



**UNIVERSITY OF
MICHIGAN HEALTH**
MICHIGAN MEDICINE

**DEPARTMENT OF
PHARMACY SERVICES**



PHARMACY RESIDENCY MANUAL

2025 - 2026

Welcome!



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Congratulations on starting your residency with University of Michigan Health (U-M Health)! We are very pleased to welcome you as a new member of University of Michigan Health's highly trained and dedicated pharmacy team. Pharmacy residency is an exciting and unique time to focus on learning and refining various skills.

We are committed to providing you with a variety of high-quality learning opportunities during your residency. We believe that your residency year should be customized to your specific interests, strengths, and areas of opportunities. Please do not hesitate to discuss opportunities to tailor activities to your specific interests.

This year you will experience great personal and professional growth that is directly related to the amount of commitment and dedication applied. The key to success is open communication, a positive attitude and a growth mindset.

At U-M Health, it is our goal to partner with you to guide you on your journey to become a highly trained and independent pharmacist and prepare you for the next step of your career.

Again, congratulations and welcome to the University of Michigan Health team!

MANUAL CONTENTS

This manual has been developed for the Pharmacy Residency Programs at U-M Health to provide information on the practice site, program structure, resident and preceptor roles and responsibilities, policies, procedures, benefits, and other elements related to the design and conduct of our programs. **(ASHP Standard 2.11)**

Questions regarding the manual may be directed to the Residency Program Director (RPD) or the Residency Advisory Committee (RAC). There may be changes to the policies and procedures at any time when deemed necessary. Residents will be informed of those changes accordingly.

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PROGRAM OVERVIEW & OVERSIGHT

UNIVERSITY OF MICHIGAN HEALTH

University of Michigan Health (U-M Health) is part of the 82-acre University of Michigan Medical Center with a total of 1,100 licensed beds. University Hospital is a 577-bed tertiary care teaching complex. Opened in February 1986, the University Hospital contains adult inpatient care programs and most of the administrative and support units. The C.S. Mott Children's Hospital houses pediatric and neonatal patient care programs while the Von Voigtlander Women's Hospital provides maternity and gynecological services. The Children and Women's (CW) Hospitals include 350 beds and opened in December 2011.

Across the Huron River, the Kellogg Eye Center houses the ophthalmology programs. The Frankel Cardiovascular Center (CVC) staff provide care for forty-eight inpatient beds, and clinic patients. Adjacent to the University Main Hospital is the A. Alfred Taubman Health Care Center with more than 100 specialty clinics and outpatient services. The Rogel Cancer Center is near the Main Hospital and includes an infusion pharmacy and outpatient pharmacy. The East Ann Arbor Health and Geriatrics Center houses one outpatient pharmacy and an infusion pharmacy. In addition, the University staffs several outpatient community medical facilities including Saline, Canton, Dexter, Chelsea, Brighton, and Northville.

RESIDENCY PROGRAM MISSION AND VISION STATEMENTS

Mission

The mission of the PGY1 and PGY2 postgraduate programs at U-M Health is to develop practice, teaching and research skills of the pharmacy residents, and to nurture the pursuit of professionalism, personal excellence, and leadership in the field of pharmacy.

All available resources will be mobilized to achieve the following objectives:

- *Clinical competency:* The program shall improve verbal and written communication skills, research capabilities, knowledge base, and clinical skills of the residents.
- *Leadership skills:* The program shall build upon individual and professional leadership skills of the residents.
- *Professionalism:* The program shall promote responsible and ethical conduct of the residents in accordance with the practice standards of the profession of pharmacy.

Vision

The pharmacy residencies at U-M Health will be the most respected postgraduate educational and training pharmacy residency programs that graduate high quality pharmacy professionals as measured by their pharmaceutical care skills, scholarly activities, and leadership.

ASHP Pharmacy Residency Purpose

PGY1 Purpose: PGY1 residency programs build upon Doctor of Pharmacy (PharmD) education and outcomes to develop pharmacist practitioners with knowledge, skills, and abilities as defined in the educational competency areas, goals, and objectives. Residents who successfully complete PGY1 residency programs will be skilled in diverse patient care, practice management, leadership, and education, and be prepared to provide patient care, seek board certification in pharmacotherapy (i.e., BCPS), and pursue advanced education and training opportunities including postgraduate year two (PGY2) residencies.

PGY2 Purpose: PGY2 residency programs build upon Doctor of Pharmacy (PharmD) education and PGY1 pharmacy residency training to develop pharmacist practitioners with knowledge, skills, and abilities as defined in the educational competency areas, goals, and objectives for advanced practice areas. Residents who successfully complete PGY2 residency programs are prepared for advanced patient care or other specialized positions, and board certification in the advanced practice area, if available.

TERM APPOINTMENTS

U-M Health Pharmacy Residents will complete a minimum of 52 weeks per residency year. Residents in the 24-month combined PGY1 / PGY2 Health-System Pharmacy Administration & Leadership (HSPAL) and PGY1 / PGY2 Investigational Drugs and Research Pharmacy (IDRP) programs will complete a minimum of 52 weeks of training prior to starting the PGY2 residency program. **(ASHP Standard 2.1)**

PHARMAcademic & RECORD KEEPING

PharmAcademic will be utilized for residency program management and maintenance. This includes the program's objective assignment grid/TE grid, learning experience descriptions, resident schedules, summative, preceptor and learning experience evaluations, initial training and development plans, and resident close out documentation. **(ASHP Standard 2.15.b)**

Program directors must also keep a record of each resident's program application, written acceptance of the Match and program policies, verification of resident's licensure, program deliverables, documentation of completion requirements and each resident's signed residency certificate of completion. Residency program directors are strongly encouraged to store this information within PharmAcademic (e.g. resident "files" tab). If PharmAcademic is not utilized, RPDs must maintain an alternative storage location. All records for residents trained at a U-M Health Pharmacy Residency Program must be kept and maintained since the date of the last accreditation site survey. **(ASHP Standard 2.15.c)**

PROGRAM ADMINISTRATION (ASHP STANDARD 4.4)

Residency Program Director (RPD)

The RPD has ultimate responsibility for the residency program they oversee. This responsibility is accomplished with the assistance of the Colossal Residency Advisory Committee (C-RAC), and program specific RAC. The RPD is to ensure the design and conduct of the program is in alignment with the ASHP Standard, program goals and objectives are met, resident progression on graduation requirements is routinely evaluated, evaluations are completed in a thorough and timely manner, and any necessary HR-related actions are implemented (e.g.: disciplinary action, approval of leave of absence, etc.).

