%
Diabetes mellitus (excluding diabetic ketoacidosis)
  and energy metabolism  <2%
  Hyperglycemic hyperosmolar state
  Hyperglycemia
  Hypoglycemia
Thyroid disorders  <2%
  Hypothyroidism
  Hyperthyroidism
  Euthyroid sick syndrome
Parathyroid disorders  <2%
Adrenal disorders  <2%
  Adrenal insufficiency
    Relative adrenal insufficiency in critical illness
  Adrenal excess
Pituitary disorders  <2%
Tumor-related syndromes  <2%
  Pheochromocytoma
  Carcinoid
Acute renal failure  2%
  Contrast-induced
  Pigment-induced
  Oncology-related
  Pre-renal disease
Intrinsic disease
   Glomerulonephritis
   Interstitial nephritis
   Rhabdomyolysis
   Acute tubular necrosis
Renal replacement therapy

**Cardiovascular Disorders** 17.5% of Exam

**Acute coronary syndromes** <2%
   Unstable angina pectoris and non-ST-segment elevation
   myocardial infarction (NSTEMI)
      Unstable angina pectoris
      NSTEMI
   ST-segment elevation myocardial infarction (STEMI)
      Diagnosis
      Complications
         Heart failure, cardiogenic shock
         Ventricular septal defect
         Acute mitral regurgitation
         Ventricular wall rupture
         Electrical conduction abnormalities
         Right ventricular failure
         Arrhythmias
      Management of STEMI
   Cocaine-related ischemia

**Arrhythmias** <2%
   Supraventricular tachycardia
      Atrial fibrillation
      Atrial flutter
      Multifocal atrial tachycardia
      Pre-excitation syndromes
      Paroxysmal supraventricular tachycardia
         (atrioventricular [AV] nodal reentrant tachycardia)
   Ventricular arrhythmias
      Nonsustained ventricular tachycardia
      Monomorphic ventricular tachycardia
      Polymorphic ventricular tachycardia
      Ventricular fibrillation
      Accelerated idioventricular rhythm
Long QT syndrome  
Brugada syndrome  
Bradyarrhythmias  
Sinus bradycardia  
Sinoatrial exit block  
Atrioventricular block  
Pacemakers and defibrillators  

**Heart failure**  
3.5%  
Heart failure with reduced ejection fraction (HFrEF)  
Heart failure with preserved ejection fraction (HFpEF)  

**Hemodynamic monitoring**  
5.5%  
Interpretation of arterial catheterization  
Pulmonary arterial catheterization  
Central venous catheterization  

**Vascular disorders**  
<2%  
Aortic dissection and aneurysm  
Aortic dissection  
Aortic aneurysm and transection  
Shock  
Hypertensive emergency and urgency  

**Valvular heart disease**  
<2%  
Mitral stenosis  
Aortic stenosis  
Aortic regurgitation  
Mitral regurgitation  
Endocarditis  
Structural defects  
Atrial  
Ventricular  

**Pericardial disease**  
<2%  
Pericarditis  
Cardiac tamponade  

**Myocardial disease**  
<2%  
Myocarditis  
Hypertrophic cardiomyopathy  
Peripartum cardiomyopathy  
Stress cardiomyopathy  

**Mechanical circulatory support**  
<2%  
Intraaortic balloon pump (IABP) counterpulsation  
Extracorporeal membrane oxygenation (ECMO)
### Pulmonary Disease

