

MMC Infectious Diseases Pharmacy Residency PGY2 Appendix 2023-2024

Permanent-RPD: Kristina Connolly, PharmD, BCIDP

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ID-RAC Membership:

- Kristina Connolly, PharmD, BCIDP
- Eliza Dollard, PharmD, BCIDP
- Nick Mercuro, PharmD, BCIDP
- Carly Schenk, PharmD, BCIDP
- Victoria Mullin, PharmD
- Christina Yen, MD, MBE

Program Structure

The program structure for required, elective, concentrated, and longitudinal learning experiences is outlined in the table below. An orientation period of 2-3 weeks will begin the residency, and will be tailored to the resident's prior experiences.

Rotations	Preceptor(s)	Duration
<i>Required Rotations</i>		
Orientation	Kristina Connolly, PharmD, BCIDP	2-3 weeks
Microbiology	Kristina Connolly, PharmD, BCIDP	1-2 weeks
Infection Control/Hospital Epidemiology	Kristina Connolly, PharmD, BCIDP	1 week
Infectious Diseases Clinical Practice #1	Nick Mercuro, PharmD, BCIDP Kristina Connolly, PharmD, BCIDP	8 weeks
Infectious Diseases Clinical Practice #2	Nick Mercuro, PharmD, BCIDP Kristina Connolly, PharmD, BCIDP	8 weeks
Infectious Diseases Clinical Practice #3	Nick Mercuro, PharmD, BCIDP Kristina Connolly, PharmD, BCIDP	8 weeks
Pediatric Infectious Diseases	Eliza Dollard, PharmD, BCIDP	4 weeks
Critical Care Medicine (SICU, MICU)	Katie Smith, PharmD, BCCCP (2 weeks) Chelsea Wampole, PharmD, BCCCP (2 weeks)	4 weeks
<i>Elective Rotations</i>		
Emergency medicine	Joleen Bierlein, PharmD, BCPS Hannah Mazur, PharmD, BCCCP	4 weeks
Inpatient adult oncology	Megan Duperreault, PharmD, BCOP	4 weeks
Nephrology/transplant	Marizela Savic, PharmD, BCPS	4 weeks

Advanced Infectious Diseases Clinical Practice #4	Nick Mercurio, PharmD, BCIDP Kristina Connolly, PharmD, BCIDP	4-8 weeks
Ambulatory Infectious Diseases	Victoria Mullin, PharmD	4 weeks
Health-system Antimicrobial Stewardship	Eliza Dollard, PharmD, BCIDP	2 weeks
Gilman Clinic (HIV, viral hepatitis)	Carly Schenk, PharmD, BCIDP	4 weeks
<i>Longitudinal Learning Experiences</i>		
<p>Service-Based Staffing Experience</p> <ul style="list-style-type: none"> Weekend (every 3rd weekend; 2 training weekends + approx. 14-16 full coverage weekends) & assigned holiday staffing (4) Total number of staffing days in residency year: ~32-36 <p>Clinical Research</p> <ul style="list-style-type: none"> Clinical research project Development of poster/platform presentation and manuscript <p>Practice Management</p> <ul style="list-style-type: none"> Medication use evaluation Formulary drug review Guideline/Protocol development and/or order-set development <p>Committee Membership and Practice Management</p> <ul style="list-style-type: none"> Committee involvement (e.g. antimicrobial stewardship committee(s), Pharmacy & Therapeutics) <p>Teaching and Effective Education (Required)</p> <ul style="list-style-type: none"> Various multidisciplinary presentations (e.g. grand rounds, ID case conference, ID fellow lecture series) <p>Teaching and Effective Education (Optional)</p> <ul style="list-style-type: none"> College of Pharmacy didactics Preceptorship of pharmacy students, PGY1 pharmacy residents, and medical students through the Tufts School of Medicine clinical pharmacology elective 		

Required Rotations

Descriptions of the required learning experiences can be found in PharmAcademic. Required rotations in core areas (e.g. ID consult service, antimicrobial stewardship) will occur in the first half of the year, while electives will generally occur in the second half of the year.