RPDs are also responsible for annual program evaluation, to include feedback from program preceptors and graduating residents. The evaluation should also include review of resident evaluations of preceptors and learning experiences. Identified program improvement opportunities and planned changes must be documented via RAC minutes or alternative method. **(ASHP Standard 4.4.b)**

Residency Program Coordinator (RPC)

A residency program coordinator assists the RPD with ASHP requirements. This may include graduation requirement tracking, individual residency advisory committees, training

schedules, PharmAcademic maintenance, interviews, etc. Programs may appoint an RPC, if desired.

Residency Program Manager (RPM)

The RPM works with RPDs and RPCs to assure overall program goals and objectives are met and training schedules are maintained. The RPM is also involved in in preceptor development, helps coordinate on-boarding and interview and staffing schedules, and provides general support to the structure and function of the entire residency program. The RPM also serves as the permanent chair of C-RAC.

Residency Program Administrator (RPA)

The RPA provides administrative support to the RPM, RPDs and the residents. The RPA works with the RPM to coordinate residency recruitment and orientation activities, resident travel and the overall organization of the residency programs. The RPA assists in the on-boarding and off-boarding of all residents and serves as the liaison for several resident-run committees.

RAC Appointed Mentor

All residents will be paired with a RAC Appointed Mentor as below:

Resident	Appointed Mentor
PGY1 Pharmacy	One of the following: <ul style="list-style-type: none"> ▪ PGY1 RPD or RPC ▪ A rotating PGY1 RAC clinician member ▪ Assistant Director of Education and Professional Development ▪ Pharmacy operations member
PGY1 HSPAL	HSPAL RPC
PGY1 IDRП	IDRP RPC
PGY1 Comm., Mgd. Care	RPD or designee
PGY2	RPD or designee

Responsibilities of the RAC Appointed Mentor include:

- Oversee resident progress on program goals & objectives through the residency year
- Function as an advisor for the resident, to whom the resident can voice concerns, issues or feedback
- Review resident’s evaluations and incorporate feedback into quarterly evaluations
- Document resident progress and any changes to the resident’s development plan
- Meet with the resident at least quarterly for development plan meetings (additional meetings are encouraged)
- Facilitate resident quarterly evaluation meetings & upload quarterly development plans by identified deadline
- Escalate concerns to the RPD
- Plan any necessary remediation in conjunction with the program RPD
- Complete the graduation requirements checklist at the end of the year

Chosen Mentor

All residents will choose an additional mentor from a list of available mentors.

Responsibilities of the Chosen Mentor include:

- Serve as an advisor and advocate for the assigned resident over the course of the year
- Help the resident to achieve individual and residency goals and to address any perceived deficiencies
- Function as an advisor for the resident, to whom the resident can voice concerns, issues or feedback
- Attend resident's quarterly evaluation meetings
- Meet with the resident at least quarterly for development plan meetings (additional meetings are highly encouraged)
- Escalate any concerns to the RPD

Colossal Residency Advisory Committee (C-RAC)

C-RAC oversees all U-M Health pharmacy residency programs, including alignment with the ASHP Accreditation Standard. C-RAC also ensures the residency programs adhere to Pharmacy Department, Hospital, and ASHP mission and guidelines. Members advocate for residents to other faculty, staff, and the department. C-RAC may also approve new programs and off-site rotations, as needed. C-RAC ensures standardization amongst the residency programs regarding graduation requirements, ASHP Standard interpretation, recruitment, on-boarding, off-boarding, early commitment, rotation schedules, project selection and quarterly preceptor development topics, whenever possible.

Individual programs also have a program specific RAC with the purpose of tracking resident progress throughout the year. Additionally, a PGY2 RAC meets quarterly to discuss needs of the PGY2 residents. PGY2 RAC reports out at C-RAC quarterly meetings.

COLOSSAL RESIDENCY ADVISORY COMMITTEE

(ASHP STANDARD 4.4)

PURPOSE

The purpose of the Colossal Residency Advisory Committee (C-RAC) is to establish and maintain ASHP-accredited pharmacy residency programs and to serve as the advisory and organizational structure for U-M Health pharmacy residency programs.

