Focused Practice in Hospital Medicine
Maintenance of 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 hospitalist 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 hospitalist. The exam is developed jointly by the ABIM and the American Board of Family Medicine.

Exam content

Exam content is determined by a pre-established blueprint, or table of specifications, which 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>
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<tbody>
<tr>
<td>Inpatient and Transitional Care</td>
<td>62%</td>
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<tr>
<td>Palliative Care, Medical Ethics, and Decision-Making</td>
<td>6%</td>
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<tr>
<td>Consultative Co-Management</td>
<td>15%</td>
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<tr>
<td>Quality, Safety, and Clinical Reasoning</td>
<td>17%</td>
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<td>100%</td>
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</table>

Exam questions in the content areas above may also address clinical topics in infectious disease (approximately 15% of the exam), cancer (approximately 7% of the exam), patient safety (approximately 10% of the exam) and general internal medicine as encountered in the practice of hospital 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 patient photographs, radiographs, electrocardiograms, and other media to illustrate relevant patient findings.

A tutorial including examples of ABIM exam question format can be found at http://www.abim.org/maintenance-of-certification/exam-information/tutorials/default.aspx.

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>Inpatient and Transitional Care</th>
<th>62% of Exam</th>
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<tbody>
<tr>
<td><strong>Cardiovascular disorders</strong></td>
<td>11.5%</td>
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<tr>
<td>Hypertension</td>
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<td>Secondary</td>
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<td>Hypertensive crisis</td>
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<td>Pericardial disease</td>
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<td>Acute pericarditis</td>
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<td>Cardiac tamponade</td>
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<td>Constrictive pericarditis</td>
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<td>Ischemic heart disease</td>
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<td>Stable angina pectoris</td>
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<tr>
<td>Unstable angina pectoris</td>
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<tr>
<td>ST-segment elevation myocardial infarction</td>
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<tr>
<td>Non-ST-segment elevation myocardial infarction</td>
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</tbody>
</table>
Right ventricular infarction
Other ischemic heart disease (cocaine-induced chest pain)

Arrhythmias
Atrial fibrillation or flutter
Atrioventricular nodal reentrant tachycardia
Atrioventricular reciprocating tachycardia and
Wolff-Parkinson White syndrome
Atrial tachycardia and multifocal atrial tachycardia
Ventricular arrhythmias
Long QT syndrome and torsades de pointes
Bradyarrhythmias and conduction defects
Sudden cardiac death (ventricular fibrillation, pulseless electrical activity, asystole)

Structural heart disease
Atrial septal defect
Aortic stenosis
Aortic insufficiency
Mitral regurgitation
Mitral stenosis
Prosthetic heart valve
Hypertrophic obstructive cardiomyopathy

Heart failure
Systolic
Ischemic cardiomyopathy
Viral cardiomyopathy
Toxin cardiomyopathy
Takotsubo cardiomyopathy
Sepsis-induced cardiomyopathy
Systolic dysfunction and heart failure

Diastolic
Endocarditis and other cardiovascular infections

Vascular disease
Carotid artery disease
Aortic aneurysm and dissection
Peripheral arterial disease
Acute arterial occlusion
Venous disease of the lower extremities
Vasculitis (Takayasu's arteritis)

Syncope
Pulmonary disease and critical care medicine

Obstructive airway disease
  Asthma
    Allergic bronchopulmonary aspergillosis
    Asthma mimics (including vocal cord dysfunction)
    Acute asthma
  Chronic bronchitis and emphysema
  Eosinophilic granulomatosis with polyangiitis
    (Churg-Strauss syndrome)

Occupational and environmental lung disease
  Organic inhalations (hypersensitivity pneumonitis)
  Inhalation lung injury
    Allergic
    Toxic
    Particulate (including silicosis and asbestosis)
  Carbon monoxide poisoning

Interstitial lung disease
  Pulmonary fibrosis
    Idiopathic pulmonary fibrosis
    Drug-induced pulmonary fibrosis
  Sarcoidosis
  Connective tissue disorders and vasculitis
    Granulomatosis with polyangiitis (Wegener's)
    Systemic lupus erythematosus—interstitial lung disease
    Anti-glomerular basement membrane disease
      (Goodpasture's syndrome)

