MaineHealth Maine Medical Center Portland (MHMMC POR)
PGY2 Critical Care Pharmacy Residency
Appendix 2025-2026

Residency Program Director (RPD): Kathryn Smith, PharmD, BCCCP
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Residency Program Coordinator (RPC): Chelsea Wampole, PharmD, BCCCP
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Residency Research Coordinator (RRC): David Gagnon, PharmD, BCCCP, FCCM, FNCS
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CCRAC Membership: All PGY2 preceptors for required rotations

Program Structure

The program structure for required, elective, and longitudinal learning experiences is outlined in the table below. An orientation period of 3-4 weeks, coordinated by the RPC, will begin the residency, and will be tailored to the resident's prior experiences.

Rotations	**Primary Preceptor**	**Typical Duration**
Required Rotations		
Cardiac ICU	Anne Andrle, MS, PharmD, BCCP	4 weeks
Cardiothoracic ICU	Colton Collier, PharmD, BCCCP, BCEMP	4 weeks
Emergency Medicine	Hannah Mazur, PharmD, BCCCP, BCEMP	6 weeks
Infectious Diseases	Kristina Connolly, PharmD, BCIDP	4 weeks
Medical Critical Care	Chelsea Wampole, PharmD, BCCCP	4 weeks
Advanced Medical Critical Care	Chelsea Wampole, PharmD, BCCCP	4 weeks
Neurocritical Care	Elizabeth Glisic, PharmD, BCCCP	4 weeks
Surgical Trauma Critical Care	Katie Smith, PharmD, BCCCP	4 weeks
Advanced Surgical Trauma Critical Care	Katie Smith, PharmD, BCCCP	4 weeks
Elective Rotations		
Advanced Emergency Medicine	Hannah Mazur, PharmD, BCCCP, BCEMP	2-4 weeks
Advanced Neurocritical Care	David Gagnon, PharmD, BCCCP, FCCM, FNCS	2-4 weeks
Advanced Cardiothoracic ICU	Colton Collier, PharmD, BCCCP, BCEMP	2-4 weeks

Nutrition	Erica Corica, PharmD, BCNSP Paul Blakeslee, RD-AP, LD, CNSC	2 weeks
Pediatric ICU	Jessica Miller, PharmD, BCPS, BCPPS	2-4 weeks
Clinical Toxicology	Karen Simone, PharmD, DABAT, FAACT	2-4 weeks

Longitudinal Learning Experiences

Service-Based Staffing Experience (Preceptor: Chelsea Wampole, PharmD, BCCCP; Alexander Tito, BCPS, BCEMP)

- Staffing
- Code blue response

Clinical Research and Medication Use Evaluation (Preceptor: David Gagnon, PharmD, BCCCP, FCCM, FNCS)

- Clinical research project
- Development of poster/platform presentation and manuscript
- Medication use evaluation

Teaching and Effective Education (Preceptor: Katie Smith, PharmD, BCCCP)

- College of Pharmacy didactics
- Multidisciplinary presentations (see below for requirements)
- Preceptorship of pharmacy students, PGY1 pharmacy residents, medical students through the Tufts University School of Medicine clinical pharmacology elective, or critical care APP residents on clinical pharmacology rotation

Committee Membership and Practice Management (Preceptors: Katie Smith, PharmD, BCCCP; Chelsea Wampole, PharmD, BCCCP)

- Committee involvement
- Guideline/Protocol development
- Formulary drug review
- Order Set Development

~~Resident Well-Being and Resilience (Preceptors: Haley Torr, BS, PharmD; Katie Smith, PharmD, BCCCP)~~

- ~~Monthly well-being sessions with co-residents~~
- ~~Community service events~~

**Additional preceptors may be involved in above rotations based on scheduling: ICU- AJ Golash, PharmD, BCCCP; Alan Goodfellow, PharmD, BCCCP; Nathan Laliberte, PharmD, BCPS, BCCCP; Haley Torr, PharmD; EM- Joleen Bierlein, PharmD, BCPS; Shayna Demari, PharmD; Morgan Roy, PharmD, BCPS, BCEMP; Alexander Tito, PharmD, BCPS, BCEMP; ID- Nicholas Mercuro, PharmD, BCIDP*

Required Rotations

Descriptions of the required learning experiences can be found in PharmAcademic. Required rotations in core areas (e.g. medical ICU, surgical trauma ICU) will be assigned in the first half of the year, while more specialized required ICU rotations (e.g. cardiac ICU, cardiothoracic ICU) will occur in the second half of the year. The PGY2 resident will gain the skills to function as the primary ICU 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 build relationships in a multidisciplinary fashion to facilitate efficient workflow and medication delivery. Daily activities include, but are not limited to: participation in ICU rounds, code blue response, order verification, provision of drug information, and preceptorship of pharmacy students, medical students, APP residents, and/or PGY1 pharmacy residents. The integration of operational and clinical services prepares residents for various practice environments and develops essential skills for an advanced pharmacy practitioner.

