# PGY1 & PGY2 Pharmacy Residency Programs Manual 2026-2027

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## Residency Purpose Statement

PGY1 pharmacy residency programs build on Doctor of Pharmacy (PharmD) education and outcomes to contribute to the development of clinical pharmacists responsible for medication-related care of patients with a wide range of conditions, eligible for board certification, and eligible for postgraduate year two (PGY2) pharmacy residency training.

PGY2 pharmacy residency programs build on Doctor of Pharmacy (PharmD) education and PGY1 pharmacy residency programs to contribute to the development of clinical pharmacists in specialized areas of practice. PGY2 residencies provide residents with opportunities to function independently as practitioners by conceptualizing and integrating accumulated experience and knowledge and incorporating both into the provision of patient care or other advanced practice settings. Residents who complete an accredited PGY2 pharmacy residency are prepared for advanced patient care, academic, or other specialized positions, along with board certification, if available.

## Program Overview

The PGY1 and PGY2 Pharmacy Residencies at UCHealth Memorial Hospital provide the resident with the skills and knowledge required to become a competent pharmacy practitioner or clinical pharmacy specialist.

The PGY1 program is a twelve-month, postgraduate training experience composed of four competency areas: 1) patient care; 2) practice advancement; 3) leadership; and 4) teaching and education.

The PGY2 Critical Care program is a twelve-month, postgraduate training experience composed of four competency areas: 1) patient care 2) advancing practice and improving patient care 3) leadership and management; and 4) teaching, education, and dissemination of knowledge.

The specific program for each resident varies based upon the residents' goals, interests, and previous experience. However, all residents are required to complete rotations in core subject areas considered to be essential to the pharmacy practitioner/clinical pharmacy specialist. A broad range of elective rotations are available to permit the resident flexibility in pursuing additional goals. Additional learning experiences aimed at producing a well-rounded pharmacist include the development and completion of a major project relating to pharmacy practice, development of oral and written communication skills, patient education, participation in various departmental administration committees, and practice in various pharmacy areas throughout the hospital. Upon completion of the program, trainees are awarded a residency certificate.

**UCHealth Pharmacy Mission and Vision**

Mission

UCHealth Pharmacy improves lives every day with extraordinary CARE

Collaboration Accuracy Respect Excellence

Vision

Always leading through our trusted expertise, exceptional outcomes and innovative patient-centric approach.

## Administration of the Program

Consistent with the commitment of the hospital and the Department of Pharmacy, a number of individuals play a key role in the administration of the pharmacy residency programs. The Director of Pharmacy has ultimate responsibility for the residency programs. This is accomplished with the assistance of the Residency Program Directors and the members of the Residency Advisory Committees (RAC).

**Residency Program Director (RPD)**

Pharmacist responsible for the direction, conduct, and oversight of the residency program. Ensures that the program goals and objectives are met, training schedules are maintained, appropriate preceptorship for each rotation period is provided, and that resident evaluations are conducted routinely and based on pre-established learning objectives.

**Residency Program Coordinator**

Pharmacist who works with the RPD to ensure the direction, conduct, and oversight of the residency program.

**Preceptor**

Each rotation has a pharmacist preceptor who develops and guides the learning experiences to meet the residency program's goals and objectives, and with consideration of the resident's goals, interests and skills. The preceptor periodically reviews the resident's performance, with a final written evaluation at the conclusion of the learning experience. A preceptor development plan will be created if indicated and reviewed with the preceptor. A preceptor advisor will be appointed.

**Facilitator**

Each resident is assigned a preceptor to be their facilitator to advise the resident throughout the year. The facilitator is assigned by the RPD and RAC and may be chosen from the clinical or administrative staff, is ideally PGY1 trained, and has practiced and precepted residents at Memorial Hospital for at least one year. Facilitators review the resident's broad plan and assist them in developing a program of development for the year. On a quarterly basis, the facilitator reviews the residents' progress, and together with the resident, makes modifications in the resident development plan. This meeting should be done in person. The facilitator also guides the resident as they select their project, to find preceptors to assist them with their presentations, and to guide them in career choices.

**Project Advisor**

The project advisor assumes primary responsibility to guide the resident in completing the required project. The project advisor may assist the resident in their project selection. Additionally, the advisor assists in defining the scope of the project to assure completion within the time frame of the residency year and planning and implementing the project design. PGY1 and PGY2 residents are required to present the results of their project(s) at the Residency Conference of the Rockies (if available) and/or the ASHP Midyear Clinical Meeting / Vizient University Health System Consortium Pharmacy Network Meeting or other conference as deemed appropriate by the RPD and Director of Pharmacy (as applicable per project timeline). Residents are invited to submit their project for publication at the ASHP Summer Meeting, Society of Critical Care Medicine Meeting, Hematology Oncology Pharmacists Association Meeting or other meetings as deemed appropriate by the Project Advisor and Research Committee. The project advisor provides guidance

concerning the suitability for publication of the research work. Decisions concerning submission should be reviewed for final approval with the resident's program director.

**Grand Rounds Advisor**

Selected by the resident and agreed to by the advisor, assumes primary responsibility to guide the resident in completing the required grand rounds presentation. The grand rounds advisor assists the resident in selecting a topic, developing objectives, completing ACPE credit paperwork, and ensuring the resident is prepared for their presentation through slide review and practice presentations.

**Residency Advisory Committee (RAC)**

Standing committee composed of residency preceptors and pharmacists. The committee serves in an advisory capacity to the Director of Pharmacy and RPD and seeks to maintain and improve the quality and consistency of the residency program. The committee provides a forum for all preceptors to discuss common concerns, to develop additional learning experiences, and to promote new and innovative areas of practice. The RPD serves as the Chair of the committee which meets on a monthly basis, quarterly at a minimum. The PGY2 residents may attend the PGY2 RAC meetings as determined by the RPD. The specific functions of the committee include:

- Continuous evaluation of the curriculum, goals and objectives
- Quarterly evaluation of the residents' progress
- Evaluation and support of residency projects
- Resident recruitment and selection
- Develop and maintain a robust preceptor group through preceptor development initiatives

Other components of RAC:

A. Research
   - Solicit research proposals from preceptors and staff no later than May
   - Validate feasibility or research proposals for presentation to the incoming residents

B. Preceptor Development
   - Create and implement a preceptor development plan for the PGY1 and PGY2 residency programs
   - Preceptor development will consist of at least two larger preceptor development presentations throughout the year, along with four shorter presentations as part of RAC. Examples of options include:
     - CE sessions utilizing ASHP or college of pharmacy resources
     - Preceptor-led discussions on a selection of topics
     - Book clubs to be completed on own and/or discussed in-person
     - 5- 10 minute preceptor development pearls at RAC
   - Preceptor development strategies will be discussed again at the end of the year continuous program improvement session

C. Recruitment & Interview

- Develop and implement recruitment, candidate application, candidate selection and interview processes
- Coordinate on-site and virtual interview schedule for residents, members and candidates in conjunction with RPD
- Collect and interpret interview feedback annually
    - Proposed changes to be presented at RAC meeting in September or October of the residency year.

## Preceptor Selection and Appointment

The RPD for each program is responsible for the selection, appointment, and development of the preceptors. The selection process is as follows:

- Preceptor expresses interest to RPD
- Preceptor completes the "Preceptor Evaluation" form for the respective program and submits to the RPD. The form includes the required preceptor eligibility requirements and qualifications, preceptor activities over the past two years, and a section for RPD comments.
- Preceptor completes the "Preceptor Academic and Professional Record (APR)" and submits in PharmAcademic which the RPD reviews and marks as approved during the appointment and re-appointment process.
- RPD evaluates the preceptor submission, asking for clarification as needed, and determines preceptor eligibility.
    - A preceptor development plan will be created if indicated and reviewed with the preceptor. A preceptor advisor will be appointed.
- RPD will provide the preceptor with a Preceptor Appointment Letter outlining the duration of appointment and further information.

## Annual Preceptor Evaluation

Preceptors will be evaluated for re-appointment every 2 years. The preceptor will complete the Preceptor Evaluation Form and update their ASHP Academic and Professional Form in PharmAcademic every 2 years during the re-appointment timeframe. As part of this documentation, a minimum RAC attendance of 50% is required. If a preceptor is unable to attend RAC in person, they are required to review the RAC minutes and email the RPD for attendance credit.These documents are due by the end of the residency year, and a minimum of one week prior to the Continuous Quality Improvement Meeting. The RPD will review the submitted documentation as well as PharmAcademic evaluations to assess the preceptor's performance and mark them as approved in PharmAcademic as well as provide a Preceptor Appointment Letter outlining the duration of appointment. The RPD will download the APR Report in PharmAcademic every year at the end of the residency year to track completion.

## Preceptor Development

Preceptor development will span all residency programs at Memorial Hospital. A preceptor development needs assessment will be completed in the first quarter of each residency year to identify the optimal approach for preceptors involved in the program. Examples of options to discuss are:

- One-hour CE sessions quarterly to monthly utilizing ASHP or college of pharmacy resources
- Preceptor-led discussions on a selection of topics
- Readings to be completed on own and/or discussed in-person
- Book club with various development topics that pertain to preceptors
- Adding 10-15 minute preceptor development sessions/pearls to RAC
- Other ideas as expressed by the group

Preceptors must attend at least 3 preceptor development activities throughout the year

Preceptor development strategies will be discussed again at the end of the year Continuous Quality Improvement Meeting scheduled in May or June of the residency year.

## Rotations

Organized rotations provide the structure of resident training in specialized areas of pharmacy practice. The resident is expected to consider the goals and objectives for each rotation as a foundation for their experience. Residents are expected to perform independently and demonstrate proficiency in each rotation. The residency preceptor provides guidance and assistance to the resident, and ensures that the goals set forth by the resident and the program are met. The preceptor also provides the resident with frequent evaluation of their progress, including a written evaluation at the conclusion of the rotation.

Frequent, clear communication is the key to a successful resident/preceptor relationship. In order to maximize the learning experience, the resident is expected to, in a timely manner, personally inform the preceptor of all absences, schedule conflicts, or concerns that might arise during the rotation. Residents shall also prepare for topic discussions, read materials in a timely manner, and perform other tasks assigned by the preceptor.

At least one week prior to the start of each rotation, the resident will contact the rotation preceptor to arrange for a pre-rotation meeting or determination of when items for rotations will be discussed. At this meeting, the resident will provide the preceptor a schedule or list of meetings and other commitments the resident has for the rotation that will require time away from the rotation. Issues that may be discussed at this meeting include, but are not limited to: starting time each day, rotation expectations including how residents are evaluated for each CAGO, specific goals the resident has for the rotation, specific goals the preceptor has for the resident to accomplish, readings to be done prior to the rotation, scheduling of a verbal or informal mid-point and written end of rotation evaluation.

### Rotation Schedule

A 12-month schedule of the resident rotations provides a framework for structured learning activities. Each rotation will be 4-6 weeks long with exceptions noted for each program. The resident and their facilitator will meet at the beginning of the year to form a resident development plan. This plan is presented to the RAC for review, and to the RPD for approval. Within the first month of the program, all residents and their RPD will meet to develop a 12-month schedule of rotations for each resident. Daily working hours while on rotation are determined by the rotation preceptor based on the needs of the rotation/patient care unit.

### Schedule Changes

As the resident acquires additional knowledge and learning experiences, their goals may change. Residents may request to change or trade scheduled rotations. Documentation of resident's intent to change rotations and approval from preceptors involved should be submitted to RPD via email no less than 3 months prior to the start of the rotation.

**PGY1 Rotations**

**Required Rotations – 4-5 weeks (exceptions specified)**

- Orientation: June – July (7 weeks)
- Critical Care (Medical ICU or Surgical-Trauma ICU)
- Internal Medicine (5 weeks)
- Emergency Medicine
- Practice Management
- Infectious Disease & Antimicrobial Stewardship
- Residency Project
- Precepting – will be done concurrently with a rotation based on student rotation availability

**Longitudinal Required Rotations – 53 weeks (exceptions specified)**

- Pharmacy Practice (Staffing) – 8-hour shifts every 3rd weekend and 2 weekday shifts every 4 weeks
- Residency Project
- Clinical Practice Management
- Grand Rounds (6 months)

**Elective Rotations - 4-5 weeks (5 electives per residency year)**

The following elective rotations are available:

- Women's Services (Memorial Hospital North)
- Inpatient Oncology
- Ambulatory Oncology
- Medication Safety
- Cardiac Surgery (available in Spring)
- Internal Medicine Elective*
- Critical Care Elective (Medical ICU or Surgical-Trauma ICU)#
- Emergency Medicine Elective
- Investigational Drug Service
- Geriatric Trauma Medicine
- Neurocritical Care
- Operational Management (Pikes Peak Regional Hospital)
- Neonatal ICU (University of Colorado Hospital)
- Toxicology (Rocky Mountain Poison Control)

* The Internal Medicine Elective has the following additional criteria to complete:

- Completion of at least 2 clinical rotations prior to the elective
- Has not received an evaluation of "Needs Improvement" in PharmAcademic
- Has been making satisfactory progress on all longitudinal projects, longitudinal rotation assignments, and Grand Rounds
- Adequately prepared to proceed with the elective as assessed by the Internal Medicine required primary preceptor

# The Critical Care Elective has the following additional criteria to complete:

- Has not received an evaluation of "Needs Improvement" on any objective in Goal R1.1 in PharmAcademic
- Has been making satisfactory progress on all longitudinal projects, longitudinal rotation assignments, and Grand Rounds
- Adequately prepared to proceed with the elective as assessed by the Critical Care Required primary preceptor

**PGY2 Critical Care Rotations**

**Required Rotations - 4-5 weeks (exceptions specified)**

- Orientation (July)
- Medical ICU I and II (8-10 weeks split between two rotations)
- Surgical Trauma ICU
- Emergency Medicine I and II (8-10 weeks split between two rotations)
- Neurocritical Care
- Research and Medical Writing (3 weeks)r
- Precepting – will be done concurrently with a required or elective rotation based on student/PGY1 rotation availability

**Longitudinal Required Rotations – 48 weeks**

- Pharmacy Practice (Staffing) - 8-hour shifts in ICU every 3rd weekend and 1 weekday ED shift every other week
- Research Project
- Practice Management

**Elective Rotations – 4-5 weeks (4 electives per residency year)**:

- Emergency Medicine Academic (University of CO Hospital)*
- Cardiothoracic Surgery
- Infectious Disease
- Toxicology (Rocky Mountain Poison & Drug Center)*
- Burn ICU (University of CO Hospital)*
- Transplant Surgery (University of Colorado Hospital)*
- Emergency Medicine Overnights
- Neonatal ICU (University of Colorado Hospital)*
- Medication Safety
- Clinical Practice Management
- Repeat of required rotation (ex: Surgical Trauma ICU II)

*Off-site rotations. A maximum of 3 off-site rotations are allowed per residency year

**Resident Development Plan Procedure**

ASHP Accreditation Standard 3.3. states that each resident must have a development plan documented by the RPD or designee. Resident progress will be assessed at least quarterly.

