2016 Internal Medicine

In-Training Examination®

Educational Objectives
## 2016 Internal Medicine In-Training Examination

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Number of Items</th>
<th>Percentage of Total Items</th>
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</thead>
<tbody>
<tr>
<td>Cardiology</td>
<td>35</td>
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<tr>
<td>Endocrinology</td>
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<td>6.9</td>
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<tr>
<td>Gastroenterology</td>
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<tr>
<td>General Internal Medicine*</td>
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<tr>
<td>Geriatric Medicine</td>
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<td>6.2</td>
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<tr>
<td>Hematology and Oncology</td>
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<td>11.5</td>
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<tr>
<td>Infectious Diseases</td>
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<td>8.8</td>
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<tr>
<td>Nephrology</td>
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<td>6.2</td>
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<td>Neurology</td>
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<tr>
<td>Pulmonary and Critical Care Medicine</td>
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<tr>
<td>Rheumatology</td>
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<td>8.8</td>
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<tr>
<td>High Value Care (HVC)**</td>
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<td>15.0</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>260</td>
<td>100</td>
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</table>

*This content area includes, but is not limited to, adolescent medicine, allergy and immunology, complementary and alternative medicine, dermatology, ethics, genetics, literature interpretation, nutrition, ophthalmology, preventive care, psychiatry, sports medicine, statistics, and women’s health. Items associated with the content area High Value Care (HVC)** may appear in other content areas. These items are identified with a double asterisk.

The following pages list examination educational objectives grouped by content area. One educational objective is provided for each item.
2016 Internal Medicine In-Training Examination®

Educational Objectives

Cardiology

Diagnose a venous stasis ulcer.
Diagnose atrial septal defect.
Diagnose cardiac tamponade.
Diagnose critical aortic stenosis on the basis of physical findings.
Diagnose Eisenmenger syndrome.
Diagnose hypertrophic cardiomyopathy on the basis of physical findings.
Diagnose ischemia-induced papillary muscle dysfunction.
Diagnose ischemic cardiomyopathy.
Diagnose mitral valve prolapse.
Diagnose myocarditis.
Diagnose pulmonary valve stenosis.
Diagnose Takotsubo cardiomyopathy.
Diagnose torsades de pointes as a complication of long QT syndrome.
Identify high-risk patients requiring coronary angiography.
Manage an idioventricular rhythm.
Manage anticoagulation therapy in a patient with a mechanical prosthetic valve.
Manage aortic dissection.
**Manage atrioventricular nodal block after an acute inferior myocardial infarction.
**Manage chronic stable angina.
**Manage Mobitz I second-degree heart block.
  Manage peripheral artery disease.
**Manage progressive angina.
  Manage recurrent atrial flutter.
  Manage venous ulceration.
  Predict the auscultatory findings in mitral stenosis.
  Prevent recurrent supraventricular tachycardia.
  Prevent sudden cardiac death.
  Recognize the indications for abdominal aortic aneurysm screening.
**Select appropriate endocarditis prophylaxis.**
Select the appropriate cardiac stress test for a patient with a permanent pacemaker.
Treat a right ventricular infarction.
Treat an acute myocardial infarction with a statin.
Treat obstructive hypertrophic cardiomyopathy.
Treat venous insufficiency.
Treat ventricular arrhythmias in a patient with an implantable cardioverter-defibrillator.
**Endocrinology**

Adjust insulin dosage in type 1 diabetes mellitus.
Adjust insulin in type 1 diabetes mellitus.
Diagnose a functional pituitary adenoma.
Diagnose an insulinoma.
Diagnose autoimmune adrenalitis.
Diagnose drug-induced hypoglycemia.
**Diagnose male hypogonadism.**
Diagnose multiple endocrine neoplasia type 1.
Diagnose primary hyperparathyroidism.
Diagnose the cause of secondary amenorrhea.
Manage a prolactinoma.
Manage a thyroid nodule.
Manage asymptomatic primary hyperparathyroidism.
**Manage primary hypothyroidism.**
**Manage thyroid function studies in critical illness.**
**Monitor diabetic retinopathy during pregnancy.**
Treat diabetic ketoacidosis.
Treat myxedema coma.
Gastroenterology

