

Inpatient Consultation Rotation Curriculum

Educational Purpose and Goals

Infectious Diseases physicians are often called on to serve as consultants to diagnose and treat hospitalized patients with a variety of Infectious Diseases. The purpose of this rotation is to allow the fellow to develop an in depth understanding of the pathophysiology of infectious diseases problems in hospitalized patients, skill as a consultant, and to independently diagnose and manage inpatients with a broad range of infectious diseases problems over the course of the program.

At the end of the program all fellows will be able to provide Infectious Diseases related care to patients with fever, upper respiratory, pleuropulmonary, and bronchial infections, urinary tract infections, peritonitis and other intra abdominal infections, cardiovascular infections, central nervous system infections, skin and soft tissue infections, prosthetic device infections, infections related to trauma and bites, gastrointestinal infections, bone and joint infections, infections of the reproductive organs, viral hepatitis, sepsis syndromes, nosocomial infections, HIV related opportunistic infections, infections in immunocompromised or neutropenic patients, infections in patients with leukemia or lymphoma, infections in geriatric patients, and infections in parenteral drug abusers. A key goal is diagnostic accuracy, appropriate utilization of radiographic and laboratory testing, and appropriate cost effective therapy. Additional goals include understanding disease pathophysiology, prevention, epidemiology, pharmacology, and the moral and ethical aspects of medicine as they relate to the infectious diseases inpatients.

Principal Teaching Methods

Supervised direct patient care: Fellows will be directly supervised by faculty members. Attending faculty members include Drs. Havlichek and Nettleman (the MSU Division of Infectious Diseases), and Drs. Gulick, Farnum, and Lampen (MSU College of Osteopathic Medicine). Drs. Havlichek, and Nettleman work primarily at Sparrow Hospital and Drs Gulick, Farnum and Lampen work primarily at Ingham Regional Medical Center. All rotations occur in Lansing Michigan. All physicians work in both hospitals as well as share weekend and holiday coverage. In addition, the MSU Infectious Diseases Division is currently recruiting for 2 junior faculty members.

Patients will be seen and examined by the fellows who will formulate a hypothesis and a treatment plan and present it to the attending. Teaching will be integrated with patient case discussions. Both the fellow and the attending will examine the patient and discuss the patients care and the

resident's assessment. While on this service fellows will participate in all conferences. Teaching will occur as a blend of teaching and management rounds and will take place to at least 4 ½ hours per week beyond patient care time.

The principle textbook for the rotation is Mandell's Principles and Practice of Infectious Diseases.

Educational Content

Mix of diseases: Fellows are exposed to a wide variety of infectious diseases problems on the inpatient rotation. These include, but are not limited to, the febrile patient, upper respiratory, pleuropulmonary, and bronchial infections, urinary tract infections, peritonitis and other intra abdominal infections, cardiovascular infections, central nervous system infections, skin and soft tissue infections, prosthetic device infections, infections related to trauma and bites, gastrointestinal infections, bone and joint infections, infections of the reproductive organs, viral hepatitis, sepsis syndromes, nosocomial infections, HIV related opportunistic infections, infections in immunocompromised or neutropenic patients, infections in patients with leukemia or lymphoma, infections in geriatric patients, and infections in parenteral drug abusers.

Patient Characteristics: Patients are referred to the inpatient consultation service from numerous services. These include the MSU Internal Medicine Residency program, other residency programs sponsored or affiliated with MSU, the MSU Health Team, and private physicians. Patients include both gender groups as well as individuals of a broad spectrum of ethnic, racial and socioeconomic backgrounds.

Learning venues: All inpatient activity will take place at Edward Sparrow Hospital and Ingham Medical Center in Lansing Michigan. Fellows will learn procedures associated with the practice of Infectious Diseases including proper specimen collection, skin/abscess aspiration, intravenous line removal.

Conferences: Fellows will participate in all conferences during this rotation including Journal Club, Core Conference, Pathophysiology Conference, and Clinical Conference.

Structure of rotation: Fellows will work under the direct supervision of one of the attending physicians. The attending physician call schedule usually has physicians on call for 1-3 weeks. Fellows will be notified of consultations from the hospital, answering service, or the main office and be responsible for initial patient assessment. Fellows will be on call at night from home for any emergencies approximately every other week. Situations requiring immediate evaluation (thus "coming in") to date have been less than one every 2 months.

Care for patients will include:

1. A complete work-up with a history and physical examination.
2. Daily patient follow-up including appropriate medical record documentation.
3. Discussion with the attending, all aspects of a patients' illness as it relates to progress and treatment plans.
4. Attend inpatient rounds with the attending physician on weekdays and assigned weekends (1/4).
5. Present significant patient related events that occur during nighttime hours to ensure information transfer and continuity of care.