The facilitator serves as a mentor for the individual resident and provides assistance to the resident in formulating individual achievable program goals. Facilitators will review the resident's broad plan and assist them in developing a resident development plan for the year. The facilitator may attend the rotation evaluations to provide consistency throughout the year, which should help to identify any problems at an early stage. On a quarterly basis, the facilitator will review the residents' progress, and, together with the resident, make modifications in the resident development plan.

**ASHP Entering Interests Form and Self-Evaluation of Current Skills Related to Required Competency Areas, Goals and Objectives form**

The ASHP Entering Interests form collects baseline information for use in the development of individualized educational goals and objectives for the upcoming residency year. The form asks residents to write a narrative addressing the following topics: career goals; current practice interests; personal strengths; personal weaknesses; and strategies for maintaining well-being and resilience. The Self-Evaluation of Current Skills Related to Required Competency Areas, Goals and Objectives form collects baseline information for use in the development of individualized educational goals and objectives for the upcoming year in the residency. The form asks residents to self-evaluate on all of the program's outcomes and goals in terms of strengths and opportunities for growth/improvement.

Residents will complete the forms at the beginning of the residency year, prior to a RAC Meeting at the end of June or early July, as directed by their RPD. The form must be completed and presented to RAC within 30 days from the start of the residency program.

Facilitators will review the forms prior to the RAC Meeting and enter comments into PharmAcademic. The ASHP standard requests a 'rich narrative'. Residents will have identified a number of areas where improvement is desired based on the topics reviewed. Facilitators should explain how each topic will be addressed within the residency program.

The RPD will review the forms and Facilitator comments (if applicable) prior to the RAC Meeting and will add their own rich narrative. It is expected that facilitators would have developed a strategy to facilitate achievement of goals. The RPD will provide a summary of the plan versus simply indicating 'no additional comments' or 'agree.'

**Resident Development Plan (Subsequent quarterly review)**

ASHP requires the Resident Development Plan to be reviewed quarterly. PharmAcademic provides a reminder to do this. The Resident Development Plan is where 1) the RPD determines which goals the resident has achieved for the residency program with the assistance of the RAC and 2) where a narrative is to be written relating to

customizing the plan for the resident, as it relates to the initial plan. This narrative should include 1) comments on resident progress, 2) suggestions for improvement and 3) any changes to the plan from the previous quarter.

The Facilitator and Resident will each write a rich narrative that details the resident's progress and any changes to the resident's initial plan. This may include rotation changes, attending a class or conference, or other activity to meet the change in plan. The RPD will review the facilitator and residents quarterly update, in addition to providing the RPD's own narrative. The facilitator will also review the goals and objectives for the resident on a quarterly basis. In conjunction with the resident's preceptors for that quarter, the facilitator will recommend which goals and objectives have been achieved for the residency. The RPD will review the recommendations and mark the achievement in PharmAcademic.

**RAC Presentation of Progress and Development Plans**

The PGY1 and PGY2 residents or facilitators will present their progress at RAC, to include a quarterly presentation of their development plan, at a minimum. Following the resident's presentation of their plan, the resident will exit the RAC meeting. The preceptors will have a closed session to discuss any information presented or missed during the resident's presentation of their development plan as well as discuss and goals and objectives to be achieved for the residency.

**Curriculum Vitae (CV)**

Residents are to provide a current copy of their curriculum vitae to their facilitator prior to the July or August RAC Meeting. The Resident should save their initial CV in their Electronic Residency Binder and to PharmAcademic. At the end of the residency year, the Resident should save their final CV in their Electronic Residency Binder and to PharmAcademic.

**Quarterly Development Plan RAC Presentation (Suggested Scripting / Timeline)**

Start of the Residency Year (Presented during late June or early July RAC) ~ 10 minutes

- Areas of Interest
- Resident identified strengths
- Resident identified weaknesses
- Residents selected rotation schedule for the first quarter
- Experience with code response
- Name 2 opportunities for preceptors during the first quarter

First Quarter Training Plan (Presented during September / October RAC) ~ 7 minutes

- Changes to resident identified strengths
- Changes to resident identified weaknesses
- Residents selected rotation schedule for the second quarter
- Number of code responses attended
- Name 2 opportunities for preceptors during the second quarter
- Updates on Research Project, Grand Rounds, if applicable

Second Quarter Training Plan (Presented during December / January RAC) ~ 7 minutes

- Changes to resident identified strengths
- Changes to resident identified weaknesses
- Residents selected rotation schedule for the third quarter
- Number of code responses attended
- Name 2 opportunities for preceptors during the third quarter
- Updates on Research Project, Grand Rounds, if applicable

Third Quarter Training Plan (Presented during March / April RAC) ~ 7 minutes

- Changes to resident identified strengths
- Changes to resident identified weaknesses
- Residents selected rotation schedule for the fourth quarter
- Number of code responses attended
- Name 2 opportunities s for preceptors during the fourth quarter
- Updates on Research Project, Grand Rounds, post-residency plans, if applicable

Fourth Quarter / End of Residency Training Plan (Presented during last June RAC) ~ 5 minutes

- Any outstanding residency requirements
- Update on post-residency plans

**Evaluation Methods**

The pharmacy residency offers the resident opportunities to obtain the skills and knowledge required to become a competent pharmacy practitioner. The specific program for each resident varies based upon interests and goals. During the year, the residents will be evaluated by rotation preceptors, the RPD, the Pharmacy Director, and themselves.

The resident will meet with the rotation preceptor prior to the start of each new rotation, primarily to discuss and customize the rotation's goals and objectives so as to meet the specific needs of the resident. During the rotation, the resident meets with the preceptor on a regularly scheduled basis, as determined by the preceptor and resident. Any additional modifications to the rotation or its goals and objectives are also discussed.

On the last day of rotation or as otherwise specified by the preceptor, the resident again meets with the preceptor for evaluation purposes. The following evaluations are required to be completed for each rotation. Evaluations are due the last day of the rotation unless otherwise specified by the preceptor. For extenuating circumstances, the RPD should be contacted to modify the PharmAcademic evaluation due date. The preceptor may provide additional feedback throughout the rotation in a verbal or written manner within PharmAcademic.

| Evaluation | Evaluator | Evaluated | Due |
|---|---|---|---|
| Summative Evaluation | Resident | Resident (self-assessment) | Last day of the rotation |
| Summative Evaluation | Preceptor | Resident | Last day of the rotation |
| ASHP Learning Experience Evaluation | Resident | Learning Experience | Last day of the rotation |
| ASHP Preceptor Evaluation | Resident | Preceptor | Last day of the rotation |

The facilitator may attend the monthly rotation evaluations to provide consistency throughout the year. This will also help to identify any problems at an early stage. All evaluations will be based on learning objectives. All resident and rotation evaluations must be in written form and included in PharmAcademic.

Self-assessments are to be completed independently, prior to preceptor, facilitator, or RPD review. Evaluations in PharmAcademic are available to the facilitator, rotation preceptor, and the RAC. Resident progress on program objectives will be evaluated using the ASHP Learning Experience Scale of 'Achieved', 'Satisfactory Progress' and 'Needs Improvement'. Definitions of each of these components are listed in the table on the next page. Preceptors are to use these definitions on learning experience evaluations and residents are to use these definitions when completing self-assessments.

**Longitudinal Rotations**

Rotations greater than 12-weeks in length, will have a summative evaluation completed at evenly spaced intervals and by the end of the learning experience, with a maximum of 12 weeks between evaluations. These are done quarterly for the longitudinal, year-long rotations. In addition, residents will complete a learning

experience evaluation at the midpoint and at the end of the learning experience.

| Longitudinal Evaluations (52-weeks) | Evaluator | Evaluated | Due |
|---|---|---|---|
| Summative Evaluation | Resident | Resident (self-assessment) | Quarterly |
| Summative Evaluation | Preceptor | Resident | Quarterly |
| ASHP Learning Experience Evaluation | Resident | Learning Experience | Midpoint (26 weeks) and last day of rotation (52 weeks) |
| ASHP Preceptor Evaluation | Resident | Preceptor | Last day of the rotation |

**Definitions of Scores Used in Learning Experience Evaluations**

Each rating should have accurate and objective comments documented within the evaluation that provide an explanation for the chosen rating

| | |
|---|---|
| NI = Needs Improvement | The resident's level of skill on the goal does not meet the preceptor's standards of either "Achieved" or "Satisfactory Progress". This means the resident could not:<br>● Complete tasks or assignments without complete guidance from start to finish, OR<br>● The resident could not gather even basic information to answer general patient care questions, OR<br>● Other unprofessional actions can be used to determine that the resident needs improvement.<br><br>This should only be given if the resident did not improve to the level of residency training to date before the end of the rotation. The rating of NI will trigger a meeting between the RPD and resident to discuss any changes that need to be made to the program and/or resident schedule to ensure progress. The facilitator and/or management may be asked to join if determined necessary.<br><br>Examples:<br>Resident recommendations are always incomplete and poorly researched and/or lack appropriate data to justify making changes in patient's medication regimen. Resident consistently requires preceptor prompting to communicate recommendations to members of the healthcare team, and/ or to follow up on issues related to patient care. |
| SP = Satisfactory Progress | This applies to a goal whose mastery requires skill development in more than one learning experience. In the current experience the resident has progressed at the required rate to attain full mastery by the end of the residency program. This means the resident can:<br>● Perform most activities with guidance but can complete the requirements without significant input from the preceptor.<br>● There is evidence of improvement during the rotation, even if it is not complete mastery of the task.<br><br>There is a possibility the resident can receive NI on future rotations in the same goal in which SP was received if the resident does not perform at least at the same level as previously noted.<br><br>Examples:<br>Resident is able to consistently answer questions of the healthcare team and provide concise and complete response with minimal preceptor prompting or assistance. An area where the resident can focus on continued development would be to work on anticipating the needs of the healthcare team during patient rounds.<br>Resident is able to make recommendations to the team without preceptor prompting when recommendations are straightforward and well received. Resident sometimes struggles with more complex recommendations and |

| | |
|---|---|
| | tackling difficult interactions. Encourage resident to continue to identify supporting evidence for recommendations to assist in difficult interactions. |
| ACH = Achieved | The resident has fully mastered the goal for the level of residency training to date. This means that the resident has consistently performed the task or expectation without guidance.<br><br>Examples:<br>Resident's recommendations are always complete with appropriate data and evidence to support medication related adjustments in therapy. This is achieved without preceptor prompting. Resident consistently makes an effort to teach members of the healthcare team his/ her rationale for therapy recommendations |
| ACHR = Achieved for the Residency | The resident's Facilitator, RAC, and RPD will collaborate throughout the residency year to determine if the resident has demonstrated consistency between learning experience evaluations of goals and objectives. This means that the resident can consistently perform the task or has fully mastered the goal for the level of residency training to date and performed this task consistently in various learning experiences, ideally during more than one rotation. For objectives taught and evaluated in multiple learning experiences or multiple quarters, requires having an evaluation of "achieved" on two separate learning experiences. Objectives evaluated in a singular learning experience may be marked ACHR after a one-time evaluation of "achieved". At such time, the RPD has the ability to mark the resident as "ACHR". This means that the resident no longer needs to be evaluated on this goal, but that the resident and any preceptor has the opportunity to provide additional feedback as necessary. |



**Programmatic Continuous Quality Improvement**

As we strive to further the resident's development, the residency program will strive to continue its development and ability to optimally train residents. This will be conducted throughout the year and as a formal exit interview at the end of each residency year.

The RPD will have regular scheduled meetings with the residents to discuss resident progress, provide updates regarding deadlines, and to solicit feedback from the residents. As able, this feedback will be discussed at RAC and implemented during the current residency year.

**Exit Interview**

At the end of each residency year, the RPD will have an exit interview to review the program from the resident's perspective, with a focus on changes that can be implemented or considered for future residency years. The RPD will then compile the resident feedback in a de-identified document to maintain resident confidentiality for distribution and discussion with the RAC.

- Rotation specific feedback will be sent to the specific residency preceptor. The RPD will consider this feedback during the annual preceptor evaluation process.

Exit interview feedback will be reviewed at the Continuous Quality Improvement meeting for discussion and decision regarding programmatic changes. This session will include preceptor feedback and ideas for improvement. These changes will be documented in RAC minutes.

## Teaching Certificate

Participation in the Colorado Pharmacy Residency Teaching Certificate Program (CPRTC) is an optional benefit provided to UCHealth - Memorial Hospital Residents. CPRTC is administered through the University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences.