The committee shall assure:

- Residency programs adhere to the Pharmacy Department, Hospital and ASHP mission and guidelines
- Resident and department goals are met
- Residents' advocacy to other faculty, staff, and departments
- Residents' adherence to residency program requirements
- Mentorship and guidance to residents
- Development of new programs as needed to support department needs, future pharmacist roles, and job market changes
- Decisions important to the function of the department are made in a timely manner

MEMBERSHIP

- Permanent Chair - Residency Program Manager

1. Provide oversight of all C-RAC activities and continuity over time
 2. Review and appoint members to C-RAC
 3. Coordinate residency recruitment
 4. Coordinate resident orientation
 5. Coordinate research project proposal review
 6. Serve as a research project proposal reviewer
 7. Ensure adequate feedback and representation of affected parties for all C-RAC votes
- Voting Members
 1. C-RAC Chair (voting tie breaker)
 2. All PGY1 and PGY2 residency program directors and one Infectious Diseases Pharmacy Fellowship Co-Director
 3. Nine (9) clinical pharmacist preceptors serving as PGY1 RAC mentors
 4. One (1) clinical pharmacist in management/operations
 5. One (1) coordinator of resident clinical case conference
 6. Chief Residents (PGY1 and PGY2)
 - Non-Voting Members
 1. All PGY1 and PGY2 residency program coordinators (non-voting members)
 2. One (1) Assistant Director of Education and Research
 3. Permanent C-RAC Secretary – Residency Program Administrator
 - Solicit agenda items and disseminate agendas
 - Record minutes
 - Communicate decisions of the committee via disseminated minutes

SPECIAL REQUESTS

All issues, concerns and special requests (i.e. rotation requests, travel requests, deadline extensions) relating to the residency should be submitted by the resident or RPD to C-RAC for consideration.

MEETINGS

- C-RAC meets at least quarterly with ad hoc meetings to be scheduled as necessary
- Action taken by the C-RAC shall be decided by general consensus (4 or more members agree or disagree). If consensus cannot be reached, the RPM will make the final decision.
- The secretary shall provide e-mail notice of the time and place of all meetings to each member of the committee. An agenda of the items for which action may be taken shall be distributed ahead of the meeting.
- Non-members who wish to attend C-RAC meetings (in person or virtually) require RPM approval
- Agendas will be prepared by the secretary, incorporating requests from members of C-RAC and other committees
- Members who cannot attend a meeting may identify a proxy to attend and vote in their place provided that the individual is identified in advance, and this is communicated to the C-RAC Chair and Secretary
 1. The C-RAC member must identify the proxy in advance and submit the name of the individual to the rotating RAC Secretary when they send out the call for agenda items

2. The RAC Secretary will record the member who is absent and the name of the individual proxy on the agenda and minutes for documentation
 3. Only 1 vote can count for each program
- C-RAC minutes will be disseminated to C-RAC members and posted to the internal website for review by residents, preceptors, and staff.
 1. Any sensitive information will be redacted prior to dissemination/posting.
 - C-RAC updates will be shared at monthly department staff meetings, monthly resident-RPM meetings, and quarterly U-M College of Pharmacy Clinical Department staff meetings, as appropriate

RESIDENT RECRUITMENT & SELECTION

RECRUITMENT

The U-M Health Pharmacy Residency Programs are committed to the recruitment, training, and support of Black, Indigenous, and People of Color (BIPOC) and those from all diverse backgrounds and experiences. Targeted recruitment outreach will be made to under-represented minority students. Recruitment plans and screening rubrics will be reviewed annually to identify any potential areas of bias. Additionally, programs are encouraged to host or attend in-person and virtual recruitment events to reduce geographic and economic bias during the recruitment process. **(ASHP Standard 1.1.a)**

ELIGIBILITY

U-M Health Pharmacy Residency Programs utilize ASHP PhORCAS/WebAdMIT™ and resident candidates and programs must register for the Match on their website. The application deadline for all residency programs is January 2nd each year, unless otherwise noted. **(ASHP Standard 1.3)**

All residency candidates must be eligible to work in the United States for the entirety of their residency program. The U-M Health Pharmacy Residency Programs do not financially sponsor any visas. All residency candidates must have graduated from an ACPE-accredited program or have a Foreign Pharmacy Graduate Examination Committee (FPGEC) certificate from the NABP. Graduates from a non-ACPE accredited pharmacy program must have attended a program that was at minimum 5-year in length. **(ASHP Standard 1.2)**

For PGY2 programs, applicants must be completing or have completed an ASHP- accredited or candidate-status PGY1 pharmacy residency. **(ASHP Standard 1.2.b)** A signed PGY1 certificate of completion must be presented during orientation of the PGY2 year to the RPD for verification. The RPD will upload the PGY1 certificate to PharmAcademic under the files tab. If the certificate is not provided within 30 days of the program start, the resident will be dismissed from the residency program. **(ASHP Standard 2.7, 2.9b)**

SCREENING OF APPLICANTS (ASHP STANDARD 1.1.B)

A pre-determined screening rubric will be utilized to score each applicant's application. Example criteria to be evaluated includes:

- Previous work experience
- Writing experience/publications
- Presentations/public speaking

- Leadership and involvement in extracurricular activities
- Letters of recommendation
- Letter of intent
- Research experience
- Academic transcripts
 1. The rubric will include information on how the academic performance of applicants from pass/fail PharmD programs is to be evaluated. **(ASHP Standard 1.1.b)**
- College of Pharmacy/Foreign Pharmacy Certificate equivalency status
- Work eligibility

The screening team, including the RPD and other program preceptors, will assess each application and share the scores with the RPD or RPC. The RPD or RPC will schedule a meeting with the screening team before interviews are offered. The RPD or RPC will obtain the scores from the electronic database and rank them in order of highest score to lowest. The final rank list is determined at a meeting with the preceptors. Discussion on final rank will involve multiple perspectives and a holistic review of each applicant's candidacy and perceived match with the program.

Applicant screening typically occurs in the early January with a goal of extending interview invitations between mid- and late-January.

INTERVIEWS (ASHP STANDARDS 1.1.C, 1.1.D., 2.8)

Interview invitations will include the residency manual (program policies, program completion requirements, financial support for required meetings), program start date and term of appointment, stipend and benefit information. **(ASHP Standard 2.8)**

Individual residency programs will determine the most appropriate interview format – in-person, virtual or hybrid.