Pulmonary vascular disease
  Pulmonary embolism
    Venous
    Fat embolism
  Idiopathic pulmonary hypertension
  Cor pulmonale
  Superior vena cava syndrome
  Hepatopulmonary syndrome

Pleural disease
  Pleural effusion
    Malignant pleural effusions
    Nonmalignant pleural effusions
  Infections of the pleural space and empyema
  Pneumothorax
Upper respiratory tract and head and neck disorders
   Acute and chronic sinusitis
   Otitis media and externa
   Pharyngitis and pharyngeal abscess
      Deep infections of the head and neck
      Peritonsillar abscess
   Tracheomalacia and tracheal stenosis
   Management of tracheostomy tubes

Lower respiratory tract infection
   Pneumonia
      Bacterial pneumonia other than mycobacterial
      Fungal pneumonia
      Viral pneumonia
      Ventilator-associated pneumonia
      Healthcare-associated pneumonia
      *Pneumocystis* pneumonia
      Aspiration pneumonia
   Bronchiolitis obliterans with organizing pneumonia and cryptogenic pneumonia
   Lung abscess
   Tuberculosis
   Bronchiectasis
   Cystic fibrosis

Critical care medicine
   Acute respiratory distress syndrome
   Mechanical ventilation
   Bacteremia and sepsis syndrome
      Systemic inflammatory response syndrome
      and septic shock
   Toxic shock syndrome

Lung cancer
Smoking cessation
Obstructive sleep apnea

**Gastroenterologic and hepatic disorders**
10.5%

Esophageal disease
   Gastroesophageal reflux
   Mallory-Weiss syndrome
   Esophageal carcinoma
   Gastroesophageal varices
   Infectious esophagitis
   Motility disorders (achalasia)
Gastric disorders
  Peptic ulcer disease
      Metastatic gastrinoma (Zollinger-Ellison syndrome)
      *Helicobacter pylori*-induced peptic ulcer
  Gastritis and gastropathy
  Stomach cancer
  Bariatric surgery and its complications
  Gastroparesis
Small intestinal disease
  Celiac disease
  Mesenteric ischemia and ischemic enteritis
  Crohn's disease
  Enteritis other than antibiotic colitis
  Duodenal ulcer disease
  Small intestine obstruction and ileus
Colonic and anorectal disease
  Colorectal cancer
  Diverticular disease
      Diverticulosis
      Diverticulitis
  Ulcerative colitis
  Antibiotic colitis
  *Clostridium difficile* infection
  Large intestine obstruction and volvulus
  Large intestine hemorrhage and arteriovenous malformation
  Acute appendicitis
  Carcinoid syndrome
  Constipation
Pancreatic disease
  Acute pancreatitis
      Infections of the pancreas and pancreatic abscess
      Pseudocyst
      Necrotizing pancreatitis
      Gallstone pancreatitis
  Chronic pancreatitis
  Pancreatic carcinoma
  Alcoholic pancreatitis
Biliary tract disease
  Cholelithiasis and choledocholithiasis
  Cholecystitis
  Cholangitis
Sclerosing cholangitis
Liver disease
  Viral hepatitis
    Hepatitis A
    Hepatitis B
    Hepatitis C
Liver abscess
Cirrhosis and portal hypertension
  Ascites
  Hepatic encephalopathy
  Hepatorenal syndrome
  Indications and management of transjugular intrahepatic portosystemic shunt
Drug-induced liver disease
Autoimmune hepatitis
Primary biliary cirrhosis
Hemochromatosis
Hepatic vein thrombosis (Budd-Chiari syndrome)
Fatty liver and nonalcoholic steatohepatitis
Alcoholic hepatitis
Gilbert's syndrome
Hepatocellular carcinoma
Indications for transplantation
Peritoneal and retroperitoneal disease
  Bacterial peritonitis secondary to perforation
  Spontaneous bacterial peritonitis
  Intra-abdominal abscess
  Retroperitoneal hemorrhage
  Retroperitoneal infections
    Psoas
    Abdominal compartment syndrome
  Ruptured ovarian cyst
  Uterine fibroids
Nutritional disorders
  Obesity
  Malnutrition

