

PGY2 Critical Care Pharmacy Residency Program Overview

Corewell Health Grand Rapids Hospitals

The Department of Pharmacy at Corewell Health West is dynamic with over 200 employees focusing on pharmaceutical care. Service is provided in a multidisciplinary decentralized model. The primary sites for the critical care residency consist of: Butterworth Hospital, Blodgett Hospital, and Helen DeVos Children's Hospital, which have approximately 1242 beds in total of which approximately 120 beds are devoted to adult critical care, 30 beds to pediatric critical care, and 110 for neonatal critical care.

Purpose

The purpose of the Corewell Health West Postgraduate Year Two (PGY-2) Critical Care Pharmacy Residency Program is to build on the Doctor of Pharmacy (PharmD) education and PGY1 pharmacy residency training to develop pharmacist practitioners with knowledge, skills, and abilities as defined in the educational competency areas, goals, and objectives for advanced practice areas. Residents who successfully complete PGY2 residency programs are prepared for advanced patient care or other specialized positions, and board certification in the advanced practice area, if available.

Overview

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Strengths of the Corewell Health West PGY-2 Critical Care Pharmacy Residency:

- Variety of required and elective rotations with flexibility of scheduling to align with resident areas of interest
- Preceptors who routinely practice in the areas they precept and provide direct modeling and mentoring for patient care experiences and project assignments
- Resident advisors/mentors are members of the Residency Advisory Committee (RAC)
- Resident progress is tracked, evaluated, and communicated regularly
- Research projects are high priority in the organization
- Affiliation with Ferris State University College of Pharmacy with opportunities for teaching, mentoring, and precepting
- Advanced Cardiac Life Support (ACLS) or Pediatric Advanced Life Support (PALS) certification available



Diversity Statement

At Corewell health West, we pledge to take on the challenge to eliminate racism and its impacts on health, hope, and lives, both within our organization and in the communities we serve.

Program Director:

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Residency Requirements

- For successful residency completion:
 - The Corewell Health Postgraduate Year 2 (PGY-2) Critical Care Pharmacy Residency must be a minimum of 52 weeks in length (full-time practice commitment or equivalent) with successful completion of required, elective, and longitudinal rotations
 - The resident and program will comply with ASHP-duty hour standards and will acknowledge throughout the residency year at least monthly:
 - https://www.ashp.org/-/media/assets/professional-development/residencies/docs/duty-hour-requirements.ashx
 - Denotation of "Achieved for Residency" (ACHR) for 85% of the program's designated goals and objectives
 - https://www.ashp.org/-/media/assets/professionaldevelopment/residencies/docs/pgy2-newly-approved-critical-carepharmacy-2016
 - Denotation of completion of all the PGY-2 Critical Care Appendix topic areas and any other Corewell Health required topics
 - Presentations
 - Submit a poster for presentation (i.e. Research in Progress) and present at ASHP Midyear Clinical Annual Meeting or Vizient poster session (if attended by the organization)
 - Present longitudinal research at the Grand Rapids Citywide Research Day or other significant venue as determined by the RPD (examples: SCCM Annual Congress, Great Lakes Residency Conference, ACCP Annual Meeting)
 - Continuing Education (CE)
 - Two presentations for Corewell Health Pharmacy Department (Fall and Spring)
 - One additional CE external to Corewell Health Pharmacy (examples: Corewell Health Internal Medicine Grand Rounds, West Michigan Pharmacists Association, American Association of Critical Care Nurses)
 - One Nursing in-service or Provider in-service or lecture
 - Additional Required Projects
 - Perform one protocol/guideline or order set change or drug class review or monograph
 - Perform one medication use evaluation (MUE)



