

## **Edward Hines, Jr. VA PGY2 ID Residency – Overview/Structure**

### **Program Director:**

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### **Preceptors:**

Daniel Carlsen, PharmD, BCPS

- Outpatient Parenteral Antimicrobial Therapy (OPAT); ID/HIV Outpatient Clinic; Antimicrobial Stewardship Program – Restricted Antimicrobial Approvals; Infectious Diseases (ID) Consult Service; ID Consult Service & Antimicrobial Stewardship – I & II

Kelly Echeverria, PharmD, BCPS AQ-ID, BCIDP

- Pharmacy Benefits Management (PBM) Services

Joelle Farano, PharmD, MBA, BCPS

- Orientation/Pharmacy Operations; Inpatient Pharmacy Staffing

Alex Gregorowicz, PharmD, BCCCP

- Critical Care

Jimmy Nguyen, PharmD, BCIDP

- Antimicrobial Stewardship Program – Restricted Antimicrobial Approvals; Infectious Diseases (ID) Consult Service; ID Consult Service & Antimicrobial Stewardship – I & II

Ursula C. Patel, PharmD, BCIDP, BCPS, AAHIVP

- Antimicrobial Stewardship Program – Restricted Antimicrobial Approvals; Infectious Diseases (ID) Consult Service; ID Consult Service & Antimicrobial Stewardship – I & II; ID Pharmacy Administration

Margi Shah, PharmD, BCACP

- Hepatology/Transplant

Stacey Spadoni, MT (ASCP)

- Microbiology Lab Experience

Anne Thorndyke, PharmD, BCPS

- Hepatology/Transplant

Various Preceptors - TBD

- General Medicine

## Criteria for Successful Completion of the Program in order to receive a Certificate of Residency Completion:

The following are required criteria that the PGY2 ID resident must meet prior to receiving a residency certificate:

1. Complete 12 months of residency training (including annual, sick, and professional leave)
2. Complete a research/major project, present findings to a pertinent stakeholder audience, and submit a written report in manuscript format suitable for publication
3. In addition, the resident must complete the following during the residency:
  - a. a drug monograph or equivalent Pharmacy Benefits Management (PBM) project
  - b. prepare and present at least one major case-based lecture (“seminar”)
  - c. at least one newsletter article
  - d. at least one journal club to pharmacists and other interested healthcare providers
  - e. update an existing or develop a new Infectious Diseases related treatment protocol
4. For the required Goals, the resident must have  $\geq 80\%$  of Objectives achieved for the residency (ACHR)
  - all goals/objectives that fall under Outcomes R1 and R3 must be ACHR
  - the resident must not receive any “Needs Improvement” (NI) rating at the end of the residency year
  - PGY2 Infectious Diseases Residency competency areas, goals and objectives can be found here: <https://www.ashp.org/-/media/assets/professional-development/residencies/docs/pgy2-infectious-diseases-pharmacy-residency-competency-areas-goals-objectives-2017.pdf>
5. All assignments in each rotation must be satisfactorily completed.
6. The resident will submit to the RPD a completed ID topics tracking sheet documenting dates of encounters for required ID topics to be covered during the residency
7. Compliance with Duty Hours must be met, including the tracking of Duty Hours/moonlighting
8. Demonstrate compliance with all institutional and departmental policies
  - Of note, Hines VA Hospital Policy Memorandum 578-03-111-022 entitled Cardiopulmonary Resuscitation, requires all professional staff who engage in direct medical care to patients to have an active Basic Cardiac Life Support card before their entrance on duty.