**20% of Exam**

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory failure</td>
<td>2%</td>
</tr>
<tr>
<td>Hypoxemic</td>
<td></td>
</tr>
<tr>
<td>Hypercapnic</td>
<td></td>
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<tr>
<td>Mechanical ventilation</td>
<td>6%</td>
</tr>
<tr>
<td>Initiation and maintenance of mechanical ventilation</td>
<td></td>
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<tr>
<td>Endotracheal intubation and tracheostomy</td>
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<tr>
<td>Modes</td>
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<tr>
<td>Oxygenation</td>
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<tr>
<td>Ventilation (CO₂)</td>
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<td>Waveforms</td>
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<tr>
<td>Respiratory system compliance (lung mechanics)</td>
<td></td>
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<tr>
<td>Complications of mechanical ventilation</td>
<td></td>
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<tr>
<td>Barotrauma</td>
<td></td>
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<tr>
<td>Bronchopleural fistula</td>
<td></td>
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<tr>
<td>Ventilator-induced lung injury</td>
<td></td>
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<tr>
<td>Dynamic hyperinflation (auto-PEEP)</td>
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<tr>
<td>Intracardiac shunt</td>
<td></td>
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<tr>
<td>Complications of endotracheal tubes and tracheostomy</td>
<td></td>
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<tr>
<td>Liberation from mechanical ventilation</td>
<td></td>
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<tr>
<td>Noninvasive ventilation</td>
<td></td>
</tr>
<tr>
<td>Airway disease</td>
<td>2%</td>
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<tr>
<td>Upper airway disease</td>
<td></td>
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<tr>
<td>Upper airway obstruction</td>
<td></td>
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<tr>
<td>Tracheoesophageal fistula</td>
<td></td>
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<tr>
<td>Intubation-related laryngeal edema</td>
<td></td>
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<tr>
<td>Anaphylactic airway edema and increased negative inspiratory pressure</td>
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<tr>
<td>Airway control</td>
<td></td>
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<tr>
<td>Asthma</td>
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<tr>
<td>Chronic obstructive pulmonary disease (COPD)</td>
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<tr>
<td>Parenchymal lung disease</td>
<td>5%</td>
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<tr>
<td>Acute respiratory distress syndrome (ARDS)</td>
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<tr>
<td>Pneumonia</td>
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<tr>
<td>Community-acquired pneumonia (CAP)</td>
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<tr>
<td>Typical bacterial</td>
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<tr>
<td>Atypical bacterial</td>
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<tr>
<td>Ventricular assist devices (VADs)</td>
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<tr>
<td>Transplanted heart</td>
<td>&lt;2%</td>
</tr>
</tbody>
</table>
Aspiration
Viral
Fungal
Hospital-acquired pneumonias and immunocompromised hosts
  Ventilator-associated pneumonia (VAP)
  Hematogenous pneumonia
  *Aspergillus* pneumonia
  Non-*Aspergillus* pneumonia
  *Pneumocystis jiroveci* pneumonia
  Viral pneumonia

Pulmonary edema
  Neurogenic
  Tocolytic
  Negative-pressure
  High-altitude
  Hypersensitivity pneumonitis
  Diffuse alveolar hemorrhage
  Atelectasis

**Pulmonary vascular disorders** 2%
  Pulmonary thromboembolism
    Deep venous thrombosis (DVT)
    Pulmonary embolism (PE)
  Nonthrombotic embolism
    Air
    Tumor
    Septic
  Pulmonary hypertension
  Acute chest syndrome in sickle cell disease
  Pulmonary vasculitis
  Hepatopulmonary syndrome

**Hemoptysis** <2%
  Massive
  Submassive

**Pleural disorders** 2%
  Pleural effusion
    Infectious (empyema)
    Noninfectious
  Pneumothorax
  Hemothorax
Infectious Disease 12% of Exam

**Systemic infections**

- Sepsis and septic shock
- Bacterial infections (typical and atypical)
  - Tuberculosis
  - Atypical mycobacterial infections
  - Nocardiosis
  - Listeriosis
  - Brucellosis
  - Typhoid fever
  - Tularemia
  - Plague
- Rickettsial infections
  - Rocky Mountain spotted fever
- Spirochetal infections
  - Lyme disease
  - Leptospirosis
  - Ehrlichiosis
- Fungal infections
- Viral infections
- Parasitic diseases
  - Malaria
  - Babesiosis
  - *Strongyloides* hyperinfection syndrome
  - Giardiasis

**Central nervous system infections**

- Meningitis
  - Bacterial
    - Meningococcal
    - Pneumococcal
    - Syphilitic
    - Listerial
  - Fungal
  - Mycobacterial
- Encephalitis
  - Viral
    - Herpes simplex virus
    - West Nile virus
    - Rabies
  - Parasitic
Brain abscess
Epidural abscess

**Head, neck, and upper airway infections**
\(<2\%

Eye and orbit
Septic cavernous sinus thrombosis
Soft tissue infections of the head and neck
Sinusitis
Epiglottitis

**Cardiovascular infections**
\(<2\%

Pericarditis
Endocarditis
Device-related infections
Catheter-related infections (peripheral, central venous, arterial, pulmonary artery)