**Program Goal**

To provide an opportunity to enhance teaching skills through practical training and actual hands on teaching experience both in the university setting as well as the clinical practice setting. A focus will be placed on both classroom and clinical practice teaching/precepting. The teaching certificate program should not be considered the equivalent of more in depth training that can be attained with PGY2 residency or fellowship training. Rather, graduates of the program should feel comfortable with designing and implementing educational programs within the clinical practice environment, as well as gain adequate exposure to consider if a career in academia is desired. The Teaching Certificate is awarded to participants that complete the program requirements.

**Program Outcomes**

1. The program participant will be able to demonstrate their expanded knowledge in a variety of instructional settings.
2. The program participant will possess an extensive teaching skill set to utilize in both the classroom and clinical setting
3. The program participant will be able to create a teaching portfolio following completion of required experiences.

The CPRTC will consist of attendance at regularly scheduled workshops, hands-on teaching experiences, and the creation of a teaching portfolio.

Workshops will be held monthly at the School of Pharmacy in Denver from 5:30 – 7 pm or as defined by the course instructors. Residents will be permitted to leave Memorial Hospital at 2:30 pm on the days of their monthly workshop to allow for travel time. This must be communicated in advance to the rotation preceptor. Mileage may be submitted to the department for reimbursement, however residents are encouraged to carpool to the workshops.

Additional information will be provided with regards to the CRPTC will be provided prior to the first workshop.

**PGY1 Pharmacy Residency Electronic Residency Portfolio**

Each resident will collect their accomplishments throughout the year and organize electronically. The electronic file may be created on your personal drive, on the pharmacy share drive or directly within PharmAcademic. The resident is expected to appropriately and clearly label all documents. At the end of the year, the files must be transferred or saved to their folder on the S:drive or directly to PharmAcademic (please do not add any Protected Health Information in PharmAcademic) as indicated below. It is recommended that residents save information to this portfolio in real time with a quarterly assessment to identify anything missing. The below documents should be saved as follows:

**S:Drive Information**:

- Title: [first name] [last name] Residency Binder [year – year]

- Folders:
    1. Professional Info
        - Offer Letter (Initial and Signed Copy)
        - ACLS, BLS Certifications
        - CITI Training Certificate(s)
        - C2 Safe Training Certificate
        - ACPE Immunization Certificate (if applicable)
        - Orientation to Residency Checklist
        - Pharmacist CPA Attestation
        - Department Checklist/Integration Plan
        - Residency Training Checklist
        - Quarterly Resident Graduation Checklist signed off by RPD/RPC and resident

    2. Longitudinal Rotations (sub-folders to include)
        - P & T Committee
            - Materials worked on/created by the resident for P&T
        - Medication Safety Steering Committee (MSSC) for PGY1
            - Materials worked on/created by the resident for MSSC
        - Antimicrobial Stewardship (ASC) for PGY1
            - Materials worked on/created by the resident for ASC
        - Code response Evaluation Forms for PGY1

    3. Miscellaneous
        - Any materials relating to the residency program which do not fit in another category

**PharmAcademic Information**

Under Self-Assessments and Development Plans tab:

1. Self-Assessment
    - ASHP Entering Interests Self-Assessment Form

2. Development Plans
    - Initial Resident Development Plan
    - Quarter 1 Resident Development Plan
    - Quarter 2 Resident Development Plan
    - Quarter 3 Resident Development Plan
    - Quarter 4 Resident Development Plan

Under Files tab:

1. R1 Patient Care
    - Class Review/Monograph, treatment guideline, treatment protocol, or order set
2. R2 Practice Advancement
    - MUE Project proposal
    - MUE IRB information (if applicable)
    - MUE ASHP/Vizient Abstract (final)
    - MUE ASHP/Vizient Poster (final)
    - Research Project proposal
    - Research Completed IRB Application (if applicable)
    - Research IRB approval confirmation (if applicable)
    - RCOR Abstract (final)
    - RCOR Presentation (final)
    - RCOR Handout (final)
    - RCOR Evaluation
    - Research Manuscript
    - Signed Research Manuscript Approval Letter from Advisor
    - Closure memo to IRB (and, if received, closure confirmation from IRB, if applicable)
3. R3 Leadership
    - None
4. R4 Teaching and Education
    - Grand Rounds
        - Final draft
        - Evaluations
        - ACPE Information
    - Rotations (clinical)
        - Final draft of presentation (patient case or journal club)
            - Include journal article if journal club presentation
        - Evaluations
    - Any newsletters, clinical pearls, patient education, provider education, or pharmacist education
    - Teaching Certificate (include your teaching portfolio, if applicable)
        - Teaching Philosophy Statement
        - Teaching Experience

- Teaching Reflection Statement
- Teaching Materials
- Evaluation Materials

5. Miscellaneous Files
    - CV from the beginning of residency
    - CV from the end of residency
    - State Pharmacist License
    - Duty Hours Acknowledgement
    - Residency Manual Receipt Acknowledgement
    - Two examples of Progress Notes (please block out any protected health information)

**PGY2 Critical Care Residency Electronic Residency Portfolio**

Each resident will collect their accomplishments throughout the year and organize electronically. The electronic file may be created on your personal drive, on the pharmacy share drive or directly within PharmAcademic. The resident is expected to appropriately and clearly label all documents. At the end of the year, the files must be transferred or saved to their folder on the S:drive or directly to PharmAcademic (please do not add any Protected Health Information in PharmAcademic). It is recommended that residents save information to this portfolio in real time with a quarterly assessment to identify anything missing. The below documents should be saved as follows:

**S Drive > Residency > PGY2 Critical Care Residency > Resident Portfolio**

- Title: [first name] [last name] Residency Binder [year – year]

- Folders:
    1. Professional Info
        - Offer Letter (Initial and Signed Copy) or Early Commitment Agreement
        - PGY1 Residency Certificate
        - ACLS, BLS, PALS, NRP Certifications
        - CITI Training Certificate(s)
        - C2 Safe Training Certificate
        - ACPE Immunization Certificate (if applicable)
        - Orientation to Residency Checklist
        - Quarterly Resident Graduation Checklist signed off by RPD/RPC and resident

    2. Longitudinal Rotations (sub-folders to include)
        - P & T Committee
            - Monographs, Therapeutic Interchanges, Protocols/Procedures, as applicable
            - Other materials worked on/created by the resident for P&T
        - Critical Care Section or other committee meetings
            - Materials worked on/created by the resident for Critical Care Section or other applicable meetings
        - Leadership/Administration
            - Materials worked on/created by the resident for leadership meetings
            - Quarterly ICU/ED Newsletters
        - Teaching for PGY2 Programs
            - Materials for elective courses taught at University of CO, if applicable
        - Additional Research Projects (ex. Trauma research project documents, if available)
        - Critical Care Appendix/Disease State Management Form (downloaded from PharmAcademic and/or form uploaded and signed off)

**PharmAcademic Information**

Under Self-Assessments and Development Plans tab:

1. Self-Assessment
    - ASHP Entering Interests Self-Assessment Form
2. Development Plans
    - Initial Resident Development Plan
    - Quarter 1 Resident Development Plan
    - Quarter 2 Resident Development Plan
    - Quarter 3 Resident Development Plan
    - Quarter 4 Resident Development Plan

Under Files tab:

3. R1 Patient Care
    - Class Review/Monograph, treatment guideline, treatment protocol, or order set
4. R2 Practice Advancement
    - MUE Project proposal
    - MUE IRB information (if applicable)
    - MUE ASHP/Vizient Abstract (final)
    - MUE ASHP/Vizient Poster (final)
    - SCCM abstract (if applicable)
    - SCCM Presentation (final, if applicable)
    - Research Project proposal
    - Research Completed IRB Application (if applicable)
    - Research IRB approval confirmation (if applicable)
    - RCOR Abstract (final)
    - RCOR Presentation (final)
    - RCOR Handout (final)
    - RCOR Evaluation
    - Research Manuscript
    - Signed Research Manuscript Approval Letter from Advisor
    - Closure memo to IRB (and, if received, closure confirmation from IRB, if applicable)
5. R3 Leadership
    - None
6. R4 Teaching and Education
    - Grand Rounds
        - Final draft
        - Evaluations
        - ACPE Information
    - Rotations (clinical)
        - Final draft of presentation (patient case or journal club)
            - Include journal article if journal club presentation
        - Evaluations

- Any newsletters, clinical pearls, patient education, provider education, or pharmacist education
- Teaching Certificate (include your teaching portfolio, if applicable)
    - Teaching Philosophy Statement
    - Teaching Experience
    - Teaching Reflection Statement
    - Teaching Materials
    - Evaluation Materials

7. Miscellaneous
    - CV from the beginning of residency
    - CV from the end of residency
    - State Pharmacist License
    - Duty Hours Acknowledgement
    - Residency Manual Receipt Acknowledgement
    - Any materials relating to the residency program which do not fit into the above categories

**Pharmacy Practice (Staffing)**

Consistent with the ASHP residency standards, each resident will complete a pharmacy practice component of the residency program. Although often referred to as "staffing" this practice component represents another learning opportunity within the framework of the residency program.

This experience is crucial to the development of professional practice skills. The resident will gain proficiency in distribution and clinical skills, personnel management and leadership skills, and insight into process improvement opportunities for acute care facilities.

**General**

1. Each resident shall obtain a Pharmacist License within the state of Colorado by September 1st.
    - Residents who fail to obtain a Pharmacist License in the state of Colorado by September 1 must set up an individual meeting with the RPD and Director of Pharmacy. Residents who fail to obtain a Pharmacist License in the state of Colorado in the first 120 days after the program start date will be suspended from the residency program until they become licensed. Time missed in the program will be added on to the end of the residency year. Residents may continue to work as pharmacy technicians and continue to receive a student intern salary along with benefits until they are licensed. At least two-thirds of the residency to be completed as a licensed pharmacist. Residents not licensed as a pharmacist in the state of Colorado by January 1 will be dismissed from the program.
2. Residents will receive quarterly staffing evaluations in PharmAcademic.
3. During orientation the residents will receive:
    - Training for procedural issues and systems
    - New Pharmacist Hire Checklist and Department Orientation
    - Orientation to the residency program
4. PGY1 Residents will staff every 3rd weekend (8-hour shifts) as well as an 8-hour evening shift on Thursday and Friday every 4th week.
    - Staffing changes/switches will be managed by the residents. Any staffing changes/switches must be communicated to the RPD and updated in the pharmacist schedule on Sharepoint to be approved by the Pharmacy Manager. Residents will also notify their rotation preceptor in advance of the shift, ideally at the time of the change/switch.
    - Residents staffing an EHOT shift will not be required to come to rotation until 0700 the following day to comply with duty hours and notify their preceptor in advance.
    - Resident staffing on Fridays will be off rotation and project time will be allowed prior to their staffing shift. This is limited to two Friday staffing shifts per 4-5 week rotation to minimize time away from rotation.
5. PGY1 staffing requirement includes a minimum of 28 weekend shifts and 20 weekday staffing shifts
6. The PGY2 Critical Care Resident will staff every 3rd weekend in the ICU and evening shifts in the ED (following completion of their ED rotation) every other week (on average).
    - Residents will be allowed to submit their requests for which day they would like to work the evening shift each week

7. PGY2 staffing requirement includes a minimum of 28 staffing shifts and 12 weekday ED staffing shifts

**Holiday Staffing Coverage**

Residents, as a part of the professional staff of the department are expected to assist with holiday coverage during the residency year. Every effort will be made to accommodate a resident's preference for the specific holiday assignment. Residents will be expected to cover:

- Two holiday shifts (Labor Day, Thanksgiving Day, Christmas Day, New Year's Day, Memorial Day, Martin Luther King Jr. Day)

**Paid Time Off (PTO)**

Paid time off accrual and procedures will follow UCHealth Policy. Paid time off would typically be used for illness, personal time off to attend special events, interviews, etc. The UCHealth Family and Medical Leave Policy and UCHealth Personal Leave of Absence Policy outline additional circumstances where leave may be warranted. Employees will also receive benefits through the Colorado Family and Medical Leave Insurance (FAMLI) program.

PTO is used for interviews for positions after residency or PGY2 positions. Sufficient PTO balance must be available for interview days. Therefore, PTO days should be used judiciously at the beginning of the residency year if the resident plans to pursue multiple opportunities. In the event that PTO is not sufficient, the Director of Pharmacy and Resident, along with the Human Resources/Payroll department, will develop a plan.

If a resident needs to take a sick day, the resident must notify the pharmacy administrator on call (AOC) at 719-365-9300. The notification can be no later two (2) hours before the start of the shift, unless proper excuse is presented for his or her inability to call. In addition, the RPD and current rotation preceptor must be contacted.

The resident is responsible for arranging switches for all vacation time off during their regular scheduled staffing weekend. Unlicensed residents are not eligible for schedule switches.

If the resident is on a rotation, the preceptor for that rotation must approve any PTO prior to the PTO request being made to the RPD. Requests for PTO must be communicated to the RPD and Pharmacy Manager. It is the responsibility of the resident and the RPD (or their designee) to keep track of resident PTO days. PTO days will be added to the Pharmacist Schedule in Sharepoint for tracking.

If a resident attends a pharmacy (or specialty) related professional meeting and the resident stays additional days at the meeting site, these days must be counted as PTO. If the resident does not follow the outlined steps in requesting time off from a rotation (see below), the request for PTO may be denied. It is advised that the resident not make flight arrangements until final approval of PTO is received.