- Committee Involvement
 - Be a contributing member of the Adult Critical Care (ACC) P&T Subcommittee as evidenced by presenting an agenda item or facilitating a meeting
- Teaching
 - Complete the Ferris State University Pharmacy Education Development and Lecture Series (PEDALS) learning seminar. Not required if completed a similar program during PGY-1 year.
 - Teach a lecture for Ferris State University College of Pharmacy
- Emergency Event Participation
 - Obtain ACLS certification within 90 days of start date (or active certification for the duration of the residency year)
 - Option to PALS certification if already have active ACLS certification
 - Actively participate in cardiac arrest (code blue), intubation, code stroke, traumas, and RAP (rapid decompensation) events as schedule allows
 - Mentor PGY-1 residents throughout the year with emergency events, including Acute Care Skills Day presentation and review of written code events by PGY-1 residents
- Research
 - Denotation of "Achieved for Residency" (ACHR) for Goal R2.2, a major novel research project
 - The primary research project will be presented at the Grand Rapids Citywide Research Day or other agreed upon venue
 - It is expected that the project will be finished by the end of the residency year and submitted for presentation at a national/international meeting or for publication
 - Closure of resident research study with the IRB or transfer of study to an individual that will be remaining with Corewell Health

Rotations/Experiences

The first month of the residency program consists of orientation to the residency program, pharmacy department, health system, and training in the service commitment area. If PGY-2 is an early commit PGY-1 of Corewell Health, the orientation month may be substituted with an available rotation.

Required rotations (1 month in length):

- Cardiothoracic Critical Care
- Emergency Medicine (Butterworth)
- Management/Project month
- Medical Critical Care (Butterworth)
- Medical Critical Care/Burn (Blodgett)
- Neurocritical Care
- Orientation
- Surgical Critical Care 1
- Surgical Critical Care 2 or Neurocritical Care 2



Elective rotations (1 month in length):

- Adult Solid Organ Transplant
- Emergency Medicine/ICU (Blodgett)
- Emergency Medicine 2/Toxicology (Butterworth)
- Infectious Disease
- Pediatric/Neonatal Critical Care
- Repeat required rotation, not to exceed 3 months in single area

Required longitudinal experiences include:

- Service commitment in staffing area (see below)
- Committee involvement (see above)
- Medical emergency involvement (see above)
- Major novel research project (see above)

Typical residency year would be sequenced as follows:

- July: Orientation
- August: Medical Critical Care (Butterworth)
- September: Surgical Critical Care 1
- October: Neurocritical Care 1
- November: Cardiothoracic Critical Care
- December: Management/Project month
- January: Emergency Medicine (Butterworth)
- February: Elective 1
- March: Surgical Critical Care 2 or Neurocritical Care 2
- April: Medical Critical Care/Burn (Blodgett)
- May: Elective 2June: Elective 3

Service Commitment

The resident's service commitment consists of staffing two shifts (8.5 hours each) in the Meijer Heart Center ICU satellite pharmacy every third weekend

- Tasks include but are not limited to: order verification, kinetic/anticoagulant consults,
 i-vent follow up, product verification, compounding, and emergency event response
- Expectations for independent practice will be determined on an individual basis, but typically expected by the end of September
- There is a requirement of two holidays (Thanksgiving or Christmas and New Year's Day, Martin Luther King Jr. Day, or Memorial Day)
- There will be a total of five additional required shifts in the Management/Project month
- There will be 4 office days given as directed by the residency program director.
 Expectations are that the resident be actively working on residency commitments during these days. They will approximately once every 3 months directly preceding or following a service commitment weekend.



Stipend and Benefits

PGY2 Pharmacy Residents will receive a competitive compensation package which includes an annual salary, health benefits, and paid time off.