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 typically scheduled in the second half of the residency year. 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.

Service-Based Staffing

The resident's service commitment is two 12 hour shifts every 3-4 weekends. The resident's weekend service commitment will consist of service-based staffing in the emergency department or in the intensive care/intermediate care units. Staffing will be determined by resident interest and departmental needs and is coordinated by the Residency Program Coordinator (RPC). The resident will be assigned to staff four holidays throughout the residency year. The resident is assigned a cardiac arrest pager in the beginning of the residency year, and is expected to attend all cardiac arrests when staffing. The resident will document an intervention at each cardiac arrest response using Smart text "MH IP RX Adult Code Documentation". These interventions will be reviewed as part of the quarterly evaluation.

To provide more formative feedback, residents are expected to briefly 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.

Clinical Research and Medication Use Evaluation

The RRC will supply the resident with a list of possible research projects to consider within the first two weeks of the residency. Project selection and CITI training should be completed prior to the end of the orientation experience. Research project methods may be presented at a neurocritical care research meeting for feedback and guidance prior to commencement of data collection, if deemed appropriate. Research project timeline will be determined by the RRC, RPD, and resident. Residents will be expected to complete at least 1 research project each year. The results of the research project will be presented during MHMMC POR pharmacy grand rounds in June of the residency year, and to other local, regional, or national meetings as appropriate. 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.

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 the RRC and CCRAC preceptors. 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 will be presented to the appropriate stakeholders within the hospital.

Project days/weeks will be granted during the resident year. Project days/weeks will be pre-assigned, and the resident may take up to 24 project days per year. Ad hoc project days beyond the 24 day maximum are at the discretion of the CC RAC and/or RPD. During project days/weeks, the resident is expected to be onsite, unless otherwise approved, for at least 8 hours daily, preferably between the hours of 0700 and 1800. Regular meetings will occur with the RRC and/or RPD to discuss progress and accomplishments during the project days/weeks. Documentation of resident productivity and details of projects and progress during their protected research time will be completed in PharmAcademic.

Teaching and Effective Education

The resident will track their progress in effective education or training to health care professionals through this longitudinal experience. Education opportunities will be evaluated and will include pharmacy grand rounds (1 required), didactic lecture at University of New England (1 required), nursing in-services (2 required), critical care journal club (2 required), clinical pearl presentation at New England Critical Care Pharmacotherapy Symposium (1 required), and critical care medicine fellowship conference (1 required).

Pharmacy grand rounds: The resident will deliver a 1-hour continuing education lecture to the pharmacy staff regarding a topic in critical care. A mentor should be identified at least 8-12 weeks in advance of the presentation date. The title and objectives are due 6 weeks in advance of the presentation date. Audience assessment questions (3-4) must be included in the presentation. 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 may be considered at least one week prior, if deemed necessary by resident and preceptor. An on-demand PharmAcademic evaluation will be used to track Grand Rounds completion.

Didactic lecture at University of New England (UNE): The resident will deliver at least one 1- or 2-hour didactic lecture to pharmacy students. This will be coordinated with faculty at UNE. The resident may also participate in the advanced cardiac life support (ACLS) simulation lab. An on-demand PharmAcademic evaluation will be used to track didactic lecture completion, and feedback from faculty and students will be attached.

Nursing in-services: The resident will give a moderate sedation inservice to critical care and emergency department nurses. This inservice typically takes place in the fall of the residency year. This is coordinated through the critical care clinical nursing educator. The resident will work with preceptors to identify another opportunity for a nursing inservice during the residency year. An on-demand PharmAcademic evaluation will be used to track nursing in-services, and feedback from nurses will be attached.

Critical care journal club: The critical care journal club occurs monthly on the second

Tuesday of the month. The resident will present at least twice during the residency year unless other opportunities arise (e.g. SCCM CPP Journal Club). Journal club topics should focus on critically reviewing a recently published journal article related to critical care. The journal club presentation will be coordinated with the RRC. The article should be selected and approved by the RRC and/or Medical Critical Care Director at least 4 weeks in advance of the presentation. The presentation is typically 20-30 minutes in duration and a one-page handout and/or PowerPoint is required. An on-demand PharmAcademic evaluation will be used to track journal club presentations.

Clinical pearl presentation at New England Critical Care Pharmacotherapy Symposium (NECCPS): The resident will prepare a 5-minute clinical pearl on a unique topic related to critical care to be presented at the NECCPS. This is coordinated by faculty at Northeastern University, who set the deadlines for topic and presentation submissions. The symposium typically occurs in the fall of the residency year. At least one preceptor from the residency program is in attendance, and an on-demand PharmAcademic evaluation will be used to track the symposium presentation.

