

Infectious Diseases

Year

R-1

Location

Miami Valley Hospital (MVH)

Duration

1 Month

Faculty

John S. Czachor, MD

Thomas E. Herchline, MD

Steve Burdette, MD

Lori Elder, PhD

Office: 937-208-2873

Pager: 937-208-8000 (Hospital operator has pager #'s)

Note: Monthly on-call schedule distributed at rotation orientation with contact information.

MVH ID/HIV Clinic

Richard K. Groger, MD

James H. Galbraith, MD

Jeffrey W. Weinstein, MD

Howard F. Wunderlich, MD

Private ID Office

John S. Czachor, MD

Thomas E. Herchline, MD

Steve Burdette, MD

Reading and Testing

John S. Czachor, MD

Thomas E. Herchline, MD

Steve Burdette, MD

Description

This is a one-month rotation available to all residents (a two-week rotation is an option as well).

Credit will be granted for one month (two weeks) of meaningful patient responsibility. The rotation will familiarize residents with general infectious diseases, as well as the preparation and interpretation of gram-stained smears.

HIV/ID Clinic

The resident will participate as the patient's primary physician during these outpatient visits. The resident will see assigned patients visiting this weekly clinic, obtain or review historical and laboratory information, perform and record pertinent physical examination data, and determine an appropriate diagnostic and therapeutic plan. Findings and action plans will then be presented to attending faculty for review and approval.

The goal of this portion of the selective is to familiarize the resident with the common manifestations of HIV infection and the therapies as well as the complications of both the disease and the treatment.

During the course of these clinic sessions and at other times during the selective epidemiologic, pathophysiologic, clinical, laboratory and therapeutic features of HIV will be reviewed.

- The resident is expected to:
- Be responsible for the clinical diagnosis and treatment of all patients seen during the sessions following current protocols. Supervision will be provided by the faculty and all charts are thoroughly reviewed by the quality assurance nurse and faculty.
- Participate in laboratory diagnosis.
- Read selectively for reference purposes from standard reading sources.
- Be responsible for clinical diagnosis and treatment of all patients seen during the sessions. Supervision will be provided by the faculty.
- Complete a multiple-choice pre-and post-rotation written examination at the end of the rotation.

Private Outpatient ID Office

The resident will participate as the patient's primary physician during these outpatient visits. The resident will see assigned patients visiting this weekly clinic, obtain or review historical and laboratory information, perform and record pertinent physical examination data, and determine an appropriate diagnostic and therapeutic plan. Findings and action plans will then be presented to attending faculty for review and approval.

The goal of this portion of the selective is to familiarize the resident with the practice of continuity of care for discharged hospital patients, as well as new evaluations of outpatients. During the course of these clinic sessions and at other times during the selective epidemiologic, pathophysiologic, clinical, laboratory and therapeutic features of general ID will be reviewed.

The resident is expected to:

- Be responsible for the clinical diagnosis and treatment of all patients seen during the sessions following current protocols. Supervision will be provided by the faculty and all charts are thoroughly reviewed by the quality assurance nurse and faculty.
- Participate in laboratory diagnosis.
- Read selectively for reference purposes from standard reading sources.
- Complete a multiple-choice pre-and post-rotation written examination at the beginning and end of the rotation.

Educational Purpose and Goals

General

It is expected that each resident on the Infectious Disease rotation will acquire:

1. The knowledge of Infectious Diseases, as related to a systematic approach to the patient who may have an infectious problem by taking a thorough problem directed history, performing a careful physical examination, and generating a differential diagnosis related to infectious problems.
2. Clinical, management and interpersonal skills related to recognizing broad clinical syndromes and initiating proper empirical therapy based on a working knowledge of likely pathogens.
3. The professional attitudes and behavior necessary to treat patients with Infectious Diseases including HIV infection.
4. The experience required to become a proficient general internist.