To request time off:

1. The resident sends an email request to the rotation preceptor, with a cc to the RPD
2. The preceptor for the rotation sends "reply to all" with approved or not approved

3. The RPD sends “reply to all” and cc to the administration assistant and Pharmacy Manager with final approved or not approved
4. Administration Assistant and/or Pharmacy Manager will enter the PTO into Kronos

The resident is expected to activate the “Out of the Office” rule in Outlook for all time away from the hospital (PTO or meeting).

**Policies**

Residents are expected to comply with all UCHealth policies. Pertinent policies are listed below for reference. Electronic copies are provided for candidates invited onsite for interview. Policies are housed on The Source under Policy Stat, rather than reprinted within the manual, to ensure the most up-to-date version is being accessed at all times.

1) **UCHealth Corrective Actions and Appeal Process**
2) **UCHealth Travel and Business-Related Expenses**
3) **UCHealth Employee Continuing Education Program**
4) **UCHealth Paid Time Off**
5) **UCHealth Family and Medical Leave**
6) **UCHealth Personal Leave of Absence**
7) **UCHealth Harassment Free Workplace**
8) **UCHealth Code of Conduct**
9) **UCHealth Memorial Parking Policy**
10) **UCHealth Environment of Mutual Respect for Employees, Patients, and Visitors Policy**
11) **UCHealth Bereavement**
12) **UCHealth Attendance**
13) **UCHealth Alcohol and Drug Free Workplace**
14) **UCHealth Dress Code and Professional Appearance**
15) **UCHealth Acceptable Use of Artificial Intelligence Policy**

**Extended Leave From the Residency Program**

The resident will be granted leave in accordance with FMLA, FAMLI, and leave of absences policies. When extenuating circumstances occur, the RPD and the DOP may consider requests for leave without pay. Specific plans will be considered on a case-by-case basis. The resident will be required to "make-up" time missed in accordance with Residency Program requirements in discussion with the Director of Pharmacy, RPD, and rotation preceptor. The resident should be present for 75% of rotation days on any individual rotation. If they are unable to be, a meeting will occur between the RPD, preceptor, and resident to discuss. The maximum leave that can be taken without extending the end date of the residency program (including all leave with the exception of professional meeting time – interview days, PTO, vacation leave, sick leave, extended leave, paid leave, unpaid leave, etc) is 37 allowed days per ASHP per 52-week training period. When the program is extended, the days will be made up in a 1:1 equivalence in duration and competencies missed. The program will not be extended past 8 weeks of the original anticipated completion date. Salary and benefits will be continued through the extension of the program.

**Failure to Progress Policy**

Residents are expected to complete all requirements of the Residency Program based on the ASHP Residency Standards and Competency Areas, Goals and Objectives for their specific program. Only those residents who complete the residency requirements set forth will receive their residency certificate. Evaluation of the

resident's progress in completing the residency completion requirements is documented as part of the quarterly review process.

- When a resident fails to do any of the following, the preceptor and RPD will review the UCHealth Corrective Actions and Appeal Process
    - A resident fails to present themselves in a professional manner or demonstrates plagiarism
    - A resident does not follow policies and procedures of the institution
    - A resident is failing to make progress in any aspect specific to the residency program completion requirements [ex: “Needs Improvement” (NI) for the same objective on more than one summative evaluation, multiple NI’s for a single summative evaluation, not meeting progression expectations during a learning experience or not meeting deadlines.
    - Other issues as deemed appropriate by pharmacy department leadership
- The RPD, in conjunction with RAC, will continually assess the resident’s progress. At the start and end of Quarter 3, the resident graduation checklist and completion requirements will be reviewed and escalated via the below process if any deficiencies (as described above) are identified.
- A discussion will then occur between the preceptor involved, RPD, Director of Pharmacy (or delegate), and Human Resources (if needed).
- A meeting will then take place between the RPD, the Director of Pharmacy (or delegate), and Human Resources (if needed), and others as deemed appropriate.
- Based on the issue identified, corrective actions processes may be initiated, to include a written warning, a record of conversation, or a written performance improvement plan (PIP) if appropriate. The record of conversation or PIP will include a follow-up plan regarding the behavior, specific goals the resident has to achieve and how it will be monitored, and will have a timeline for remediation of no longer than 4 weeks.
    - If the resident meets the criteria for successful remediation, the resident must not regress for the duration of the residency to receive a certificate of completion.
    - If the resident is not successful in completing the action steps, yet makes progress, a second resident corrective action plan can be executed. The second resident corrective action plan will be no longer than 4 weeks.
    - If the resident does not meet the criteria for successful remediation in the second plan, the resident will be dismissed from the program and will not receive a certificate.
- The appropriate details of the record of conversation or PIP that impact progression through the residency will be shared with the RAC and future preceptors. Preceptors may be asked to provide written documentation on progress to the resident’s facilitator and RPD.
- During the quarter 3 resident development plan presentation, if it is identified the resident will be unlikely to meet the residency goals and objectives or graduation requirements, the RPD, Director of Pharmacy and Human Resources will meet to consider additional actions or termination. The resident will have the opportunity to review and discuss an alternative plan to meet the requirements prior to moving forward with termination.
- The RPD and Director of Pharmacy (or delegate) will meet with the resident to discuss the additional requirements of the resident in order to continue in the program.
- If the resident fails to comply with the additional requirements or other issues arise the RPD and Director of Pharmacy (or delegate) will meet with Human Resources to determine next steps

- If a resident completes 54 weeks (for PGY1) and 52 weeks (for PGY2) of the residency but does not fulfill all residency completion requirements, a certificate will not be issued. No extensions will be granted for residents who have failed to meet residency completion requirements.
- The resident will have the opportunity to meet with the human resources at any point if desired.

Examples of situations/causes for immediate termination include, but are not limited to, failure to obtain licensure by specified date, failure to meet the program objectives as outlined in the residency manual, failure to abide by the policies and procedures of UCHealth or the residency manual, breach of confidentiality, or violation of any of the rules and regulations of the Colorado State Board of Pharmacy. If termination is recommended by RAC, the decision will then be escalated to the Director of Pharmacy and the Human Resources.

**Grievances and Complaints**

The following stepwise process shall be used by a resident to address any issues or decisions regarding performance or actions taken within the construct of the training program including probation and dismissal.

1) Any attempts to resolve issues concerning specific rotations should first be addressed with the rotation preceptor and issues worked out between the resident and preceptor to the best of their abilities.
2) If unable to resolve the issue directly with the preceptor, contact the RPD to discuss the complaint.
3) If unable to resolve at the RPD level, then the resident may appeal to the RAC.
4) If unable to resolve, the resident may appeal to the Director of Pharmacy (or their designee).

## Pharmacy Residency Code of Conduct

As per the UCHealth Code of Conduct, pharmacy residents practicing at UCHealth Memorial Hospital are expected to treat others with respect through courteous communication and professional demeanor. In addition to this policy, there are some additional expectations with regards to conduct of the resident:

- The resident will show respect to colleagues both inside and outside of the pharmacy department.
- If expectations for any rotation, assignment, project, or other responsibilities are not clear, the resident will seek clarification from the preceptor in a timely fashion.
- The resident will have clear communication with preceptors when deadlines are not achieved and a plan presented to move forward.
- The resident will work with the preceptor to resolve any conflict. If they are unable to resolve, they will refer to the Grievances and Complaints section of the Residency Manual and discuss with the RPD moving in a stepwise process.
- The resident will follow the UCHealth Attendance Policy and notify the Pharmacy Administrator On Call in addition to their rotation preceptor for any call offs.
- The resident will come prepared to rotation. If they are going to be late or are unprepared for a discussion, there will be communication in advance with the preceptor.
- The resident will also abide by the ASHP Code of Ethics for Pharmacists - https://www.ashp.org/-/media/assets/policy-guidelines/docs/endorsed-documents/code-of-ethics-for-pharmacists.ashx

If these expectations are not followed, the RPD will discuss with the resident and corrective action will take place if indicated.

**Duty Hours**

**American Society of Health System Pharmacists (ASHP) Pharmacy Specific Duty Hours**

The UCHealth - Memorial Hospital Department of Pharmacy is dedicated to providing residents with an environment conducive to learning. In 2012, ASHP adopted Pharmacy Specific Duty Hours to replace the previous Accreditation Council for Graduate Medical Education (ACGME) duty hours. The RPD, Preceptors, and Residents share responsibility to ensure that residents abide by the ASHP requirements during the residency year.

The Department of Pharmacy supports compliance with the ASHP Duty Hour Requirements to ensure that residents are not compromising patient safety or minimizing the learning experience by working extended periods of time and ensure wellness and resilience are a priority. Key elements of the ASHP requirements include:

- Duty hours must be limited to no more than 80 hours per week, averaged over a four-week period, inclusive of internal and external moonlighting.
- Moonlighting shifts will not exceed 24 hours in any pay-period without RPD and Pharmacy Manager approval
- Continuous duty periods for residents should not exceed 16 hours.
- Residents must have a minimum of one day in seven days free of duty (when averaged over four weeks). At-home call cannot be assigned on these free days.
- Residents must have at a minimum of 8 hours between scheduled duty periods.

ASHP defines "duty hours" as: ***"all inpatient and outpatient patient care (resident providing care within a facility, a patient's home, or from the resident's home when activities are assigned to be completed virtually); staffing/service commitment; in-house call; administrative duties; work from home activities (i.e., taking calls from home and utilizing electronic health record related to at-home call program); and scheduled and assigned activities, such as committee meetings, classroom time associated with a master's degree for applicable programs or other required teaching activities and health and wellness events that are required to meet the goals and objectives of the residency program."*** Duty hours **excludes** reading, studying, and academic preparation time (e.g. presentations, journal clubs, closing knowledge gaps); travel time (e.g., to and from work); and hours that are not scheduled by the residency program director or a preceptor.

Questions concerning the application of ASHP guidelines should be directed to the RPD and/or the DOP.
https://www.ashp.org/-/media/assets/professional-development/residencies/docs/duty-hour-requirements.pdf

With my signature below I acknowledge that I have read and understand my responsibilities to comply with ASHP duty hour requirements:

| _____ | _____ | _____ |
|---|---|---|
| Print Name | Signature | Date |

**Additional staffing activities/Moonlighting**
Working outside of UCHealth Memorial Hospital ("moonlighting") will be permitted provided that the moonlighting activities are disclosed to the RPD in advance, the resident is maintaining duty hours, and the resident is performing satisfactorily in the program (resident may not have any recent 'Needs Improvement' on any of the programs goals and objectives from the prior rotation). Moonlighting shifts will not exceed 24 hours in any pay-period without RPD and Pharmacy Manager approval. Moonlighting must not interfere with rotation shifts and learning experiences. Extra shifts at Memorial Hospital will be permitted, provided there is communication with the RPD prior to the resident agreeing to work extra shifts. There will need to be communication between the RPD and the scheduler about the proposed extra shift(s) to ensure the resident is maintaining duty hours. If the resident is found to be in violation of these expectations, the Pharmacy Manager/Director of Pharmacy will be notified for disciplinary action.

**Duty Hours Attestation**
Residents will complete a monthly Duty Hours attestation within PharmAcademic to ensure continued compliance with Duty Hours. It is recommended the resident discuss any duty hours concerns with the preceptor PRIOR to the dates in concern. An example is evening staffing and early morning rotations. The resident is expected to discuss with the preceptor in advance so alternate rotation timing can be considered. If there is non-compliance with duty hours, the resident will notify the RPD who will schedule a meeting with the resident and rotation preceptor to discuss and work out a plan to prevent any future instances of non-compliance. This will be documented in PharmAcademic as 'Provide Feedback to Resident'. If more than one instance of non-compliance occurs, it will be escalated to RAC to further discuss and create an action plan with the resident and each rotation preceptor. **Frequently Asked Questions (Duty Hours)**
Adapted from the ASHP and ACGME website

**Duty hours must be limited to 80 hours per week**
Question: *What is included in the definition of duty hours under the standard "duty hours must be limited to 80 hours per week?"*

Answer: Duty hours are defined as all scheduled clinical and academic activities related to the pharmacy residency program. This includes inpatient and outpatient care, in-house call, administrative duties, scheduled and assigned activities, such as conferences, committee meetings, and health fairs that are required to meet the goals and objectives of the residency program. For call from home, only the hours spent in the hospital after being called in to provide care count toward the 80-hour weekly limit. Hours spent on activities that are required by the accreditation standards, such as membership on a hospital committee, or that are accepted practice in residency programs, such as residents participating in interviewing residency candidates, must be included in the count of duty hours. It is not acceptable to expect residents to participate in these activities on their own hours, nor should residents be prohibited from taking part in them. Duty hours do not include: reading, studying, and academic preparation time for presentations, journal clubs; or travel time to and from conferences; and hours that are not scheduled by the residency program director or preceptor.

**Moonlighting**
Question: *How is moonlighting defined?*

Answer: Moonlighting is defined as any voluntary, compensated, work performed outside the organization (external), or within the organization where the resident is in training (internal). These are compensated hours beyond the resident's salary and are not part of the scheduled duty periods of the residency program. Moonlighting (internal or external) must not interfere with the ability of the resident to achieve the educational goals and objectives of the residency program, and must not interfere with the resident's fitness for work nor compromise patient safety. It is at the discretion of the residency program director whether to permit or to withdraw moonlighting privileges. Moonlighting hours must be counted towards the 80-hour maximum weekly hour limit. Working outside of Memorial Hospital ("moonlighting") will be permitted provided that the moonlighting activities are disclosed to the RPD in advance, the resident is maintaining duty hours, is performing satisfactorily on rotations, and the activities do not interfere with rotation responsibilities. Extra shifts at Memorial Hospital will be permitted, provided there is communication with the RPD prior to the resident agreeing to work extra shifts. There will need to be communication between the RPD and the scheduler about the proposed extra shift/s to ensure the resident is maintaining duty hours. If moonlighting affects the resident performance, the RPD will meet with the resident and document this in PharmAcademic as 'Provide Feedback to Resident'.

