

Infectious Disease

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 infectious disease 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 infectious disease specialist.

Exam content

Exam content is determined by a pre-established blueprint, or table of specifications. The blueprint is developed by 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:

Medical Content Category	% of Exam
Bacterial Diseases	27%
Human Immunodeficiency Virus (HIV) Infection	15%
Antimicrobial Therapy	9%
Viral Diseases	7%
Travel and Tropical Medicine	5%
Fungi	5%
Immunocompromised Host (Non-HIV Infection)	5%
Vaccinations	4%
Infection Prevention and Control	5%
General Internal Medicine, Critical Care and Surgery	18%
	100%

Exam questions in the content areas above may also address clinical topics in clinical syndromes and general internal medicine that are important to the practice of infectious disease.

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, recordings of heart or lung sounds, 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/certification/exam-information/infectious-disease/exam-tutorial.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.

Bacterial Diseases	27% of Exam
Gram-positive cocci	4.5%
<i>Staphylococcus aureus</i>	
<i>Streptococcus</i>	
<i>Enterococcus</i>	
Gram-positive rods	<2%
<i>Listeria</i>	
<i>Corynebacterium</i>	
<i>Bacillus</i>	
<i>Erysipelothrix</i>	
Gram-negative cocci and coccobacilli	2%
<i>Neisseria</i>	

<i>Haemophilus</i>	
Gram-negative rods	2.5%
Enterobacteriaceae	
<i>Pseudomonas</i>	
<i>Stenotrophomonas</i>	
<i>Burkholderia</i>	
<i>Acinetobacter</i>	
<i>Aeromonas</i>	
<i>Salmonella</i>	
<i>Shigella</i>	
<i>Campylobacter</i>	
<i>Vibrio</i>	
<i>Pasteurella</i>	
<i>Yersinia</i>	
<i>Legionella</i>	
<i>Capnocytophaga</i>	
<i>Bartonella</i>	
<i>Brucella</i>	
<i>Bordetella</i>	
<i>Streptobacillus</i>	
<i>Francisella</i>	
<i>Helicobacter</i>	
Anaerobes	2.5%
Gram-positive cocci	
Gram-positive rods	
Gram-negative rods	
Actinomycetes	<2%
<i>Actinomyces</i>	
<i>Nocardia</i>	
Spirochetes	<2%
<i>Treponema</i>	
<i>Borrelia</i>	
<i>Leptospira</i>	
Mycoplasma	<2%
<i>M. pneumoniae</i>	
<i>M. genitalium</i>	
Tropheryma whipplei	<2%
Chlamydia	<2%
<i>C. trachomatis</i>	
<i>C. pneumoniae</i>	
<i>C. psittaci</i>	

Rickettsia	2.5%
<i>R. conorii</i>	
<i>R. akari</i>	
<i>R. rickettsii</i>	
<i>R. prowazekii</i>	
<i>R. typhi</i>	
<i>Orientia tsutsugamushi</i>	
<i>R. parkeri</i>	
<i>R. africae</i>	
<i>Coxiella burnetii</i>	
Ehrlichia	<2%
<i>E. chaffeensis</i>	
<i>E. ewingii</i>	
<i>Anaplasma phagocytophilum</i>	
Mycobacterium	5%
<i>M. tuberculosis</i>	
<i>M. bovis</i>	
<i>M. lepri</i>	
Nontuberculous mycobacteria	
Syndromes characterized by bacterial pathogens	3%
Head and neck	
Respiratory	
Gastrointestinal	
Ophthalmologic	
Genitourinary	
Dermatologic (including skin and soft-tissue infections)	
Musculoskeletal	
Neurologic	
Cardiovascular	

Human Immunodeficiency Virus (HIV) Infection	15% of Exam
---	--------------------

Epidemiology	<2%
Transmission	
Testing and counseling	
Initial laboratory evaluation	
Prevention	
Pathogenesis	<2%
Virology	
Immunopathogenesis	
Acute HIV infection	