Specific

1. To understand the etiology, pathogenesis, clinical presentation and natural history of major infectious diseases.
2. To be able to diagnose and manage common infectious diseases that present to the general internist.
3. To recognize the infectious disease emergencies and early recognition of problems requiring the help of consultants.
4. To understand screening and prevention of common infectious diseases.
5. To gain experience in the diagnosis and general management of patient with infection.
6. To learn clinically important aspects about the microbiology laboratory to better understand appropriate ordering and interpretation of diagnostics tests.
7. Will prepare and present to the ID group a topic related from the list of 10 ID problems.
8. Will complete a multiple choice pre- and post-rotation written examination.

Principal Teaching Methods

As part of the infectious disease rotation, each resident spends one morning (3 hours) with Dr. Elder at the CompuNet Clinical Laboratories (Microbiology). The residents will complete an interactive computer tutorial (Gram-Stain tutor) and then interpret, under the microscope with direct supervision (Dr. Elder), 20 slides from a collection. Additionally, they examine slides under the microscope for the quality of the specimen. Lastly, they must perform a gram-stain under supervision.

A second morning (3 hours) is spent at CompuNet Clinical Laboratories interacting with the microbiologists reviewing culture data, culture plates, susceptibility testing, and virology. Molecular diagnostic methods (PCR, various assays) are also encountered.

Residents are expected to read selectively for reference purposes from standard text reading resources.

Types of Clinical Encounters

- Inpatient consults
 - Follow-ups: Daily rounds average 10 patients
 - New Consults: 25-40 per month
- Outpatient - Clinics: 3-10 patients per session

Procedures

Residents will be encouraged to perform procedures, such as needle-aspirations or spinal taps, but the only required skill is the gram-stain.

The resident is expected to:

- Perform gram-stain in satisfactory manner to complete rotation.
- Be able to identify common bacteria and candida to satisfaction of faculty to complete rotation.

Supervision

The attending physician will have responsibility for all patient care provided. Residents will be supervised by an attending for each patient, although attending physicians need not be physically present during each encounter. At the discretion of the attending physician, residents may be granted some independent decision-making according to their ability and level of training.

Orientation and supervision by faculty.

Basic laboratory skills under direction of microbiologist.

Patient Characteristics and Services

Patients encountered during this rotation will reflect the general population of Dayton, including a wide variety of socioeconomic groups, ethnic diversity, and balanced gender and age groups.

Mix of Diseases

- A. Expect to see patients with and to have teaching about:
 - 1. Skin and Soft Tissue Infections and Inflammation: Cellulitis
 - 2. Respiratory Infections:
 - a. Bronchitis
 - b. Pneumonia
 - 3. Urinary Tract Infections: Cystitis
 - 4. Immunocompromised Host:
 - a. HIV
 - b. Febrile neutropenia
 - c. Gram-negative bacteremia
 - 5. Bone and Joint Infections
 - a. Osteomyelitis
 - b. Prosthetic joint infection
 - 6. Post-op Fever
 - a. Wound infection
 - b. Intra-vascular device related infection
 - 7. Antibiotics
 - a. Susceptibility testing
 - b. Pharmacokinetics
 - c. Adverse effects
 - d. Interactions
- B. May or may not be seen but must be read about:
 - 1. Central Nervous System Infections: Meningitis
 - 2. Cardiovascular and Bloodstream Infections: Endocarditis
 - 3. Skin and Soft Tissue Infections and Inflammation: Drug rash
 - 4. Respiratory Infections:
 - a. Pharyngitis
 - b. Sinusitis
 - c. Tuberculosis (pulmonary)
 - 5. Urinary Tract Infections: Pyelonephritis
 - 6. Immunocompromised Host:
 - a. Neoplastic fever
 - b. Pneumocystis carinii
 - 7. Bone and Joint Infections: Septic arthritis
 - 8. Post-op Fever: Intra-abdominal abscess