**Gastrointestinal and intra-abdominal infections**
\(<2\%

Esophageal
Liver
Gallbladder and biliary
Pancreatitis
\(\text{Necrotizing (infected)}\)
\(\text{Pancreatic abscess}\)
Gastroenteritis
\(\text{Community-acquired bacterial}\)
Colitis and diverticulitis
\(\text{Clostridium difficile}-\text{associated}\)
Parasitic
\(\text{Necrotizing enterocolitis (typhlitis)}\)
Cytomegalovirus colitis
Peritonitis
Small intestine and appendix

**Genitourinary tract infections**
\(<2\%

Cystitis, including catheter-related
Pyelonephritis
Perinephric abscess

**Soft tissue, bone, and joint infections**
\(<2\%

Bites
Septic arthritis

**Infections associated with nonvascular transcutaneous catheters**
\(<2\%
**Antimicrobial therapy and resistance**

- Nonallergic toxicity
- Allergic reactions
- Resistant organisms
  - Gram-positive organisms
  - Gram-negative organisms
  - Fungi and inherent susceptibility patterns and resistance

**Pharmacokinetics**

**Infections in immunocompromised hosts**

- Opportunistic infections in human immunodeficiency virus (HIV) infection
- Neutropenia
- Transplantation
  - Solid organ
  - Hematopoietic cell
- Asplenia
- Corticosteroid immunosuppression

**Virulence factors**

- Toxic shock

**Bioterrorism**

**Hospital infection control**

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**Gastrointestinal Disorders**

<table>
<thead>
<tr>
<th>Section</th>
<th>Percentage of Exam</th>
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</thead>
<tbody>
<tr>
<td><strong>Esophagus</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Corrosive injury</td>
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<tr>
<td>Perforation and rupture</td>
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<tr>
<td>Fistula</td>
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<tr>
<td><strong>Stomach</strong></td>
<td>&lt;2%</td>
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<tr>
<td>Peptic ulcer disease</td>
<td></td>
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<tr>
<td>Non-peptic ulcer disease</td>
<td></td>
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<tr>
<td>Perforation</td>
<td></td>
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<tr>
<td>Mechanical disorders</td>
<td></td>
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<tr>
<td><strong>Small intestine</strong></td>
<td>&lt;2%</td>
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<tr>
<td>Perforation</td>
<td></td>
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<tr>
<td>Hemorrhage</td>
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<tr>
<td>Mechanical and motility disorders</td>
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<tr>
<td>Inflammatory bowel diseases</td>
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</tbody>
</table>

5.0% of Exam
Large intestine

- Perforation
- Hemorrhage
- Mechanical and motility disorders
- Colonic ischemia

Liver

- Hepatitis
  - Viral
  - Autoimmune
  - Alcohol- and drug-induced
  - Toxin and solvent exposure
  - Ischemic (shock liver)
  - Budd-Chiari syndrome

Portal hypertension

- Esophageal variceal hemorrhage
- Gastric variceal hemorrhage
- Spontaneous bacterial peritonitis
- Hepatorenal syndrome
- Hepatopulmonary syndrome
- Portopulmonary hypertension

Fulminant hepatic failure

- Infection
- Alcohol- and drug-induced
- Tumor
- Infiltrative diseases and nonalcoholic steatohepatitis (NASH)
- Toxin exposure
- Encephalopathy
- Cerebral edema
- Hypotension

Pancreas

- Pancreatitis
  - Infectious
  - Gallbladder disease
  - Tumor
  - Alcohol- and drug-induced
  - Toxin exposure
  - Hypertriglyceridemia-induced
  - Complications
**Gallbladder and biliary tract**
- Cholecystitis, calculous and acalculous
- Cholangitis