Interviews typically occur between late January and the end of February. An interview itinerary will be emailed to the candidate along with the updated Residency Manual and pertinent travel/parking information (as applicable), at least 1 week prior to the interview. During interviews, the RPD and/or RPM will provide an overview of the program and review program start date and term of appointment, stipend and benefit information and pertinent Residency Manual policies and expectations for completion of the residency. Pre-determined interview questions will be utilized during the interview.

Interviewers will have access to an interview evaluation form and will submit their final scores to the RPD or RPC. After the last interview, the scores will be obtained from the electronic database and ranked in order of highest score to lowest. The RPD or RPC will schedule a meeting with the interview team to review the rankings. Determinations based on weaknesses collected from the evaluation form will be used to remove candidates with negative feedback such as not a team player, failing/low grades, professionalism concerns, etc. The rank meeting involves a discussion on the applicant's total application and interview scores. The final rank list will be entered into National Matching Service platform by the RPD or RPC.

PHASE II MATCH PROCEDURES (ASHP STANDARD 1.1.E)

Programs that do not match all positions in Phase I may elect to participate in Phase II of the Match. The programs should use a similar screening and interview process as utilized in Phase I.

RESIDENCY OFFER LETTERS & MATCH ACCEPTANCE (ASHP STANDARD 2.9)

A U-M Health residency program offer letter template will be created each year that includes details related to salary, pre-employment requirements, program start date, term of appointment and verification of PGY1 residency completion (PGY2 candidates only). The template will be shared with RPDs to be modified by individual programs.

Residency program directors, or a designee, will contact each matched candidate in writing within **30 days** of the Match. Candidates will be provided with an offer letter and a copy of the residency manual, which includes program policies and information related to verification of PGY1 residency program completion. The offer letter will specify a deadline for matched candidates to return their acceptance of the Match and program policies, which must be prior to the start of the residency program. Signed offer letters will be stored centrally by the RPA and/or uploaded to the resident's files tab in PharmAcademic.

ACCEPTANCE OF PROGRAM POLICIES (ASHP STANDARD 2.10)

The RPM will review the residency program manual, including program policies, with residents on the 1st day of orientation. Residents that do not attend the 1st day orientation will meet with their RPD to review the manual and policies within **14 days** of the program start date. This includes those that early committed into a PGY2 program, are beginning the 2nd year of a combined program or those unable to attend the 1st day orientation.

Residents will document their acceptance of the residency manual, including program policies, within 14 days of the program start date and the documentation will be stored centrally by the RPA.

LICENSURE

(ASHP Standard 2.4)

All applicants to the U-M Health Pharmacy Residency programs must be licensed pharmacists or eligible for pharmacist licensure in the state of Michigan. **Michigan licensure requires a pharmacist license and a controlled substance license.**

Residents are expected to expeditiously seek licensure upon acceptance to a U-M Health Pharmacy Residency Program. Licensure should be obtained **before the residency begins**, or very shortly thereafter. It is recommended that the NAPLEX exam be scheduled before the program start date. If an exam date is not available prior to the program start date, it is recommended that the resident check daily for potential exam cancellations and openings.

Residents must share their NAPLEX exam date with the RPM and RPD as soon as they are scheduled. Written approval must be obtained from the RPM and RPD before an exam may be rescheduled.

If the NAPLEX exam is not scheduled prior to July 1st, the resident must email the RPM and RPD with the reason(s) and proposed plan to be licensed as soon as possible. Licensure delays impact many program components, including orientation and training,

weekend/holiday staffing and learning experience schedules, and the level of autonomy afforded during these experiences. It is to the resident's benefit to be licensed prior to July 1st to maximize the residency experience and learning opportunities.

Per U-M Health Pharmacy Staff License and Certification Requirements and Verification policy 115.10, all residents must obtain licensure within 60-days of hire. If licensure is not obtained within 60-days from the program start date, a written plan must be created with the RPD of the program and submitted to C-RAC and the RPM for tracking purposes. See [Appendix A](#) for Licensure Remediation Plan Template. Residents must meet with the RPD at least every other week to discuss progress. An updated plan must be resubmitted to the RPM monthly. Residents may not staff independently on the weekends/holidays while unlicensed and must coordinate their own trades/coverage. See "Resident Staffing Licensure Delays Procedure" to review this process.

Unlicensed residents must share their licensure status with their preceptors at least 7 days prior to the first day of the learning experience. Adjustment to the resident's learning experience schedule may be required due to delayed licensure.

Per ASHP Standard 2.4, residents must complete at least two-thirds of the residency as a licensed pharmacist. The 2025 residency licensure deadlines are below:

Program Start Date	2024 Licensure Deadline
June 16, 2025	On or before October 20, 2025
July 1, 2025	On or before October 29, 2025

If a resident is not successful in passing the 3rd attempt of the NAPLEX, or if they have not had both their required pharmacist and controlled substance licenses issued by LARA and verified by program leadership by the deadlines above, they will be dismissed from the residency program.

If a resident requires an extended leave of absence (LOA) prior to obtaining their pharmacist and controlled substance licenses, the above licensure deadlines will be extended commiserate with the length of the LOA. The RPD must ensure the resident is licensed for two-thirds of the residency program, excluding the LOA. Please see the leave of absence section for additional details.

GRADUATION REQUIREMENTS

(ASHP Standard 2.5, 2.13)

Criteria as described below must be met for the resident to receive their certificate of completion. These graduation requirements refer to the **PGY1 Pharmacy Residency Program** but may be applicable to all programs. For deviations from the requirements, please reference program-specific appendices.