## I. LEARNING EXPERIENCES/ROTATIONS

(See Learning Experience descriptions in PharmAcademic for more details):

### A. Required:

#### i. Orientation/Pharmacy Operations (*1 month rotation*)

a. During this rotation, the resident will become oriented to the PGY2 ID Pharmacy Residency as well as meet staff and learn about the organization and pharmacy operations. The orientation rotation will be tailored to the needs of the resident and the length of this rotation will depend on previous experiences (if the resident is a former Hines VA PGY1 resident, orientation will primarily be structured around orienting to the PGY2 program and staffing in the Inpatient and/or Outpatient pharmacies). During this month, the RPD will review the resident's incoming strengths, weaknesses, previous experiences, interests, and career goals in order to develop a customized training plan for the resident.

b. Preceptor(s): Joelle Farano, Pharm.D., MBA, BCPS  
Ursula C. Patel, Pharm.D., BCIDP, BCPS, AAHIVP

#### ii. Inpatient Pharmacy Staffing (*duration will vary based on when resident becomes "dual appointed"*)

a. This rotation is designed to give the resident hands on and diverse experiences in various aspects of the inpatient pharmacy at Edward Hines Jr. VA Hospital. Specifically, the resident will be able to contribute as a member of the inpatient pharmacy and have the opportunity to evaluate and process orders for various units in the hospital. Areas of concentration for this rotation include order verification, medication review, medication reconciliation, evaluation of drug/drug, drug/food and drug/disease state interactions, pharmacy operations, customer service and dispensing to abide by local policies and drug manufacturer guidance to promote medication safety for patients and staff. This experience will build off of experiences during Orientation. Ultimately, this rotation will aid the resident in gaining experience of the clinical inpatient pharmacist's role, better allowing the resident to step into a clinical role themselves either during residency through dual appointment, or post-residency when applying for a position

b. Preceptor: Joelle Farano, Pharm.D., MBA, BCPS

iii. **Microbiology Lab Experience (1 week concentrated experience)**

- a. The microbiology rotation will take place in the Hines VA microbiology laboratory. The PGY2 resident will work closely with an assigned microbiology technician to discuss the theory and practice of the isolation and identification of pathogenic bacteria, mycobacteria, fungus, and viruses as well as discuss the fundamentals of antimicrobial susceptibility testing, infectious disease serology, and molecular diagnostics.
- b. Preceptor: Stacey Spadoni, MT (ASCP)

iv. **Antimicrobial Stewardship Program – Restricted Antimicrobial Approvals (3–4 week rotation)**

- a. Primary responsibilities include reviewing restricted antimicrobial requests to determine appropriateness, communicating recommendations, and providing education to providers, and documenting approval decisions electronically in patient chart.
- b. Preceptor: Daniel Carlsen, Pharm.D., BCPS or  
Jimmy Nguyen, Pharm.D., BCIDP

v. **Infectious Diseases Consult Service (1 month rotation)**

- a. The ID consult team at the Hines VA is multidisciplinary and includes the ID attending, ID fellow, medical resident(s) and student(s), and ID Clinical Pharmacy Specialist (along with pharmacy resident and student if on rotation). The PGY2 ID resident will be attending the majority of rounds independently after discussing patients with preceptor. He/she will also be responsible for precepting the pharmacy resident and/or student if on ID rotation.
- b. Preceptor: Daniel Carlsen, Pharm.D., BCPS or  
Jimmy Nguyen, Pharm.D., BCIDP

vi. **General Medicine (1 month rotation)**

- a. The resident will be assigned to work with one of the medical teams by the general medicine preceptor. The resident is expected to attend and participate in daily team rounds, provide medication education to patients and health care providers, and perform medication reconciliation as appropriate. The resident will be responsible for

evaluating all non-formulary and/or restricted antibiotic requests. The resident will participate in leading topic and patient discussions with an emphasis on infectious diseases.

b. Preceptor: Various; TBD

vii. **Infectious Diseases Consult Service & Antimicrobial Stewardship – I & II**  
**(level I – 1 month rotation; level II – 2 month extended experience, repeated twice)**

a. The PGY2 resident will combine responsibilities from the ID consult and ASP-RDA rotations during this experience. Time management and prioritization of clinical duties will be a focus of this rotation. The resident will get a good sense of “the day in the life of an ID clinical pharmacist.” There are two levels of this combined rotation, level I and level II. Level I will introduce the resident to the multiple responsibilities of a general ID pharmacist and will allow the resident to determine his/her own method for prioritizing tasks in order to place patient care first. During level II, the resident will be more independent and may take on a student and resident at the same time – the resident will essentially be in the ID PharmD role during this phase.