- C. Rarely seen on service but should be read about:
1. Respiratory Infections: Lung abscess
 2. Urinary Tract Infection:
 - a. Prostatitis
 - b. Renal abscess
 3. Central Nervous System Infections:
 - a. Encephalitis
 - b. Brain abscess
 4. Cardiovascular Infections: Supportive thrombophlebitis
 5. Immunocompromised Host: Herpes zoster infection
 6. Sexually Transmitted Diseases:
 - a. Chlamydial infection
 - b. Gonorrhea
 - c. Syphilis
 - d. Herpes simplex infection
 - e. Venereal warts
- D. Optional for this rotation:
1. Cardiovascular Infections:
 - a. Myocarditis
 - b. Pericarditis
 2. Sexually Transmitted Diseases: Chancroid

Reading List and Ancillary Educational Materials

It is recommended that the residents purchase or borrow the textbook, A Practical Approach to Infectious Diseases, 5th Edition, by Reese and Betts, 2002. It is expected that residents will do most of their reading concerning patients seen and the core subjects presented in mini-lectures in this textbook, and from selected journal articles provided by the faculty.

Other good textbook references are:

- Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases edited by G.L. Mandell, J.E. Bennett, A. Dolin, 5th edition, published in 2004 by Churchill Livingstone, Inc.
- Gorbach, Bartlett, and Blacklow's Infectious Disease, 3rd edition, published in 2003 by W.B. Saunders Co.
- On-line materials such as Up-to-Date and eMedicine are also useful for the learner.

Competencies by Resident Level

R-1

- Patient Care

The R-1 will be able to identify patients' problems and develop a prioritized differential diagnosis. Abnormal findings will be interrelated with altered physiology. They will understand their limitation of knowledge and seek the advice of more advanced clinicians. The R-1 will begin to develop therapeutic plans that are evidenced or consensus based. Residents will establish an orderly succession of testing based on their history and exam findings. Specific organ dysfunction will be anticipated based on known side effects of therapy.

Additionally, residents will understand the correct administration of drugs, describe drug-drug interactions, and be familiar with expected outcomes.

The R-1 will be able to describe the rationale for a chosen therapy and will be able to describe medication side effects in lay terms. They will assess patient understanding and provide more information when necessary. Residents will demonstrate the ability to be a patient advocate.

- Medical Knowledge

The R-1 will consistently apply current concepts in the basic sciences to clinical problem solving. They will use information from the literature and other sources including electronic databases. The R-1 will demonstrate satisfactory knowledge of common medical conditions, sufficient to manage urgent complaints with supervision.

- Interpersonal and Communication Skills

The R-1 will develop and refine their individual style when communicating with patients. They will strive to create ethically sound relationships with patients, the physician team and supporting hospital personnel. They will create effective written communications through accurate, complete, and legible notes. They will exhibit listening skills appropriate to patient-centered interviewing and communication. Residents will recognize verbal and non-verbal cues from patients.

- Professionalism

All residents will demonstrate integrity, accountability, respect, compassion, patient advocacy, and dedication to patient care that supercedes self-interest. Residents will demonstrate a commitment to excellence and continuous professional development. They will be punctual and prepared for teaching sessions. Residents will demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, and informed consent. Residents are expected to show sensitivity and responsiveness to patients' culture, age, gender and disabilities.

- Practice Based Learning and Improvement

The R-1 will use hospital and University library resources to critically appraise medical literature and apply evidence to patient care. They will use hand-held computers, desktop PCs and Internet electronic references to support patient care and self-education.

- Systems Based Practice

The R-1 will be sensitive to healthcare costs while striving to provide quality care. They will begin to effectively coordinate care with other healthcare professionals as required for patient needs.

R-2 and R-3

- **Patient Care**

The R-2 will regularly integrate medical facts and clinical data while weighing alternatives and keeping in mind patient preference. They will regularly incorporate consideration of risks and benefits when considering testing and therapies. They will present up-to-date scientific evidence to support their hypotheses. They will consistently monitor and follow-up patients appropriately.