**Averaging of Selected Standards over a 4-Week Period**
Question: *How should we handle the averaging of the duty hour standards (80-hour weekly limit, one day off in 7, and call every third night)? For example, what should be done if a resident takes a vacation week?*

Answer: Averaging must occur by rotation. This is done over one of the following: a four-week period; or a one-month period. This avoids heavy and light assignments being combined to achieve compliance.

**Duty Hour Limits and Research and Other Non-Patient Care Activities**
Question: *How are the standards applied to rotations that combine research and clinical activities?*

Answer: Some programs have added clinical activities to "pure" research rotations, such as having research residents covering "night float". This combination of research and clinical assignments could result in hours that exceed the weekly limit and could also seriously undermine the goals of the research rotation. Review Committees have traditionally been concerned that required research not be diluted by combining it with significant patient care assignments. This suggests limits on clinical assignments during research rotations, both to ensure safe patient care, resident learning, and resident well-being, and to promote the goals of the research rotation.

Question: *A journal club is held in the evening for 2 hours, outside the hospital. It is not held during the regularly scheduled duty hours, and attendance is strongly encouraged but not mandatory. Do these hours count toward the 80-hour weekly total?*

Answer: If attendance is “strongly encouraged,” the hours should be included because duty hours apply to all required hours in the program, and it is difficult to distinguish between “strongly encouraged” and required. Another way to look at it is that such a journal club, if held weekly, would add two hours to the residents’ weekly time. A program in which two added hours result in a problem with compliance with the duty hour standards likely has a duty hour problem.

Question: *If some of a program’s residents attend a conference that requires travel, how should the hours for duty hour compliance?*

Answer: If attendance at the conference is required by the program, or the resident is a representative for the program (e.g., he/she is presenting a paper or poster), the hours should be recorded just as they would for an “on-site” conference hosted by the program or its sponsoring institution. This means that the hours during which the resident is actively attending the conference should be recorded as duty hours. Travel time and non-conference hours while away do not meet the definition of “duty hours” in the ASHP or ACGME standards.

**Institutional Monitoring and Oversight of Duty Hours**

Question: *The ASHP Residency standard states that neither the educational outcomes of the program nor the welfare of the resident or the welfare of patients are compromised by excessive reliance on residents to fulfill service obligations and the guidance document states that duty hours must be addressed by a well-documented, structured process. What does this mean?*

Answer: ASHP requires that programs and their sponsoring institutions monitor resident duty hours to ensure they comply with the standards. ASHP does not mandate a specific monitoring approach, since the ideal approach should be tailored to the program and the sponsoring institution. At Memorial Hospital, duty hours are tracked within PharmAcademic. See previous documentation regarding duty hours for if a resident has or anticipates a violation in the hours.

**Requirements for Completion of UCHealth Memorial Hospital Pharmacy Residency Program**

**PGY1 Resident Graduation Checklist**

| Requirement |
|---|
| 1. Licensed as a pharmacist in the state of Colorado.<br>Licensure Date: |
| 2. Residents shall complete a residency project.<br>Topic: |
| a. A proposal and timeline for the major project shall be submitted in PharmAcademic (R2.1.2) |
| b. A final evaluation by the residency project advisor(s) |
| c. Platform Presentation at Residency Conference of the Rockies or another suitable platform |
| d. Presentation to local committee; Committee_____ |
| e. A manuscript plus memo submitted to the RPD by June 15 |
| f. A project report shall be uploaded to PharmAcademic (R2.1.6) |
| 3. Residents shall complete a medication use evaluation. |
| a. Poster Presentation at a meeting |
| b. Presentation to local committee (written and/or verbal) |
| c. A project report shall be uploaded to PharmAcademic (R2.1.6) |
| 4. Residents shall complete an ACPE-accredited Grand Rounds Presentation.<br>Topic: |
| 5. Residents shall obtain 'achieved for residency' on > 90% (28/31) of the program's goals and objectives |
| 6. All PharmAcademic evaluations are completed and signed by June 30 |
| 7. Monthly Duty Hours attestations completed |
| 8. Electronic Residency Portfolio must be submitted to the Program Director by June 30 |
| 9. Completion of required rotations |
| a. Internal Medicine |
| b. Critical Care |
| c. Emergency Medicine |
| d. Infectious Disease |
| e. Practice management |
| f. Precepting |
| 10. Completion of 5 elective rotations |
| a. |
| b. |
| c. |
| d. |
| e. |
| 11. Completion of required longitudinal rotations |
| a. Clinical Practice Management |

| Requirement |
|---|
| b. Residency Project |
| c. Pharmacy Practice (Staffing) |
| **12.** Completed staffing requirement including a minimum of 28 weekend shifts and 20 weekday staffing shifts |
| 13. Completion and presentation of (at least) one drug monograph, therapeutic interchange, class review, or policy/protocol. This will be uploaded to PharmAcademic (R1.4.2)<br>Topic: |
| 14. Completion and documentation of (at least) one ADR investigation (Naranjo Scoring)<br>Topic: |
| 15. Submission of one verbal and one written example of teaching and education to PharmAcademic (ex: verbal presentation done on rotation, written education to healthcare providers or pharmacists) (R4.1.1, R4.1.2, and R4.1.3) |
| 16. Completion of all Lead Resident activities as assigned for the respective quarter |
| 17. BLS and ACLS Certification; Date Certified _____ |
| 18. Attendance and Participation in Code Response (evaluation forms must be on file and include # of codes attended in progress summary) |

**PGY2 Critical Care Resident Graduation Checklist**

| Completion Date / RPD Sign Off | Requirement |
|---|---|
| | 1. Licensed as a pharmacist in the state of Colorado.<br>Licensure Date: |
| | 2. Receipt of PGY1 Residency Certificate; Date received/confirmed*: |
| | 3. Residents shall complete a residency project.<br>Topic: |
| | a. A proposal and timeline for the major project shall be submitted and reviewed by the Residency Advisory Committee; Date approved: |
| | b. A final evaluation by the residency project advisor(s) |
| | c. Platform Presentation at Residency Conference of the Rockies or another suitable platform |
| | d. Presentation to local committee; Committee: |
| | e. A manuscript plus cover memo signed by the project advisor submitted to the Program Director by July 2nd, 2027 |
| | f. A project report shall be uploaded to PharmAcademic |
| | 5. Residents shall complete a medication use evaluation.<br>Topic: |
| | a. Poster Presentation at a meeting<br>b. Presentation to local committee (written and/or verbal)<br>c. A project report shall be uploaded to PharmAcademic |
| | 6. Residents shall complete an ACPE-accredited Grand Rounds Presentation.<br>Topic: |
| | 7. Residents shall obtain 'achieved for residency' on 90% (29/32) of the program's goals and objectives. |
| | 8. All PharmAcademic evaluations are completed and signed by July 2nd, 2027 |
| | 9. Monthly Duty Hours attestations completed |
| | 9. Electronic Residency Portfolio must be submitted to the Program Director by July 2nd, 2027 |
| | 10. Completion of required rotations |
| | a. Orientation |
| | b. Medical ICU I |
| | c. Medical ICU II |
| | d. Surgical Trauma ICU I |
| | e. Emergency Medicine I |
| | f. Emergency Medicine II |
| | g. Neurocritical Care |
| | h. Research and Medical Writing |
| | i. Precepting |

| | |
|---|---|
| | 11. Completion of 4 elective rotations |
| | a. |
| | b. |
| | c. |
| | d. |
| | 12. Completion of Longitudinal Rotations |
| | a. Clinical Practice Management |
| | b. Residency Project |
| | c. Pharmacy Practice (Staffing) |
| | 13. Completion of staffing requirement including a minimum of 28 ICU weekend shifts and 12 weekday ED staffing shifts |
| | 14. Completion and presentation of (at least) one drug monograph, class review, therapeutic interchange, or policy/protocol<br>Topic:<br>Date presented: |
| | 15. Completion and documentation of (at least) one ADR investigation (Naranjo Scoring) |
| | 16. Completion of Disease State Appendix Resident Progress Form |
| | 17. Participation in at least 3 cardiac arrests (include date, rotation, and preceptor) |
| | a. |
| | b. |
| | c. |
| | 18. Preparation of at least four ICU/ED newsletters |
| | a. |
| | b. |
| | c. |
| | d. |
| | 19. Participation in at least four leadership meetings |
| | a. Date/Topic: |
| | b. Date/Topic: |
| | c. Date/Topic: |
| | d. Date/Topic: |
| | 20. Write a review article or article suitable for publication (include article name, preceptor) |
| | a. |
| | 21. BLS, ACLS, PALS, and NRP certification active |
| | 1. BLS date: |
| | 2. ACLS date: |
| | 3. PALS date: |
| | 4. NRP date: |

*Failure to receive a signed PGY1 Residency Certificate by day 5 of orientation will result in dismissal from the PGY2 program.

The responsibility to confirm completion of the program requirements rests with the RPD. The above requirements have been development into a checklist that will be completed and monitored quarterly by the resident and the RPD, with the assistance of the Facilitator or Advisors as needed. A copy will be saved in the Electronic Residency Portfolio.

Although a pharmacy residency program, as a post-graduation experience, differs from a college of pharmacy or university experience there are similarities. In college, you are not eligible to participate in the graduation exercise if you haven't completed all of the requirements for graduation. This concept also applies to the pharmacy residency program and unless all of the requirements have been completed, you are not eligible to attend the end-of-year function when Certificates of Residency Training are awarded. A Certificate of Residency Training can be awarded when all of the requirements have been completed.

**Graduation Tracking**

A separate graduation checklist will be maintained for each resident. A copy of the final graduation checklist will be provided to the resident during orientation, and may reflect changes from the above. The RPD will maintain the graduate tracking list throughout the year. Progress will be reviewed and signed off on the checklist quarterly. The resident will also be sent a tracking of their progress towards the residency goals and objectives, at least quarterly.

## Code Response

The primary goals of the code response program are to enhance the resident's practice responsibilities and further develop their clinical autonomy. Residents will complete BLS and ACLS certifications during orientation for PGY1 and if not currently active for PGY2 Critical Care, including PALS and NRP.

**Coverage for PGY1 Residents**

PGY1 Residents are expected to attend all in house and emergency department codes/medical emergencies (Adult Code Blue) within the following hours (see caveats below):

- Monday – Wednesday: 7 am – 4 pm
- Thursday – Friday: 8 am – 9 pm (depending on staffing shifts)
- Saturday – Sunday: 8 am – 9 pm (depending on staffing shifts)

PGY1 Residents will create a code coverage schedule for the first 6 months of the residency on the annual rotation schedule which will be shared with preceptors. The schedule should be provided to the RPD by the end of orientation. A schedule for the second 6 months of residency should be provided to the RPD by the end of December. It is suggested that PGY1 residents cover the code pager or participate in code response for a week at a time on a rotating basis, or monthly during their ICU rotation. Only one PGY1 resident and one PGY2 Critical Care resident should respond to a code at a time. During the second 6 months, PGY1 residents still needing code experience or resident preference (ex. Critical Care or Emergency Medicine post-PGY1) may cover the pager at a higher frequency if agreed on by class and RPD.

On days of the teaching certificate program, PGY1 resident code response coverage will end at 2 pm when they depart the hospital for Denver. The PGY1 resident on the Emergency Department or an outpatient/off-site rotation should not cover the pager during their rotation.

It is the PGY1 resident's responsibility to communicate with their preceptor regarding code response coverage. It is the responsibility of the PGY1 resident to arrange for alternate coverage if he/she cannot cover the pager at the designated time.

The code pager should be passed off to the PGY1 resident staffing the Thursday and Friday evening shift at Memorial Hospital Central, unless the PGY1 resident is covering evening hot seat. If the PGY1 resident is covering evening hot seat, they will NOT cover code response.

On evenings and weekends, the PGY1 resident is expected to respond to codes when working the EMS shift.

During their staffing shift, the PGY1 resident should notify another staff member that they will be leaving order verification to respond to a code. After 15 minutes, the PGY1 resident is expected to check in with another staff member to discuss the anticipated code duration and the current order verification workload. The PGY1 resident should stay for the duration of the code unless order verification volume is substantial.

Failure of a PGY1 resident to attend a code that is paged out during the coverage hours will be reported to the resident's facilitator and RPD by the preceptor who attended the code and any disciplinary action required will be determined by the RPD.

**Coverage for PGY2 Critical Care Resident**

PGY2 Critical Care Residents are expected to attend to all in house and emergency department medical emergencies (Adult Code Blue) within the following hours (see caveats below):

- Monday – Friday: 7 am – 4 pm
    - If staffing in the ED, respond to codes as per ED pharmacist responsibilities
- Saturday – Sunday: 7 am – 730 pm (depending on staffing shifts)

The PGY2 Critical Care Resident but residents should communicate with Critical Care preceptors if they are leaving the site early and will be unavailable for code response. It is the PGY2 critical care resident's responsibility to communicate with their preceptor if they will not attend a meeting due to response to a medical emergency.

**Evaluation for PGY1 Residents**

The PGY1 resident will observe their first two code experiences and review the events at the end with the preceptor who responded to the code. After two observational codes, the PGY1 resident is expected to take an active role in code response. ***The PGY1 resident will bring a code response evaluation form with them to every code experience***. The evaluation form will be completed by the preceptor or PGY2 resident at the code and reviewed with the PGY1 resident in a post-code huddle. If evaluation forms are not filled out in a timely manner or the preceptor/PGY2 resident does not review the code with the PGY1 resident, the PGY1 resident should first attempt to address with the preceptor/PGY2 resident and then notify the RPD if needed. It is the expectation that the evaluation forms are brought with the resident to the code and given to the preceptor/PGY2 resident, however if that does not occur the resident must provide the evaluation form to the preceptor within 4 hours of the experience to optimize real-time feedback. After the resident has five documented evaluation forms they no longer need to have the evaluation form completed, however this is at the discretion of the RAC committee based on resident and preceptor feedback. If issues exist, evaluation forms will still be required.