b. Preceptor: Daniel Carlsen, Pharm.D., BCPS or  
Jimmy Nguyen, Pharm.D., BCIDP

viii. **Hepatology/Transplant: (1 month rotation)**

a. This rotation is designed to develop the resident with the disease states relating to hepatitis and kidney transplantation as well as current trends in safe, effective pharmaceutical management of these patients in the outpatient setting.

b. Preceptor: Margi Shah, Pharm.D., BCACP  
Anne Thorndyke, Pharm.D., BCPS

ix. **Critical Care (4–6-week rotation)**

a. The Critical Care rotation is a 4-6 week learning experience. The duration of this experience will depend on whether the resident has had a Critical Care rotation as a PGY1 resident as well as his/her comfort level in this area. This rotation is designed to provide the resident with a unique

experience in caring for critically ill patients in the medical or surgical intensive care units at the Hines VA hospital. The PGY2 resident will be involved with providing drug information, appropriate drug therapy recommendations and monitoring plans all in collaboration with members of the ICU interdisciplinary team. The resident will also review and discuss important ICU-related topics with the preceptor(s) and other interested health care providers.

b. Preceptor: Alex Gregorowicz, Pharm.D., BCCCP

x. **Pharmacy Benefits Management (PBM) Services (1 month rotation)**

a. The PGY2 resident's role in this learning experience will be to ensure safe and effective medication use across the VA system. Tasks include but are not limited to policy writing and editing, formulary and criteria for use review, and development of educational materials that will be available to all VA facilities for implementation and use at the local level. Documents are developed through multidisciplinary interaction with clinical experts from the field. A drug monograph will be developed during this learning experience.

b. Preceptor: Kelly Echevarria, PharmD, BCIDP

xi. **Infectious Diseases Formal Lecture Experience (duration will depending on timeline relative to presentation date)**

a. The resident will create and present a formal lecture in the field of Infectious Diseases on a topic to be determined. This lecture will be presented to pharmacy students at Northwestern University - Chicago College of Pharmacy as part of the Pharmacotherapeutics sequence focusing on Infectious Diseases.

b. Preceptor: TBD

**B. Elective:**

i. **Transplant Infectious Diseases: (1 month rotation)**

a. The resident will join the Transplant Infectious Diseases team for a four-week rotation at Loyola University Medical Center (LUMC). The multi-disciplinary team consists of an attending physician, infectious diseases

fellow, and a clinical pharmacist. The Transplant Infectious Diseases consult team is a consulting service for patients with a suspected or confirmed infection, and history of a solid-organ transplant, bone-marrow transplant, acute leukemia/myelodysplastic syndrome or is being evaluated for one of the aforementioned transplants. The Transplant Infectious Diseases team census ranges from 5-16 patients at a time. Patients may be located in any area of the hospital. The resident is expected to communicate recommendations and interventions with the pharmacists on the patients' primary team in order to ensure continuity of care.

b. Preceptor: TBD

**C. Longitudinal:**

**i. ID Pharmacy Residency Major Project:**

a. A completed research project is a requirement of the residency program. The intent of the PGY2 project is to provide the resident with the opportunity to build upon and develop the skills and processes necessary to perform research. The residency director and interested preceptors will meet with the resident(s) early in residency, during Orientation month, to discuss potential research project ideas. The residency director and primary preceptor for the project will help guide the resident through the research process. The resident is expected to have made sufficient progress to present final results at the Illinois Pharmacy Residency Conference (or similar forum). The resident may also present the results of their project to the Pharmacy department. The final report for the project must be submitted to the Residency Program Director in a format suitable for publication by the last day of the residency.

b. Preceptor: Ursula C. Patel, Pharm.D., BCIDP, BCPS, AAHIVP  
(or other interested preceptor)

