# INFECTIOUS DISEASE Blueprint

*For traditional, 10-year Maintenance of Certification (MOC) exam and Longitudinal Knowledge Assessment (LKA®)*

## ABIM invites diplomates to help develop the Infectious Disease MOC exam blueprint

Based on feedback from physicians that MOC assessments should better reflect what they see in practice, in 2016 the American Board of Internal Medicine (ABIM) invited all certified infectious disease specialists to provide ratings of the relative frequency and importance of blueprint topics in practice.

This review process, which resulted in a new MOC exam blueprint, will be used on a periodic basis to inform and update all MOC assessments created by ABIM. No matter what form ABIM's assessments ultimately take, they will need to be informed by front-line clinicians sharing their perspective on what is important to know.

A sample of over 270 infectious disease specialists, similar to the total invited population of infectious disease specialists in age, gender, time spent in direct patient care, and geographic region of practice, provided the blueprint topic ratings. ABIM used this feedback to update the blueprint for MOC assessments (beginning with the Spring 2017 administration of the traditional, 10-year MOC exam).

To inform how assessment content should be distributed across the major blueprint content categories, ABIM considered the average respondent ratings of topic frequency and importance in each of the content categories. A second source of information was the relative frequency of patient conditions in the content categories, as seen by certified infectious disease specialists and documented by national health care data (described further under *Content distribution* below).

To determine prioritization of specific assessment content within each major medical content category, ABIM used the respondent ratings of topic frequency and importance to set thresholds for these parameters in the assessment assembly process (described further under *Detailed content outline* below).

## Purpose of the Infectious Disease MOC Assessments

MOC assessments are designed to evaluate whether a certified infectious disease specialist has maintained competence and currency in the knowledge and judgment required for practice. The MOC assessments emphasize diagnosis and management of prevalent conditions, particularly in areas where practice has changed in recent years. As a result of the blueprint review by ABIM diplomates, MOC assessments place less emphasis on rare conditions and focus more on situations in which physician intervention can have important consequences for patients. For conditions that are usually managed by other specialists, the focus is on recognition rather than on management.

## Assessment format

The traditional, 10-year MOC exam contains up to 220 single-best- answer multiple-choice questions, of which approximately 50 are new questions that do not count in the examinee's score. Examinees taking the traditional, 10-year MOC exam will have access to an external resource (i.e., UpToDate®) for the entire exam.

ABIM's LKA for MOC, launching in 2023, is a five-year cycle in which physicians answer questions on an ongoing basis and receive feedback on how they're performing along the way. More information on how assessments are developed can be found at abim.org/about/exam-information/exam-development.aspx.

Most questions describe patient scenarios and ask about the work done (that is, tasks performed) by physicians in the course of practice:

- **Diagnosis:** making a diagnosis or identifying an underlying condition
- **Testing:** ordering tests for diagnosis, staging, or follow-up
- **Treatment/Care Decisions**: recommending treatment or other patient care
- **Risk Assessment/Prognosis/Epidemiology:** assessing risk, determining prognosis, and applying principles from epidemiologic studies
- **Pathophysiology/Basic Science:** understanding the pathophysiology of disease and basic science knowledge applicable to patient care

*ABIM is committed to working toward health equity and believes that board-certified physicians should have an understanding of health care disparities. Therefore, health equity content that is clinically important to each discipline will be included in assessments, and the use of gender, race, and ethnicity identifiers will be re-evaluated.*

Clinical scenarios presented take place in outpatient or inpatient settings as appropriate to a typical infectious disease practice. Clinical information presented may include patient photographs, radiographs, electrocardiograms, and other media to illustrate relevant patient findings.

Exam tutorials, including examples of question format, can be found at abim.org/maintenance-of-certification/exam-information/infectious-disease/exam-tutorial.aspx.

## Content distribution

Listed below are the major medical content categories that define the domain for the Infectious Disease traditional, 10-year MOC exam and LKA. The relative distribution of content is expressed as a percentage of the total assessment. To determine the content distribution, ABIM considered the average respondent ratings of topic frequency and importance. To cross-validate these self-reported ratings, ABIM also considered the relative frequency of conditions seen in Medicare patients by a cohort of certified infectious disease specialists. Informed by these data, the Infectious Disease Approval Committee and Board have determined the medical content category targets are appropriate, as shown below.

| CONTENT CATEGORY | BLUEPRINT % |
|---|---|
| Bacterial Disease | **27%** |
| Human Immunodeficiency Virus (HIV) | **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%** |
| Internal Medicine and Non-Infectious Syndromes | **18%** |
| **Total** | **100%** |

The inherent complexity of the field of infectious disease leads to considerable overlap in content categories, and each question can only be assigned to a single blueprint topic. Thus, a question addressing the cause of fever and rash likely would be classified under the specific organism, while a similar question addressing the treatment of that same illness would be classified under the antimicrobial agent used.

