

Infectious Disease Rotation

I. Goals and Overview

The goal of this rotation is to provide residents with an in-depth exposure to a wide variety of diagnostic, therapeutic and management problems in clinical infectious disease.

The rotation involves both inpatient consultations (Iowa Methodist Medical Center and the VA Medical Center) and participation in Infectious Diseases Clinics at Iowa Health Physicians (1221 Pleasant Street, Suite 300) and the VA Medical Center.

The course director is Lisa Veach, M.D. She can be reached at 241-4082 (Sue, office nurse) Participating ID faculty are: Lisa Veach, MD, Roger Harvey, DO, Sudhir Kumar, MD, Leyla Best, MD, and Roshan Lewis, MD.

II. Objectives

A. Antimicrobial Agents

The resident will understand the mechanism of action, spectrum of activity, clinical indications and adverse effects of antibacterial, antiviral and antifungal agents. The use of antimicrobial agents in both the inpatient and outpatient setting will be reviewed. The increasing incidence of antimicrobial resistance, mechanisms and the risk factors as well as treatment of multiply-resistant organisms will be reviewed.

B. HIV Infection

The resident will understand the epidemiology and natural history of HIV infection. The initial evaluation of a patient with HIV infection and appropriate preventative care will be reviewed. The resident will know the indications and adverse effects of the anti-HIV agents. The manifestations of opportunistic infections will be reviewed as well as the approach to diagnosis and therapy.

C. Other major clinical topics to be reviewed:

1. Fever of unknown origin
2. Endocarditis
3. Meningitis
4. Immunocompromised host
5. Sexually transmitted diseases
6. Mycobacterial infections
7. Health care associated infections
8. Diagnostic tests - gram stains, cultures, serology, etc.

III. Educational Materials

The resident will be provided with pertinent articles for review. The resident is expected to use resources available at the IMMC library and the Iowa Health Physicians offices for case-based learning. The residents is also expected to complete the assigned readings in the syllabus available on-line. Literature searches are frequently appropriate and the resident is encouraged to initiate these. Both the resident and the staff should provide articles pertinent to topics discussed on rounds.

IV. Competency-Specific Learning Objectives

Patient Care

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

- show appropriate, detailed initial evaluation and daily follow-up evaluation of hospitalized infectious disease patients.
- provide appropriate follow-up and monitoring for antimicrobial agent adverse effects and drug interactions.

Medical Knowledge

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and epidemiological sciences and the application of this knowledge to patient care. Residents are expected to:

- understand the approach to patient with *S. aureus* bacteremia.
- understand the principles of management of patient with bone, joint and soft tissue infections.
- apply the principles of optimal antimicrobial therapy and interpretation of culture results.

Practice-Based Learning & Improvement

Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:

- demonstrate the ability to utilize resources to answer clinical infectious disease questions. This is a must and is a daily expectation.
- complete the provided self-study questions.

Interpersonal and Communication Skills

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange with patients, families and professional associates.

Residents are expected to:

- show ability to discuss complex infectious disease issues with patients and families.
- communicate infectious disease consulting team plans in daily progress notes and by direct communication with the primary team.

Professionalism

Residents must demonstrate a commitment to carry out professional responsibilities, adhere to ethical principles, and demonstrate sensitivity in caring for a diverse patient population. Residents are expected to:

- demonstrate the ability to acquire sensitive information from patients (i.e. STD risks) in a respectful manner.

Systems-Based Practice

Residents must demonstrate an awareness of, and responsiveness to, the larger context and system of health care and the ability to effectively call on system resources to provide optimal care of patients. Residents are expected to:

- learn how to arrange home/outpatient IV antibiotic therapy.
- demonstrate proficiency in role as a consultant by the effective communication with primary team and coordination of care.

V. Responsibilities

The resident will meet with the staff at 8:30 a.m. at 1221 Pleasant Street, Suite 300, on the first day of the rotation for an orientation. Specific responsibilities will be discussed then but, in brief, the responsibilities are:

- A. Thorough evaluation of assigned new patient consultations both inpatient and outpatient. These will be seen together with the staff after presentation and specific recommendations will be made at that time. It is important, however, that the resident formulate their own impression and plan during their evaluation of the patient.

Residents will receive direct and indirect supervision, with direct supervision immediately available, from the Infectious Disease faculty physicians.

- B. Daily follow-up of inpatients assigned with review of x-rays, culture results, etc. All patients should be seen prior to staff rounds. Inpatient staff rounds are daily and generally begin at 9:00-9:30 a.m.
- C. Participation in Infectious Disease Clinics at the VA and in the Iowa Health Physicians office will be arranged between the resident and attending staff physician.
- D. A pre-test is given. These questions and/or MKSAP infectious disease questions will be reviewed in discussion sessions with the attending physician.

NOTE: Residents will participate in Continuity of Care Clinic during this rotation.

VI. Evaluation

At the end of the rotation, the resident will be evaluated by the supervising faculty. Personal feedback will be provided and an evaluation form will be completed and returned to the residency office. The evaluation form will be reviewed and signed by the resident.

The resident will be evaluated by faculty in each of the required six general competency areas as follows:

1. **Patient Care:** Demonstrate ability to effectively evaluate and manage patients with infectious disease conditions. Patient care skills will be evaluated through initial patient evaluations and daily inpatient rounds. The resident must demonstrate the ability to synthesize data, develop an impression and plan and provide appropriate follow-up throughout the hospital stay or outpatient work-up.
2. **Medical Knowledge:** Demonstrate ability to access and critically evaluate current medical information relevant to infectious disease. Medical knowledge will be assessed through discussions on daily patient rounds and review of pre-test/MKSAP questions. The resident is expected to read daily on this rotation.
3. **Practice-Based Learning:** Demonstrate ability to identify gaps in knowledge and skills in the care of patients with infectious disease conditions and demonstrate real-time evidence-based strategies to address these gaps.
4. **Interpersonal and Communication Skills:** Demonstrate adequate communication abilities in dealings with patients and families as evaluated during case presentations and daily inpatient rounds. Demonstrate timely and complete medical records. Precise daily inpatient notes appropriate for the Infectious Disease Consult Service are important, as well as patient communication skills.
5. **Professionalism:** Demonstrate respectful behavior towards patients and families, colleagues, nurses and other allied health personnel. Demonstrate ability to obtain and report an STD risk history in a professional, non-judgmental fashion. Always protect patient confidentiality and obtain informed consent when appropriate.
6. **Systems-Based Practice:** Demonstrate an evidence-based, cost-conscious approach to care of the Infectious Disease patient. Collaborate with nursing, social services and other allied health care providers to assure timely, comprehensive care provided. Understand the issues involved and access the resources available to provide for outpatient/home intravenous antibiotic therapy and care for the HIV patient.

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William J. Yost, MD FACP