***The PGY1 resident will send the completed code response evaluations to the PGY1 resident's facilitator and RPD by the end of the day of the code. Additionally, evaluations should be saved to the electronic residency binder.***

If available, the PGY1 Resident will attend code simulations offered within the hospital or department. A basic competency for code response is provided during Orientation to all new pharmacists. A written competency regarding basic code scenarios will be administered to the PGY1 residents and reviewed with a preceptor if deemed necessary due to performance concerns. For continued performance concerns, an action plan will be developed by the RPD in conjunction with department management.

Code progress will be discussed at each quarterly RAC meeting. The RPD or facilitator will note how many code response evaluations have been completed so all preceptors are aware.

**Evaluation for PGY2 Critical Care Residents**

The PGY2 Critical Care resident will observe their first code experience and review the events at the end with the preceptor who responded to the code. After one observational code, the PGY2 resident is expected to take an active role in code response with the goal of independent code response after the first month of the PGY2 residency depending on the quantity of code responses. ***An evaluation form will only be required for the first two codes the PGY2 Critical Care resident attends***. A debrief with the preceptor is always suggested for additional learning opportunities.

If available, the PGY2 Resident will attend code simulations offered within the hospital or department. A written competency regarding basic code scenarios will be administered to the PGY2 resident and reviewed with a preceptor if deemed necessary due to performance concerns. For continued performance concerns, an action plan will be developed by the RPD in conjunction with department management.

**Well-Being**

Residency can be a stressful time. At UCHealth well-being is supported in a number of ways including, personal well-being, promoting a climate of wellbeing and organizational well-being. Four "wellness" days may be taken using your PTO bank (limit one per quarter) pending agreement from the preceptor or RPD based on assigned duties. Wellness days may be taken at the discretion of the resident (only with agreement of rotation preceptor or RPD) during the weekdays for perceived needs to have unscheduled downtime. No more than one wellness day per quarter will be taken. Patient care should be ensured and wellness days cannot be taken if responsibilities are not covered by preceptor and/or another pharmacist or the resident has a scheduled staffing shift.

A variety of UCHealth resources are available with the most up to date information found on the source: https://myuch.sharepoint.com/sites/srvcs-well-being-resilience. Some of the current wellbeing resources include, Lyra Health, Nutrition and fitness resources, workplace wellbeing topics, and Schwartz rounds. Additionally, residents are encouraged to discuss wellbeing with their facilitators and other members of staff while implementing individual well-being activities such as:

- Practicing meditation, cognitive behavioral therapy, reframing/rethinking
- Practicing gratitude and self-compassion
- Practicing time management
- Enjoying hobbies
- Following a nutritious diet and fitness plan
- Support sleep health and develop good sleep hygiene

Additional resources outside of those offered by UCHealth can be found at the following locations:

ASHP Well-Being Resource found on ASHP's Well-being Website

NAM Action Collaborative on Clinician Well-Being Resources

- National Academy of Medicine National Compendium for Healthcare Worker Well-Being
- National Academy of Medicine Consensus Study: Taking Action Against Clinician Burnout: A Systems Approach to Professional Well-Being
- National Academy of Medicine National Plan for Health Workforce Well-Being

Governmental Resources

- U.S. Surgeon General Advisory on Health Worker Burnout
- U.S. Surgeon General Framework for Workplace Mental Health and Well-Being
- Addressing Burnout in the Behavioral Health Workforce through Organizational Strategies by the Substance Abuse and Mental Health Services Administration

Professional Organization Resources

- ALL IN: Well-Being First for Healthcare
- Institute for Healthcare Improvement Framework for Improving Joy in Work

- American Hospital Association Strengthening the Healthcare Workforce: Strategies for Now, Near and Far
- Our Duty of Care: A Global Call to Action to Protect the Mental Health of Health and Care Workers: A report from the World Innovation Summit for Health, in collaboration with the World Health Organization
- Workplace Change Collaborative

## Medication Use Evaluation (MUE)

All pharmacy residents will complete a Medication Use Evaluation during the first half of the residency year. The topic of the MUE will be determined by the RAC, RPD, and Pharmacy Leadership prior to the start of the residency program. PGY1 residents will work in pairs for the MUE and PGY2 residents will work individually. Residents will be given the topics during the first week of Orientation. Residents will be required to review the topic and perform a literature review to finalize the MUE proposal after discussion with the project advisors (ideally 2) and present to RAC in August. Residents will be expected to present the results in a poster format at the ASHP Midyear Clinical Meeting / Vizient University Health System Consortium Pharmacy Network Meeting or other conference as deemed appropriate by the RPD and Director of Pharmacy (as applicable per project timeline). At least 3 weeks prior to the conference submission due date, the residents will schedule two reviews with RAC and department leadership to go over the poster and results for any modifications. Residents will also present their findings to the Regional Pharmacy and Therapeutics Committee meeting or suitable alternative. The MUE will be evaluated as part of the Clinical Practice Management longitudinal rotation.

## Residency Project

The Pharmacy Resident Project is designed to teach the resident about the scientific method, quality improvement, and facilitate their application of knowledge to a project. There is both a didactic and experiential component to the Pharmacy Resident Project. Thus, each resident will learn about research methods and be required to complete one major project relating to a specific aspect of pharmacy. The project may be original research, quality improvement, or the development or enhancement of existing services. The residency program provides an opportunity for preceptors and residents to collaborate on ideas that present a researchable idea. Thus, a structure is in place to facilitate the interaction between residents and preceptors for the yearlong research experience.

### Project Idea Generation

Each year, preceptors and department management will be surveyed to generate a list of ideas for potential projects. Ideas may also stem from Regional or System Pharmacy and Therapeutics (P&T) Committee or other committee needs. Each idea submitted will require the following information:

1. Project Advisor(s)/Preceptors
2. Title/topic of the project: one sentence
3. Brief Description of the proposed project
4. Barriers to the project
5. Expected patient volume

The approved list of ideas will be given to the new residents by the end of orientation.

### Project Idea Selection

The residents will be given a list of ideas from which to select. However, they are also free to propose an idea of their own. Should a resident have a particular interest in an area that is not on the list, approval for the project

can be gained through a proposed advisors and the RAC. The resident should talk to the project advisors regarding each idea they are interested in pursuing. These discussions will ultimately lead to the resident selecting a project. Projects are required to be selected prior to the end of Orientation to allow the resident adequate time to meet the requirements.

**Project Proposal**

The resident will be responsible to develop a formal project proposal, which will then be reviewed by the project advisors and presented to RAC. The proposal should outline what the goals of the project are, why the goals are important and what methods will be used to complete the project including endpoints and data collection. The project proposal will generally have the following sections:

1. *Project question*: A well-defined question will allow the resident to focus on the correct design and plan. What exactly are you trying to answer?
2. *Objectives*: Be as specific as possible. The objectives should be quantifiable. You can have a primary objective and multiple secondary objectives for each question.
3. *Hypotheses (if applicable):* What are your hypotheses? What relationships do you expect to see?
4. *Background*: Perform a literature review of the question. Summarize the literature. What has been done? What impact has been shown? This should be sufficient enough to prove why the project is needed and may be used to assemble the final manuscript.
5. *Methods*: How are you going to answer your question? What is your design? What will you measure?
6. *Data analysis*: How are you going to analyze the results?
7. *References*

**Project Proposal Approval**

Each resident is required to gain approval of the project proposal from their project advisors. In September, the resident is required to make a formal presentation to the RAC. Residents will be required to submit the proposal at least one week in advance for the committee to review. The potential outcomes of this meeting are either the project is approved to move forward or the idea requires major modification and a subsequent meeting must be scheduled.

**Project Status Updates**

The resident will submit a monthly project status update to the RPD during the monthly RPD/RPC check-in. Project advisors should also be included on the communication and kept apprised of the status.

**Project Results Presentation and Manuscript**

Final results of the project will be presented as a platform presentation at Residency Conference of the Rockies, or other suitable forum as deemed appropriate by the RPD. If the resident's abstract is not accepted at one of these meetings or the meeting is cancelled, the RPD will review options including presentation at an alternative meeting or local presentation to fulfill this requirement. Practice sessions for project presentations will be scheduled at least 3 weeks before the conference and prior to slides being due. All members of the RAC and department management will be invited.

Additional presentations of the results may be scheduled at various committee or Department meetings as the project advisor sees fit.

A manuscript suitable for publication in a peer-reviewed journal summarizing the findings of the project will be developed. Approval of the final version of the manuscript will be the responsibility of the project advisors. The resident will submit the final, approved version of the manuscript to the RPD by the specified due date. Additionally, an electronic copy will be placed in the resident's electronic binder.

**Project Advisor**

In most instances, the project advisor will be the person who recommended the topic of study. In addition, it is recommended to have 2 project advisors on each project. The preceptor(s) serving as the project advisors will serve as the primary contacts for the resident throughout the research process. The project advisors will guide the resident through the proposal writing process and will be responsible for assuring progress is being made and that the research is being done in a scholarly manner. Project advisors should review a small selection of patients (ex: 10 patients) that have had data collected on prior to moving forward with full data collection to provide any feedback. The project advisors will submit quarterly evaluations in PharmAcademic to document the resident's progress.

**Resident**

The resident will be responsible to invest their time and problem solving skills into the project. The resident will keep their project advisors appraised of progress. The resident will be responsible for carrying on the project in a scholarly manner.

**Typical PGY1 and PGY2 Project Timeline for MUE and Residency Project (PGY2 timeline may be adjusted based on selected forum for presentation)**

| | |
|---|---|
| MUE Proposal Development | Completed by the end of Orientation |
| Residency Project Idea | Completed by the end of Orientation |
| MUE Proposal Approval Presentation | August RAC |
| Residency Project Proposal Development | August-September |
| Residency Project Approval Presentation | September RAC |
| MUE Poster Practice Presentation | Late October-Early November |
| MUE Poster at ASHP Midyear/Vizient (if applicable) | December |
| Residency Project RCOR Practice Sessions | May (prior to slides being due) |
| Residency Project RCOR (if applicable) | Early June |
| Residency Project Manuscript | May-June |
| Residency Project Manuscript Cover Letter Signed off | June 15 |

**PGY1 and PGY2 MUE and Residency Project Checklist**

(PGY2 Project Timeline may be adjusted based on selected forum for presentation)

Date completed

**July**

_____ 1. MUE selection and meet with project advisors

_____ 2. Submit written MUE proposal to project advisors (by end of orientation)

_____ 3. Select Residency Project idea (by end of orientation)

_____ 4. Select Residency Project advisors

_____ 5. Obtain approval from Residency Project advisors to proceed with the project

**August**

_____ 1. MUE proposal presentation to RAC

_____ 2. Submit written Residency Project proposal to advisors

_____ 3. If outside funding is desired, the grant should be prepared at this time

**September**

_____ 1. Residency Project proposal presentation to RAC

_____ 2. Meet with IDS Pharmacist and Submission to IRB (if applicable)

**October**

_____ 1. MUE Data Collection (have advisor review after first subset of patients)

_____ 2. Meet with advisors to review final data collection and run any statistics needed

**November**

_____ 1. Finalize MUE Poster and review with advisors

_____ 2. Complete two practice presentations with advisors, RAC and pharmacy leadership (at least 3 weeks prior to poster being due)

**December**

_____ 1. MUE Poster Presentation at ASHP Midyear/Vizient (if applicable)

_____ 2. Residency Project Data collection (have advisor review after first subset of patients)

**January/February**

_____ 1. Meet with advisors to review final data collection and run any statistics needed

**March/April**

_____ 1. Submit abstract to Residency Conference of Rockies (RCOR) with advisors approval

**May**

_____ 1. Practice RCOR Platform Presentation to the RAC and department management

_____ 2. Submit finalized slides for RCOR

**June**

_____ 3. Present at Residency Conference of Rockies

_____ 4. Review Residency Conference of Rockies evaluation with project advisor, if available

_____ 5. Written manuscript submitted to the RPD with approval from the project advisor by prespecified due date

**Grand Rounds**

Grand Rounds is a forum in which pharmacy residents formally present clinically relevant topics to pharmacy and hospital staff. The resident will learn to evaluate the scientific literature and discuss its applicability to clinical practice. The goal of Grand Rounds is to enhance the resident's knowledge regarding the use of drug therapy to treat and prevent disease. The resident will learn to present complex concepts and scientific data in a clear and concise manner.

The audience will consist of pharmacy residents, pharmacy practitioners, pharmacy students, and invited guests. Presentations will be formal in nature and audience members will refrain from asking questions during the presentation (except to ask brief points of clarification) until the end. Residents should dress professionally.

Each resident is required to do one formal presentation. The presentation must comprehensively review the treatment of a medical disorder or examine a pharmacotherapeutic problem in a specific patient population. The topic and advisor(s) must be submitted to RAC by the end of Orientation with approval in August. Each presentation must be 45 – 50 minutes in duration, allowing approximately 10 minutes for questions. The presenter must use audiovisual aids (i.e. slides, video) during the presentation. A practice presentation is required to be given to the advisor(s) and others as deemed appropriate. All members of the audience will evaluate each presentation using a standardized assessment instrument.