The PGY2 resident will gain the skills to function as the infectious diseases pharmacist during their required learning experiences with the expectation that the resident displays ownership of all aspects of the medication process (e.g. operational, distributive, clinical). The resident will need to build relationships in a multidisciplinary fashion to facilitate efficient workflow and medication delivery. Daily activities include, but are not limited to:

- Participation in ID consult service rounds
- Pharmacokinetics consult service
- Collaboration with microbiology colleagues
- Order review & verification of antibiotic orders

- Manage non-formulary antimicrobials, when necessary
- Ensure proper and safe delivery of antimicrobial medications
- Provide antimicrobial pharmacotherapy recommendations to other healthcare team members

Elective Rotations

Descriptions of elective learning experiences can be found in PharmAcademic. Elective rotations may be tailored to the resident's interest and recognized areas for development. The rotations may be customized to the duration necessary for the resident, but typically range from 2 to 4 weeks. The elective learning experiences are scheduled in the second half of the residency year.

Residents may opt to choose two (2) electives from the above list. If resident elects to do 0 or 1 non-ID related elective, the resident may choose to do additional infectious diseases clinical practice to complete the schedule.

New experiences may be created on a case-by-case basis if the resident has interest in a practice area not covered by the elective learning experiences in the table above.

ID Pharmacy Team Staffing (Weekend and assigned holidays)

The resident's staffing commitment will consist of providing comprehensive ID pharmacy support for the hospital on weekends and assigned holidays. On staffing days, residents will perform the same activities as other ID pharmacist team members:

- Pharmacokinetic Consults for designated floors
- Antimicrobial stewardship activities (e.g. blood culture report review, restricted antimicrobial review and approval)
- Pharmacotherapy support for ID consult service patients

In order to provide more formative feedback, residents may meet with a preceptor following a staffing weekend to debrief and review interventions from the resident's weekend assignment. Documentation of this meeting and feedback will occur in PharmAcademic (scheduled as a non-learning experience evaluation).

Clinical Research Project

Topic Selection: on behalf of the ID-RAC, RPD will supply the resident with a list of possible research projects to consider within the first 1-2 weeks of the residency. Project selection and CITI training (see Resident's Survival Kit supplemental booklet for specific modules to complete) should be completed prior to the end of the orientation experience. If resident has completed all of the required CITI training from prior experiences (e.g. PGY1), the resident does not need to complete additional modules. If the module will expire during the residency year, the resident is responsible for ensuring that the modules are completed and renewed for the remainder of the residency year.

Initial Set-up: Research project methods **must** be disseminated, reviewed, and acknowledged by all study investigators and co-investigators. Methods may be disseminated to ID-RAC for review, if deemed appropriate. In addition, clearly defined roles and responsibilities of each investigator and co-investigator for authorship must be established at the onset of the project. In addition, criteria for order of authorship (e.g. criteria for first author, senior author) should also be established prior to starting.

Research project timeline should be determined by the research project preceptor, RPD, and resident. Residents will be expected to complete 1 major research project each year.

Dissemination of Results: the results of the research project will be presented, at minimum, in the month of June at a designated Pharmacy Grand Rounds (12-15 minutes). In addition, the resident may elect to present results of the research project at a regional or national meeting.

A completed manuscript will be submitted for the research project before graduation with the understanding that articles suitable for publication will require additional work that may occur after residency completion.

Dedicated Research Time: Project days may be granted during the resident year. On these days, the resident is expected to be onsite, unless otherwise approved, for at least 8 hours for each project day, preferably between the hours of 0700 and 1800. Periodic meetings will occur with the research preceptor and/or RPD to discuss progress and accomplishments during the project days.

Formal meetings with project preceptor and/or all study authors

Resident is expected to maintain communication with project preceptors (and other study investigators as appropriate) and is responsible for keeping up with established timeline. Resident is responsible for setting up meetings as needed.

Medication Use Evaluation

Each resident will complete at least one medication use evaluation (MUE). The resident will be provided with a list of potential MUE topics generated by ID-RAC. The resident will be able to add to the list of ideas, if it is feasible within the year-long residency. The resident will conduct the MUE under the guidance of a preceptor. Results from MUE's will be presented to the appropriate stakeholders within the hospital.