Principal Ancillary Educational Materials

The principle text of the rotation is Mandells' Principles and Practice of Infectious Diseases. Fellows have access to web based resources and other texts and videos through the hospital libraries. Fellows have access to the Rush Infectious Diseases Board Review program.

Methods of Evaluation

Fellow Performance: Faculty will complete competency –based resident evaluation forms and provide feedback to the fellow. Evaluations are forwarded to the fellowship office for incorporation into the fellows performance file and are discussed at the semi-annual review. Each 6 months the faculty will perform medical record review of 3 randomly selected patient charts. Charts will be reviewed for quality of history documentation, accuracy of physical examination, quality of differential diagnosis generation, and management plan. Semiannually the fellow will be evaluated by the program director in a formal, written evaluation session. These evaluations will be transcribed and signed by both the residency program director and the fellow.

Program and Faculty Performance The fellow will summarize and accurately describe faculty performance, facilities, and experience and return it to the program office. The Fellowship Training and Evaluation Committee will review results annually.

Institutional Resources: Strengths and Limitations

Strengths: A commitment to high quality inpatient care and education.

Limitations: The fellows will rotate off site for experiences in Bone Marrow Transplantation and Solid Organ Transplantation.

Rotation Specific Competency Objectives

Patient Care

F-1 fellows are expected to precisely and logically obtain patient histories, efficiently perform accurate physical exams approaching the level of a sub-specialist, demonstrate sound clinical reasoning in ambiguous situations, possess knowledge of common ID syndromes/diseases sufficient to establish a differential diagnosis, establish patient monitoring procedures to determine need for changes in therapeutic programs, observe patients for adverse side effects, and apply public health policies to patient care.

Fellows will be responsible for medical record documentation, as appropriate, under the supervision of the medical attending.

In addition to the F-1 expectations, F-2 fellows are expected to appropriately manage common and uncommon ID syndromes/diseases sufficient to establish a subspecialty focused differential diagnosis, establish an appropriate management plan to determine need for changes in diagnostic and therapeutic interventions, observe patients for adverse side effects, and apply public health policies to patient care.

By the F-2 year, the Infectious Diseases Fellow will be able to perform infectious diseases-related procedures.

Medical Knowledge

F-1 fellows will possess knowledge of and demonstrate growing understanding of basic and clinical sciences, knowledge of urgent and non-urgent Infectious Disease conditions, lead teaching of residents and students. Fellows will display self-initiative to stay current with new medical literature, and demonstrate knowledge on the impact of study design on validity or applicability to practice. Fellows will read appropriate texts and articles and be prepared to discuss key literature.

In addition to F-1 expectations, F-2 fellows are expected to demonstrate sufficient knowledge to sit for the ABIM certification examination, and lead teaching of residents, students and the F-1 fellow.

Interpersonal and Communication Skills

F-1 fellows will engage in shared decision making, conduct family meetings as appropriate, successfully negotiate nearly all difficult patient encounters unaided, function as a team leader with minimal reliance upon attending physicians, thoroughly educate patients and their families using education as a form of intervention and partnering, effectively communicate with

referring physicians. Fellows will be able to demonstrate appropriate consultative principles of communication with other physicians and responsiveness to professional consultative requests.

In addition to F-1 requirements, the F-2 fellow will demonstrate the ability to sensitively communicate in a patient centered manner issues concerning end-of -life care.

Professionalism

F-1 fellows are expected to exhibit honesty and trustworthiness, reliability in their clinical duties, as well as demonstrate integrity, compassion, and respect in their interactions with patients and colleagues from the same or different cultures/ages/sexes. Fellows will be responsible for prompt completion of medical records and proper documentation in the medical record.

In addition to F-1 requirements, the F-2 fellow will demonstrate professional service to Infectious Diseases community through participation on appropriate committees, conference participation, and outside service.

Practice Based Learning and Improvement

F-1 fellows will use consulting services to improve patient care and self knowledge, appraise and assimilate scientific literature, integrate evidence based medicine, expert opinion and professional judgment, suggest and utilize data driven protocols, respond to the questions of the consulting physician, demonstrate self-initiative in the use of information technology available via the hospital library, the MSU electronic library, or the internet to access and retrieve materials for performance improvement. Fellows are expected to show progressive self-learning throughout the rotation, with emphasis on learning from any cognitive or procedural errors.

In addition to F-1 requirements, the F-2 fellow is expected to work with and/or lead teams that generate a constructive learning and practice environment.

Systems Based Practice

The F-1 fellow will demonstrate leadership in management of complex patients as appropriate, partner with case managers and other health providers to identify and act on improvement opportunities in the health care system, practice within external regulations and expectations, contain cost and conserve resources while preserving high quality care, ensure effective communication between providers.

In addition to F-1 requirements, the F-2 fellow will demonstrate facility with cooperative management of patients needing outpatient antibiotic therapy, home health care support, and specialized wound services.