Laboratory testing	<2%
Diagnostic evaluation	
Baseline evaluation	
HIV treatment regimens	4.5%
Antiretroviral therapy drug classes	
Adverse effects of treatment	
Drug-drug interactions	
When to start therapy	
Selection of optimal initial regimen	
Laboratory monitoring	
Treatment-experienced patients	
Opportunistic infections (OIs)	5%
Prevention	
When to start HIV therapy in the context of active OIs	
Immune reconstitution inflammatory syndrome	
Bacteria	
Mycobacteria	
Fungi	
Parasites	
Viruses	
Malignancies	<2%
Kaposi's sarcoma	
Lymphoma	
Cervical cancer	
Anal cancer	
Other complications of HIV	2%
Hematologic	
Endocrine	
Gastrointestinal	
Renal (HIV-associated nephropathy [HIVAN])	
Cardiac (HIV cardiomyopathy)	
Pulmonary	
Head, eye, ear, nose, and throat	
Musculoskeletal	
Neurologic	
Psychiatric	
Dermatologic	
Related issues	<2%
Substance use	
Organ transplantation	
Primary care	

Miscellaneous non-HIV-related complications that may occur
more commonly in those who have HIV
Pregnancy

Antimicrobial Therapy	9% of Exam
Antibacterials	5.5%
Aminoglycosides	
Antifolates	
Carbapenems	
Cephalosporins	
Chloramphenicol	
Fluoroquinolones	
Fusidanes	
Glycopeptides, glycolipopeptides, and lipopeptides	
Lincosamides	
Macrolides	
Monobactams	
Nitroimidazoles	
Oxazolidinones	
Penicillins	
Polymyxins	
Rifamycins	
Streptogramins	
Tetracyclines	
Non-sulfonamide (sulfa drug), non-trimethoprim urinary tract agents	
Topical antibacterials	
Other routes of administration	
Antivirals (non-HIV)	<2%
For influenza	
For herpes simplex	
For cytomegalovirus	
For hepatitis C and respiratory syncytial virus (RSV)	
For hepatitis B	
Interferon alfa 2a and alfa 2b	
For hepatitis C	
Miscellaneous and topical agents	
Pharmacology and outpatient parenteral antimicrobial therapy (OPAT)	2.5%
Susceptibility testing	
Drug resistance	

ADME (absorption, distribution, metabolism, and excretion)
 Dosing
 Drug interactions
 Toxicity
 Outpatient parenteral antimicrobial therapy

Viral Diseases	7% of Exam
DNA viruses	4%
Herpesviruses	
Adenovirus	
Papillomavirus	
Polyomavirus	
Poxviruses	
Hepadnaviridae	
Parvovirus	
RNA viruses	2.5%
Reoviridae	
Togaviridae	
Flaviviridae	
Coronaviridae	
Paramyxoviridae	
Rhabdoviridae	
Filoviridae (hemorrhagic fever viruses)	
Orthomyxoviridae (influenza)	
Bunyaviridae	
Arenaviridae	
Non-HIV retroviridae	
Picornaviridae	
Calciviridae	
Hepatitis E	
Prions	<2%

Travel and Tropical Medicine	5% of Exam
Protozoal intestinal infections	<2%
<i>Balantidium coli</i>	
<i>Blastocystis hominis</i>	
<i>Cryptosporidium parvum</i> and <i>C. hominis</i>	
<i>Cyclospora cayetanensis</i>	
<i>Cytoisospora belli</i> (formerly <i>Isospora belli</i>)	
<i>Dientamoeba fragilis</i>	
<i>Entamoeba histolytica</i> (amebiasis)	

