

2025 Internal Medicine

In-Training Examination®

Educational Objectives

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American College of Physicians
190 North Independence Mall West
Philadelphia, Pennsylvania 19106-1572
Telephone: 215-351-2400

2025 Internal Medicine In-Training Examination®

Content Area	Number of Items	Percentage of Total Items
Cardiology	35	13.5
Endocrinology	18	6.9
Gastroenterology	24	9.3
General Internal Medicine*	39	15.1
Geriatric Medicine	16	6.2
Hematology and Oncology	30	11.6
Infectious Diseases	23	8.9
Nephrology	16	6.2
Neurology	10	3.9
Pulmonary and Critical Care Medicine	26	10.0
Rheumatology	22	8.5
High Value Care (HVC)**	65	25.1
TOTAL	259	100

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.

2025 Internal Medicine In-Training Examination®

Educational Objectives

Cardiology

- Diagnose cardiac amyloidosis.
- Diagnose complications after ST-elevation myocardial infarction.
- Diagnose hypertrophic cardiomyopathy.
- Diagnose Mobitz type 1 second-degree atrioventricular block.
- Diagnose patent ductus arteriosus.
- Diagnose polymorphic ventricular tachycardia.
- Diagnose spontaneous coronary artery dissection.
- Diagnose the cause of sudden cardiac arrest.
- Diagnose ventricular septal defect.
- **Evaluate a patient for peripheral artery disease.
- Evaluate hypertrophic obstructive cardiomyopathy.
- Evaluate pericardial tamponade.
- **Manage antimicrobial prophylaxis in a patient with a bicuspid valve.
- Manage atrioventricular reentrant tachycardia.
- Manage chronic venous insufficiency.
- Manage complete heart block.
- Manage gestational hypertension in a pregnant patient.
- Manage lipid-lowering therapy in a patient with type 2 diabetes mellitus and coronary artery disease.
- Manage mitral regurgitation.
- Manage resistant hypertension.
- Manage right ventricular infarction.
- Manage tachycardia-induced cardiomyopathy.
- Manage ventricular fibrillation.
- **Provide endocarditis prophylaxis.
- Treat chronic congestive heart failure with reduced ejection fraction.
- Treat diabetes in a patient with coronary artery disease.
- **Treat heart failure by avoiding NSAIDs.
- Treat heart failure with preserved ejection fraction.
- Treat hyperlipidemia in a patient with ischemic heart disease.

Treat pericarditis.

Treat symptomatic premature ventricular contractions.

Treat symptomatic severe aortic stenosis.

Treat thoracic aortic aneurysm.

Treat unilateral atherosclerotic renal artery stenosis.

Treat valvular atrial fibrillation.

Endocrinology

- Diagnose adrenal insufficiency in traumatic brain injury.
- Diagnose gastrinoma.
- Diagnose idiopathic hypogonadotropic hypogonadism.
- Evaluate a multinodular goiter.
- **Evaluate abnormal thyroid levels caused by biotin supplementation.
- **Manage asymptomatic primary hyperparathyroidism.
- Manage lipid-lowering therapy in a patient with type 2 diabetes mellitus.
- **Manage opioid-related hypogonadism.
- **Reduce risk for glucocorticoid-induced osteoporosis.
- Screen for familial hypocalciuric hypercalcemia in the evaluation of hyperparathyroidism.
- **Screen for multiple endocrine neoplasia type 1.
- Treat a patient with osteoporosis and an elevated parathyroid hormone level.
- Treat a pheochromocytoma.
- Treat acute hypocalcemia.
- Treat acute hypopituitarism.
- Treat high triglyceride levels in a patient with poorly controlled type 2 diabetes mellitus.
- Treat type 2 diabetes mellitus in a patient with heart failure.
- **Treat type 2 diabetes mellitus in an older patient with dementia.

Gastroenterology

- Diagnose acute mesenteric ischemia.
- Diagnose centrally mediated abdominal pain syndrome.
- Diagnose defecation disorder.
- Diagnose gastroesophageal reflux disease.
- Diagnose hepatic venous outflow obstruction (Budd-Chiari syndrome).
- Diagnose intrahepatic cholestasis of pregnancy.
- Diagnose microscopic colitis in a patient with celiac disease.
- **Evaluate a patient with chronic diarrhea for celiac disease.
- Evaluate irritable bowel syndrome with mixed bowel habits.
- Identify prognostic factors of acute liver failure.
- Manage adenomatous colon polyps.
- **Manage asymptomatic gallstones.
- **Manage feeding in acute pancreatitis.
- **Manage surveillance colonoscopy in a patient with recent colorectal cancer.
- Recommend follow-up for a patient with a false-positive multitarget stool test result.
- **Screen for hepatocellular carcinoma in a patient with hepatitis C virus infection and cirrhosis.
- Treat acute biliary pancreatitis.
- **Treat acute colonic pseudo-obstruction.
- Treat acute hepatitis A virus infection.
- Treat Crohn disease.
- **Treat dumping syndrome.
- Treat mild left-sided ulcerative colitis.
- Treat nonalcoholic liver disease.
- Treat pill-induced esophagitis.