<table>
<thead>
<tr>
<th>Neurologic Disorders</th>
<th>9.5% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brain death</strong></td>
<td>&lt;2%</td>
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<tr>
<td>(also see entry in Research, Ethics, and Administration)</td>
<td>&lt;2%</td>
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<tr>
<td><strong>Cerebrovascular disease</strong></td>
<td>2.5%</td>
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<tr>
<td>Ischemic stroke</td>
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<tr>
<td>Intracerebral hemorrhage</td>
<td></td>
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<tr>
<td>Subarachnoid hemorrhage and aneurysm</td>
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<td>Complications</td>
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<tr>
<td>Vasospasm</td>
<td></td>
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<tr>
<td>Other subarachnoid hemorrhage and aneurysm topics (hydrocephalus)</td>
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<tr>
<td>Cerebral vein and sinus thrombosis</td>
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<tr>
<td><strong>Seizures and status epilepticus</strong></td>
<td>&lt;2%</td>
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<tr>
<td>Seizures complicating critical illness</td>
<td></td>
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<tr>
<td>Seizures caused by critical illness</td>
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<tr>
<td>Pre-existing epilepsy in critically ill patients</td>
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<tr>
<td>Status epilepticus</td>
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<tr>
<td>Generalized convulsive status epilepticus</td>
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<tr>
<td>Nonconvulsive status epilepticus</td>
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<tr>
<td>Electroencephalogram (EEG) monitoring in the intensive care unit (ICU)</td>
<td></td>
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<tr>
<td>Repetitive seizures</td>
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<tr>
<td><strong>Neurogenic pulmonary edema</strong></td>
<td>&lt;2%</td>
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<tr>
<td><strong>Neuromuscular respiratory failure</strong></td>
<td>&lt;2%</td>
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<tr>
<td>Guillain-Barré syndrome</td>
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<tr>
<td>Critical illness myopathy</td>
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<tr>
<td>Critical illness polyneuropathy</td>
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<tr>
<td>Tetanus</td>
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<tr>
<td>Myasthenia gravis</td>
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<tr>
<td>Botulism</td>
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<tr>
<td><strong>Increased intracranial pressure</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td><strong>Head trauma</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Nonpenetrating head trauma</td>
<td></td>
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<tr>
<td>Penetrating head trauma</td>
<td></td>
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</tbody>
</table>
### Spinal cord injury
- Cervical spine injury
- Thoracic spine injury

### Coma, encephalopathy, and delirium
- Anoxic brain injury
- Metabolic encephalopathy
- Drug-induced encephalopathy
- Drug and alcohol withdrawal
- ICU-related delirium

### Analgesia, sedation, and neuromuscular junction blockade
- Analgesia
- Sedation
- Neuromuscular junction blockade

### Hematologic and Oncologic Disorders

#### Red blood cell diseases
- Anemias
- Polycythemias
- Hemoglobinopathies

#### White blood cell diseases
- Leukopenia (immune, drug-related)
- Leukemias
- Lymphoma
- Multiple myeloma

#### Platelet disorders
- Thrombocytosis
- Thrombocytopenia
- Platelet dysfunction

#### Coagulopathies
- Disseminated intravascular coagulation (DIC)
- Factor deficiencies
- Anticoagulant-associated coagulopathy
- Hypothermia
- Hemorrhagic shock

#### Hypercoagulable states
- Proteins C and S, and antithrombin deficiency
- Factor V Leiden mutation
- Malignancy
- Hormone replacement therapy and oral contraceptives
- Antiphospholipid antibody syndrome
Transfusion medicine <2%
  Blood products
  Apheresis
  Adverse effects
  Massive blood transfusion
  Transfusion refusal

Solid tumors <2%

Oncologic syndromes <2%
  Superior vena cava syndrome
  Tumor lysis syndrome
  Spinal cord compression
  Hyperviscosity syndrome
  Hypercalcemia

Hematopoietic cell transplantation <2%
  Graft-versus-host disease
  Hepatic sinusoidal obstruction syndrome
    (veno-occlusive disease)
  Respiratory distress

Complications of immunosuppressive drugs and chemotherapy <2%
  Cyclosporine
  Corticosteroids
  Alkylating agents
  Methotrexate
  Sirolimus
  Tacrolimus
  Mycophenolate mofetil
  Azathioprine

<table>
<thead>
<tr>
<th>Surgery, Trauma, and Transplantation</th>
<th>7.0 % of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cardiovascular and vascular surgery</strong></td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Cardiac</td>
<td></td>
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<tr>
<td>Mediastinal disease</td>
<td></td>
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<tr>
<td>Vascular, aortic and peripheral</td>
<td></td>
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<tr>
<td>Thoracic</td>
<td></td>
</tr>
</tbody>
</table>

