

## Infectious Disease Outpatient [IDOP] Service

The Infectious Disease outpatient service provides evaluation and consultative management of those patients with various infectious diseases on an outpatient basis. This includes experiences at the Designated Aids Center (DAC) and the County STD clinic. The Infectious Disease Division faculty is the following:

- Timothy Endy, MD, MPH – Chief and Program Director, Division of Infectious Diseases
- Donald Blair, MD
- Britta Denman, MD
- Shelley Gilroy, MD
- Waleed Javaid, MD
- Madhuchhanda Choudhary, MD

### I. Educational Purpose

The resident in internal medicine should:

- Be competent to evaluate and treat those patients with an infectious disease process as well as understand when a referral to an infectious disease specialist is appropriate.
- Be well-trained in the choice of antimicrobial agents as well as the techniques of infectious disease prevention (i.e. handwashing).
- Be exposed to the various causes of infectious disease (bacteria, fungi, viruses, and protozoa) and the bodily manifestations that result.
  - Examples of the latter include meningitis/encephalitis, pneumonia/empyema, tuberculosis, infectious endocarditis, infectious colitis, urinary infections, bacteremia/septicemia, cellulitis, abscesses, soft-tissue infections, osteomyelitis, and sexually transmitted diseases.
- Receive training in:
  - the care of patients with HIV/AIDS.
  - the evaluation and management of fever of unknown origin.
  - the prevention techniques including handwashing, gowning/masking, instrument cleaning, as well as immunization schedules.
  - antimicrobial decision-making including cost and pharmacodynamics / pharmacokinetics.
  - immunology and its importance in infectious disease.

### II. Learning Venue

- A. Rotation description** - The Infectious Disease outpatient service provides care to the community through the DAC and the county STD clinic where housestaff treat patients ages 18 and older, of male and female gender, and of varying ethnicities/cultures. The service sees patients scheduled for routine visits as well as those patients needing same day appointments with problems managed in an outpatient environment. The team consists of the attending, a fellow, a senior resident and/or intern, and mid level practitioners.

**CURRENT SCHEDULE**

DAY	TIME	ACTIVITY	NOTE
MONDAY	8:30 a.m.	ID Conference, POB* Suite 304	HIV Clinical Conference alternating weekly with didactic ID question review session
	1:00 p.m.	a) DAC Clinic <sup>+</sup> , Dr. Britta Denman, <b>or</b> b) STD Clinic <sup>**</sup>	Each Monday a.m., the resident will page Dr. Gilroy [441-5572] to see if there is a STD Clinic that afternoon. If there is no clinic, the resident will come to the DAC Clinic
TUESDAY	8:00 a.m.	DAC Clinic <sup>+</sup> , Dr. Blair	
	4:00 p.m.	I.D. Conference, POB*, Suite 304	
WEDNESDAY	9:00 a.m.	DAC Clinic <sup>+</sup> , Dr. Gilroy	
	4:00 p.m.	ID Clinical Conference, POB* Suite 304	
THURSDAY	7:15 a.m.	Medicine Grand Rounds, WH 1 <sup>st</sup> floor Aud.	
	8:30 a.m.	DAC Clinic <sup>+</sup> , Dr. Javaid <sup>++</sup>	
FRIDAY	8:00 a.m.	DAC Clinic <sup>+</sup> , Dr. Endy	If you have not yet had an STD clinic, page Dr. Gilroy [441-5572] to see if you can participate in a clinic <sup>**</sup> Friday a.m., instead of a.m. DAC

\*POB: Physicians Office Building, directly across from Crouse Hospital.

\*\*STD Clinic is in the basement of the Syracuse Civic Center, Room 80

+DAC Clinic: Suite 211, POB

++ Clinic is Thursday afternoon 1:00 pm until 3/1/2010; a.m. thereafter.

Expectations of the PGY-1: The intern will

- 1) Complete detailed history and physicals on all patients and complete progress notes for each office visit.
- 2) Have detailed knowledge of every patient evaluated at a particular clinic.
- 3) Be expected to interpret basic laboratory and radiographic tests including gram stains and cultures.
- 4) Demonstrate intellectual curiosity and evidence-based patient care approaches.
- 5) Display professionalism and good communication skills with the team, nurses, patients and families.
- 6) Work efficiently with nursing, social workers and case managers on quality and timely patient care.

Expectations of the Senior Resident: In addition to the above, the senior resident will

- 1) Demonstrate leadership and model professionalism and good communication skills.
- 2) Serve as a resource for team learning.
- 3) Continue to expand their knowledge of infectious diseases with the aid of the reading materials outlined below. (Active mentoring of evidence based pt care should be demonstrated thru the use of PICO's, online searches and interpretation of newer studies)
- 4) Model systems-based practice competencies by working efficiently with nursing, social workers and case managers on quality and timely patient care.