## How the blueprint ratings are used to assemble the MOC assessment

Blueprint reviewers provided ratings of relative frequency in practice for each of the detailed content topics in the blueprint and provided ratings of the relative importance of the topics for each of the tasks described in *Assessment format* above. In rating importance, reviewers were asked to consider factors such as the following:

- High risk of a significant adverse outcome
- Cost of care and stewardship of resources
- Common errors in diagnosis or management
- Effect on population health
- Effect on quality of life
- When failure to intervene by the physician deprives a patient of significant benefit

Frequency and importance were rated on a three-point scale corresponding to low, medium, or high. The median importance ratings are reflected in the *Detailed content* outline below. The Infectious Disease Approval Committee and Board, in partnership with the physician community, have set the following parameters for selecting MOC assessment questions according to the blueprint review ratings:

- At least 70% of questions will address high-importance content (indicated in green)
- No more than 30% of questions will address medium-importance content (indicated in yellow)
- No exam questions will address low-importance content (indicated in red)

Independent of the importance and task ratings, no more than 15% of questions will address low-frequency content (indicated by “LF” following the topic description).

*The content selection priorities below are applicable beginning with the Spring 2017 traditional, 10-year MOC exam and are subject to change in response to future blueprint review.*

***Note:*** *The same topic may appear in more than one medical content category.*

## Detailed content outline for the Infectious Disease traditional, 10-year MOC exam and LKA

✓ – ***High Importance***: *At least 70% of questions will address topics and tasks with this designation.*

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LF – ***Low Frequency***: *No more than 15% of questions will address topics with this designation, regardless of task or importance.*

| **BACTERIAL DISEASES** *(27% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **GRAM-POSITIVE COCCI** | | | | | |
| *Staphylococcus aureus* | ✓ | ✓ | ✓ | ✓ | ✓ |
| *Streptococcus* | ✓ | ✓ | ✓ | ✓ | ✓ |
| *Enterococcus* | ✓ | ✓ | ✓ | ✓ | ⁄ |
| **GRAM-POSITIVE RODS** | | | | | |
| *Listeria* LF | ✓ | ✓ | ✓ | ✓ | ⁄ |
| *Corynebacterium* | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| *Bacillus* | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| *Erysipelothrix* LF | ⁄ | ✗ | ✗ | ⁄ | ✗ |
| **GRAM-NEGATIVE COCCI AND COCCOBACILLI** | | | | | |
| *Neisseria* | ✓ | ✓ | ✓ | ✓ | ⁄ |
| *Haemophilus* | ✓ | ⁄ | ⁄ | ⁄ | ⁄ |
| **GRAM-NEGATIVE RODS** | | | | | |
| Enterobacteriaceae | ✓ | ✓ | ✓ | ✓ | ⁄ |
| *Pseudomonas* | ✓ | ✓ | ✓ | ✓ | ⁄ |
| *Stenotrophomonas* | ⁄ | ⁄ | ✓ | ⁄ | ✗ |
| *Burkholderia* LF | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| *Acinetobacter* | ✓ | ✓ | ✓ | ⁄ | ⁄ |
| *Aeromonas* LF | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| *Salmonella* | ✓ | ⁄ | ✓ | ⁄ | ⁄ |

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| **BACTERIAL DISEASES** *continued…* *(27% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **GRAM-NEGATIVE RODS** *continued…* | | | | | |
| *Shigella* **LF** | ✓ | ✓ | ✓ | ✓ | ✓ |
| *Campylobacter* **LF** | ✓ | ✓ | ✓ | ✓ | ✓ |
| *Vibrio* **LF** | ✓ | ✓ | ✓ | ✓ | ✗ |
| *Pasteurella* **LF** | ✓ | ✓ | ✓ | ✓ | ✗ |
| *Yersinia* **LF** | ✓ | ✓ | ✓ | ✓ | ✗ |
| *Legionella* | ✓ | ✓ | ✓ | ✓ | ✓ |
| *Capnocytophaga* **LF** | ✓ | ✓ | ✓ | ✓ | ✗ |
| *Bartonella* **LF** | ✓ | ✓ | ✓ | ✓ | ✗ |
| *Brucella* **LF** | ✓ | ✓ | ✓ | ✓ | ✗ |
| *Bordetella* **LF** | ✓ | ✓ | ✓ | ✓ | ✗ |
| *Streptobacillus* **LF** | ✓ | ✗ | ✗ | ✗ | ✗ |
| *Francisella* **LF** | ✓ | ✓ | ✓ | ✓ | ✗ |
| *Helicobacter* | ✓ | ✓ | ✓ | ✓ | ✗ |
| **ANAEROBES** | | | | | |
| Gram-positive cocci | ✓ | ✓ | ✓ | ✓ | ✓ |
| Gram-positive rods | ✓ | ✓ | ✓ | ✓ | ✗ |
| Gram-negative rods | ✓ | ✓ | ✓ | ✓ | ✓ |
| **ACTINOMYCETES** | | | | | |
| *Actinomyces* **LF** | ✓ | ✓ | ✓ | ✓ | ✓ |
| *Nocardia* **LF** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **SPIROCHETES** | | | | | |
| *Treponema* | ✓ | ✓ | ✓ | ✓ | ✓ |
| *Borrelia* | ✓ | ✓ | ✓ | ✓ | ✓ |
| *Leptospira* **LF** | ✓ | ✓ | ✓ | ✓ | ✗ |