The R-3 will demonstrate the above and in addition, will demonstrate appropriate reasoning in ambiguous situations, while continuing to seek clarity. Residents at this level of training will not overly rely on tests and procedures. The R-3 will continuously revise assessments in the face of new data.

- **Medical Knowledge**

The R-2 will demonstrate a progression in knowledge and analytical thinking in order to develop well-formulated differential diagnoses for multi-problem patients.

In addition to the above, the R-3 will demonstrate appropriate habits to stay current with new medical knowledge, and will exhibit knowledge of effective teaching methods.

- **Interpersonal and Communication Skills**

The R-2 will develop and refine their individual style when communicating with patients. They will strive to create ethically sound relationships with patients, the physician team and supporting hospital personnel. They will create effective written communications through accurate, complete, and legible notes. They will exhibit listening skills appropriate to patient-centered interviewing and communication. Residents will recognize verbal and nonverbal cues from patients. The R-2 will be able to communicate with patients concerning end-of-life decisions.

The R-3 should additionally be able to successfully negotiate nearly all “difficult” patient encounters with minimal direction.

- **Professionalism**

The R-2 and R-3 will serve as role models, demonstrating integrity, accountability, respect, compassion, patient advocacy, and dedication to patient care that in all encounters. Residents will demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, and informed consent.

The R-3 will be especially sensitive and responsive to patients’ culture, age, gender and disabilities.

- **Practice Based Learning and Improvement**

The R-2 will consistently seek out and analyze data on practice experience, identify areas for improvement in knowledge or patient care performance and make appropriate adjustments.

The R-3 will additionally model independent learning and development. They will regularly demonstrate knowledge of the impact of study design on validity or applicability to individual practice.

- **Systems Based Practice**

The R-2 will be sensitive to healthcare costs while striving to provide quality care. They will effectively coordinate care with other healthcare professionals as required for patient needs. They will consistently understand and adopt available clinical practice guidelines and recognize the limitations of these guidelines. They will work with patient care managers, discharge coordinators and social workers to coordinate and improve patient care and outcomes.

The R-3, in addition, will enlist social and other out-of-hospital resources to assist patients with therapeutic plans. The R-3 is expected to model cost-effective therapy.

Resident Performance Evaluations

- A written examination covering general ID, HIV and STDs will be given at the beginning and end of the month. The answers and results will be reviewed in detail with the resident at the end of the month.
- A written evaluation is usually reviewed with the resident at the end of the month and can be further discussed at request of the resident at any time.
- A mid-rotation evaluation will not routinely be employed; however, residents having problems noted by attending will be counseled during rotation.
- Clinical performance and written examination (post-test).

Schedule

	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
12:00 Mid							
1:00 AM							
2:00 AM							
3:00 AM							
4:00 AM							
5:00 AM							
6:00 AM							
7:00 AM		7:30	7:30	7:30	7:30	7:30	7:30
8:00 AM							
9:00 AM							
10:00 AM							
11:00 AM							12:00
12:00 PM							
1:00 PM							
2:00 PM							
3:00 PM							
4:00 PM		4:30	4:30	4:30	4:30	4:30	
5:00 PM							
6:00 PM							
7:00 PM							
8:00 PM							
9:00 PM							
10:00 PM							
11:00 PM							
Total							50

Where to Report the First Day (8:30 a.m.)

MVH Weber Education Bldg
Wright State University Boonshoft School of Medicine Department of Medicine
128 E. Apple Street, 2nd Floor
Dayton, OH 45409

Resident Office Hours

Inpatient consults and admissions: Daily rounds and progress notes on all patients and initial evaluation of new consultations Monday through Friday 8:30 a.m. - 4:30 p.m., and will be responsible for one weekend call experience per month: Saturday and Sunday 8:30 a.m. - 12:00 noon. Initial consultations and progress notes reflecting changes in patient evaluation and treatment should be written only after interaction with ID attending.