**Nephrologic and urologic disorders**  8.5%
  Acute kidney injury
    Hypotension or shock-induced acute kidney injury
    Toxic and drug-induced kidney injury
    Rhabdomyolysis
Disseminated atheroembolism (cholesterol embolization syndrome)
Tubulointerstitial disease
   Acute interstitial nephritis
   Acute tubular necrosis
Nephrotic syndrome
   Focal segmental glomerulosclerosis
   Membranous glomerulonephritis
   Membranoproliferative glomerulonephritis
Nephritic syndrome
   Systemic lupus erythematosus—glomerulonephritis
   Hepatitis C-related (cryoglobulinemia)
   Vasculitis and the kidney
Chronic kidney disease
   Renal replacement therapy
   Renal osteodystrophy
   Kidney transplantation
Urinary tract infection
   Asymptomatic bacteriuria
   Urethritis and cystitis
   Pyelonephritis and perinephric abscess
   Prostatitis
Sexually transmitted disease and infection of reproductive organs
   Gonorrhea
   Primary syphilis
   Salpingitis, tubo-ovarian abscess, and other
   infections of the female pelvis
Nephrolithiasis
Urologic cancer
   Renal cell carcinoma
   Bladder carcinoma
   Prostate carcinoma
   Testicular carcinoma and tumors
   Uterine cancer
   Ovarian cancer
Water and electrolyte balance
   Hyponatremia
   Diabetes insipidus
   Hypovolemic hyponatremia
   Hyponatremia
   Hyponatremia from hypovolemia
Hyponatremia from syndrome of inappropriate antidiuretic hormone secretion
Ecstasy-associated hyponatremia
Postoperative hyponatremia
Hypokalemia
Hyperkalemia
Hypomagnesemia
Hypermagnesemia

Acid-base disorders
Metabolic acidosis
  Elevated anion gap
  Normal anion gap
Metabolic alkalosis
Respiratory acidosis
Respiratory alkalosis
Mixed acid-base disturbance

**Endocrinologic disorders**

**Adrenal disorders**
Primary aldosteronism and mineralocorticoid excess
Pheochromocytoma
Adrenal adenoma
Cushing's disease
Adrenal insufficiency

**Thyroid disorders**
Hyperthyroidism
  Graves' disease
  Thyroiditis
  Thyroid storm
Hypothyroidism
  Hashimoto's thyroiditis and other autoimmune thyroiditis
  Myxedema coma
Thyroid nodules and thyroid cancer
Euthyroid sick syndrome

**Diabetes mellitus**
  Type 1
  Type 2
Complications of diabetes mellitus
  Diabetic ketoacidosis
  Hyperosmolar coma
  Diabetic nephropathy
Diabetic gastroparesis
Diabetic neuropathy
Diabetic foot other than necrotizing infection

Hypoglycemia

Disorders of calcium metabolism and bone

Hypercalcemia
- Primary hyperparathyroidism
- Malignancy-associated hypercalcemia
- Sarcoidosis and hypercalcemia
- Milk-alkali syndrome

Hypocalcemia
- Hyperphosphatemia
- Osteopenia and osteoporosis

Pituitary disorders
- Pituitary tumor
- Hypopituitarism

Hematologic and oncologic disorders

3.5%
- Hypoproliferative anemia
  - Aplastic anemias
  - Anemia of chronic disease
  - Anemia due to kidney failure
  - Iron deficiency anemia
  - Vitamin B₁₂ and folate deficiencies
  - Myelodysplastic syndromes
  - Infiltrative bone marrow disease
  - Toxin- and alcohol-related bone marrow suppression

Hemolytic anemia
- Glucose-6-phosphate dehydrogenase deficiency
- Autoimmune hemolytic anemia
- Paroxysmal nocturnal hemoglobinuria

Hemoglobinopathies
- Sickle cell anemia (pain crises and complications)
- Thalassemias

Platelet disorders
- Idiopathic thrombocytopenic purpura
- Heparin-induced thrombocytopenia (HIT)
- Thrombotic thrombocytopenic purpura
- Splenomegaly

Coagulation factor deficiency and disorders
- Disseminated intravascular coagulation
- Warfarin-related coagulopathy
Inherited factor deficiencies (Factors VIII and IX)
von Willebrand disease