Diagnose alcoholic hepatitis.
Diagnose angioedema.
Diagnose ascites associated with nephrotic syndrome.
Diagnose drug-induced cholestasis.
**Diagnose Gilbert syndrome.
Diagnose gluten ingestion in a patient with recurrent symptoms of celiac disease.
Diagnose malabsorption after gastric bypass surgery.
Diagnose microscopic colitis.
Diagnose oropharyngeal dysphagia.
Diagnose pill-induced esophagitis.
Diagnose primary biliary cirrhosis.
Diagnose schistosomiasis.
Diagnose sclerosing cholangitis.
Diagnose the cause of obscure gastrointestinal bleeding in chronic kidney disease.
Diagnose Wilson disease.
Diagnose Zollinger-Ellison syndrome.
Identify prognostic factors in acute pancreatitis.
Manage acute cholecystitis in a high-risk patient.
**Manage bleeding from uncomplicated peptic ulcer disease.
**Manage chronic constipation.
Manage colorectal cancer screening when the bowel preparation is poor.
Manage recent colorectal cancer.
Manage toxic megacolon.
Treat spontaneous bacterial peritonitis.
**Calculate the number needed to treat.**
Counsel a patient about the risks of a low-carbohydrate diet.

**Determine negative predictive value.**
Diagnose arrhythmogenic syncope.
Diagnose at-risk drinking patterns.
Diagnose malignant melanoma.
Diagnose Osgood-Schlatter disease.

**Diagnose panic disorder.**
Diagnose plantar fasciitis.
Diagnose trochanteric bursitis.

**Manage a hyperplastic colonic polyp.**
Manage acute prostatitis.
Manage benign prostatic hyperplasia.

**Manage episcleritis.**

**Manage epistaxis.**

**Manage immunizations in a patient with cardiovascular disease.**

**Manage mechanical low back pain.**
Manage pharmacotherapy for depression.

**Manage pityriasis rosea.**

**Manage tinnitus.**

**Manage vasovagal syncope.**

**Manage viral conjunctivitis.**
Order appropriate immunizations in an adolescent.
Prevent recurrent lower extremity cellulitis.
Prevent urinary tract infection.
Recognize indications for human papillomavirus immunization in male patients.
Screen a patient for alcohol misuse.
Screen for cervical cancer.

**Screen for osteoporosis.**
Treat allergic rhinitis.
Treat contact dermatitis.
Treat cutaneous psoriasis.
Treat obesity with medical complications.
Treat obesity.
Treat symptoms of restless legs syndrome.
Understand why family members cannot act as interpreters.
Use root cause analysis to address a problem in health care.
Geriatric Medicine

Diagnose apathetic hyperthyroidism.
Diagnose dementia with Lewy bodies.
Diagnose medication-related syncope.
Diagnose mild cognitive impairment.
Diagnose sensory impairment as a cause of dizziness and falls.
Identify decisional capacity.
Manage agitation in a hospitalized patient with dementia.
Manage dysphagia in an older patient.
Prevent dementia.
Screen for breast cancer.
Select an appropriate fall risk assessment tool.
Treat depression and associated weight loss.
Treat dry macular degeneration.
Treat footdrop.
Treat osteoarthritis.
**Treat urinary incontinence.
Hematology and Oncology

Diagnose a second primary cancer in a patient with a head and neck primary cancer.
Diagnose cancer of unknown primary.
Diagnose Hodgkin lymphoma.
Diagnose myelodysplastic syndrome.
Diagnose myelofibrosis.
Diagnose porphyria cutanea tarda.
Diagnose primary amyloidosis.
Diagnose radiation-induced hypothyroidism.
Diagnose the cause of microcytic anemia.
Evaluate prolonged activated partial thromboplastin time.
Manage familial adenomatous polyposis.
Manage fertility in adults receiving chemotherapy.
Manage testicular cancer.
Recognize prognostic factors for breast cancer.
**Treat a patient with a family history of deep venous thrombosis.
   Treat acute leukemia with leukapheresis.
   Treat acute promyelocytic leukemia.
   Treat an isolated brain metastasis.
   Treat cancer pain.
**Treat chronic lymphocytic leukemia.
**Treat cold agglutinin disease in a patient with mononucleosis.
   Treat colon cancer in a patient with positive lymph nodes.
   Treat estrogen receptor–positive breast cancer in postmenopausal women.
   Treat hypercalcemia of malignancy.
   Treat immune thrombocytopenia.
   Treat newly diagnosed breast cancer.
   Treat ovarian cancer.
**Treat postchemotherapy cytopenia.
   Treat prostate cancer.
   Treat superficial bladder cancer.
**Infectious Diseases**

**Diagnose** babesiosis.
Diagnose Giardia lamblia infection.
Diagnose Lemierre syndrome caused by Fusobacterium necrophorum.
Diagnose nonmenstrual toxic shock syndrome.
Diagnose Plasmodium falciparum malaria.
Diagnose the cause of HIV-associated oral hairy leukoplakia.
Diagnose the cause of malignant external otitis.
Diagnose the cause of thrombotic thrombocytopenic purpura–hemolytic uremic syndrome.
Diagnose West Nile virus encephalitis.
Follow isolation precautions to prevent transmission of infectious agents in health care settings.
Give HIV-infected patients the appropriate immunizations.