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| **BACTERIAL DISEASES** *continued…* *(27% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **MYCOPLASMA** | | | | | |
| *M. pneumoniae* | ✓ | ✓ | ✓ | ⊘ | ⊘ |
| *M. genitalium* **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| **TROPHERYMA WHIPPLEI** | | | | | |
| *Tropheryma whipplei* **LF** | ⊘ | ⊘ | ✗ | ⊘ | ✗ |
| **CHLAMYDIA** | | | | | |
| *C. trachomatis* | ✓ | ✓ | ✓ | ✓ | ⊘ |
| *C. pneumoniae* **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| *C. psittaci* **LF** | ⊘ | ✗ | ⊘ | ⊘ | ✗ |
| **RICKETTSIA** | | | | | |
| *R. conorii* **LF** | ✗ | ✗ | ✗ | ✗ | ✗ |
| *R. akari* **LF** | ⊘ | ✗ | ✗ | ⊘ | ✗ |
| *R. rickettsii* **LF** | ✓ | ✓ | ✓ | ✓ | ⊘ |
| *R. prowazekii* **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| *R. typhi* **LF** | ⊘ | ✗ | ⊘ | ⊘ | ✗ |
| *Orientia tsutsugamushi* **LF** | ✗ | ✗ | ✗ | ✗ | ✗ |
| *R. parkeri* **LF** | ⊘ | ✗ | ✗ | ✗ | ✗ |
| *R. africae* **LF** | ⊘ | ✗ | ⊘ | ✗ | ✗ |
| *Coxiella burnetii* **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| **EHRLICHIA** | | | | | |
| *E. chaffeensis* **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| *E. ewingii* **LF** | ✗ | ✗ | ✗ | ✗ | ✗ |
| *Anaplasma phagocytophilum* | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |

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| **BACTERIAL DISEASES** *continued…* *(27% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **MYCOBACTERIUM** | | | | | |
| *M. tuberculosis* | ✓ | ✓ | ✓ | ✓ | ✓ |
| *M. bovis* **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| *M. leprae* **LF** | ⊘ | ⊘ | ✗ | ⊘ | ✗ |
| Nontuberculous mycobacteria | ✓ | ✓ | ✓ | ✓ | ⊘ |
| **SYNDROMES CHARACTERIZED BY BACTERIAL PATHOGENS** | | | | | |
| Head and neck | ✓ | ✓ | ✓ | ⊘ | ⊘ |
| Respiratory | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Gastrointestinal | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Ophthalmologic **LF** | ✓ | ⊘ | ⊘ | ⊘ | ✗ |
| Genitourinary | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Dermatologic (including skin and soft-tissue infections) | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Musculoskeletal | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Neurologic | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Cardiovascular | ✓ | ✓ | ✓ | ✓ | ⊘ |

| **HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION** *(15% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **EPIDEMIOLOGY** | | | | | |
| Transmission | ✓ | ✓ | ✓ | ✓ | ✓ |
| Testing and counseling | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Initial laboratory evaluation | ✓ | ✓ | ✓ | ✓ | ✓ |
| Prevention | ✓ | ✓ | ✓ | ✓ | ⊘ |
| **PATHOGENESIS** | | | | | |
| Virology | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Immunopathogenesis | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| Acute HIV infection | ✓ | ✓ | ✓ | ✓ | ✓ |

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| **HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION** *continued…* *(15% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **LABORATORY TESTING** | | | | | |
| Diagnostic evaluation | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Baseline evaluation | ✓ | ✓ | ✓ | ✓ | ⊘ |
| **HIV TREATMENT REGIMENS** | | | | | |
| 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)** | | | | | |
| Prevention | *Not Applicable* | | ✓ | ✓ | ⊘ |
| When to start HIV therapy in the context of active OIs | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Immune reconstitution inflammatory syndrome | ✓ | ✓ | ✓ | ⊘ | ⊘ |
| Bacteria | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Mycobacteria | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Fungi | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Parasites LF | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Viruses | ✓ | ✓ | ✓ | ✓ | ⊘ |
| **MALIGNANCIES** | | | | | |
| Kaposi sarcoma LF | ✓ | ✓ | ⊘ | ⊘ | ⊘ |
| Lymphoma | ✓ | ✓ | ⊘ | ⊘ | ⊘ |
| Cervical cancer LF | ✓ | ⊘ | ⊘ | ⊘ | ✗ |
| Anal cancer LF | ✓ | ✓ | ⊘ | ⊘ | ✗ |