Thrombotic disorders
Inherited hypercoagulable state
Antiphospholipid antibody syndrome
Paraneoplastic thrombosis

Hematologic malignancies
Chronic myelogenous leukemia
Chronic lymphocytic leukemia
Acute lymphocytic leukemia
Acute myelogenous leukemia
Non-Hodgkin's lymphoma
Hodgkin's disease
Multiple myeloma
Monoclonal gammopathy
Waldenström's macroglobulinemia
Polycythemia vera and other erythrocytosis
Essential thrombocythemia
Myelofibrosis

Transfusion medicine (principles and complications)
Hemolytic transfusion reactions
Febrile nonhemolytic transfusion reactions
Transfusion-related acute lung injury
Hyperproductive thrombocytopenia
Anemia

Adverse effects of cancer chemotherapy
Toxic effects of chemotherapy
Fever and neutropenia
Tumor lysis syndrome

**Neurologic disorders**

Seizure
Tonic-clonic seizure disorders
Nonconvulsive status

Stroke
Transient ischemic attack
Hemorrhagic stroke
Ischemic stroke

Headache or facial pain
Migraine headache
Temporal arteritis, giant cell arteritis, and polymyalgia rheumatica
Subdural hematoma
Subarachnoid hemorrhage and aneurysms
Pseudotumor cerebri (idiopathic intracranial hypertension)
Cavernous sinus thrombosis

Peripheral neuropathy
- Neurologic complications of vitamin B₆ and vitamin B₁₂ deficiency
- Acute inflammatory demyelinating polyneuropathy (Guillain-Barré syndrome)
- Compression neuropathy
- Mononeuritis multiplex
- Drug-induced neuropathy

Neuro-ophthalmology
- Bell's palsy
- Eye infection
  - Periorbital cellulitis
  - Conjunctivitis
  - Herpes zoster
- Glaucoma
- Retinal disease
  - Retinal detachment
  - Retinal artery and vein occlusion
  - Retinal infections (toxoplasmosis, cytomegaloviral)
- Uveitis

Disorders of cerebral function
- Dementia
  - Alzheimer's disease
  - Multi-infarct dementia
  - Normal-pressure hydrocephalus
  - Frontal-temporal-parietal (FTP) dementia
  - Thiamine deficiency, Wernicke-Korsakoff syndrome
  - Neurosyphilis
  - Pseudodementia (thyroid-stimulating hormone [TSH], subdural, vitamin B₁₂)

Brain death and persistent vegetative state
- Delirium
  - Alcohol withdrawal and delirium
  - Hepatic encephalopathy
  - Drug-induced delirium
  - Electrolyte-induced delirium
  - Hyperosmolar nonketotic coma
  - Uremia-induced delirium
Nonconvulsive status
Posterior reversible encephalopathy syndrome

Movement disorder
Parkinson's disease and parkinsonism
Lewy body disease
Parkinson-plus syndromes
Parkinson's disease—general

Central nervous system infection
Viral meningitis
Bacterial meningitis
Tuberculous meningitis
Carcinomatous meningitis
Drug-induced meningitis
Basilar meningitis
Brain abscess
Viral encephalitis
Herpes encephalitis
Meningovascular syphilis

Neurologic complications of human immunodeficiency virus (HIV) infection
Toxoplasmosis
Central nervous system lymphoma
Progressive multifocal leukoencephalopathy (PML)
Cryptococcal meningitis

Central nervous system tumor
Meningioma
Metastatic brain lesion

Multiple sclerosis and other demyelinating diseases

Spinal cord disease
Spinal cord compression
Epidural abscess
Metastatic spinal cord lesions
Amyotrophic lateral sclerosis
Transverse myelitis
Cauda equina syndrome

Diseases of muscle and neuromuscular junction
Myasthenia gravis and Lambert-Eaton syndrome
Polymyositis
Drug-induced myopathy and myositis
Neuroleptic malignant syndrome
Malignant hyperthermia
Thyroid-induced myopathy and myositis
Neuropathy of critical illness

**Allergic, immunologic, dermatologic, and rheumatologic disorders** 3%

*Allergic and immunologic disorders*
- Anaphylaxis
- Urticaria and angioedema
- Serum sickness
- Immunization recommendations