General Internal Medicine

- **Apply principles of patient safety.
- **Counsel a patient who is seeking permanent contraception.
- Diagnose anterior uveitis as a manifestation of sarcoidosis.
- Diagnose lateral epicondylitis.
- Diagnose lumbar spinal stenosis.
- Diagnose Meniere disease.
- Diagnose olecranon bursitis.
- Diagnose sexual dysfunction secondary to medications.
- Diagnose stress fractures.
- Diagnose vasovagal syncope.
- **Establish goals of care for a transgender person.
- Identify a case-control study as the appropriate method to investigate a rare outcome.
- **Identify common causes of azoospermia related to exogenous testosterone.
- Identify streptococcal pharyngitis as a cause of erythema nodosum.
- Identify the appropriate use of a cohort study for research.
- Manage a patient with coronary artery disease and a need for urgent surgery.
- Manage allergic conjunctivitis.
- Manage cervical cancer screening in a 35-year-old woman.
- Manage cocaine use disorder.
- **Manage greater trochanteric pain syndrome.
- Manage insomnia.
- Manage intimate partner violence with a patient-centered approach to care.
- Manage opioid overdose.
- **Manage viral pharyngitis.
- Perioperatively manage antiplatelet medications in a patient with cardiac stents.
- **Prevent micturition syncope.
- **Prevent pneumococcal disease in adults age 65 years or older.
- **Recognize appropriate indications for pancreatic cancer screening.
- **Recommend appropriate herpes zoster vaccination.
- **Screen for breast cancer in a transgender patient.
- **Screen for gonorrhea and chlamydia in a low-risk woman.
- **Screen for lung cancer with low-dose CT.

Treat acute epididymitis.

Treat erythema migrans.

**Treat lower urinary tract symptoms secondary to benign prostatic hyperplasia.

Treat nutritional deficiencies after bariatric surgery.

Treat obesity with pharmacologic therapy.

Treat pain at the end of life.

Treat syncope due to sick sinus syndrome.

Geriatric Medicine

- **Apply appropriate guideline-directed health screening in an older man.
- **Apply vaccination guidelines in an older adult.
 - Diagnose hypothalamic hypogonadism as a cause of secondary amenorrhea.
- **Diagnose medication adverse effect as a cause of driving impairment.
- **Diagnose medication-related xerostomia and dysgeusia.
 - Evaluate memory loss in an older adult.
- **Manage adverse effects of sodium-glucose cotransporter 2 inhibitor in a frail older adult with congestive heart failure.
- **Manage asymptomatic bacteriuria in older adults.
- **Manage prescribing cascade in an older adult.
- **Target glycemic control in an older adult.
 - Treat adverse drug reaction in an older patient with comorbidities.
 - Treat fecal incontinence in an older adult.
- **Treat postoperative delirium.
 - Treat pressure ulcer.
 - Treat weight loss in an older nursing home resident.
- **Use appropriate functional assessment tool to determine care needs.

Hematology and Oncology

**Appropriately refer a patient for hospice care.

Diagnose an acquired factor VIII inhibitor.

Diagnose a-thalassemia.

Diagnose carcinomatous meningitis.

Diagnose checkpoint inhibitor–associated diarrhea.

Diagnose chronic myelogenous leukemia.

Diagnose essential thrombocythemia in an older patient.

Diagnose myelodysplastic syndrome.

Diagnose secondary myelodysplastic syndrome.

Diagnose vitamin B12 deficiency.

Diagnose von Willebrand disease.

Evaluate a patient for suspected metastatic non–small cell lung cancer.

Evaluate a solitary plasmacytoma.

Evaluate for hepatitis B virus infection before initiation of rituximab.

Identify appropriate indications for genetic counseling for inherited cancer.

Identify medications associated with hemolysis in glucose-6-phosphate dehydrogenase deficiency.

**Identify osteonecrosis of the jaw as a side effect of zoledronic acid therapy.

Identify reactive thrombocytosis secondary to iron deficiency anemia.

Manage a patient with low-risk myelodysplastic syndrome.

Manage a patient with stage I rectal cancer.

Manage anemia.

Manage classic familial adenomatous polyposis.

**Manage surveillance in a patient with low-risk bladder cancer.

Recognize germ cell tumor as the cause of a mediastinal mass in a patient with probable Klinefelter syndrome.

**Recommend the appropriate diagnostic evaluation of squamous cell carcinoma of unknown primary.

Treat a patient with polycythemia vera.

Treat acute venous thromboembolism in pregnancy.

Treat hypercalcemia of malignancy.

Treat ovarian cancer.

Treat tumor lysis syndrome in acute leukemia.