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| **HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION** *continued…* *(15% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **OTHER COMPLICATIONS OF HIV** | | | | | |
| Hematologic | ✓ | ⊘ | ⊘ | ⊘ | ⊘ |
| Endocrine | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| Gastrointestinal | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| Renal (HIV-associated nephropathy [HIVAN]) | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| Cardiac (HIV cardiomyopathy) LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Pulmonary | ✓ | ✓ | ⊘ | ⊘ | ⊘ |
| Head, eye, ear, nose, and throat LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Musculoskeletal LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Neurologic | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| Psychiatric | ✓ | ⊘ | ⊘ | ⊘ | ✗ |
| Dermatologic | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| **RELATED ISSUES** | | | | | |
| Substance use disorder | ✓ | ⊘ | ⊘ | ✓ | ✗ |
| Organ transplantation LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Primary care | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Miscellaneous non-HIV-related complications that may occur more commonly in those who have HIV | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Pregnancy LF | ✓ | ✓ | ✓ | ⊘ | ⊘ |

| **ANTIMICROBIAL THERAPY** *(9% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **ANTIBACTERIALS** | | | | | |
| Aminoglycosides | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Antifolates | ⊘ | ⊘ | ✓ | ✓ | ⊘ |
| Carbapenems | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Cephalosporins | ✓ | ✓ | ✓ | ✓ | ⊘ |

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|---|---|---|---|---|---|
| **ANTIBACTERIALS** *continued…* | | | | | |
| Fluoroquinolones | ✓ | ✓ | ✓ | ✓ | / |
| Glycopeptides, glycolipopeptides, and lipopeptides | ✓ | ✓ | ✓ | ✓ | / |
| Lincosamides | / | / | / | / | / |
| Macrolides | ✓ | ✓ | ✓ | ✓ | / |
| Monobactams | ✓ | / | ✓ | / | ✗ |
| Nitroimidazoles | / | / | / | / | / |
| Oxazolidinones | ✓ | ✓ | ✓ | ✓ | / |
| Penicillins | ✓ | ✓ | ✓ | ✓ | / |
| Polymyxins | / | ✓ | ✓ | ✓ | / |
| Rifamycins | / | ✓ | ✓ | ✓ | / |
| Tetracyclines | ✓ | ✓ | ✓ | ✓ | / |
| Non-sulfonamide (sulfa drug), non-trimethoprim urinary tract agents | / | / | / | / | ✗ |
| Pleuromutilins (e.g., lefamulin) | / | / | ✓ | / | / |
| Topical antibacterials **LF** | ✗ | ✗ | / | / | ✗ |
| Other routes of administration | / | / | ✓ | / | / |
| **ANTIVIRALS (NON-HIV)** | | | | | |
| For influenza | ✓ | ✓ | ✓ | ✓ | ✓ |
| For herpes simplex | ✓ | ✓ | ✓ | ✓ | / |
| For cytomegalovirus | ✓ | ✓ | ✓ | ✓ | / |
| For hepatitis C and respiratory syncytial virus (RSV) | ✓ | ✓ | ✓ | ✓ | / |
| For hepatitis B | / | ✓ | ✓ | ✓ | / |
| Interferon alfa 2a and alfa 2b **LF** | ✗ | ✗ | ✗ | ✗ | ✗ |
| For hepatitis C | ✓ | ✓ | ✓ | ✓ | ✓ |

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|---|---|---|---|---|---|
| **PHARMACOLOGY AND OUTPATIENT PARENTERAL ANTIMICROBIAL THERAPY (OPAT)** | | | | | |
| Susceptibility testing | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Drug resistance | ✓ | ✓ | ✓ | ✓ | ⊘ |
| ADME (absorption, distribution, metabolism, and excretion) | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| Dosing | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Drug interactions | ✓ | ✓ | ✓ | ✓ | ✓ |
| Toxicity | ✓ | ✓ | ✓ | ✓ | ✓ |
| Outpatient parenteral antimicrobial therapy | ✓ | ✓ | ✓ | ✓ | ⊘ |

| **VIRAL DISEASES** *(7% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **DNA VIRUSES** | | | | | |
| Herpesviruses | ✓ | ✓ | ✓ | ⊘ | ⊘ |
| Adenovirus **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Papillomavirus | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| Polyomavirus **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Poxviruses **LF** | ⊘ | ✗ | ✗ | ⊘ | ✗ |
| Hepadnaviridae | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Parvovirus **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |

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| **VIRAL DISEASES** *continued…* *(7% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **RNA VIRUSES** | | | | | |
| Reoviridae (e.g., rotavirus) LF | ⊘ | ✗ | ✗ | ✗ | ✗ |
| Togaviridae (e.g., chikungunya) LF | ⊘ | ✗ | ✗ | ✗ | ✗ |
| Flaviviridae | ✓ | ✓ | ⊘ | ✓ | ⊘ |
| Coronaviridae LF | ⊘ | ✗ | ✗ | ✗ | ✗ |
| Paramyxoviridae LF | ⊘ | ✗ | ✗ | ✗ | ✗ |
| Rhabdoviridae LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Filoviridae (hemorrhagic fever viruses) LF | ✓ | ⊘ | ⊘ | ⊘ | ⊘ |
| Orthomyxoviridae (influenza) | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Bunyaviridae LF | ✗ | ✗ | ✗ | ✗ | ✗ |
| Arenaviridae (e.g., lymphocytic choriomeningitis virus) LF | ⊘ | ✗ | ✗ | ✗ | ✗ |
| Non-HIV Retroviridae LF | ⊘ | ⊘ | ✗ | ⊘ | ✗ |
| Picornaviridae LF | ⊘ | ✗ | ✗ | ✗ | ✗ |
| Calciviridae LF | ⊘ | ✗ | ✗ | ⊘ | ✗ |
| Hepatitis E LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| **PRIONS** | | | | | |
| Prions LF | ⊘ | ⊘ | ✗ | ⊘ | ✗ |