*Dermatologic disorders*
- Dermatologic manifestation of systemic disease
  - Erythema nodosum
  - Pyoderma gangrenosum (ulcerative colitis and Crohn’s disease)
  - Ecthyma gangrenosum
  - Acanthosis nigricans
  - Measles
- Vesicles and bullae
  - Pemphigus vulgaris
  - Bullous pemphigoid
  - Porphyria cutanea tarda
  - Herpes viruses
  - Varicella (initial infection and zoster)

*Skin and soft tissue infection*
- Cellulitis
- Necrotizing soft tissue infections and gas gangrene
- Abscess
- Lyme disease
- Secondary syphilis

*Skin cancer*

*Rheumatologic disorders*
- Crystal-induced arthropathy
- Seronegative arthropathy and spondyloarthropathy
  - Ankylosing spondylitis
  - Reactive arthritis
  - Inflammatory bowel disease
  - Psoriatic arthritis
- Rheumatoid arthritis
- Systemic lupus erythematosus—general
- Systemic sclerosis
  - Diffuse
  - CREST syndrome (calcinosis of the digits, Raynaud’s phenomenon, esophageal dysmotility,
sclerodactyly, telangiectasia
Vasculitis (Buerger's disease)
Sjögren's syndrome
  Adult Still's disease
  Behçet’s syndrome
  Dermatomyositis
  Mixed connective tissue disease
Infectious arthritis
  Viral (parvovirus)
  Bacterial
  Disseminated gonorrhea
Osteomyelitis

<table>
<thead>
<tr>
<th>Palliative Care, Medical Ethics, and Decision-Making</th>
<th>6% of Exam</th>
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<tbody>
<tr>
<td><strong>Medical ethics and decision making</strong></td>
<td>&lt;2%</td>
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<tr>
<td>Results disclosure</td>
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<td>Physician-patient relationship</td>
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<td>Confidentiality</td>
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<td>Communication about prognosis</td>
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<td>Informed consent</td>
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<td>Cultural competency</td>
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<td>Lines of decision-making authority</td>
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<td><strong>Facilitation of hospice care</strong></td>
<td>&lt;2%</td>
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<td>Cancer diagnoses</td>
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<td>Noncancer diagnoses</td>
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<td><strong>Palliative care</strong></td>
<td>4%</td>
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<td>Discontinuation of life-sustaining care</td>
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<td>Discontinuation of devices</td>
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<td>Discontinuation of interventions</td>
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<td>Pain management in palliative care</td>
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<td>Nonpain symptom management at end of life</td>
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<td>Secretions</td>
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<td>Dyspnea</td>
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<td>Nausea</td>
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<td>Delirium</td>
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<td>Depression</td>
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<td><strong>Pain management</strong></td>
<td>&lt;2%</td>
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<td>Dosage conversion</td>
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<td>Chronic kidney or liver disease</td>
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<td>Consultative Co-Management</td>
<td>15% of Exam</td>
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<td><strong>Perioperative care</strong></td>
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<td>Cardiology</td>
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<td>Endocarditis prophylaxis</td>
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<td>Perioperative risk-stratification</td>
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<td>Perioperative arrhythmias</td>
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<td>Perioperative hypertension management</td>
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<td>Pulmonology</td>
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<td>Perioperative asthma management</td>
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<td>Perioperative chronic obstructive pulmonary disease management</td>
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<td>Postoperative hypoxia</td>
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<td>Hematology</td>
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<td>Perioperative anticoagulation and antiplatelet therapy</td>
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<td>Perioperative deep venous thrombosis prophylaxis</td>
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<td>Endocrinology</td>
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<td>Perioperative diabetes mellitus management</td>
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<td>Perioperative stress-dose corticosteroid management</td>
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<td>Perioperative thyroid management and thyroid storm</td>
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<td>Perioperative and postoperative infections</td>
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<td>Neurology</td>
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<td>Postoperative delirium</td>
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<td>Compressive neuropathies</td>
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<td>Nephrology</td>
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<td>Postoperative urinary retention</td>
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<td><strong>Pregnancy</strong></td>
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<td>Hypertension in pregnancy (pre-eclampsia and eclampsia)</td>
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<td>Asthma and pregnancy</td>
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<td>Hyperthyroidism during pregnancy or peripartum period</td>
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<td>Liver disease in pregnancy</td>
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<td>Peripartum cardiomyopathy</td>
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<td>Ectopic pregnancy</td>
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<td>Diabetes mellitus and pregnancy</td>
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<td>Medications safe in pregnancy</td>
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<td>Dyspnea in pregnancy</td>
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Quality, Safety, and Clinical Reasoning  