## B. Teaching Methods:

1. Daily Patient appointments. The resident who has seen the patient will present the case to the attending and discuss patient issues in order to formulate management plans. The resident will be expected to know each of his patients well, to have collected all relevant data, and to present in a concise, logical format.
2. Recommended Reading:
  - Mandell, Douglas, Bennett; Principles and Practices of Infectious Diseases; 7<sup>th</sup> edition; Churchill Livingstone 2000
  - Bailey & Scott's Diagnostic Microbiology; 12th Edition; Mosby 2007
  - Keceas, Crowe, Grayson, Hoy; The Use of Antibiotics; Latest Edition; Butterworth Heinmann
  - Sande and Volberding; The Medical Management of AIDS; Latest Edition
  - Mayo Clinic Proceeding Review of Antimicrobial Agents
  - MKSAP for Infectious Diseases and AIDS
  - Armstrong and Cohen; Infectious Diseases; Latest Edition Mosby
  - Goodman & Gilman's; The Pharmacological Basis of Therapeutics; Latest Edition; McGraw Hill
  - Yu, Merigan, Barriers; Antimicrobial Therapy and Vaccines; Latest Edition Williams & Wilkins
  - Dolin, Masur, Saas; AIDS Therapy; Latest Edition Churchill Livingstone
  - For recent studies and peer reviewed scientific literature visit the ACP online PIER site <http://pier.acponline.org/index.html?hp>
3. Unique Learning Opportunities:
  - a. HIV/AIDS Conference (Mondays 8:30-9:30 a.m.) – didactic sessions covering all aspects HIV/AIDS, but primarily devoted to care of the HIV/AIDS patient.
  - b. ID Conference (Tuesdays 4-5 p.m.) – pre-determined topics presented by faculty and fellows.
  - c. Case Conference (Wednesdays 4-5 a.m.) – the faculty and fellows present infectious disease cases to the division.
  - d. Journal Club (once per month on Fridays 12-1 p.m.) – the faculty and fellows review and critique articles relevant to their specialty.

## C. Mix of Diseases and Patient Characteristics

1. Common Clinical Presentations and Diseases:

### Central Nervous System

- meningitis
- encephalitis
- brain/spinal cord abscess

### Respiratory

- pneumonia (bacterial, fungal, viral)
- Tuberculosis
- empyema
- sinusitis
- bronchitis

### Skin/Soft Tissue

- cellulitis/erysipelas
- diabetic infections
- abscesses

### Bone

- osteomyelitis

### Cardiovascular

- infective endocarditis
- aortitis/vasculitis

### Genitourinary

- pyelonephritis
- cystitis
- urinary infections

### Sexually Transmitted Diseases

- Chlamydia
- Herpes Simplex
- Gonorrhea
- Syphilis
- pelvic inflammatory disease
- Reproductive
  - orchitis
  - epididymitis
- Gastrointestinal
  - gastroenteritis
  - colitis
  - infectious diarrhea
- Sepsis
- Solid Organ Transplantation
  - temporal occurrence of infections
  -
- Cancer Chemotherapy
  - neutropenic fevers
- Bioprosthesis Infections
- Fever of Unknown Origin
- Adult Immunization
- Travel-Related Illness
- Ophthalmologic Infections
- Nosocomial Infections
- HIV/AIDS
- Illicit Drug-Related Infections

2. Procedures:
- Gram staining and interpretation
  - Culturing and interpretation
  - PPD testing and interpretation

### III. Educational Content

<i>Central nervous system</i>
Brain abscess
Encephalitis
Meningitis
Conjunctivitis
Endocarditis
Fever of unknown origin
Fungal (histoplasmosis, coccidioidomycosis, cryptococcosis)
<i>Gastrointestinal</i>
Biliary tract infection
Gastroenteritis
Infectious diarrhea
Liver abscess
Peritonitis
Viral hepatitis
<i>Genitourinary</i>
Cervical cancer (HPV)
Cervicitis, vaginitis
Common sexually transmitted diseases (gonorrhea, chlamydia, trichomonas, herpes simplex, syphilis)
Pelvic inflammatory disease
Prostatitis, epididymitis