| **TRAVEL AND TROPICAL MEDICINE** *(5% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **PROTOZOAL INTESTINAL INFECTIONS** | | | | | |
| *Balantidium coli* LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| *Blastocystis hominis* LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| *Cryptosporidium parvum* and *C. hominus* LF | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| *Cyclospora cayetanensis* LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| *Cystoisospora (Isospora) belli* LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |

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|---|---|---|---|---|---|
| **PROTOZOAL INTESTINAL INFECTIONS** *continued…* | | | | | |
| *Dientamoeba fragilis* **LF** | ⊘ | ✗ | ✗ | ✗ | ✗ |
| *Entamoeba histolytica* (amebiasis) | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| Giardiasis | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| Microsporidiosis **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| **PROTOZOAL EXTRAINTESTINAL INFECTIONS** | | | | | |
| Amebic meningoencephalitis **LF** | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Babesiosis **LF** | ✓ | ⊘ | ⊘ | ⊘ | ⊘ |
| Leishmaniasis **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Malaria | ✓ | ✓ | ✓ | ✓ | ✓ |
| Toxoplasmosis | ✓ | ✓ | ✓ | ✓ | ⊘ |
| *Trichomonas vaginalis* | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| Trypanosomiasis (general) **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| **NEMATODE INTESTINAL INFECTIONS** | | | | | |
| Anisakiasis **LF** | ⊘ | ✗ | ✗ | ⊘ | ✗ |
| *Ascaris lumbricoides* (ascariasis) **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| *Capillaria philippinesis* (capillariasis) **LF** | ✗ | ✗ | ✗ | ✗ | ✗ |
| *Enterobius vermicularis* (pinworm) **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Hookworm **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| *Strongyloides stercoralis* | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| *Trichuris trichiura* (whipworm) **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| **NEMATODE EXTRAINTESTINAL INFECTIONS** | | | | | |
| *Angiostrongylus cantonensis* **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Bayliascariasis (raccoon roundworm) **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Cutaneous larva migrans (dog and cat hookworm) **LF** | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |

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| **NEMATODE EXTRAINTESTINAL INFECTIONS** *continued…* | | | | | | |
| *Dracunculus medinensis* (Guinea worm) | LF | ✗ | ✗ | ✗ | ✗ | ✗ |
| Filariasis | LF | / | / | / | / | ✗ |
| *Gnathostoma spinigerum* | LF | / | ✗ | ✗ | ✗ | ✗ |
| Toxocariasis | LF | / | / | / | / | ✗ |
| *Trichinella spiralis* (trichinellosis) | LF | / | / | / | / | ✗ |
| **CESTODE INFECTIONS** | | | | | | |
| *Diphyllobothrium latum* (fish tapeworm) | LF | / | / | / | / | ✗ |
| *Hymenolepis* (dwarf tapeworm) | LF | ✗ | ✗ | ✗ | ✗ | ✗ |
| *Echinococcus granulosus* (hydatid disease) | LF | / | / | / | / | / |
| *Echinococcus multilocularis* (alveolar disease) | LF | / | / | / | / | ✗ |
| *Taenia saginata* (beef tapeworm) | LF | / | / | / | / | ✗ |
| *Taenia solium* (pork tapeworm; intestinal) | LF | / | / | / | / | ✗ |
| **TREMATODE INFECTIONS (FLUKES)** | | | | | | |
| *Clonorchis sinensis* (Chinese liver fluke) | LF | / | ✗ | ✗ | / | ✗ |
| *Fasciolopsis buski* (intestinal fluke) | LF | ✗ | ✗ | ✗ | ✗ | ✗ |
| *Fasciola hepatica* and *F. gigantica* (sheep liver fluke) | LF | / | ✗ | ✗ | / | ✗ |
| *Paragonimus westermani* (lung fluke) | LF | / | ✗ | ✗ | / | ✗ |
| Schistosomiasis (general) | LF | / | / | / | / | / |
| **ECTOPARASITIC INFECTIONS** | | | | | | |
| Myiasis (human botfly or tumbu fly) | LF | / | / | / | / | ✗ |
| *Pediculus humanus* (body, head, and pubic lice) | LF | / | / | / | / | ✗ |
| Tick bites – identification and tick paralysis | | ✓ | ✓ | ✓ | ✓ | / |