**ii. ID Pharmacy Administration:**

a. This year-long longitudinal experience will consist of projects and experiences related to management of anti-infectives. It may include projects, infection control initiatives, regulatory practices, guideline/protocol development, and practice leadership as it relates to infectious diseases pharmacy practice. The resident will take a role in public health as well as accreditation requirements for the institution. The resident will assist the

department in identifying opportunities for improvement in regards to antimicrobial use. In addition, the resident will develop his or her personal, leadership, and management skills. A required newsletter article will also be completed during this rotation.

b. Preceptor: Ursula C. Patel, Pharm.D., BCIDP, BCPS, AAHIVP

iii. **ID/HIV Outpatient Clinic:**

a. The Hines VA Hospital has a half-day clinic twice weekly in which adult patients with either HIV/AIDs and/or chronic infections are seen by ID providers. The ID pharmacy resident will participate in this clinic by reviewing all HIV drug regimens to assess for appropriateness and for potential drug interactions, reviewing laboratory parameters, ensuring vaccinations are up to date and counseling patients as needed. The resident will assist in administering a Medication Adherence Questionnaire to the HIV patients. In addition, the resident will be responsible for answering questions posed by other ID providers.

b. Preceptor: Daniel Carlsen, Pharm.D., BCPS

iv. **Outpatient Parenteral Antimicrobial Therapy (OPAT):**

a. Patients discharged home on long-term home IV antibiotics are followed by a multidisciplinary team at Hines VA, including venous access nurses, pharmacists, and physicians. Patient's laboratory parameters and clinical progress are monitored on a regular basis and the patients are followed in the outpatient ID clinic. The ID resident will be involved with assessing whether a patient is an appropriate candidate for home IV therapy, determining an appropriate IV regimen for the patient, and assisting with regular laboratory monitoring. The goal will be for the resident to follow at least 2 OPAT patients per month.

b. Preceptor: Daniel Carlsen, Pharm.D., BCPS



## II. OTHER RESPONSIBILITIES/ACTIVITIES

### A. *Pharmacokinetics and IV to PO conversion programs*

The ID resident will gain experience in these programs during their time in the Inpatient Pharmacy. Responsibilities include ensuring patients are on appropriate dosing of vancomycin and aminoglycosides by regularly following drug levels, determining whether a patient is an appropriate candidate for an IV to PO antimicrobial switch based on the Hines VA protocol, and effectively communicating recommendations to providers.

### B. *Other Required Projects*

#### a. **Seminar**

- i. The resident will develop and formally present a "new and upcoming," controversial, or other topic of significance in the area of Infectious Diseases to an audience consisting of other health care providers. This project involves the creation and presentation of a 45–50-minute PowerPoint presentation, that includes learning assessment questions. This learning experience for the PGY2 resident may differ from the PGY1 experience because the resident will be presenting a CE-based seminar to Pharmacists across VISN 12 vs. just at the local facility. The presentation will either be in person at the local facility (broadcasted to other VAs) or remote via virtual presentation using the assigned web conferencing system.

#### b. **Journal Club**

- i. The PGY2 Infectious Diseases Resident will be required to present two Journal Clubs (JC) to an audience made up of health care providers. The first JC will be in the beginning of the year at a monthly ID Pharmacy Journal Club session. Later in the residency year, the resident will present a second JC to a different audience, consisting of ID healthcare professionals, during a weekly ID noon conference.

#### c. **ID Treatment Protocol Update/Development**

- i. The resident will take the lead on creating or updating at least one anti-infective related institution protocol/guideline during the residency. Generally, these protocols are electronic and will be integrated into the medication ordering system. In addition to complying with national guidelines and Infectious Diseases provider input, the resident will ensure that the guideline secures approval

from all involved parties and that appropriate education is delivered to all providers involved.