LICENSURE

- Obtain State of Michigan Pharmacist and Controlled Substance licensure by deadline

LEARNING EXPERIENCES & EVALUATIONS

- Completion of all learning experience evaluations in PharmAcademic.
- Receive achieved for residency (ACHR) score on $\geq 80\%$ of ASHP required objectives

- An entering self-assessment for must be completed & uploaded to PharmAcademic prior to starting residency.
- Resident initial and quarterly development plans uploaded to PharmAcademic by specified deadlines
- Completion of a drug class review, monograph, treatment guideline, treatment protocol, utilization management criteria and/or order set
- Completion of all clinical practice requirements as stated in residency manual

SCIENTIFIC ADVANCEMENT & RESEARCH

- Research project with manuscript deemed suitable for publication and the following:
 1. Poster presentation of research at Vizient Pharmacy Resident Poster Session, ASHP Midyear Clinical Meeting or alternative meeting approved by RPD
 2. Oral platform presentation of research project at Great Lakes Resident Conference, or alternative approved by RPD
 3. *PGY2 Residents*: poster and/or platform presentations may occur at a PGY2 specialty conference at discretion of RPD
- Writing project with manuscript deemed suitable for publication
- Presentation of continuing education seminar (except PGY2 HSPAL residents)
- Participation in Professional Development Series- research/writing seminars
 1. Sessions are optional but encouraged for PGY2 residents

LEADERSHIP & PROFESSIONAL INVOLVEMENT

- Participation in Professional Development Series – leadership sessions
 1. Sessions are optional but encouraged for PGY2 residents
- All residents will be actively engaged in a local, state or national committee to develop essential leadership skills. They have the responsibility of determining committee involvement with the assistance of preceptors during orientation.
- PGY1 residents are required to participate in at least 2 resident-run committees. PGY2 residents are required to participate in at least 1 resident-run committee. Residents will rank committees in July/early August and the final committee assignments will be determined by the Chief Residents.

TEACHING AND ACADEMIA

- All residents receive adjunct faculty appointments at the U-M College of Pharmacy. They serve as instructors for a one-semester course and may serve as a co-preceptor for IPPE and/or APPE students.
- There is an optional teaching certificate opportunity through the U-M College of Pharmacy

LONGITUDINAL EXPERIENCES

- Completion of clinical, operational, holiday and gap day staffing activities
- Participation in the management of medical emergencies (code blue response), with advanced cardiac life support (ACLS) certification
- Completion of residency clinical case conference presentations
- Participation in at least 1 community service activity

1. Residents in the PGY1 Pharmacy, PGY1 Community, and PGY2 Ambulatory Care programs are required to participate in the student-run free clinic. This participation counts towards the community service component.
- Routine upload of documents, assignments and presentations to PharmAcademic files tab. This serves as the resident’s portfolio. See [Appendix B](#) for list of required documents & naming convention.

TRACKING GRADUATION REQUIREMENTS

The graduation requirement checklist will be completed by the Resident and RPD or RAC Mentor. See [Appendix C](#) for checklist. The RAC Mentor or RPD should verify satisfactory completion of the research and writing projects with the resident’s project mentors prior to signing the checklist. **(ASHP Standard 2.13)**

The resident is to upload the completed checklist to the “files” tab in PharmAcademic. A compliance audit will be performed at the end of the year by the RPD and/or RPC. If non-compliance is noted, the RPD or RPC will contact the resident to reconcile.

LEARNING EXPERIENCES

(ASHP Standard 3.1)

The resident will complete 12 learning experiences (LEs), including orientation and required and elective experiences, and a variety of longitudinal experiences. PGY1 residents (PGY1 pharmacy, PGY1 IDRP and PGY1 HSPAL) will complete a 6-week orientation starting in the middle of June. Residents in other programs will complete a 4-week orientation beginning the first week of July. Residents will also complete a variety of required, longitudinal experiences and will focus on their research project in December.

The required, elective, and longitudinal experiences listed below are for the **PGY1 Pharmacy program**. Learning experiences for other programs are listed in program-specific appendices.

REQUIRED

The required learning experiences must be taken at a U-M Health site. The **seven** required LEs are below and are all one-month (4-weeks) in duration, unless otherwise noted:

- **Orientation (6 weeks)**
 1. Residents will be oriented to the residency program and practice environment. This includes the residency manual, program purpose, ASHP Standard, competency areas, goals and objectives (CAGOs), required and elective learning experience options, burnout, wellness and well-being strategies and resources and processes for reporting inappropriate behavior and harassment. Residents will also receive training in the clinical and distributive functions of the pharmacy department, including organizational and departmental policies, protocols and procedures, etc.
- **Ambulatory Care:**
 1. May be fulfilled via a traditional one-month or a longitudinal rotation.
 - *Longitudinal option:* the resident is to be in a primary care clinic for one half-day every week for a 5-month block (beginning August 1st

during the Fall semester or January/ February 1st for the Winter semester)

- **Critical Care**
- **Adult Internal Medicine**
 1. May also be fulfilled by: Internal Medicine, Internal Medicine – Hospital Care at Home, Adult Inpatient Hematology, General Adult Cardiology, or Medical Oncology
- **Medication Use Policy**
- **Pharmacy Practice Management**
- **Research (December)**

ELECTIVES

The **five** elective LEs can be fulfilled via an additional required LE, any elective LE, or by soliciting C-RAC approval for a new LE. PGY1 residents may not exceed 3 LEs in the same specialty area, specific disease state or population.

Residents choosing to participate in the optional teaching certificate program must take an elective in Teaching/Academia. The teaching certificate program faculty mentors provide the residents with a list of LEs that fulfill this requirement during orientation.

The required and elective learning experience options are listed in [Appendix D](#) and may vary from year to year based on preceptor availability. LEs are all one-month in duration, unless otherwise noted.