Giardiasis	
Microsporidiosis	
Protozoal extraintestinal infections	<2%
Amebic meningoencephalitis	
Babesiosis	
Leishmaniasis	
Malaria	
Toxoplasmosis	
<i>Trichomonas vaginalis</i>	
Trypanosomiasis (general)	
Nematode intestinal infections	<2%
Anisakiasis	
<i>Ascaris lumbricoides</i> (ascariasis)	
<i>Capillaria philippinensis</i> (capillariasis)	
<i>Enterobius vermicularis</i> (pinworm)	
Hookworm	
<i>Strongyloides stercoralis</i>	
<i>Trichuris trichiura</i> (whipworm)	
Nematode extraintestinal infections	<2%
<i>Angiostrongylus cantonensis</i>	
Bayliascariasis (raccoon roundworm)	
Cutaneous larva migrans (dog and cat hookworm)	
<i>Dracunculus medinensis</i> (Guinea worm)	
Filariasis	
<i>Gnathostoma spinigerum</i>	
Toxocariasis	
<i>Trichinella spiralis</i> (trichinellosis)	
Cestode infections	<2%
<i>Diphyllobothrium latum</i> (fish tapeworm)	
<i>Hymenolepis</i> (dwarf tapeworm)	
<i>Echinococcus granulosus</i> (hydatid disease)	
<i>Echinococcus multilocularis</i> (alveolar disease)	
<i>Taenia saginata</i> (beef tapeworm)	
<i>Taenia solium</i> (pork tapeworm; intestinal)	
Trematode infections (flukes)	<2%
<i>Clonorchis sinensis</i> (Chinese liver fluke)	
<i>Fasciolopsis buski</i> (intestinal fluke)	
<i>Fasciola hepatica</i> and <i>gigantica</i> (sheep liver fluke)	
<i>Paragonimus westermani</i> (lung fluke)	
Schistosomiasis (general)	

Ectoparasitic infections	<2%
Myiasis (human botfly or tumbu fly)	
<i>Pediculus humanus</i> (body, head, and pubic lice)	
Tick bites—identification and tick paralysis	
Tungiasis (<i>Tunga penetrans</i>)	
Bed bugs	
General principles of travel medicine	<2%
Pretravel preparation	
Post-travel illness	
Immigrants, refugees, and adoptees	
Travelers with specific needs	

Fungi	5% of Exam
Yeasts	<2%
<i>Candida</i>	
<i>Cryptococcus</i>	
Other yeasts (including <i>Trichosporon</i> and <i>Saccharomyces</i>)	
Endemic mycoses	<2%
<i>Histoplasma</i>	
<i>Blastomyces dermatitidis</i>	
<i>Coccidioides immitis</i> (<i>C. posadasii</i>)	
<i>Sporothrix schenckii</i>	
<i>Paracoccidioides brasiliensis</i>	
<i>Penicillium marneffeii</i>	
Molds	<2%
<i>Aspergillus</i>	
Hyaline molds	
Agents of zygomycosis (mucormycosis)	
Dematiaceous molds (<i>Bipolaris</i> , <i>Exophila</i> , and others)	
Superficial and subcutaneous mycoses	<2%
Mycetoma	
Chromoblastomycosis	
<i>Malassezia</i>	
Dermatophytes	
<i>Pneumocystis jirovecii</i> pneumonia (PJP)	<2%
Therapy	<2%
Pharmacokinetics	
Drug interactions	
Spectrum	
Toxicity	
Prophylaxis	

Susceptibility testing	
Drug resistance	
Diagnostic testing	<2%
Histopathology	
Culture	
Nonculture methods	
Syndromes	<2%
Mucosal	
Skin	
Pulmonary	
Central nervous system and eyes	
Cardiac	
Disseminated	

Immunocompromised Host (Non-HIV Infection)	5% of Exam
---	-------------------

Primary immunodeficiency	<2%
Anatomic lesions	
Lymphocyte defects	
Combined immunodeficiency syndromes (including severe combined immunodeficiency [SCID])	
Phagocytes	
Complement deficiencies	
NK cell deficiencies	
Hematologic malignancies and stem cell transplantation	<2%
Infections associated with chemotherapy-induced neutropenia	
Stem cell transplant	
Syndromes	
Noninfectious conditions	
Solid-organ transplantation	<2%
Donor-derived infections	
Surgical site infections	
Hospital-acquired infection	
Opportunistic infections	
Noninfectious conditions	
Complications of immunosuppression in non-transplant population (disease-modifying agents, including tumor necrosis factor [TNF] blockers, corticosteroids)	<2%
Bacteria	
Fungi	
Viruses	
Parasites and protozoa	