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|---|---|---|---|---|---|
| **ECTOPARASITIC INFECTIONS** *continued…* | | | | | |
| Tungiasis (*Tunga penetrans*) LF | ⁄ | ✗ | ✗ | ⁄ | ✗ |
| Bed bugs | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| **GENERAL PRINCIPLES OF TRAVEL MEDICINE** | | | | | |
| Pretravel preparation | ✓ | ✓ | ✓ | ✓ | ⁄ |
| Post-travel illness | ✓ | ✓ | ✓ | ✓ | ⁄ |
| Immigrants, refugees, and adoptees | ✓ | ✓ | ✓ | ✓ | ⁄ |
| Travelers with specific needs LF | ⁄ | ⁄ | ⁄ | ✓ | ⁄ |

| **FUNGI** *(5% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **YEASTS** | | | | | |
| *Candida* | ✓ | ✓ | ✓ | ✓ | ⁄ |
| *Cryptococcus* | ✓ | ✓ | ✓ | ✓ | ⁄ |
| Other yeasts (including *Trichosporon* and *Saccharomyces*) LF | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| **ENDEMIC MYCOSES** | | | | | |
| *Histoplasma* | ✓ | ✓ | ✓ | ⁄ | ⁄ |
| *Blastomyces dermatitidis* LF | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| *Coccidioides immitis* (*C. posadasii*) LF | ✓ | ✓ | ✓ | ✓ | ⁄ |
| *Sporothrix schenckii* LF | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| *Paracoccidioides brasiliensis* LF | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| *Talaromyces (Penicillium) marneffei* LF | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |

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| **FUNGI** *continued…* *(5% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **MOLDS** | | | | | |
| *Aspergillus* | ✓ | ✓ | ✓ | ✓ | ✓ |
| Hyaline molds **LF** | ✓ | ✓ | ✓ | ✓ | ✗ |
| Agents of zygomycosis (mucormycosis) **LF** | ✓ | ✓ | ✓ | ✓ | ✓ |
| Dematiaceous molds (*Bipolaris, Exophyla*, and others) **LF** | ✓ | ✗ | ✓ | ✓ | ✗ |
| **SUPERFICIAL AND SUBCUTANEOUS MYCOSES** | | | | | |
| Mycetoma **LF** | ✓ | ✓ | ✓ | ✓ | ✗ |
| Chromoblastomycosis **LF** | ✓ | ✗ | ✗ | ✓ | ✗ |
| *Malassezia* **LF** | ✓ | ✓ | ✓ | ✓ | ✗ |
| Dermatophytes | ✓ | ✓ | ✓ | ✓ | ✗ |
| **PNEUMOCYSTIS JIROVECII PNEUMONIA (PJP)** | | | | | |
| *Pneumocystis jirovecii* pneumonia (PJP) | ✓ | ✓ | ✓ | ✓ | ✓ |
| **THERAPY** | | | | | |
| Agents | ✓ | ✓ | ✓ | ✓ | ✓ |
| Pharmacokinetics | ✓ | ✓ | ✓ | ✓ | ✓ |
| Drug interactions | ✓ | ✓ | ✓ | ✓ | ✓ |
| Spectrum | ✓ | ✓ | ✓ | ✓ | ✓ |
| Toxicity | ✓ | ✓ | ✓ | ✓ | ✓ |
| Prophylaxis | ✓ | ✓ | ✓ | ✓ | ✓ |
| Susceptibility testing | ✓ | ✓ | ✓ | ✓ | ✓ |
| Drug resistance | ✓ | ✓ | ✓ | ✓ | ✓ |
| **DIAGNOSTIC TESTING** | | | | | |
| Histopathology | ✓ | ✓ | ✓ | ✓ | ✗ |
| Culture | ✓ | ✓ | ✓ | ✓ | ✓ |

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| | | | | | |
|---|---|---|---|---|---|
| Nonculture methods | ✓ | ✓ | / | / | / |

| **FUNGI** *continued…* *(5% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **SYNDROMES** | | | | | |
| Mucosal | ✓ | / | / | / | / |
| Skin | / | / | / | / | ✗ |
| Pulmonary | ✓ | ✓ | ✓ | ✓ | / |
| Central nervous system and eyes | ✓ | ✓ | ✓ | ✓ | / |
| Cardiac LF | / | / | / | / | ✗ |
| Disseminated | ✓ | ✓ | ✓ | ✓ | / |

| **IMMUNOCOMPROMISED HOST (NON-HIV INFECTION)** *(5% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **PRIMARY IMMUNODEFICIENCY** | | | | | |
| Anatomic lesions LF | / | / | / | / | / |
| Lymphocyte defects LF | / | / | / | / | / |
| Combined immunodeficiency syndromes (including severe combined immunodeficiency [SCID]) LF | / | / | / | / | ✗ |
| Phagocytes LF | / | ✗ | ✗ | ✗ | ✗ |
| Complement deficiencies LF | / | / | ✗ | / | ✗ |
| NK cell deficiencies LF | ✗ | ✗ | ✗ | ✗ | ✗ |
| **HEMATOLOGIC MALIGNANCIES AND STEM CELL TRANSPLANTATION** | | | | | |
| Infections associated with chemotherapy-induced neutropenia | ✓ | ✓ | ✓ | ✓ | / |
| Stem cell transplant LF | / | / | ✓ | / | / |
| Syndromes LF | / | / | / | / | / |
| Noninfectious conditions | / | / | / | / | / |