LONGITUDINAL EXPERIENCES

- CORE - Clinical and Operations Residency Experience*
 - Evaluates staffing, code blue response, clinical case conference, and leadership series
- Education (~15 weeks)
 - Evaluates required teaching assignment at College of Pharmacy
- Research Project*
 - Evaluates overall research project, research protocol presentation, research poster, final research platform presentation and research project manuscript
- Writing Project*
 - Evaluates overall writing project, continuing education seminar presentation and writing project manuscript

**Learning experience is approximately 44 weeks in duration and is scheduled as 4 quarterly blocks to maximize feedback opportunity.*

OFF-SITE LEARNING EXPERIENCES

Off-site LEs may be considered on a case-by-case basis and are subject to approval by C-RAC. Due to licensing, HR, legal and financial considerations, every effort should be made to organize the experience within U-M Health.

To request C-RAC review of an off-site LE, RPDs will need to complete the off-site rotation form ([Appendix E](#)) and submit to the C-RAC Chair. The RPD will present the request at the August C-RAC meeting.

LEARNING EXPERIENCE SCHEDULE

Preceptors will complete a learning experience/preceptor availability grid in April/May each year to assess for capacity for rotations. Preceptors should also indicate which months will have IPPE/APPE student overlap, maximum residents/month and maximum residents/residency year, if applicable. Preceptors will be asked to re-confirm their availability on the grid in early June.

The finalized grid will then be shared with all residents during orientation. The PGY2 residents select rotations first by updating the availability grid & adding their LE selections to the LE schedule template. The updated LE availability grid is then shared with the PGY1 Pharmacy, HSPAL and IDRP residents who will work together to design a rotation schedule that meets the program requirements outlined in the residency manual. If additional availability is requested, the resident will contact the preceptor to discuss.

The resident schedule is then reviewed for appropriateness by the RPDs. Residents in other programs should add their LE schedule to the posted LE schedule by the end of July.

Residents and RPDs are responsible for ensuring resident schedules abide by all program requirements. Additionally, residents in PGY1 and direct patient care PGY2 programs must spend $\geq 2/3$ of the program in patient care activities (**ASHP Standard 3.1.c.3**).

LEARNING EXPERIENCE SCHEDULE CHANGES

Residents may request changes to their learning experience schedule due to changes in their interest areas and goals. Changes must be completed ≥ 2 weeks prior to a 1st day of the LE.

The **resident** must do the following:

- Confirm preceptor availability for new LE
- Seek approval from the scheduled preceptor(s), new preceptor(s), RAC Mentor, and RPD
- If approved, update the posted LE schedule

The program RPD or RPC will complete the schedule change in PharmAcademic.

WRITING PROJECT

The writing project is a required component of the residency experience designed to expose residents to all aspects of preparing an article suitable for publication. Topics may include a review of a specific drug, class of drugs, or therapy for a specific disease state. In addition to review articles, case reports or case series with a review of pertinent literature, or a survey study with a literature review may also be acceptable writing projects, as long as the project requires the resident to learn the same skills as writing a review paper.

Throughout the course of the year, the resident and writing preceptor(s) will meet periodically to discuss the manuscript and make necessary revisions in order to complete the project before the end of March. Residents and preceptors will complete quarterly evaluations in PharmAcademic and general progress must be discussed at the quarterly resident/mentor meetings.

The final manuscript must be in a format suitable for publication and it must be deemed satisfactory by the preceptor in order to successfully complete the residency requirement. The writing project's content will be ultimately utilized for a one-hour ACPE Continuing Education (CE) seminar presentation.

SELECTION OF PROJECT

Writing project ideas are solicited from preceptors and compiled by the RPM each Winter. The list of ideas is shared with the residents in July. **Residents are to review the list, and MUST discuss projects of interest with preceptors, and share their intention to select/rank the project with the preceptor.** Project ideas that are reserved for certain programs will be clearly noted on the project list.

By the end of July, residents must select a topic of interest from the compiled list of topics and preceptors, or work with a preceptor to develop an idea outside of the compiled list. PGY2 residents get first choice of writing projects. PGY1 residents then submit a ranking of their top 5 projects from the remaining projects to the RPM.

The RPM will then pair the residents and projects and disseminate the proposed pairings to the preceptors for review & approval. The finalized list will then be sent to all residents and project preceptors and posted on the internal website.

RESIDENT RESPONSIBILITIES

Residents are responsible for the majority of the work on the writing project and should be involved in all aspects of the project, including:

- Developing an initial project timeline & making any necessary updates
- The majority of the work on the article including:
 1. Outline composition
 2. Literature search
 3. Providing the preceptor with a copy of all articles cited
 4. Reading all articles cited
 5. Writing a draft of the article AND
 6. Making all necessary revisions
- Identifying a journal for submission
- Uploading required writing project files to PharmAcademic
- Submitting the manuscript to the journal of their choice (optional, but strongly encouraged)

Additionally, residents are responsible for:

- Scheduling all meetings with project preceptor(s)
 1. The preceptor's work schedule must be taken into consideration (i.e.: staffing and vacation)
- Meeting all deadlines established by the preceptor and C-RAC
- Completing all evaluations as scheduled in PharmAcademic and discussing with project preceptor(s)
- Escalating issues that arise that cannot be easily resolved between the resident and the project preceptor(s) to the resident's RAC Mentor and RPD
- Attending the longitudinal Research & Writing Series (required for PGY1 residents)

1. This is a lecture series scheduled to coincide with research deadlines and activity at the beginning of the residency year. The schedule is coordinated by the Chief Residents.
2. The series is intended to:
 - Provide tools needed to conduct residency research projects and future research
 - Provide a consistent research experience through reading and discussion on core topics
 - Keep residents “on track” to meet requirements and deadlines for their research projects

PRECEPTOR RESPONSIBILITIES

Writing preceptors are responsible for the following aspects of the writing project:

- Directing the work of the resident throughout the year including:
 1. Assisting resident with determining the design & scope of the project
 2. Ensuring the resident has a good understanding of the topic
 3. Helping resident identify key background information and previously published literature on topic
 4. Reviewing the CE seminar slides and manuscript & providing timely feedback on all drafts

Additionally, preceptors are responsible for:

- Devoting sufficient time to the project (i.e.: assist in literature interpretation, development of CE seminar slides, writing of the manuscript, providing timely feedback) in order to assure that the project is completed within the year
- Discussing authorship on the project manuscript
 - This discussion should occur prior to initiation of the project and should make clear the resident's responsibilities and the order of authorship.
- Completing evaluations in PharmAcademic as scheduled & discussing with resident
- Escalating issues that arise that cannot be easily resolved between the resident and the writing preceptor to the resident’s RAC Mentor and RPD
- Providing feedback to the resident’s RAC Mentor or RPD regarding progress on the project throughout the year and be present to discuss the progress at quarterly development plan meetings.
- Retaining copies of all drafts to document the progress of the resident throughout the course of the year
- Returning feedback and instructions on draft manuscript by mutually agreed upon deadlines to help the resident meet the final March deadline
- Notifying the resident’s RAC Mentor/RPD that the manuscript has been satisfactorily completed and is in a publishable format

COMPLETION OF THE WRITING PROJECT

The writing project is considered complete when the following have been met:

- The writing project is completed within **nine (9) months** of the start of the residency year (March)
- The writing mentor deems that all of the revisions requested have been satisfactorily incorporated and that the final manuscript is suitable for publication

- The RAC Mentor/RPD deems that the final report, PharmAcademic evaluations, and preceptor feedback to resident have been satisfactorily completed
- The final manuscript must be uploaded to the resident’s files tab in PharmAcademic

See below for a suggested writing project timeline (required deadlines bolded):

Date	Description
July	<ul style="list-style-type: none"> ▪ Approved topic and preceptor list is distributed to residents. ▪ <u>Residents MUST discuss topics with preceptors & share intent to select or rank their project</u>
End of July	<ul style="list-style-type: none"> ▪ PGY2 residents self-select topics & remaining projects shared with PGY1 residents ▪ PGY1 residents submit 5 ranked projects to RPM. RPM pairs PGY1 residents & projects. ▪ Selected project preceptors review project pairings & notify RPM of needed changes ▪ RPM distributes the final pairings ▪ Resident emails writing mentor(s) to set up initial meeting ▪ Resident completes computerized literature search and collects and reads selected major articles on the topic
Early August	<ul style="list-style-type: none"> ▪ Resident and preceptor meet to schedule meetings and to discuss scope of manuscript and individual responsibilities ▪ Rough outline is drafted
End of August	Resident submits completed outline to preceptor for approval
Early September	<ul style="list-style-type: none"> ▪ Resident collects and reads all articles ▪ Preceptor is given selected/all articles to read ▪ Schedule standing meetings to discuss progress of writing and allow for ongoing revisions
Early November	Writing project seminar outline and learning objectives must be turned in for continuing education accreditation of seminar in January/February
Late December	Handouts and other final continuing education accreditation materials must be turned in for seminar in January/February
January	<ul style="list-style-type: none"> ▪ Resident submits completed first draft (including text, table, figures, and references) to preceptor for review ▪ Writing project seminars are scheduled
January – March	Resident and preceptor meet to discuss necessary revisions and editing
Middle of March	Final writing submission to preceptor
April-June 1 st	<ul style="list-style-type: none"> ▪ Writing mentor gives their approval and notifies RAC Mentor and RPD that they have signed off and all requirements have been completed ▪ If writing mentor does not give approval, then opportunity for remediation via editing must be done <u>no later than June 1st</u> to ensure successful program completion

RESEARCH PROJECT

Each pharmacy resident will complete a longitudinal research project. Three criteria should be considered for all resident research projects:

- It must address a topic of importance to the practice of pharmacy
- The subject matter should be of interest and value to both the resident and the Pharmacy Department
- The project scope must be such that it can be completed during the residency year

APPROVAL OF RESEARCH PROPOSALS

All research project proposals must be reviewed and approved by a committee of C-RAC members.

- Preceptors submit research project ideas annually via a web-based form by mid-March
- Each proposal is reviewed by a review committee selected from C-RAC members, including the RPM, PGY1 Pharmacy RPD, PGY1 RAC mentors, and additional interested C-RAC members. The reviewers assess feasibility of the project to be completed within the residency time frame, appropriate sample size to meet study end points, and research question and methodology.
- The reviewer questions/comments are collected and returned to the primary investigator (PI) within 4-6 weeks of the submission deadline.
- The PI is asked to provide electronic, written responses to reviewer questions. Any verbal discussion of feedback should be summarized in writing by one of the reviewers.
- Once the reviewers' questions have been answered and a final decision is made, the PI is informed of the acceptance or rejection of the proposal.
- If the research project is to be significantly modified after the initial approval, C-RAC must be notified.

Projects not selected by a resident may remain on the list of available projects for subsequent years, pending appropriateness and PI approval.

SUITABILITY OF RESEARCH PROJECTS

- Research study design:
 1. The scope of the project may vary widely. Acceptable study designs include database, development of service, DUE/MUE, laboratory, and prospective and retrospective chart reviews. Other study ideas are encouraged and will be considered by the RAC Research Review Committee on a case-by-case basis.
 2. The project must provide sufficient and meaningful data to allow reaching a conclusion suitable for preparation of a final report.
 3. Projects do not need to be publishable, but it is preferred that projects have a unique perspective or contribute to the pharmacy departmental goals. For projects that are not expected to be publishable, this should be clear to the residents during project selection
- Feasibility
 1. The project, including an appropriate typed final report, must be completed within the time frame of the residency program.