17% of Exam

**Hospital-based prevention strategies**  
- Deep venous thrombosis prophylaxis  
- Gastroenterologic prophylaxis  
- Fall prevention  
- Delirium prevention  
- Aspiration prevention

**Healthcare-associated infections**  
- Infection control (including isolation)  
  - *Clostridium difficile* infection  
  - Methicillin-resistant *Staphylococcus aureus* (MRSA) infection  
- Needlestick injury and postexposure prophylaxis  
- Central line-associated blood stream infection  
- Healthcare-associated pneumonia  
- Ventilator-associated pneumonia  
- Catheter-associated urinary tract infection

**Medication errors and adverse drug effects**  
- Drug-induced nephrologic disease  
  - Kidney failure  
  - Acute interstitial nephritis  
  - Nephrogenic systemic fibrosis  
  - Electrolyte disorders  
- Drug-induced cardiac disease  
  - Arrhythmias  
  - Cardiomyopathy  
  - Pericardial disease  
  - Valve disease  
- Drug-induced hematologic disease  
  - Hemolytic anemia  
  - Neutropenia  
- Drug-induced rheumatologic disease  
  - Lupus erythematosus  
  - Complications of immunosuppressive therapy  
  - Reactivation disease following immunosuppression

**Dermatologic drug reactions**  
- Drug-induced leukocytoclastic vasculitis  
- Erythema multiforme, Stevens-Johnson syndrome, and toxic epidermal necrolysis
Drug-induced psychiatric disease
  - Serotonin syndrome
  - Lithium toxicity
  - Antipsychotic complications
  - Benzodiazepine withdrawal
Complications of pain management
  - Management of patient-controlled analgesia (PCA) pumps
  - Neuro-excitatory adverse effects of opioid therapy
  - Pain control in chronic kidney disease
  - Pain control in chronic liver disease
Medication reconciliation
Drug-induced ophthalmologic disease (retinal toxicity)

Interprofessional and interdisciplinary communications and professionalism
  - The role and importance of the healthcare team
  - Identification of the ways in which team members and stakeholder facilitate or impede improvement
  - Identification of stakeholders important to improving a process or system of care
Interprofessional communication
  - Closed-loop communication

Clinical reasoning
  - Bayesian theory (pre-test and post-test probabilities)
  - Sensitivity, specificity, and likelihood ratios
  - Heuristics
  - Testing thresholds
  - Treatment thresholds
  - Study design limitations

Hazards of immobility and bed rest
  - Pressure ulcers
  - Catheter management

Procedural complications
  - Thoracentesis
  - Paracentesis
  - Central venous line
  - Lumbar puncture

Prevention strategies for medical errors
  - Principles of failure mode effect analysis
  - Principles of root cause analysis
Principles of Plan-Do-Study-Act (PDSA) cycle

Indicators of poor system performance; system and process versus individual accountability

Challenges to changing systems and processes of care—the value of small tests of change

Tools for changing systems

Clinical quality measurement

Structure, process, and outcome measures
Patient-reported and patient-experience measures

Constructing measures (appropriate numerator and denominator descriptions, appropriate exclusions)

Quality monitoring systems

Electronic health records as primary data generators
Structured documentation in electronic record-keeping systems
Data use in identifying and describing clinical quality issues

Electronic data for measuring and monitoring care
Clinical quality data for identifying and describing a clinical quality issue with a population of patients

Error reporting systems
Teach-back method

Universal protocol

Errors and principles of error disclosure <2%

Errors
Technical or procedural error
Knowledge or judgment error
System error

Mistakes
Slips and lapses
Adverse events

Error disclosure

Resource utilization and cost containment <2%

Excessive imaging
Non-indicated tests
Redundant testing
Recurent testing
Batch and shot-gun testing
Nonindicated management

Incentive compensation

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