Critical Care Medicine (CCM) Fellowship Conference: The resident will present to CCM fellows at their weekly conference. The resident typically presents on pharmacokinetics and pharmacodynamics in the critically ill patient. The lecture usually takes place in the spring, and will be facilitated through the RPD or other designated preceptor and the CCM program coordinator. An on-demand PharmAcademic evaluation will be used to track the PCCM fellowship conference lecture.

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

The resident will co-precept at least two advanced practice pharmacy experience students, medical students, APP residents, or PGY1 pharmacy residents.

Finally, the resident's progress in covering disease states listed in the Critical Care Appendix will also be evaluated as part of this longitudinal learning experience. The appendix progress will be tracked in Microsoft Teams or PharmAcademic.

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 (e.g. code blue, ED critical care council, critical care pharmacy team meetings, formulary subcommittee, pharmacy and therapeutics committee) and practice management contributions (e.g. formulary drug review, order set review, and/or treatment guideline creation or revision) will be evaluated.

Professional Meeting Attendance

The residents may have the opportunity to attend various professional meetings throughout the year. The resident typically attends New England Critical Care Symposium, ASHP Midyear Meeting, and Society of Critical Care Medicine as funding allows. Other meeting attendance may be discussed and reviewed on a case-by-case basis.

Evaluation Strategy

The PGY2 Critical Care Pharmacy Residency Program utilizes the ASHP on-line evaluation tool 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 the resident's customized development plan. The Residency Graduation Requirement Checklist and Customized Development Plan will be discussed and modified (as necessary) through a collaborative effort between the RPD, RPC, and resident. In addition, the resident may request schedule modifications throughout the residency year and the RPD and/or RPC 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 Graduation Requirement Checklist via Microsoft Teams and Customized Development Plan via PharmAcademic automated emails to scheduled preceptors and during quarterly PGY2 Critical Care Residency Advisory Council (CCRAC) 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 Summative Evaluation of Resident	Resident Self-Summative Evaluation (optional)
End	End	End	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)

Formative feedback will provided routinely throughout the learning experience, and documented in PharmAcademic as needed.

Summative Evaluations

Summative evaluations assess the residents' mastery of the 32 required ASHP residency objectives. Summative evaluations of these objectives will be completed by both preceptors and residents based on the following scale:

Rating Scale	Definition
Needs Improvement (NI)	• Deficient in knowledge/skills in this area • Often requires assistance to complete the objective • Unable to ask appropriate questions to supplement learning
Satisfactory Progress (SP)	Resident is performing and progressing at a level that should eventually lead to mastery of the goal/objective • Adequate knowledge/skills in this area • Sometimes requires assistance to complete the objective • Able to ask appropriate questions to supplement learning • Requires skill development over more than one rotation
Achieved (ACH)	• Fully accomplished the ability to perform the objective independently in the learning experience • Rarely requires assistance to complete the objective; minimum supervision required • No further developmental work needed
Achieved for Residency (ACHR)*	Resident consistently performs objective independently at the Achieved level, as defined above, across multiple settings/patient populations/acuity levels for the residency program

*On a quarterly basis, the RPD will review all summative and quarterly evaluations completed for learning evaluations completed for learning experiences that the resident has completed and assess the ratings rendered by preceptors for each objective assigned to be taught and evaluated.

- Summative Evaluations should be completed using Criteria Based Feedback statements.
- 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:
    - Significant misspellings
    - 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 Critical Care Program Evaluation in the last month of

residency. Feedback will be discussed at the PGY2 CCRAC meeting and agreed upon changes will be incorporated into the next academic year.

PGY2 Critical Care Competency Areas, Goals, and Objectives (2016 Standard):

The resident is encouraged to read detailed information about the required competency areas and each goal and objective supplied by ASHP (PGY2 Critical Care Pharmacy Residency Goals and Objectives (ashp.org)). A report may be generated by PharmAcademic to demonstrate the goals and objectives taught and evaluated in required and elective learning experiences for review.

PGY2 Critical Care Residency Requirements for Completion/Graduation:

- Objective achievement: Minimum of 90% program-required objectives rated as "Achieved for Residency". No objectives rated as "needs improvement" on final rating. (see criteria for achievement of objectives in shared residency manual under "Development Plan")
- Completion of all required learning experiences
- Completion of all assigned evaluations in PharmAcademic
- Completion of medication use evaluation and presentation at an appropriate committee meeting
- Completion of all assigned presentations:
    - Pharmacy grand rounds (1 required)
    - Didactic lecture at University of New England (1 required)
    - Nursing in-services (2 required)
    - Critical care journal club (2 required)
    - Clinical pearl presentation at New England Critical Care Pharmacotherapy Symposium (1 required)
    - Critical care medicine fellowship conference (1 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 RRC
- Submission of 15 reports in safety reporting system (e.g. safety, adverse drug reports)
- Completion of required direct patient care topic discussions per PGY2 Critical Care Topic Appendix
- Completion of assigned staffing shifts
- Upload all projects, presentations, work products required for graduation to designated program folder and PharmAcademic