Teaching and Education

The resident will track their progress in effective education or training to health care professionals through this longitudinal experience. Effective education opportunities will be evaluated and will include, but is not limited to:

- Pharmacy grand rounds (1 required)
- ID Fellow Lecture Series (1 required)
- ID Case Conference (3 required)
- Didactic lecture at University of New England (up to 2 optional)
- In-services (ad hoc)

Pharmacy Grand Rounds: The resident will deliver a 1-hour continuing education lecture to the pharmacy staff regarding a topic in infectious diseases. A presentation preceptor should be identified at least 12 weeks in advance of the presentation date.

A draft of the grand rounds presentation should be delivered to the mentor at least 3 weeks prior to the presentation date. A practice presentation will occur at least 1-2 weeks prior. If deemed necessary by resident and preceptor, a second practice session may be scheduled. A PharmAcademic evaluation will be used to track Grand Rounds completion.

Infectious Diseases (ID) Case Conference (Thursdays 1200-1300): In addition to attending ID case conference weekly (unless otherwise noted), the resident will present up to three (3) 30-minute pharmacology pearl presentations (one (1) for each 8-week ID clinical core rotation). Coordination of the date of presentation can be made with the ID fellows and ID fellowship director. The topic should be based on a patient the resident experienced on service or while performing antimicrobial stewardship.

A topic and preceptor for the case conference presentation should be identified at least 4 weeks prior to the presentation date. An on-demand PharmAcademic evaluation will be used to track the case conference presentations.

Infectious Diseases (ID) Fellow Lecture Series (Tuesdays 1200-1300): Resident will provide one (1) 60-minute pharmacotherapy lecture within the ID Fellow Lecture series.

The ID Fellow Lecture series is a weekly learning session for the ID fellows. Lecturers are ID fellowship faculty, consisting of ID attendings and ID pharmacists. The topic for the PGY2 ID pharmacy resident to lecture is on principles of antifungal pharmacotherapy and is typically scheduled around the 3rd week of October.

In-services: As opportunity arises to present in-service presentations, the resident will work with a designated preceptor to successfully carry out a presentation. An on-demand PharmAcademic evaluation will be used to provide evaluation and feedback to resident as applicable.

Didactic lecture at University of New England College of Pharmacy: The resident may deliver one or two 2-hour didactic lecture to pharmacy students. This will be coordinated with faculty at UNE. An on-demand PharmAcademic evaluation will be used to track didactic lecture completion and feedback from faculty and students will be attached.

Teaching certificate: Participation in the Teaching Certificate Program is optional and will be discussed on a case-by-case basis.

The resident may co-precept advanced practice pharmacy experience students, medical students, or PGY1 pharmacy residents. Primary preceptorship of trainees is an optional experience and should be discussed with RPD, if interested.

Finally, the resident's progress in covering disease states listed in the Infectious Diseases Appendix will also be evaluated as part of this longitudinal learning experience. The appendix progress will be tracked in PharmAcademic and is expected to be updated and maintained by the resident on an on-going basis.

Committee Membership and Practice Management

The resident will track their progress and development in the areas of practice management and formulary drug review, order set review, and/or treatment guideline development. Committee participation (MMC antimicrobial stewardship task force committee, formulary subcommittee, pharmacy and therapeutics committee) and practice management contributions (formulary drug review, order set review, and/or treatment guideline creation or revision) will be evaluated.

Meeting Attendance

The residents will have the opportunity to attend various professional meetings throughout the year. The resident typically attends ASHP Midyear Meeting and IDWeek (IDSA annual meeting). Other meeting attendance may be discussed and reviewed on a case-by-case basis.

Evaluation Strategy

The PGY2 Infectious Diseases Residency Program utilizes the ASHP on-line evaluation tool called PharmAcademic.

Residents will complete two pre-residency questionnaires that help the RPD design a residency year that is tailored to the specific needs and interests of the resident:

- ASHP Entering Interests Form
- Entering Objective-Based Self-Evaluation Form

The RPD uses the ASHP Entering Interest Form and Entering Objective-Based Self-Evaluation form to create residents customized training plan. The Residency Requirement Checklist and Customized Training Plan will be discussed and modified (as necessary) through a collaborative effort between the RPD and resident. In addition, the resident may request schedule modifications throughout the residency year and the RPD will make all efforts to accommodate these requests. Assessment tools will be adjusted as changes are made. The RPD will share changes to the Residency Requirement Checklist and Customized Training Plan via Smartsheet automated emails to scheduled preceptors and during quarterly PGY2 ID-RAC meetings.