**C. Teaching**

**i. Precepting Pharmacy students and Hines VA PGY1 residents**

The ID rotation is currently an elective rotation for students and residents. The Hines VA serves as a training site for Midwestern University, University of Illinois at Chicago (UIC), and Chicago State University (CSU) students. The PGY2 ID resident will get experience with precepting both students and residents and will be involved in activities such as leading topic discussions on various ID related topics, reviewing ID consult patients with the trainee, and assisting the preceptor in evaluating journal clubs, case presentations and overall rotation performance.

**ii. Educating ID medical providers**

The ID resident will attend the weekly “viral load” meetings (HIV case presentations/education) as well as the bi-monthly ID Interest Rounds and Microbiology Rounds where interesting cases are presented to an audience consisting of ID attendings, fellows, residents, students, and pharmacists. The ID resident will be expected to present at least twice at the “viral load” meetings with an HIV Pharmacotherapy-related topic.

**iii. (Optional) Teaching and Learning Certificate**

Offered through the University of Illinois at Chicago College of Pharmacy  
Upon completion of this program, participants will:

1. Demonstrate an increased knowledge of required skills for teaching
2. Enhance and improve teaching behaviors
3. Apply concepts learned in order to create an appropriate learning experience and to improve learners’ performance

### III. Proposed Learning Experience Schedule 2024-2025

<b>Month</b>	<b>Learning Experience<sup>a</sup></b>	<b>Comments</b>
<b>July 2024</b>	Orientation/Pharmacy Operations <sup>b</sup>	
<b>August 2024</b>	Microbiology Lab Experience/ Antimicrobial Stewardship Program - Restricted Antimicrobial Approvals	8/5–8/9 (Micro)  8/12- 8/30 (Antimicrobial Approvals)  Major Project time
<b>September 2024</b>	Infectious Diseases Consult Service	ID/HIV Outpatient Clinic & OPAT starts
<b>October 2024</b>	General Medicine	
<b>November 2024</b>	Infectious Diseases Consult Service & Antimicrobial Stewardship - I	
<b>December 2024</b>	Hepatology/Transplant	ASHP Mid-year meeting; Seminar presentation
<b>January 2025</b>	Critical Care	
<b>February 2025</b>	Infectious Diseases Consult Service & Antimicrobial Stewardship - II	
<b>March 2025</b>	Infectious Diseases Consult Service & Antimicrobial Stewardship - II	ID Formal Lecture to be presented at school of Pharmacy
<b>April 2025</b>	Pharmacy Benefits Management (PBM) Services	
<b>May 2025</b>	Infectious Diseases Consult Service & Antimicrobial Stewardship - II	* Transplant Infectious Diseases as an elective may be an option
<b>June 2025</b>	Infectious Diseases Consult Service & Antimicrobial Stewardship - II	

<sup>a</sup>Longitudinal learning experiences/activities such as ID/HIV clinic, OPAT, major project and ID pharmacy administration will be incorporated into core rotations.

<sup>b</sup>Orientation activities: new employee orientation, computer systems, mandatory TMS trainings, development of customized plan, familiarization of policies and procedures, choosing a major project; Pharmacy Operations portion will take place in Inpatient Pharmacy setting; Inpatient Pharmacy Staffing will follow this Orientation month on a predetermined weekend schedule

#### IV. ASHP PGY2 Infectious Diseases Residency Competencies

[Required Competency Areas Guidance Document \(ashp.org\)](#) - use this link to obtain competencies, goals, and objectives. The following rating scale definitions have been reviewed with the preceptors to ensure consistency:

#### **Rating Scale Definitions:**

##### **Achieved for Residency (ACHR)**

- Goals considered “achieved” across the majority (>50%) of rotations or in the final learning experience in which it is evaluated; resident appropriately completes residency requirements at a level appropriate for someone completing a PGY-2 residency year. Preceptors are able to facilitate the learning of the resident completely rather than modeling or coaching (only the RPD may designate “ACHR”, but preceptors and RAC may be consulted).

##### **Achieved (ACH)**

- Generally accomplished in the ability to perform the objective
- Resident appropriately completes the objective or requirement at a level appropriate for someone completing that learning experience.
- Preceptor can facilitate the learning completely rather than modeling or coaching.