Start date (approximate): July 5

Salary:

- \$61,000 annual residency stipend
- Residents have the option of staffing additional shifts outside of the service commitment at pharmacist wage

Benefits:

 Residents are recognized as full team members of Corewell Health and are eligible for medical, dental, vision, and life insurance

Paid Time Off (PTO):

- o PTO days include vacation, sick, and personal days
- Residents accrue PTO hours at a fixed rate during each pay period, resulting in approximately 27 days over the course of the year
- Unused PTO is paid out at the completion of employment
- Additionally, Corewell Health recognizes seven paid holidays Independence Day, Labor Day, Thanksgiving, Christmas, New Year's Day, Martin Luther King Jr. Day, and Memorial Day)

Travel expenses:

- Approved travel to conferences is at the discretion of the organization
- Previously attended conferences included ASHP Midyear Clinical Meeting and SCCM Annual Congress
- If travel approved, paid travel expenses (hotel, registration, transportation) for each conference will typically be approved up to \$3,000. If expenses are expected to exceed \$3,000, approval will be determined on a per-case basis.

Office & Resources:

 The residents share an office space with individual computer workstations, electronic Lexicomp subscriptions, telephones, office supplies, photocopying privileges, access to the Health Sciences Library resources and business cards.



Application

The Corewell Health Postgraduate Year Two (PGY-2) Critical Care Pharmacy Residency participates in the match and is accredited by ASHP.

PGY-2 Critical Care Pharmacy Residency National Matching Service Code: 786452

All PGY-2 residency applications will be accepted through the Pharmacy Online Residency Centralized Application Service (PhORCAS).

Application deadline: January 2

Application Requirements:

- Completed application
- Letter of intent
- Curriculum Vitae
- Three completed standardized reference forms in PhORCAS
- Verified Transcripts

Applicant Qualification Requirements:

- Qualified applicants are graduates of an Accreditation Council for Pharmacy Education (ACPE) accredited degree program (or one in process of pursuing accreditation) or have a Foreign Pharmacy Graduate Equivalency Committee (FPGEC) certificate from the National Association of Boards of Pharmacy (NABP). At minimum, the program must be a five-year pharmacy degree program.
- The applicant must be participating in, or have completed, an ASHPaccredited PGY1 pharmacy residency program or one in the ASHP accreditation process (i.e., one with candidate or preliminary accreditation status).
- Are eligible for licensure to practice pharmacy in the state of Michigan within 90 days of hire. Failure to comply will result in dismissal from the program.

Interview

Interviews are approximately 4 hours in length and take place in January and/or February with members of the Corewell Health PGY-2 Critical Care Pharmacy Residency Advisory Committee. All candidates selected for an on-site/virtual interview will be expected to prepare and present on a pre-determined topic to the RAC.

Match

This residency site agrees that no person at this site will solicit, accept, or use any ranking related information from any residency applicant. All match offers are contingent on the application process including, but not limited to: additional application on the Corewell Health website, interview by a Human Resources representative, reference checks, background checks, and obtaining licensure as a pharmacist in the State of Michigan within 90 days of the start date.



PGY2 Residency Preceptors

Katie Chernoby, PharmD, BCCCP | Medical Critical Care Butterworth |

Kaite.Chernoby@Corewellhealth.org

Peggy deVoest, PharmD | Academia |

Peggy.deVoest@Corewellhealth.org

Christopher Dewald, PharmD, BCEMP | Emergency Medicine |

Christopher.Dewald@Corewellhealth.org

Heba El-Ghoroury, PharmD, BCCCP | Cardiothoracic Critical Care |

Heba.El-ghoroury@Corewellhealth.org

Matthew Gurka, PharmD, BCCCP, DPLA | Adult Critical Care |

Matthew.Gurka@Corewellhealth.org

Brittany Hoyte, PharmD, BCCCP | Surgical Critical Care |

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Calvin Ice, PharmD, BCCCP, BCPS | Surgical Critical Care |