Infection prevention in the immunosuppressed host	<2%
Immunizations	
Antimicrobials	
Environmental control	

Vaccinations	4% of Exam
---------------------	-------------------

Active immunizations (vaccines)	3%
Pneumococcal	
Influenza	
Tetanus, diphtheria, and acellular pertussis	
<i>Haemophilus influenzae</i>	
Hepatitis B	
Hepatitis A	
Measles, mumps, and rubella	
Polio	
Meningococcal	
Smallpox	
Rabies	
Varicella	
Herpes zoster	
Human papillomavirus (HPV)	
Anthrax	
Passive immunizations	<2%
Varicella-zoster virus	
Rabies	
Hepatitis B	
Tetanus	
Immune globulin	
Other (including cytomegalovirus immune globulin)	

Infection Prevention and Control	5% of Exam
---	-------------------

Applied epidemiology and biostatistics	<2%
Outbreak investigation	
Healthcare quality improvement	
Healthcare-associated infections (HAIs) of organ systems	<2%
HAIs related to intravascular devices, short-term and long-term (including contaminated infusions)	
HA urinary tract infections and pneumonia infections	
HA surgical site infections	
HAIs of other organ systems (including gastrointestinal tract infections, and central nervous system infections)	

Epidemiology and prevention of HAIs caused by specific pathogens	<2%
Bacterial infections	
Mycobacterial and fungal infections	
Viral infections	
Epidemiology and prevention of HAIs in special patient populations	<2%
HAIs in obstetrics	
HAIs in neoplastic diseases	
HAIs in organ transplant and hematopoietic stem cell transplant	
Epidemiology and prevention of HAIs in therapeutic procedures	<2%
Infection risks of endoscopy	
HAIs associated with hemodialysis and peritoneal dialysis	
HAIs related to other procedures (including cardiology and respiratory therapy)	
HAIs following transfusion of blood and blood products	
Fecal transplantation	
Prevention of HAIs related to hospital support services	<2%
Environmental services	
Disinfection and sterilization	
Epidemiology and prevention of HAIs in healthcare workers	<2%
Prevention of occupationally acquired viral hepatitis in healthcare workers	
Prevention of occupationally acquired HIV infection in healthcare workers	
Vaccination of healthcare workers	
Prevention of occupationally acquired diseases of healthcare workers spread by contact, droplet, or airborne precautions (other than TB, and including diagnostic laboratories)	
Organization and implementation of infection control programs	<2%
Surveillance of HAIs	
Isolation precautions	
Hand antisepsis	
Epidemiology and prevention of infections in residents of long-term care facilities	
Infection control in countries with limited resources	

General Internal Medicine, Critical Care and Surgery	18% of Exam
---	--------------------

General internal medicine	7.5%
Malignancies	
Hemophagocytic syndrome	
Collagen vascular and autoimmune disorders	
Dermatologic disorders	

Hematologic disorders	
Noninfectious central nervous system disease	
Bites, stings, and toxins	
Drug fever	
Ethical and legal decision making	
Surgical infections	2.5%
Orthopedic	
Neurosurgery	
Ear, nose, and throat	
General surgery and intra-abdominal	
Thoracic and cardiothoracic	
Urologic	
Obstetric and gynecologic	
Plastic and reconstructive	
Vascular	
Critical care medicine	8%
Systemic inflammatory response syndrome (SIRS) and sepsis	
Ventilator-associated pneumonias	
Noninfectious pneumonias (eosinophilic and acute respiratory distress syndrome [ARDS])	
Bacterial pneumonias	
Viral pneumonias	
Hyperthermia and hypothermia	
Near-drowning and <i>Scedosporium</i> and <i>Pseudallescheria</i> infection	

January, 2018