Urethritis
Urinary tract infection
HIV disease (see HIV Infection)
Infection in the immunosuppressed patient
Lyme disease
Malaria
Pericarditis
Otitis
<i>Respiratory</i>
Acute epiglottitis, pharyngitis
Empyema
Pneumonia (community and nosocomial), bronchitis
Sinusitis
Upper respiratory infection
<i>Rheumatologic/musculoskeletal</i>
Osteomyelitis
Septic arthritis
Rocky Mountain Spotted Fever
Sepsis, septic shock syndrome
<i>Skin Infections</i>
Cellulitis
Follirulitis
Ulcers
Viral exanthems
<i>Tuberculosis</i>
Active infection
Positive tuberculin skin test
<i>Viral</i>
Cytomegalovirus
Herpes simplex infection
Influenza
Mononucleosis
Varicella zoster infection
<i>AIDS-defining malignancies</i>
Kaposi's sarcoma
Non-Hodgkin's lymphoma
Squamous cell carcinoma (cervix or anus)
<i>Cardiovascular Complications</i>
Cardiomyopathy
Myocarditis
Pericarditis
<i>Dermatologic complications</i>
Bacillary angiomatosis
H. zoster
Kaposi's sarcoma
Molluscum contagiosum
Scabies
Seborrheic dermatitis
<i>Endocrine Complications</i>
Hypoadrenalism
Hypogonadism
Hypothyroidism
Lipodystrophy

<i>Gastrointestinal complications</i>
Diarrhea
Esophageal candidiasis
Esophageal ulcer disease
Hepatomegaly, hepatitis, jaundice
Wasting syndrome
<i>General management</i>
<i>Evaluation and management of early disease</i>
Advance directives evaluation
Assessment of alternative health practices
Assessment of social support systems
Monitoring progression to AIDS
<i>Ongoing staging</i>
Diagnosing AIDS-defining opportunistic infections
Functional assessment
Mental status evaluation
Nutritional assessment
Referral to case-management agencies
Palliative and terminal care
Pregnancy counseling (pretest, post-test, risk factors)
<i>Gynecologic complications</i>
Cervical dysplasia/neoplasia
Pelvic inflammatory disease
Vaginal candidiasis
<i>Hematologic Complications</i>
Anemia
Antiphospholipid antibody
Immune thrombocytopenic purpura
Thrombotic thrombocytopenia purpura
<i>Infectious diseases (see also Preventive measures and specific organ-based complications)</i>
Cytomegalovirus disease
Mycobacterial disease
<i>Pneumocystis carinii</i> pneumonia
Syphilis (diagnosis, treatment)
<i>Neurologic complications</i>
Central nervous system mass lesions
Cryptococcal meningitis
Dementia
Myelopathy
Myopathy
Neurosyphilis
Peripheral neuropathy
Polyneuropathy
Wasting syndrome
<i>Ocular Complications</i>
Conjunctivitis
Iritis
Keratitis
Retinitis
<i>Oral complications</i>
Pregnancy counseling (pretest, post-test, risk factors)
<i>Ongoing staging</i>
Diagnosing AIDS-defining opportunistic infections

Functional assessment
Mental status evaluation
Nutritional assessment
Referral to case management agencies
Palliative and terminal care
<i>Preventive measures</i>
<i>Antibiotic prophylaxis</i>
<i>Pneumocystis carinii pneumonia</i>
<i>Tuberculosis</i>
Antiretroviral drug therapy
Immunizations
<i>Mycobacterium avium complex</i>
<i>Protease inhibitor therapy</i>
Toxoplasmosis
Transmission of HIV
<i>Psychiatric Complications</i>
Anxiety-panic disorders
Pain management
Depression
<i>Renal</i>
Lactic acidosis
Renal tubular acidosis

#### IV. Method of Evaluation

Evaluations are based on the six core competencies. All team members are expected to complete formal evaluations at the end of each rotation using the web-based E-Value evaluation software. Mid rotation verbal feedback should be sought by residents. Residents at all levels of training are evaluated by their attendings, peers and students.

#### V. Rotation-specific Competency Objectives – link to Competency based Learning Objectives

- A. Patient Care/Medical knowledge – this rotation offers concentrated learning in the areas of ID and HIV care. It allows residents to care for patients in the outpatient setting at the DAC and county STD clinic.
- B. Professionalism – link
- C. Interpersonal and communication skills – often this rotation will expose residents to diseases related to a person’s private sexual life. Residents will conduct themselves professionally and learn how to effectively elicit sexual history.
- D. Practice based learning – link
- E. Systems based practice – Residents have the opportunity to learn about coordinating long term care for HIV patients and also the use of indwelling catheters and their complications in the outpatient setting.

Reviewed 11/08 by Jad Joseph Wakim, MD  
Reviewed 01/10 by Donald C. Blair, MD