**Manage an uncomplicated urinary tract infection.**

**Manage asymptomatic bacteriuria.**
Manage latent tuberculosis.
Treat a cat bite.
Treat a human bite.
Treat an HIV-infected patient with cryptococcal meningitis.
Treat cervicofacial actinomycosis.
Treat ehrlichiosis.
Treat health care–associated pneumonia.
Treat latent tuberculosis.
Treat Streptococcus pneumoniae meningitis.
Treat Trichomonas vaginalis infection.
Nephrology

Diagnose a mixed acid-base disorder.
Diagnose acute interstitial nephritis.
Diagnose acute tubular necrosis.
Diagnose membranoproliferative glomerulonephritis in hepatitis C.
Diagnose nephrogenic diabetes insipidus.
Diagnose oxalosis in a patient after bariatric surgery.
Diagnose the cause of a mixed metabolic acidosis and respiratory alkalosis.
Diagnose the cause of hypocalcemia.
Diagnose the cause of nephrolithiasis after bariatric surgery.
Diagnose the syndrome of inappropriate antidiuretic hormone secretion.
Emergently treat hyperkalemia.

**Recognize indications for ACE inhibitors in patients with type 2 diabetes mellitus.

**Treat hyperkalemia.
  Treat hypertension in a woman attempting to conceive.
  Treat hypertension.
  Treat obstructive uropathy.
Diagnose a subdural hematoma.
Diagnose amyotrophic lateral sclerosis.
Diagnose carotid artery dissection.
Diagnose essential tremor.
Diagnose Meniere disease.
Diagnose vasculitic neuropathy.
Evaluate new-onset seizure activity.
Manage acute thiamine deficiency.
**Treat medication overuse headache.
Treat myasthenia gravis.
Diagnose abdominal compartment syndrome.
Diagnose asbestos-related pleural plaques.
Diagnose cystic fibrosis.
Diagnose exercise-induced asthma.
Diagnose hypersensitivity pneumonitis.
Diagnose idiopathic pulmonary fibrosis.
Diagnose pulmonary hypertension.
Diagnose respiratory failure in the setting of restrictive lung disease.
Diagnose right main-stem bronchus intubation.
Manage an acute asthma exacerbation.
Manage Candida albicans in the sputum.
Manage delirium in the intensive care unit.
Manage fluids in acute respiratory distress syndrome.
Manage intrinsic positive end-expiratory pressure.
Prevent ventilator-associated pneumonia.

Treat a parapneumonic effusion.
Treat a patient with COPD.
Treat a pleural effusion.
Treat anaphylactic shock.
Treat anaphylaxis.
Treat hypothermia-related bradycardia.
Treat intensive care unit–acquired weakness.
Treat pulmonary edema.
Treat respiratory failure due to COPD.
Treat transfusion-related acute lung injury.
Use D-dimer measurement to exclude pulmonary embolism.
Rheumatology

Diagnose adhesive capsulitis.
Diagnose anserine bursitis.
Diagnose complications of methotrexate therapy in rheumatoid arthritis.
Diagnose diffuse cutaneous systemic sclerosis.
Diagnose hemochromatosis.
Diagnose inflammatory back pain.
Diagnose limited cutaneous systemic sclerosis with the appropriate antibody.
Diagnose osteoarthritis of the hand.
Diagnose polyarteritis nodosa.
Diagnose reactive arthritis.
Diagnose relapsing polychondritis.
Diagnose Sjögren syndrome.
Diagnose statin-induced myopathy.
Diagnose Still disease.
Diagnose systemic lupus erythematosus.
Diagnose thyroid myopathy.
Identify the crystals associated with calcium pyrophosphate dihydrate deposition disease.

**Treat osteoarthritis of the hip.
  Treat osteoarthritis of the knee.
  Treat polymyalgia rheumatica.
  Treat psoriatic arthritis.
  Treat rheumatoid arthritis with arthroplasty.
  Treat systemic lupus.