**Abdominal and gastrointestinal** <2%
  Acute abdomen
  Postoperative complications
  Mesenteric ischemia and ischemic colitis
  Abdominal compartment syndrome
Genitourinary and obstetric emergencies <2%
  Urologic
  Obstetric

Skin and soft tissues and extremities <2%
  Soft tissue infections
  Crush injury, myonecrosis, and rhabdomyolysis
  Necrotizing fasciitis
  Acute compartment syndrome

Environmental injury 3.5%
  Inhalation injury
  Hypothermia
  Submersion injury, near-drowning, and diving trauma
  Altitude injury
  Electrical injury and lightning strike
  Radiation injury
  Bioterrorism, noninfectious
  Heatstroke
  Burn injury

General postoperative management <2%

Trauma <2%
  Flail chest
  Pulmonary contusion
  Hemothorax
  Great vessel injury
  Airway injury, tracheobronchial laceration and rupture
  Foreign body aspiration
  Blunt myocardial injury
  Fat embolism syndrome
  Intra-abdominal injury
  Massive bleeding
  Shock

Transplantation <2%
  Heart
  Lung
  Liver
  Kidney
  Pancreas and intestines
  Organ donation
<table>
<thead>
<tr>
<th>Pharmacology and Toxicology</th>
<th>4.5% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic pharmacologic principles</strong></td>
<td>&lt;2%</td>
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<tr>
<td>Pharmacokinetics</td>
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<tr>
<td>Dosing adjustments for disease states</td>
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<tr>
<td><strong>Drug-drug interactions</strong></td>
<td>&lt;2%</td>
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<tr>
<td><strong>Adverse effects of drugs</strong></td>
<td>&lt;2%</td>
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<tr>
<td>Immunologic allergic reactions</td>
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<td>Anaphylaxis</td>
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<td>Thrombotic thrombocytopenic purpura</td>
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<td>Stevens-Johnson syndrome</td>
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<td>Nonimmunologic adverse effects of drugs</td>
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<td>Electrolyte and metabolic</td>
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<td>Hematologic</td>
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<td>Cardiac</td>
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<tr>
<td><strong>Toxicology, drug overdose, and poisoning</strong></td>
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<td>Acetaminophen</td>
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<tr>
<td>Beta-adrenergic blockers</td>
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<td>Calcium channel blockers</td>
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<td>Cyanide</td>
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<td>Tricyclic antidepressants</td>
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<td>Nitroprusside</td>
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<td>Oral antihyperglycemic agents</td>
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<td>Organophosphates</td>
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<td>Salicylates</td>
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<td>Sarin (nerve) gas</td>
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<td>Selective serotonin reuptake inhibitors (SSRIs)</td>
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<td>Additional psychotropic drugs</td>
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<td>Scombroid food poisoning</td>
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<td>Muscle relaxants</td>
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<td>Xanthines</td>
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<td>Iron toxicity</td>
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<td>Antibiotic toxicity</td>
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<td>Carbon monoxide</td>
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<td>Methemoglobinemia</td>
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<td>Research, Administration, and Ethics</td>
<td>2.0% of Exam</td>
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<td><strong>Intensive care unit (ICU) administration</strong></td>
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<td>Regulatory issues</td>
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<tr>
<td>Intensive care unit (ICU) physical design</td>
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<td>Continuous quality improvement and patient safety</td>
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<td>Isolation</td>
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<td><strong>Staffing issues</strong></td>
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<td>Physician extenders in the intensive care unit (ICU)</td>
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<td>Interactions between hospitalists and intensivists</td>
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<td><strong>Medicolegal interactions</strong></td>
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<td><strong>Brain death</strong> (also see entry in Neurologic Disorders)</td>
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<tr>
<td><strong>Patient confidentiality and Health Insurance Portability and Accountability Act (HIPAA) regulations</strong></td>
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<td><strong>End-of-life issues</strong></td>
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<td><strong>Organ donation</strong></td>
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<td><strong>Medical futility</strong></td>
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<td><strong>Psychosocial issues</strong></td>
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<td>Professionalism</td>
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<tr>
<td>Intensive care unit (ICU) burnout</td>
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<td>Impaired health-care professional</td>
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<tr>
<td><strong>Abdominal</strong></td>
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<tr>
<td><strong>Neurologic</strong></td>
<td>&lt;2%</td>
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<tr>
<td><strong>Vascular</strong></td>
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January, 2018