Residents must work with their advisor (content experts/mentors) for each presentation. The advisor should provide guidance to the residents regarding the selection of an appropriate topic, developing the handout and slides for the session and writing learning objectives for CE credit. All programs will be offered for continuing education (CE) credit through the School of Pharmacy. For additional resources:
https://pharmacy.cuanschutz.edu/docs/librariesprovider195/academic-documents/speaker-handbookd75500b2-7957-4796-8b29-b7b19641b07e.pdf?sfvrsn=4f98e8bb_1
https://pharmacy.cuanschutz.edu/academics/continuing-education/resources

**Slide Format --- Refer to UCHealth Branding standards**

1. The approved UCHealth Power Point template can be downloaded from: https://brand.uchealth.org/site/index
2. Fonts: Arial or Helvetica work best (avoid Times New Roman)
3. Animation:
    a. No backgrounds that contain moving part. Text animation is fine when used in moderation.
4. If you use transition or effect between slides be consistent on every slide
5. An acknowledgement slide is optional. If added, it should be last slide of the presentation, after the questions slide, seen not heard.
6. In general, be consistent from beginning to end

**Proposed PGY1 Project Timeline**

| | |
|---|---|
| Idea and advisor selection | End of Orientation |
| RAC presentation idea approval | August |

| | |
|---|---|
| First draft due to advisor | 3 months prior to presentation |
| Final draft due to advisor | 1 month prior to presentation |
| Practice presentation | 1 month to 2 weeks prior to presentation |
| Complete the online submission form with final presentation title, 3-4 learning objectives, current CV, Conflict of Interest Disclosure Form | 2 weeks prior to presentation |
| Email the final powerpoint slides including a disclosure slide, handout (if different from slides) and any additional materials to Rachel.wagmaister@cuanschutz.edu | 1 week prior to presentation |

**Lead Resident Rotation Responsibilities**

**(only applicable to PGY1 Residents)**

The Lead Resident will have defined leadership responsibilities centered on the activities necessary to support the mission and vision of both the residency training program and the Department of Pharmacy. The Lead Resident will rotate quarterly throughout the year.

**Lead Resident Responsibilities**

1. Working with the Director of Pharmacy and RPD to serve as the point person to facilitate and clarify issues and policies regarding the Pharmacy Residency Program
2. Point person for questions from co-residents to be presented at RPD/RPC check-ins or by email. Complete projects during the rotation as assigned by the Director of Pharmacy and RPD
3. Plan any social outings for the residents and preceptors (one per quarter recommended)

**Specific Monthly Responsibilities**

July/August/September

- Work with administrative assistant to order business cards
- Acquire biographies for each resident and all preceptors to update the webpage
- Facilitate coordination of the code and rotation schedule

October/November/December*

- Assist with preparation and set up of Colorado Residency Showcase
- Assist the RPD in the coordination of activities for the ASHP Midyear Clinical Meeting
- Prepare a summary of hotel and flight information
- Collect the sign in sheets from Residency Showcase

January/February/March

- Schedule ASHP Midyear Clinical Meeting presentations for preceptors and staff
- Assist the RPD in the coordination of activities for residency interviews
- Prepare a summary of hotel and flight information for candidates
- Coordinate resident involvement in interviews to include virtual and in person responsibilities

April/May/June

- Assist the RPD in the coordination of activities for Residency Conference of the Rockies
- Communicate with incoming residents on housing, travel plans, preparation for exams, etc.

*PGY2 residents will be responsible for coordinating Midyear poster printing and development of a schedule for Midyear to ensure all residents' posters are well attended.

## Residency Applicant Assessment Procedure

ASHP Accreditation Standard 1 states that residency applicant qualifications will be evaluated by the RPD or designee through a documented, formal procedure and that the criteria used to evaluate applicants must be documented and understood by all involved in the evaluation and ranking process. Applicants must be graduates or candidates for graduation 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). For PGY2 applicants, the applicant must be participating in, or have completed, an ASHP-accredited PGY1 pharmacy residency program or one in the ASHP accreditation process. UCHealth Memorial Hospital will adhere to all the requirements and deadlines established by the American Society of Health-System pharmacists (ASHP) and the National Matching Services (NMS).

Residency applicants are to submit the following materials through WebAdmit to the RPD by January 2nd: letter of intent, curriculum vitae, three letters of reference, and pharmacy school transcript. Please see the website for further details (https://www.uchealth.org/professionals/education-programs/pharmacy-residency-program/application-process/)

Each application will be reviewed and scored by a minimum of two reviewers, using the Residency Scoring Tool for PGY1 or PGY2, as applicable. The PGY1 and PGY2 Residency Scoring Tools list various categories to be scored and evaluated. The categories may include: (1) Academic Performance in Pharmacy School, (2) Work Experience [PGY1 only], (3) Extra-curricular activities, (4) Presentations/Projects/Publications/Research, (5) Letter of Intent, (6) Letters of reference, (7) Teaching Experience [PGY2 programs only] and (8) PGY1 Residency Rotations [PGY2 programs only].

Criteria have been established for each of the categories being evaluated and the associated “point value”. This is provided in the PGY1 and PGY2 Residency Scoring Tools. Under each category, criteria and associated point values are listed. Reviewers are encouraged to use their judgment when scoring applications, as the scores are guidelines only. Reviewers submit point values within WebAdmit.

Applicant scores will be tallied based on the PGY1 and PGY2 Residency Scoring Tools. A preliminary ranking of applicants utilizing a numerical rank list based on scores, along with additional comments from preceptors and residents, will be reviewed by the RPD and presented to the residency interview team who will make the final decision as to whom to invite for on-site interviews. This process is reviewed yearly with preceptors at the November RAC Meeting and at the RPD/RPC check-in with the current residents.

## Interview Process

By December, dates for interviews will be determined. Four to eight candidates will be offered interviews for each residency position. Interview dates will be selected by the residency candidates in a first-come-first-serve manner. Candidates will be provided a draft copy of next year’s residency manual prior to arriving on-site to allow the candidate to fully understand the expectations of the residency programs.

For the PGY1 residency, four to eight candidates will be interviewed each day. For the PGY2 residency, four candidates will be interviewed each day. Candidates will have the option to interview in-person or virtually. In-person candidates will be brought from the hotel to the hospital by a current resident, taxi or hotel shuttle, or personal transportation. Candidates will be met in the lobby by a residency program member and escorted between interviews by a current resident, pharmacy staff or the RPD. Candidates will receive a tour of the department's pharmacy areas and have lunch with the current residents or preceptors. Candidates will interview with the RPD, preceptors, and pharmacy leadership. Predetermined questions are provided to the interviewers to evaluate each candidate. The PGY2 candidates will also interview with nursing and physicians from the respective departments. The candidate will be evaluated on communication skills, critical thinking skills, and basic pharmacotherapy knowledge through a presentation or written patient case.

**Residency Applicant Ranking Procedure**

Following the on-site or virtual interview, the interview team will submit their scores to the RPD. The residency interview team will rank the candidates based on their numerical scores. The list will then be reviewed based on application, interview, clinical presentation/patient case, overall impression, and program fit/compatibility. In the event that the residency interview team does not agree, the RPD will retain the final decision.

The RPD will submit the rank list to the National Matching Service. Once the Match results are released, the RPD will distribute the results to the residency interview team and RAC.

**Match Phase II Procedure**

In the event that all positions are not matched in Phase I of the Match, UCHealth Memorial Hospital will participate in Phase II of the Match in accordance with ASHP regulations. Applicants will be reviewed by a minimum of one preceptor or resident but ideally will be reviewed by two individuals. Assessment will follow the procedure as previously outlined. Four to eight candidates for every position will be offered a virtual interview for each open position. Candidates will be provided a draft copy of next year's residency manual prior to their interview to fully understand the expectations of the residency program. Candidates will interview with the RPD, preceptors, current residents, and pharmacy leadership based on availability. Predetermined questions are provided to the interviewers to evaluate each candidate.

Following the interview, ranking will commence following the procedure as previously outlined.

**Post-Match Procedure**

The RPD will contact the candidate(s) that have matched to the program to outline the next steps including sending an offer letter within 30 days of the ASHP Match or as otherwise specified. The RPD will also coordinate orientation information to send to the candidate(s) prior to their start date. The PGY2 RPD will verify the PGY2 resident has completed their PGY1 residency by day 5 of orientation which includes a copy of their PGY1 certificate and/or contacting the PGY1 RPD to confirm completion. If a resident fails to complete their PGY1 program, the resident will be dismissed from the program.

**Early Commitment**

To be considered for a PGY2 position via the Early Commitment process, a formal letter or email expressing interest from a current PGY1 resident shall be provided to the PGY2 RPD, copied to the PGY1 RPD and Director of Pharmacy. Early commitment will be considered throughout the UCHealth system if there is interest. The procedure listed below is for early commitment within UCHealth Memorial Hospital. The procedure may differ for other facilities within the UCHealth System.

- Signed hard copies of the letter or email are due to the PGY2 RPD no later than **November 4th.**
- The PGY2 RAC will review interested candidates' progress including, but not limited to, monthly rotation performance and all evaluations in PharmAcademic.
- The resident(s) will be assessed utilizing the same pre-interview rubric as non-internal candidates.
- An interview will be required by the PGY2 RAC committee, RPD and nursing/providers as available.
- Following review and discussion of interested applicants, the PGY2 RAC shall provide a recommendation to the Director of Pharmacy and PGY2 RPD.
    - If more than one candidate expresses interest and interviews for the positions, they will be ranked numerically based on the combination of their pre-interview and interview scores.
- With agreement from the PGY2 RAC, DOP, and PGY2 RPD, the PGY2 RPD will sign the "Early Commitment Letter of Agreement" from the National Matching Service (NMS) website and send the offer to the PGY1 Candidate.
    - Offer will be provided to the PGY1 no later than December 1st
- The signed acceptance of the offer printed out must be returned to the PGY2 RPD, PGY1 RPD and Director of Pharmacy within 48 hours of receipt.
- The PGY2 RPD will pay the associated fee, no later than December 15th.

**Resident Applicant Responsibilities**

- Preparation and delivery of a formal letter or email of interest to be considered for a PGY2 resident position
- Adherence to all applicable deadlines listed above
- Participation in ASHP PGY2 residency matching program according to all ASHP established guidelines and regulations
- Return of signed offer letter is a formal written commitment by resident to the PGY2 program and copies given to the PGY1 RPD and Director of Pharmacy

**RPD responsibilities**

- Participation in the review of the candidate by RAC
- Approval or denial of the early commitment in collaboration with the Director of Pharmacy
- Preparation and delivery of a formal offer letter for the PGY2 resident position
- Adherence to all applicable deadlines listed above
- Participation in ASHP PGY2 residency matching program according to all ASHP established guidelines and regulations

**PGY1 Graduate Tracking**

| 2025-2026 | | |
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| **Name** | **Project** | **First Position** |
| Breah Morlan | Evaluation of pharmacist-driven MRSA Nasal PCR Protocol | TBD |
| Joseph Pittman | Antibiotic duration in intra-abdominal infections: a retrospective evaluation of STOP-IT guidelines adherence and outcomes | TBD |
| Levi Sinn | Sodium polystyrene sulfate (SPS) versus sodium zirconium cyclosilicate (SZC) for the treatment of acute hyperkalemia | PGY2 Emergency Medicine<br>Denver Health Medical Center<br>Denver, CO |
| Kevin Standen | Evaluation of dose titration and transfusion burden in patients on luspatercept | PGY2 Pediatrics<br>Children's Memorial Hermann Hospital - Texas Medical Center<br>Houston, TX |
| **2024-2025** | | |
| **Name** | **Project** | **First Position** |
| William Beech | Utilization and clinical impact of *Clostridioides difficile* toxin assays added to multiplex gastrointestinal polymerase chain reaction tests | PGY2 Infectious Disease<br>Novant Health Presbyterian Medical Center<br>Charlotte, NC |
| Petra Erhardt | Correlation of corticosteroid initiation, vasopressor use, and random cortisol levels | PGY2 Critical Care<br>St. Anthony Hospital<br>Denver, CO |
| Reanna Jereb | Comparison of Acute Agitation Medications in the Emergency Department and Need for Secondary Interventions | PGY2 Emergency Medicine<br>UVA Health<br>Charlottesville, VA |
| Nicholas Perez | Bleeding complications in low body weight trauma patients treated with enoxaparin for venous thromboembolism prophylaxis | Oncology Clinical Pharmacist<br>University of Colorado Hospital<br>Aurora, CO |
| **2023-2024** | | |
| **Name** | **Project** | **First Position** |