##### **Satisfactory Progress (SP)**

- Adequate knowledge/skills in this area
- Resident is making satisfactory progress for that point in the residency year, requires less coaching and is able to complete residency expectations.
- The preceptors can facilitate learning often rather than direct modeling and coaching.

##### **Needs Improvement (NI)**

- Deficient in knowledge/skills in this area
- Unable to ask appropriate questions to supplement learning
- Multiple noted deficiencies or deficiencies that could result in patient harm
- Resident requires significant modeling (direct preceptor involvement) or instruction in order to complete appropriate patient and/or non-patient care activities.

#### V. Required Meetings/Activities at VA/Loyola

*(when resident is able to attend – patient care will take priority)*

- ASP meetings (dates to be determined)
- Infection Control Committee meetings (4<sup>th</sup> Tuesday every other month)
- Pharmacy and Therapeutics Committee meetings (4<sup>th</sup> Tuesday every other month)
- PGY1/PGY2 journal clubs and seminars
- HIV Viral Load meetings (weekly on Mondays)
- ID Interest and Micro Rounds & Journal Clubs (Thursdays)
- Grand Rounds (when topic is ID related)

## **VI. Professional Meetings**

- A. ASHP Mid-Year Clinical Meeting
- B. Illinois Pharmacy Residency Research Conference
- C. IAS HIV Meeting (downtown Chicago in May)
- D. Antimicrobial Stewardship related meetings

### **Topics Tracking:**

The PGY2 resident is required to keep track of and document instances when a certain infectious disease or antimicrobial (or related) agent is discussed or encountered. The purpose of this is to ensure that the resident is exposed to all relevant topics and ID pharmacotherapy agents at least once during the residency year. In many instances, topics and agents will be discussed multiple times and when this is required, it will be indicated on the tracking sheet. Discussions may occur during topic discussions, when discussing antibiotic approvals or ID consult patients, or during other activities. The resident will indicate on the tracking sheet where the infectious disease or antimicrobial agent was encountered. The RPD will provide the resident with the tracking sheet and will discuss the progress of the tracking sheet at the resident's quarterly meetings with the resident and preceptors to ensure compliance with tracking as well as to determine in which areas the resident's experience may be deficient in. This will allow the RPD and preceptors to develop additional topic discussions or identify types of infections the resident will need to encounter prior to the end of the residency experience. At the end of the residency, the RPD along with the resident will sign off on the tracking sheet to indicate that all requirements have been met.

### **Antimicrobial Stewardship Certification Program**

PGY2 ID residents are encouraged to complete the Antimicrobial Stewardship Certification Program, offered through the Society of Infectious Diseases Pharmacists (SIDP). Per the program's website description: "This program is an innovative and intensive practice-based activity for pharmacists focusing on the pharmacist's role in the area of appropriate use of antimicrobial agents. The program, which emphasizes a health care team approach, seeks to foster the development of a strong knowledgebase in microbiology, pharmacology, and disease state management in order to successfully implement an antibiotic stewardship program that will improve patient care, reduce healthcare expenditures and potentially reduce rates of resistance and prolong the longevity of the limited number of antimicrobial agents available to treat infections. For more information, please visit this link: <http://www.proce.com/SIDP-ASP/>" This is a program that the resident may work at his/her own pace. Certification requirements include completion of modules, webinars and a practicum. Every effort will be made to assist the resident will obtaining reimbursement for registration costs through the facility. If reimbursement is not possible, the resident may choose to complete the "CDC Training on Antibiotic Stewardship," which is free of cost. More information can be found here: [https://www.train.org/cdctrain/training\\_plan/3697](https://www.train.org/cdctrain/training_plan/3697).

**National Infectious Diseases Organization Involvement:**

In addition to the required rotations and activities outlined in the manual, at the beginning of the residency, the resident will be asked to submit an application for “Trainee” membership to the Society of Infectious Diseases Pharmacists (SIDP), IDSA, or to MAD-I