Residents' schedules are entered into PharmAcademic. For each learning experience, the following assessments are completed:

Block or Learning Experiences of < 12 weeks			
Resident Evaluation of Learning Experience	Resident Evaluation of Preceptor	Preceptor Verbal Midpoint Evaluation of Resident	Preceptor Summative Evaluation of Resident
End	End	Midpoint	End

Longitudinal Learning Experiences of > 12 weeks			
Resident Evaluation of Learning Experience	Resident Evaluation of Preceptor	Preceptor Summative Evaluation of Resident	Resident Self-Summative Evaluation
End	End	Quarterly (or Midpoint and End)	Quarterly (or Midpoint and End)

Summative Evaluations

- Summative evaluations assess the residents' mastery of the 34 required ASHP residency objectives. Summative evaluations of these objectives will be completed by both preceptors and residents based on the following scale:

Short Description	Long Description	Value
1	1 Does not meet expectations: Unable to complete or perform the objective	1.00
2	2 Occasionally meets expectations: Completes or performs objective inconsistently or requires intervention to complete objectives	2.00
3	3 Meets expectations: Able to complete or perform objectives with minimal intervention	3.00
4	4 Occasionally exceeds expectations: Able to complete or perform objectives independently	4.00
5	5 Frequently exceeds expectations: Able to complete or perform objectives consistently and independently at a high level of practice	5.00
NA	Not assessed this rotation	

- Summative Evaluations should be completed using Criteria Based Feedback statements; see Power Point on PharmAcademic Tips and weTricks.
- Preceptors and residents should complete their own summative assessments, save, and then meet to discuss/review together. Any changes to the evaluation should be made in PharmAcademic, then finalized and sent for 'Cosign'.
- Summative evaluations MUST be completed within 7 days of rotation completion.**
- Evaluations are cosigned by the rotation preceptor as well as the RPD. The RPD may send an evaluation back for revision for the following reasons:
 - Patient names mentioned within document
 - Criteria-based qualitative feedback statements not utilized
- Signing an evaluation (both preceptors AND residents) indicates that the evaluation has been read and discussed.

The resident will complete a PGY2 Infectious Diseases Pharmacy Residency Program Evaluation in the last month of residency. Feedback will be discussed at the PGY2 ID-RAC meeting and agreed upon changes will be incorporated into the next academic structure.

PGY2 Infectious Diseases Competency Areas, Goals, and Objectives (2017 Standard):

The resident is encouraged to read detailed information about the required competency areas and each goal and objective supplied by ASHP ([PGY2 Infectious Diseases Pharmacy Residency Goals and Objectives \(ashp.org\)](http://www.ashp.org/PGY2-Infectious-Diseases-Pharmacy-Residency-Goals-and-Objectives)).

PGY2 Infectious Diseases Residency Requirements for Completion/Graduation:

- Objective achievement: >90% of program-required objectives are marked as "Achieved for Residency" by the end of the residency year. All learning experience objectives must be marked at a 3 (meets expectations) and above. Any expectations of the residents that are not met or learning objectives with score of 1 or 2 from evaluations will result in a meeting between the learning experience preceptor, RPD, and resident and a plan of correction will be formulated.
- Completion of all required learning experiences
- Completion of all assigned evaluations in PharmAcademic
- Completion of MUE and present at an appropriate committee meeting

- Completion of all assigned presentations:
 - Pharmacy grand rounds (1 required)
 - ID Fellow Lecture Series (1 required)
 - ID Case Conference (3 required)
- Completion of formulary drug review and/or develop/revise treatment guideline/protocol and presentation at an appropriate committee meeting
- Presentation of major research project at residency conference and/or other professional platform (e.g. national meeting, Pharmacy Grand Rounds)
- Completion of manuscript of major project in publishable form, signed off by research preceptor and RPD
- Submission of 15 reports in safety reporting system (e.g. safety, adverse drug reports)
- Completion of all assigned staffing shifts
- Completion of all attendance related and duty hour fulfillment and reporting requirements
- Submission of residency portfolio: Upload all projects, presentations, work products to shared F:/ drive and SmartSheet, or as directed by RPD.