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| Sydney Kruse | Impact to Antimicrobial Stewardship and Laboratory with Changing from Rapid Antigen Detection Tests to Polymerase Chain Reaction Tests for Group A Streptococcal Pharyngitis | PGY2 Infectious Disease<br>University of Washington<br>Seattle, WA |
| Rhiannon Montgomery | Inpatient Management of Opioid Use Disorder: Patient-Directed Discharges and Hospital Readmissions Before and After Implementation of Buprenorphine Clinical Pathway | PGY2 Critical Care<br>Denver Health<br>Denver, CO |
| Kateryna Parkhomenko | Acute pain management in patients with a history of opioid use disorder (OUD) on medication assisted treatment (MAT) | Clinical Pharmacist<br>University of Colorado Hospital |
| Uyen Tran | A retrospective review of time to initiation of bone targeting treatment (IV bisphosphonate and denosumab) for patients receiving primary multiple myeloma therapy | PGY2 Oncology<br>Stanford Health Care<br>Stanford, CA |
| **2022-2023** | | |
| **Name** | **Project** | **First Position** |
| William Martinez<br>University of Colorado Skaggs School of Pharmacy | Evaluation of Tumor Lysis Syndrome Management Upon Hospital Admission | Clinical Pharmacist<br>Penrose-St. Francis Hospital<br>Colorado Springs, CO |
| Collyn Scott<br>University of Colorado Skaggs School of Pharmacy | Comparison of the effectiveness, safety, and compliance to inpatient pharmacy warfarin protocols | Clinical Pharmacist<br>UCHealth Memorial Hospital<br>Colorado Springs, CO |
| Kailee Severt<br>Loma Linda University School of Pharmacy | Treatment of alcohol withdrawal syndromes: MINDS versus CIWA protocols and the rate of over sedation | PGY2 Critical Care<br>UCHealth Memorial Hospital<br>Colorado Springs, CO |
| Vanessa Rivera<br>Rosalind Franklin University of Medicine and Science College of Pharmacy | Retrospective Comparison and Cost Analysis of Dinoprostone to Oral and Vaginal Misoprostol for Cervical Ripening on the Labor and Delivery Unit | Clinical Pharmacist<br>Florida |

| 2021-2022 | | |
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| **Name** | **Project** | **First Position** |
| Shayna DeMari<br>Albany College of Pharmacy | Evaluation of Tumor Lysis Syndrome Management Upon Hospital Admission | PGY2 Emergency Medicine<br>University of Vermont Medical Center<br>Burlington, Vermont |
| Kate Fox<br>Idaho State University | Evaluating inpatient management of acute hypercalcemia in a regional health system | Clinical Pharmacist Outpatient Oncology<br>Boise, ID |
| Savannah Gross<br>University of Georgia | Effect of Various Antibiotic Prescribing Patterns in Open Fractures | PGY2 Critical Care<br>UCHealth Memorial Hospital<br>Colorado Springs, CO |
| Maria Pearson<br>University of Colorado Skaggs School of Pharmacy | Impact of outpatient administration of high-dose influenza vaccine on inpatient discharges in a hybrid care model | Clinical Pharmacist<br>UCHealth Memorial Hospital<br>Colorado Springs, CO |
| **2020-2021** | | |
| **Name** | **Project** | **First Position** |
| Alexa Jense<br>University of Toledo | Oral anti-hypertensive protocol to wean nicardipine in neurocritical patients post hypertensive intracranial hemorrhage (ICH) | PGY2 Critical Care<br>UCHealth Memorial Hospital<br>Colorado Springs, CO |
| Laura Meyer<br>University of Tennessee | Assessment of regular insulin use for the management of hyperkalemia within a community hospital system | MS Pharmacy Practice<br>Fellow/Assistant Clinical Professor<br>University of the Pacific Thomas J. Long School of Pharmacy<br>Stockton, CA |
| Rebecca Rezac<br>Drake University | Evaluation of an emergency department alert to achieve antibiotic administration within one hour of patient presentation for sepsis | PGY2 Oncology<br>UCHealth Memorial Hospital<br>Colorado Springs, CO |
| Jeffrey Sperry<br>University of Utah | Administering oral sodium bicarbonate prior to inpatient high-dose methotrexate to reduce hospital length of stay | PGY2 Internal Medicine<br>University of Wisconsin<br>Madison, WI |
| **2019 - 2020** | | |
| **Name** | **Project** | **First Position** |

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| Laura (Becker) Brewer<br>University of Colorado Skaggs School of Pharmacy | Clinical considerations and outcomes in successful re-challenge with immunotherapy after an immune related adverse event | PGY2 Oncology<br>UCHealth Memorial Hospital<br>Colorado Springs, CO |
| Luisa Hoyt<br>University of Kentucky | Comparing clinical outcomes in C. difficle infection between toxin positive and negative patients in a community hosptial system | Clinical Pharmacist<br>Franklin Memorial Hospital (part of MaineHealth)<br>Farmington, ME |
| Rachel Jenson<br>University of Wisconsin-Madison | Effect of a pharmacist driven MRSA screening protocol on vancomycin and linezolid days of therapy in patients with pneumonia | Clinical Pharmacist<br>UCHealth Memorial Hospital<br>Colorado Springs, CO |
| Riya Patel<br>University of Tennessee | Pharmacoeconomic anaylsis of the switch from intravenous to subcutaneous trastuzumab in a large health system | PGY2 Oncology<br>UAB Hospital<br>Birmingham, AL |
| **2018 -2019** | | |
| **Name** | **Project** | **First Position** |
| Bayli Larson<br>University of Colorado Skaggs School of Pharmacy | A comparison of single versus dual agent antibiotic prophylaxis for cesarean delivery | ASHP Executive Fellowship<br>Bethesda, MD |
| Neil Schenk<br>Samford University | The incidence of heparin-induced thrombocytopenia (HIT) in cardiothoracic surgery patients receiving heparin versus enoxaparin for VTE prophylaxis | PGY2 Critical Care<br>Prisma Health Richland<br>Columbia, SC |
| Lauren Schluenz<br>Creighton University | Compliance of protocol driven hepatitis B serological screening in patients receiving anti-CD 20 monoclonal antibody therapy | PGY2 Emergency Medicine<br>University of New Mexico<br>Albuquerque, NM |
| Courtney Holmes<br>Oregon State University | Use of a Pharmacy Managed Empiric Continuous Infusion Vancomycin Protocol in Pediatrics | PGY2 Pediatrics<br>Loma Linda University<br>Loma Linda, CA |
| **2017 - 2018** | | |
| **Name** | **Project** | **First Position** |
| Allison Schiefer<br>Ferris State University College of Pharmacy | Comparison of the safety of sugammadex to neostigmine/glycopyrrolate | Clinical Pharmacist<br>UCHealth Memorial Hospital<br>Colorado Springs, CO |
| Lance Nelson<br>Regis University | Use of acetaminophen (APAP) for neonatal patent ductus arteriosus (PDA) ligation | Clinical Pharmacist<br>Children's Hospital Colorado<br>Colorado Springs, CO |

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| Rachel Miller<br>Samford University | Establishment of a uniform and effective preceptor development program for student and resident rotations within the department of pharmacy | Clinical Pharmacist<br>Children's Hospital Colorado<br>Colorado Springs, CO |
| Ted Lindgren<br>Drake University | Implementation of a pediatric antimicrobial stewardship protocol for selected acute disease states in a single-centered setting | Clinical Pharmacist<br>Children's Hospital Colorado<br>Colorado Springs, CO |
| **2016 - 2017** | | |
| **Name** | **Project** | **First Position** |
| Anton Nguyen<br>University Of Utah | Development of a practice standard for monitoring adult patients receiving bone-modifying agents at a community cancer center | Clinical Pharmacist<br>HealthSouth Rehabilitation Hospital of Utah<br>Salt Lake City, UT |
| Catherine McCall<br>Texas Tech University Health Sciences Center | Evaluation of erythropoietin alfa in patients with acute kidney injury | Clinical Pharmacist<br>Texas Health Presbyterian Hospital Flower Mound<br>Flower Mound, TX |
| Chelsea Goldsmith<br>University of Iowa | Assessment of initial febrile neutropenia management in hospitalized cancer patients at a community cancer center | PGY2 Pediatrics Resident<br>Children's Hospitals and Clinics of Minnesota<br>Minneapolis, MN |
| Heather Johnson<br>Medical University Of South Carolina | A comparison of ampicillin-sulbactam to ampicillin plus once daily gentamicin for pregnant women with a diagnosis of chorioamnionitis | Pediatric Clinical Pharmacist<br>Children's Hospital Colorado<br>Colorado Springs, CO |
| **2015 - 2016** | | |
| **Name** | **Project** | **First Position** |
| Kyle McDaniel<br>University Of Kansas Main Campus | Introduction of a pharmacy driven culture review for outpatient treatment of complicated and uncomplicated urinary tract infections in the emergency department | Emergency Medicine Pharmacist<br>Olathe Medical Center<br>Olathe, KS |
| Ruby Nkwenti<br>University Of Maryland Eastern Shore | Evaluation of a pharmacy driven central line tube priming protocol to reduce central venous catheter infections in the NICU | Clinical Pharmacist<br>First Health of the Carolinas – Moore Regional Hospital<br>Pinehurst, NC |

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| Diana Fischer<br>University Of Utah | Pharmacy resident implementation of a transitions of care pilot program | PGY-2 Ambulatory Care Resident<br>Intermountain Health Care<br>Salt Lake City, UT |
| Elizabeth England<br>University Of The Sciences In Philadelphia | Dexmedetomidine adjunct therapy compared to benzodiazepines alone for the treatment of alcohol withdrawal syndrome in critically ill trauma patients | Clinical Pharmacist<br>The Medical Center of Aurora<br>Aurora, CO |

**PGY2 Critical Care Graduate Tracking**

| **2025-2026** | | | | |
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| **Name** | **PGY-1 Program** | **Project** | **Employment upon completion of PGY2** | **Board Certification** |
| Leandre Kalhagen | Sanford Medical Center Fargo | **E**valuation of perioperative methylnaltrexone as postoperative ileus prophylaxis in cardiothoracic surgery | Clinical Pharmacist - UCHealth Memorial Hospital Central | |
| Harris Milanovic | University of Michigan | The Effect of Serum Calcium Level on the Success of Atrial Fibrillation Treatment with Diltiazem or Metoprolol | ICU Clinical Pharmacist – University of New Mexico Hospital | |
| **2024-2025** | | | | |
| **Name** | **PGY-1 Program** | **Project** | **Employment upon completion of PGY2** | **Board Certification** |
| Mezhgan Aslamy | Presebyterian/St Luke's Medical Center and The Rocky Mountain Hospital for Children | Etomidate versus Ketamine for RSI: Observing the Hemodynamic Impact in Heart Failure Patients | Clinical Pharmacist – UCHealth Parkview Medical Center Pueblo, CO | |

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| Shane Murphy-Pociask | St Vincent's Medical Center Hartford HealthCare | A Comparative Study Evaluating Incidence of Hypoglycemia in the Intensive Care Unit Before and After Implementation of an Insulin Infusion Order Set | Critical Care Clinical Pharmacist – Hartford Hospital<br>Hartford, CT | |
| **2023-2024** | | | | |
| **Name** | **PGY-1 Program** | **Project** | **Employment upon completion of PGY2** | **Board Certification** |
| Kailee Severt | UCHealth Memorial Hospital<br>Colorado Springs, CO | Intravenous versus subcutaneous insulin in the emergency department for non-emergent hyperglycemia and impact on time to discharge | Critical Care Clinical Pharmacist - UCHealth Memorial Hospital<br>Colorado Springs, CO | BCCCP |
| Srishti Singal | CHI Health Creighton University Medical Center – Bergan Mercy<br>Omaha, NE | Evaluation of calcium replacement in trauma patients not receiving massive transfusion | Critical Care Clinical Pharmacist – Prime St. Francis<br>Evanston, IL | BCCCP |
| **2022-2023** | | | | |
| **Name** | **PGY-1 Program** | **Project** | **Employment upon completion of PGY2** | **Board Certification** |
| Savannah Gross | UCHealth Memorial Hospital<br>Colorado Springs, CO | Impact of Peripheral Versus Central Vasopressors in Septic Shock | Pharmacy Specialist – Surgical Trauma ICU<br>Grady Memorial Hospital<br>Atlanta, GA | BCCCP |
| **2021-2022** | | | | |
| **Name** | **PGY-1 Program** | **Project** | **Employment upon completion of PGY2** | **Board Certification** |
| Alexa Jense | UCHealth Memorial Hospital<br>Colorado Springs, CO | Impact of prolonged emergency department boarding times on ICU length of stay | ED Clinical Pharmacist<br>MedStar Southern Maryland Hospital Center<br>Clinton, MD | BCCCP |
| **2020-2021** | | | | |

| Name | PGY-1 Program | Project | Employment upon completion of PGY2 | Board Certification |
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| Lilliana Gonzales | Texas Health Presbyterian Hospital Dallas Dallas, TX | Assessment of phenobarbital-containing regimens on resolution of alcohol withdrawal syndrome | ICU/ED Clinical Pharmacist UCHealth Memorial Hospital Colorado Springs, CO | BCCCP |
| **2019-2020** | | | | |
| **Name** | **PGY-1 Program** | **Project** | **Employment upon completion of PGY2** | **Board Certification** |
| Joseph Oropeza | Baylor University Medical Center Dallas, TX | Midodrine as Adjunctive Therapy for Vasopressor Weaning in Patients Recovering from Septic Shock | ED Clinical Pharmacist UCHealth Memorial Hospital Colorado Springs, CO | BCCCP |

**PGY2 Oncology Graduate Tracking**

| **2021-2022** | | | | |
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| **Name** | **PGY-1 Program** | **Project** | **Employment upon completion of PGY2** | **Board Certification** |
| Rebecca Rezac | UCHealth Memorial Hospital Colorado Springs, CO | Assessment of inpatient hypersensitivity reactions due to chemotherapy at a Community Cancer Center | Blood Disorders and Cellular Therapies Center Ambulatory Care Clinical Pharmacy Specialist University of Colorado Hospital Denver, CO | BCOP |
| **2020-2021** | | | | |
| **Name** | **PGY-1 Program** | **Project** | **Employment upon completion of PGY2** | **Board Certification** |
| Laura Brewer | UCHealth Memorial Hospital Colorado Springs, CO | Evaluating the effectiveness of an immunotherapy call ahead program in a community-based oncology infusion center | Surgical Oncology Clinical Pharmacy Specialist WVU Medicine Morgantown, WV | BCOP |
| **2019-2020** | | | | |
| **Name** | **PGY-1 Program** | **Project** | **Employment upon completion of PGY2** | **Board Certification** |

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| Abdinasir Bile | University of Minnesota Medical Center Minneapolis, MN | Safety and efficacy of Venetoclax with a hypomethylating agent in the treatment of AML and MDS in community cancer setting | Clinical Oncology Pharmacist<br>M Health Fairview<br>Fairview Ridges<br>Burnsville, MN | |