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| **IMMUNOCOMPROMISED HOST (NON-HIV INFECTION)** *continued…* *(5% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **SOLID ORGAN TRANSPLANTATION** | | | | | |
| Donor-derived infections LF | ✓ | ✓ | ✓ | ✓ | ✗ |
| Surgical site infections | ✓ | ✓ | ✓ | ✓ | ✓ |
| Hospital-acquired infections | ✓ | ✓ | ✓ | ✓ | ✓ |
| Opportunistic infections | ✓ | ✓ | ✓ | ✓ | ✓ |
| Noninfectious conditions LF | ✓ | ✓ | ✓ | ✓ | ✗ |
| **COMPLICATIONS OF IMMUNOSUPPRESSION IN NON-TRANSPLANT POPULATION (DISEASE-MODIFYING AGENTS, INCLUDING TUMOR-NECROSIS FACTOR [TNF] BLOCKERS, CORTICOSTEROIDS)** | | | | | |
| Bacteria | ✓ | ✓ | ✓ | ✓ | ✓ |
| Fungi | ✓ | ✓ | ✓ | ✓ | ✓ |
| Viruses | ✓ | ✓ | ✓ | ✓ | ✓ |
| Parasites and protozoa LF | ✓ | ✓ | ✓ | ✓ | ✗ |
| **INFECTION PREVENTION IN THE IMMUNOSUPPRESSED HOST** | | | | | |
| Immunizations | ✓ | ✓ | ✓ | ✓ | ✓ |
| Antimicrobials | ✓ | ✓ | ✓ | ✓ | ✓ |
| Environmental control | ✓ | ✓ | ✓ | ✓ | ✓ |

| **VACCINATIONS** *(4% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **ACTIVE IMMUNIZATIONS (VACCINES)** | | | | | |
| Pneumococcal | ✓ | ✓ | ✓ | ✓ | ✓ |
| Influenza | ✓ | ✓ | ✓ | ✓ | ✓ |
| Tetanus, diphtheria, and acellular pertussis | ✓ | ✓ | ✓ | ✓ | ✗ |
| *Haemophilus influenzae* LF | ✗ | ✗ | ✓ | ✓ | ✗ |
| Hepatitis B | ✓ | ✓ | ✓ | ✓ | ✗ |
| Hepatitis A | ✓ | ✓ | ✓ | ✓ | ✗ |
| Measles, mumps, and rubella LF | ✓ | ✓ | ✓ | ✓ | ✗ |

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| **VACCINATIONS** *continued…* *(4% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **ACTIVE IMMUNIZATIONS (VACCINES)** *continued…* | | | | | |
| Polio **LF** | ✗ | ✗ | ⁄ | ⁄ | ✗ |
| Meningococcal | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| Rabies **LF** | ✓ | ⁄ | ✓ | ✓ | ✗ |
| Varicella | ⁄ | ⁄ | ✓ | ✓ | ✗ |
| Herpes zoster | ✓ | ⁄ | ✓ | ✓ | ✗ |
| Human papillomavirus (HPV) **LF** | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| **PASSIVE IMMUNIZATIONS** | | | | | |
| Varicella-zoster virus | ✓ | ⁄ | ✓ | ✓ | ✗ |
| Rabies **LF** | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| Hepatitis B | ⁄ | ✓ | ✓ | ⁄ | ✗ |
| Tetanus **LF** | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| Immune globulin **LF** | ⁄ | ⁄ | ⁄ | ⁄ | ✗ |
| Other (including cytomegalovirus immune globulin) **LF** | ✗ | ✗ | ⁄ | ✗ | ✗ |

| **INFECTION PREVENTION AND CONTROL** *(5% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **APPLIED EPIDEMIOLOGY AND BIOSTATISTICS** | | | | | |
| Outbreak investigation/ management | ✓ | ✓ | ✓ | ✓ | ⁄ |
| Healthcare quality improvement | ✓ | ⁄ | ✓ | ⁄ | ⁄ |
| **HEALTHCARE-ASSOCIATED INFECTIONS (HAIs) OF ORGAN SYSTEMS** | | | | | |
| HAIs related to intravascular devices, short-term and long-term (including contaminated infusions) | ✓ | ✓ | ✓ | ✓ | ⁄ |
| HA urinary tract and pneumonia infections | ✓ | ✓ | ✓ | ✓ | ⁄ |