Calvin.Ice@Corewellhealth.org

Asia Johnson, PharmD | Solid Organ Transplant |

Asia.Johnson@Corewellhealth.org

Paula Krzos, PharmD | Solid Organ Transplant |

Paula.Krzos@Corewellhealth.org

Tuan Lam, PharmD, BCCCP | ED/ICU Blodgett |

Tuan.Lam@Corewellhealth.org

Alexandra Naden, PharmD, BCCCP | Medical Critical Care Blodgett|

Alexandra.Bednarz@Corewellhealth.org

Lindsay Schray, PharmD, BCPPS | Neonatal Critical Care |

Lindsay.Schray@Corewellhealth.org

Ankit Shukla, PharmD, BCPPS | Pediatric Intensive Care |

Ankit.Shukla@Corewellhealth.org

Wendy L. Thomas, PharmD, BCCCP | Medical Critical Care Blodgett |

Wendy. Thomas @ Corewellhealth.org

Lauren Troyanowski, PharmD, BCCCP | Neuroscience Critical Care |

Lauren. Troyanowski@Corewellhealth.org

Derek Vander Horst, PharmD, BCPS, BCIDP | Adult Infectious Disease |

Derek.VanderHorst@Corewellhealth.org

Dana Wendzel, PharmD, BCCCP | Surgical Critical Care |

Dana.Wendzel@Corewellhealth.org

Lacy Worden, PharmD, BCIDP | Adult Infectious Disease |

Lacy.Worden@Corewellhealth.org



Previous Program Graduates

Residency Year	Name	Institution
2003-2004	Tracy Mingori	Aurora BayCare Medical Center
2010-2011	Dustin Gladden	St. Joseph Mercy Oakland
2011-2012	John Snider	Sutter Roseville Medical Center
2012-2013	Zachary Kirschner	University of Virginia Charlottesville
2013-2014	Christopher Michaud	Ion Diagnostics
2018-2019	Kumaran Ramakrishan	Innova Health
2019-2020	Katie Chernoby	Corewell Health
2020-2021	Alexandra Bendarz	Corewell Health
2021-2022	Kamah Ellena	Trinity Health - Saint Mary's
2022-2023	Lorin Bell	WakeMed Hospital
2023-2024	Jordan Hollmeyer	TriHealth Good Samaritan Hospital

Examples of Previous Resident Projects

Research

- Intravenous milrinone for cerebral vasospasm (CVS) due to aneurysmal subarachnoid hemorrhage (aSAH)
- Association between fluid resuscitation and in-hospital mortality in end-stage renal disease patients with septic shock
- Characterization of thromboembolism in COVID-19 patients
- Impact of continuous infusion ketamine on bispectral index in sedated, paralyzed, critically ill adults
- Impact of angiotensin II on mortality in septic shock
- Evaluation of alteplase vs. Tenecteplase in acute ischemic stroke

Continuing Education (Corewell Health Pharmacy)

- Heparin induced thrombocytopenia
- Evolution of bloodless medicine
- Gift of Life Michigan: A pharmacist's guide to organ and tissue donation
- Managing multidrug resistant gram-negative infections
- Management strategies for neuropsychotropic medication withdrawal in hospitalized patients
- Mechanical circulatory support

Continuing Education (External to Corewell Health Pharmacy)

- Pain, Agitation, Delirium Guideline updates
- Myth busters pharmacy edition: the facts about medications and recreational drugs
- Hot off the press(ors): a review of vasopressor therapy
- The painless approach to analgesia and sedation in the ICU
- HIT me with your best CLOT: a review of anticoagulation management



Inservice

- Neurostimulants review
- Anticoagulation reversal
- Dexmedetomidine use in procedural areas
- Overview of antiepileptic medications
- Calcium channel and beta blocker overdose

Medication Use Evaluation

- Andexanet alfa
- Vasopressin
- Lipid formulations
- Fixed dose Kcentra for INR reversal
- Anti-Ila heparin monitoring nomograms

Protocol/guideline or order set change or drug class review or monograph

- Angiotensin II formulary review
- Clinolipid formulary review
- Emergent reversal of pharmacologic order set updates
- Phenobarbital for alcohol withdrawal (protocol + order set)

Ferris State Lectures

- Arrhythmias
- Enteral access
- ICU supportive care
- Give your patient a FASTHUG daily ICU supportive care