Infectious Diseases

- Diagnose familial Mediterranean fever.
- Diagnose gonococcal arthritis.
- Diagnose Lemierre syndrome caused by *Fusobacterium necrophorum*.
- Diagnose pertussis.
- Diagnose recurrent lower-leg streptococcal cellulitis.
- Diagnose staphylococcal food poisoning.
- Diagnose the cause of subacute cough.
- Diagnose West Nile virus encephalitis.
- **Evaluate a patient with a prosthetic joint who is undergoing a dental procedure.
- Manage a patient with Lyme carditis.
- **Manage asymptomatic bacteriuria.
- Manage possible exposure to hepatitis B virus after needlestick injury.
- **Manage pre-exposure prophylaxis in a patient at high risk for HIV infection.
- Manage preseptal cellulitis.
- **Manage travelers diarrhea.
- **Prevent varicella zoster infection.
- **Prevent ventilator-associated pneumonia.
- Treat a dermatophyte infection.
- Treat acute pyelonephritis.
- Treat community-acquired meningitis.
- Treat endocarditis.
- Treat Giardia lamblia infection.
- Treat recurrent genital herpes infection.

Nephrology

- Diagnose a mixed acid-base disorder.
 - Diagnose hypophosphatemia.
 - Diagnose membranous nephropathy.
 - Diagnose osteitis fibrosa cystica in a patient with end-stage kidney disease.
 - Diagnose primary adrenal insufficiency–associated hyponatremia.
 - Diagnose salicylate toxicity as a cause of noncardiogenic pulmonary edema.
 - Diagnose Sjögren syndrome-caused chronic tubulointerstitial disease.
 - Diagnose spontaneous bacterial peritonitis as cause of acute kidney injury.
 - Diagnose the cause of chronic kidney disease in a patient with HIV infection.
 - Diagnose the cause of hypokalemia.
 - Identify clinical features of hypertensive nephrosclerosis.
 - Manage secondary hypertension.
 - Manage tumor lysis syndrome.
 - Prevent recurrent calcium oxalate kidney stones.
- **Treat hypertensive urgency by resuming antihypertensive medications.
- Treat obstructive uropathy caused by prostatic hyperplasia.

Neurology

- Diagnose a patient with head injury/concussion.
- Diagnose behavioral-variant frontotemporal dementia.
- Diagnose cervical myelopathy.
- **Diagnose iron deficiency as the cause of restless leg syndrome.
- Diagnose normal-pressure hydrocephalus.
- Diagnose Parkinson disease.
- Diagnose vertebral artery dissection.
- **Diagnose vitamin B12 deficiency.
- Manage new-onset optic neuritis.
- **Treat medication overuse headache.

Pulmonary and Critical Care Medicine

- Diagnose bronchiectasis.
- Diagnose community-acquired pneumonia.
- Diagnose fixed upper airway obstruction by spirometry.
- Diagnose occupational asthma.
- Diagnose opioid-associated acute hypoventilation as a cause of acute respiratory acidemia.
- **Evaluate a solitary pulmonary nodule.
- **Evaluate for pulmonary rehabilitation in a patient with COPD who is deconditioned.
- Manage a parapneumonic effusion.
- Manage a significant asthma flare.
- **Manage asbestos plaques in a patient who smokes.
- Manage hypertensive crisis in the setting of intracranial hemorrhage.
- Manage medications for smoking cessation.
- Manage methemoglobinemia.
- **Manage pulmonary embolism in a patient at high risk for recurrence.
- Manage symptoms related to obstructive sleep apnea/obesity hypoventilation syndrome.
- Monitor a patient with restrictive lung disease for respiratory failure.
- **Prevent delirium in the ICU.
- Recognize risk factors for ICU-acquired weakness.
- **Screen for need for supplemental oxygen during air travel.
- Treat acute respiratory distress syndrome using appropriate ventilation.
- Treat hypercapnic respiratory failure.
- Treat hypothermia-related bradycardia.
- Treat hypoxemia in a patient with COVID-19 acute respiratory distress syndrome.
- Treat inhalational respiratory injury.
- Treat nontuberculous mycobacterial infection.
- Wean a patient from mechanical ventilation.

Rheumatology

- Diagnose acromioclavicular joint arthritis.
- Diagnose cryoglobulinemic vasculitis in a patient with hepatitis C virus infection.
- Diagnose early spondyloarthritis.
- Diagnose enteropathic arthritis.
- Diagnose Felty syndrome.
- Diagnose hyperparathyroidism associated with calcium pyrophosphate deposition disease.
- Diagnose limited cutaneous systemic sclerosis.
- Diagnose Lyme arthritis.
- Diagnose necrotizing autoimmune myositis.
- Diagnose osteoarthritis of the hands.
- Diagnose osteoarthritis.
- Diagnose persistent inflammatory polyarthritis after chikungunya virus infection.
- Diagnose sarcoidosis.
- Diagnose Sjögren syndrome.
- Identify antiphospholipid antibodies in the setting of systemic lupus erythematosus as a risk factor for pregnancy loss.
- **Identify appropriate vaccination for a patient receiving immunosuppressive treatment.
- **Identify risks of tumor necrosis factor antagonists.
- **Manage chondrocalcinosis found incidentally on radiography.
- Recognize and manage scleroderma renal crisis.
- **Treat asymptomatic hyperuricemia.
- Treat rheumatoid arthritis with conventional disease-modifying antirheumatic drugs.
- Treat severe osteoarthritis of the knee joint causing functional limitation.