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| **INFECTION PREVENTION AND CONTROL** *continued…* *(5% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **HEALTHCARE-ASSOCIATED INFECTIONS (HAIs) OF ORGAN SYSTEMS** *continued…* | | | | | |
| HA surgical site infections | ✓ | ✓ | ✓ | ✓ | ⊘ |
| HAIs of other organ systems (including gastrointestinal and central nervous system) | ✓ | ✓ | ✓ | ✓ | ⊘ |
| **EPIDEMIOLOGY AND PREVENTION OF HAIs CAUSED BY SPECIFIC PATHOGENS** | | | | | |
| Bacterial infections | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Mycobacterial and fungal infections | ✓ | ✓ | ✓ | ✓ | ⊘ |
| Viral infections | ✓ | ✓ | ✓ | ✓ | ⊘ |
| **EPIDEMIOLOGY AND PREVENTION OF HAIs IN SPECIAL PATIENT POPULATIONS** | | | | | |
| HAIs in obstetrics LF | ⊘ | ⊘ | ⊘ | ⊘ | ⊘ |
| HAIs in neoplastic diseases | ✓ | ✓ | ✓ | ✓ | ⊘ |
| HAIs in organ transplantation and hematopoietic stem cell transplantation | ✓ | ✓ | ✓ | ✓ | ⊘ |
| **EPIDEMIOLOGY AND PREVENTION OF HAIs IN THERAPEUTIC PROCEDURES** | | | | | |
| Infection risks of endoscopy LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| HAIs associated with hemodialysis and peritoneal dialysis | ✓ | ✓ | ✓ | ✓ | ⊘ |
| HAIs related to other procedures (including cardiology and respiratory therapy) LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| HAIs after transfusion of blood and blood products LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Fecal transplantation LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| **PREVENTION OF HAIs RELATED TO HOSPITAL SUPPORT SERVICES** | | | | | |
| Environmental services LF | ⊘ | ⊘ | *Not Applicable* | ⊘ | ✗ |
| Disinfection and sterilization LF | ⊘ | ⊘ | *Not Applicable* | ⊘ | ⊘ |

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|---|---|---|---|---|---|
| **EPIDEMIOLOGY AND PREVENTION OF HAIS IN HEALTHCARE WORKERS** | | | | | |
| Prevention of occupationally acquired viral hepatitis in healthcare workers LF | ✓ | ✓ | ✓ | ✓ | ⊘ |
| 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** | | | | | |
| 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 LF | ✗ | ✗ | ✗ | ⊘ | ✗ |

| **INTERNAL MEDICINE AND NON-INFECTIOUS SYNDROMES** *(18% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **GENERAL INTERNAL MEDICINE** | | | | | |
| Malignancies | ✓ | ✓ | ⊘ | ⊘ | ✗ |
| Hemophagocytic lymphohistiocytosis (Hemophagocytic syndrome) LF | ⊘ | ⊘ | ⊘ | ⊘ | ✗ |
| Noninfectious inflammatory disorders (e.g., vasculitis, granulomatosis with polyangiitis, eosinophilic granulomatosis with polyangiitis, aortitis) | ✓ | ⊘ | ⊘ | ⊘ | ⊘ |
| Dermatologic disorders | ✓ | ⊘ | ⊘ | ⊘ | ✗ |

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| **INTERNAL MEDICINE AND NON-INFECTIOUS SYNDROMES** *continued…* *(18% of exam)* | **Diagnosis** | **Testing** | **Treatment/ Care Decisions** | **Risk Assessment/ Prognosis/ Epidemiology** | **Pathophysiology/ Basic Science** |
|---|---|---|---|---|---|
| **GENERAL INTERNAL MEDICINE** *continued…* | | | | | |
| Hematologic disorders | ✓ | ✓ | ✓ | ✓ | ✓ |
| Noninfectious central nervous system disease | ✓ | ✓ | ✓ | ✓ | ✗ |
| Bites, stings, and toxins | ✓ | ✓ | ✓ | ✓ | ✗ |
| Drug fever | ✓ | ✓ | ✓ | ✓ | ✗ |
| Ethical and legal decision making | *Not Applicable* | | ✓ | ✓ | *Not Applicable* |
| **SURGICAL INFECTIONS** | | | | | |
| Orthopedic | ✓ | ✓ | ✓ | ✓ | ✓ |
| Neurosurgery | ✓ | ✓ | ✓ | ✓ | ✓ |
| Ear, nose, and throat | ✓ | ✓ | ✓ | ✓ | ✗ |
| General surgery and intra-abdominal | ✓ | ✓ | ✓ | ✓ | ✓ |
| Thoracic and cardiothoracic | ✓ | ✓ | ✓ | ✓ | ✓ |
| Urologic | ✓ | ✓ | ✓ | ✓ | ✓ |
| Obstetrics and gynecologic LF | ✓ | ✓ | ✓ | ✓ | ✗ |
| Plastic and reconstructive LF | ✓ | ✓ | ✓ | ✓ | ✗ |
| Vascular | ✓ | ✓ | ✓ | ✓ | ✓ |
| **CRITICAL CARE MEDICINE** | | | | | |
| 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 LF | ✓ | ✓ | ✓ | ✓ | ✗ |
| E-cigarette or vaping product use–associated lung injury (EVALI) LF | ✓ | ✓ | ✓ | ✗ | ✗ |