ID (HIV) Clinic

MVH clinic meeting Monday afternoons 1:00 pm – 4:30 pm with Dr. H.F. Wunderlich as attending, or Friday mornings 8:30 am - 12:00 noon with Dr. J. Weinstein as attending.

WSU Clinic

1 Elizabeth Place meeting Tuesday morning 8:30 am – 12:00 noon with Drs. Burdette and Czachor as attendings, or Friday morning 8:30 am – 12 noon with Dr. Herchline as the attending.

Clinical Microbiology

CompuNet Clinical Microbiology experience (Sandridge) for two mornings (8:00 – 12:00 noon) during month with Dr. L. Elder as supervisor. Scheduled with Dr. Elder each month. This experience includes module on performing and interpreting gram stains. This experience may not be offered to residents taking vacation during the month or during the two week elective.

Resident Continuity Clinic:

R-1: One half day per week

R-2 and R-3: Two half days per week

Infectious Disease Resident Weekend Scheduled Call Guidelines

If you are not on another evening or weekend call schedule, then you have been scheduled to be on the infectious disease call schedule. You are responsible for one weekend per month. If you have notified us at least 10 days prior to the beginning of the month (as requested), we have tried to accommodate your call preferences. Weekend call begins Friday at 4:30 pm and ends Monday at 8:00 am. If you are on the weekend, you will be expected to make rounds on both Saturday and Sunday; rounding times should be discussed with the attending.

ID attendings are on first call for ID consults and problems. You will be called by the attending for new consults and rarely for emergent problems. Since weekend consults are often of an emergency nature, you are expected to respond promptly to pages and be available to go to the hospital in a short period of time. Physician standards require you to be within 20 miles or 30 minutes away from the hospital and you should adhere to these standards. Cincinnati or Columbus are both too far away to be responsive for emergency consultation.

As described above, it is not necessary for you to be in the hospital for call, but you must have your pager on and be within 20 miles or 30 minutes from the hospital. If you have a problem which will prevent you from being available you should call the attending and inform him of your difficulty. Any coverage arrangements or switches of call with other residents on the ID rotation must be approved by the attending.

New consults will be called to the ID fellow or attending who will then call you. The usual procedure will be for you to see the patient first and then for the fellow and/or attending to meet you at the hospital to discuss and see the patient with you.

The purpose of this call schedule is to provide the resident with a better clinical experience. Hopefully, this will give you the opportunity of seeing interesting ID problems first hand.

Conferences

Unless otherwise assigned (see above), residents on ID rotation are expected to attend morning report, resident forum, and internal medicine noon conferences.

- Internal Medicine Resident Forum: 1:00-4:30 1st, 3rd, 4th, and 5th Tuesdays
- GSH, MVH, or WPMC Clinic Meeting: 2nd Tuesday 12:00-1:30
- OR Med/Peds Business Meeting: 3rd Friday 12:00-3:00
- Noon Conferences: 12:00-1:00 most weekdays, except Tuesday
- Mini-lectures: All residents are required to give one mini-lecture on one of 10 topics they choose from list, and resident lectures are usually given during the last week of the month. Remaining topics will be addressed by other residents, students, and attendings.
- Mini-lecture Topics: Pneumonia, Urinary Tract Infection, HIV, Antibiotics, Meningitis, Endocarditis, Febrile Neutropenia, Sexually Transmitted Diseases, Post-Operative Fever, Osteomyelitis

WSU-ID Meetings

- City Wide Infectious Diseases Case Presentations are on the last Thursday at 7:30 a.m. at the Dayton Racquet Club. You should attend these and you may be instructed to be one of the presenters.
- Infectious Diseases Journal Club is held on the third Thursday of each month at 5:00 p.m. at the location determined at the beginning of the month. You may be requested to present an infectious diseases article from a journal that is assigned to you or that you may be allowed to choose an article at the preceptors discretion.