INTRODUCTION

Infectious disease medicine requires an understanding of the microbiology, prevention, and management of disorders caused by viral, bacterial, fungal, and parasitic infections, including appropriate use of antimicrobial agents, vaccines, and other immunobiologic agents. Important elements include the environmental, occupational, and host factors that predispose to infection, as well as basic principles of epidemiology and transmission of infection.

The general internist should be able to provide appropriate preventive (including immunization and chemoprophylaxis), diagnostic, and therapeutic care for most infections. He or she should also be able to evaluate symptoms that may be caused by a wide range of infectious disorders. General internists should also learn about diagnostic and general management approaches to patients with early and advanced HIV infection.

EDUCATIONAL GOALS AND OBJECTIVES

Patient Care

In the four-week rotation in infectious diseases, residents will be evaluated on their knowledge and understanding of the following:

- Assessing the appearance of infected and non-infected skin lesions.
- Recognizing physical signs of intravascular infections (e.g., endocarditis).
- Recognizing signs of infected medical devices.
- Distinguishing common rashes associated with infections and with antibiotic allergy.
- Interpreting the appearance of respiratory secretions and other potentially infected body fluids.
- Recognizing the psychological context of certain chronic infectious diseases (e.g., AIDS, viral hepatitis) and distinguish psychiatric morbidity from organic consequences of the disease.
- Selecting radiologic diagnostic tools to diagnose infectious conditions and their common complications.
- Management of infectious conditions

PGY-3 residents are expected to:

- Recognize and explain the importance of lifestyle and life events in the risk for specific infections, including intravenous drug use, sexual orientation or behavior, socio-economic status, travel, animal exposure, and environmental exposure.
- Recognize the role of the following in predisposing or altering the presentation of infectious diseases: advanced age, diabetes mellitus, malnutrition, renal failure, COPD, organ and stem cell transplantation, and congenital or acquired immunodeficiency (including HIV).
- Take a thorough exposure history for infectious diseases.
- Construct chronologies of symptoms (e.g., fever), possible exposures, risk factors, and prior treatments.
- Make use of multiple sources of information to assemble a patient database, including previous records, medication administration records, flow charts and on-line reports.
Medical Knowledge

Residents will be evaluated on their knowledge and understanding of the following:
- The pharmacology of antibiotics and classifications of bacteria
- Basic principles of antibiotic prescribing
- Virulence factors of clinically significant organisms
- Knowledge of epidemiology and microbiology of antibiotic-resistant bacteria
- Recognition of common clinical presentations and cardinal manifestations of infectious diseases
- Ability to compose a prioritized patient care plan
- Ability to appropriate select, recommend, and interpret laboratory tests

PGY-3 residents are expected to understand the basic pathophysiology and natural course of:
- The sepsis syndrome
- Upper and Lower respiratory tract infections
- Urinary tract infection
- Skin and soft tissue infections
- Bone and joint infections
- Intravascular infection (including cardiovascular infection)
- CNS infection
- Gastrointestinal infection (food poisoning, hepatitis, and colitis)
- Intra-abdominal infection (including peritonitis)
- Systemic and opportunistic infections, including fungal and viral (EBV, CMV) pathogens
- Infection of the reproductive tract (including STDs)
- Infections of the eye

Practice-Based Learning

In the course of the rotation, residents will be evaluated on the following:
- The ability to investigate and evaluated their patient care practices
- The integration of scientific evidence into the care of patients
- Self-improvement in the understanding of health issues related to infectious diseases

PGY-3 residents are expected to:
- Constructively respond to and internalize feedback from faculty, nursing, and allied healthcare providers.
- Perform a literature search to answer clinical questions
- Interpret microbiological data such as pathogens identification and antimicrobial sensitivities
- Facilitate team member education

Interpersonal and Communication Skills

In the course of the rotation, residents will be evaluated on the following:
- Communication of potential risks of therapy, including antibiotic toxicities, to patients and their caretakers
- Communicating a plan of action and follow-up to patients and other team members
- Learning to effectively and efficiently provide evaluation and management recommendations to the primary care physician

PGY-3 residents are expected to:
- Adapt history-taking skills to the mental status and psychosocial presentation of the patient and family.
- Respectfully communicate with Microbiology Laboratory personnel to obtain timely information about microorganisms detected in patient samples.
Effectively communicate with patients and other professionals regarding risks and benefits of diagnostic evaluation and testing, incorporating indications and contraindications for interventions.

Understand the essential elements of a thoughtful consultation report in order to be useful to the consulting physician and the patient.

**Professionalism**

In the course of the rotation, residents will be evaluated on the following:

- Recognition of potential problems that may impact on the treatment of infectious diseases and their complications, including personal economic factors, complexities of family care at home, and other factors affecting adherence with medical therapy.
- Appreciation of how personal and cultural characteristics impact efforts to prevent the spread of communicable diseases.
- Understanding of appropriate indications to discuss DNR status and end-of-life issues with patients and families, as they pertain to the treatment of opportunistic and hospital-acquired infections.
- Interactions with patients, colleagues, and hospital staff
- Maintaining patient confidentiality and HIPAA guidelines
- Sensitivity to diversity

PGY-3 residents are expected to:

- Understand ethical issues relating to the transmission of an infectious agent and the responsibility of the physician to protect uninfected individuals and the public.
- Understand the ethical conflict between the care of the individual and the good of the community as it affects antimicrobial therapy, preventive measures, and vaccination.
- Demonstrate behaviors that reflect a commitment to continuous professional development and ethical practice

**Systems-Based Practice**

In the course of the rotation, residents will be evaluated on the following:

- Understanding of the contexts and systems in which healthcare is provided and the ability to apply this knowledge to improve and optimize patient care
- Collaboration with other members of the health team to assist patients in dealing effectively with complex systems and to improve systematic processes of care
- The ability to perform, in a safe manner, the appropriate diagnostic and therapeutic procedures in a cost effective environment without compromising the quality of patient care

PGY-3 residents are expected to:

- Direct, cost-effective diagnostic and treatment plans for common infections, prioritizing cost-effective interventions.
- Effectively access and mobilize emergent care services. Recognize when the urgency of an infectious disease requires ongoing monitoring of or direct action within the healthcare system in order to assure timely management of potentially life-threatening infections.
- Identify psychosocial support/hospice care options for patients with terminal infections.
- Know roles of the physician/radiology/surgery/social work/nursing/anesthesiology in the team management of patients.
- Reflect familiarity with the system for initiating and managing intravenous antibiotic therapy in the outpatient setting.
- Implement appropriate infection control systems and actions consistent with public health and institutional policies.
- Generate documentation reflecting requirements for billing compliance in consultative care.