2. The project must be monetarily feasible. For projects requiring outside support, it is advisable that funding be reasonably certain/obtained before a resident becomes involved.
- The project must allow sufficient involvement on the part of the resident. This includes a literature search to avoid duplication of work, project design, protocol writing, data collection and analysis, and preparation of the final report.
 - The resident must have a sufficient number of preceptor co-investigators to ensure appropriate education and guidance (see preceptor responsibilities).

PROJECT SELECTION

The list of RAC-approved project ideas is shared with the residents in July. **Residents are to review the list, and MUST discuss projects of interest with preceptors, and share their intention to select/rank the project with the preceptor.** Some project ideas are reserved for certain programs – this will be clearly noted on the project list.

If a resident has specific research they would like to pursue, then a preceptor must be identified, and a proposal can be submitted to RAC by Mid-July to consider the research project at that time.

By the end of July, residents must select a topic of interest from the compiled list of subjects and preceptors, or to work with a preceptor to develop an idea outside of the compiled list. PGY2 residents get first choice of writing projects. PGY1 residents then submit a ranking of their top 5 projects from the remaining projects to the RPM.

The RPM will then pair the residents and projects and disseminate the proposed pairings to the preceptors for review & approval. The finalized list will then be sent to all residents and project preceptors and posted on the internal website.

RESIDENT RESPONSIBILITIES

Residents are responsible for the majority of the work on the research project and should be involved in all aspects of the study, including:

- Developing an initial project timeline & making any necessary updates
- Writing the research proposal including composition of an outline, literature search and making any necessary revisions
- Presenting a research protocol presentation (PGY1 residents only)
- Preparing and submitting an IRB application, as soon as possible.
 1. Ensuring IRB approval is obtained prior to ANY data collection
- Data collection
- Data analysis
- Presenting final research results to department and regional pharmacy residency conference
- Identifying journal for submission
- Writing/editing the final manuscript and making necessary revisions
- Uploading required research project files to PharmAcademic
- Submitting the manuscript to the journal of their choice (optional, but strongly encouraged)

Additionally, residents are responsible for:

- Scheduling all meetings with project preceptor(s)
 1. The preceptor's work schedule must be taken into consideration (i.e.: staffing and vacation)
- Meeting all deadlines established by the preceptor(s) and C-RAC
- Completing evaluations as scheduled in PharmAcademic and discussing with project preceptor(s)
- Escalating issues that arise that cannot be easily resolved between the resident and the project preceptor(s) to the resident's RAC Mentor and RPD
- Attending the longitudinal Research & Writing Series (required for PGY1 residents)
 1. This is a lecture series scheduled to coincide with research deadlines and activity at the beginning of the residency year. The schedule is coordinated by the Chief Residents.
 2. The series is intended to:
 - Provide tools needed to conduct residency research projects and future research
 - Provide a consistent research experience through reading and discussion on core topics
 - Keep residents "on track" to meet requirements and deadlines for their research projects

PRECEPTOR RESPONSIBILITIES

Research preceptors are responsible for the following aspects of the research project

- Directing the work of the resident throughout the year including:
 1. Reviewing the written protocol & providing timely feedback
 2. Attending the research protocol presentation & providing feedback
 3. Assisting with IRB application process, if applicable
 4. Training the resident regarding the experimental procedures
 5. Teaching the resident how to perform data analysis and interpretation and
 6. Reviewing the manuscript & providing timely feedback

Additionally, preceptors are responsible for:

- Devoting sufficient time to the project (i.e.: assist in literature interpretation and/or writing of the article, providing timely feedback) in order to assure that the project is completed within the year.
- Discussing authorship on the project manuscript
 - This discussion should occur prior to initiation of the research project and should make clear the resident's responsibilities and the order of authorship.
- Completing evaluations in PharmAcademic as scheduled and discussing with the resident
- Escalating issues that arise that cannot be easily resolved between the resident and the writing preceptor to the resident's RAC-assigned mentor and RPD.
- Providing feedback to the resident's RAC-Assigned mentor regarding progress on the project throughout the year and be present to discuss the progress at quarterly development plan meetings
- Retaining copies of all drafts to document the progress of the resident throughout the course of the year

- Returning feedback and instructions on draft manuscript by mutually agreed upon deadlines to help the resident meet the final June deadline
- Notifying the resident’s RAC Mentor/RPD that the manuscript has been satisfactorily completed and is in a publishable format (for graduation checklist).

FORMAT

The format of the research protocol and final manuscript will vary for each project. Clinical studies may have substantially different formats than administrative or drug use evaluation studies. However, accepted scientific methods and formats which are appropriate to the subject matter should be adhered to.

The final manuscript should follow a traditional format with sections for introduction, methodology, results, discussion, conclusion(s), references, tables, and figures. The format should be in alignment with the requirements of the target journal/publication. If an alternative manuscript/written report format is to be used, it must be agreed upon *in writing* by the resident, all preceptors and RPD prior to the resident beginning the writing process. The final manuscript must be deemed to be of publishable quality by the project preceptors to satisfy the graduation requirement.

Suggested outline:

Research Protocol	Final Manuscript
1. Introduction/Background 2. Objectives 3. Significance of Proposed Project <ul style="list-style-type: none"> a. Methodology b. Patient Population c. Inclusion Criteria d. Exclusion Criteria e. Procedures (i.e.: details of experiment) f. Data Analysis (i.e.: statistics) 4. Funding (if applicable) 5. References 6. Tables/Figures 7. Appendices (if applicable)	1. Introduction 2. Methodology 3. Results 4. Discussion and Conclusion 5. References 6. Tables/Figures

COMPLETION OF THE RESEARCH PROJECT

The research project is considered complete when the following have been met:

- The research project is completed within twelve (12) months of the start of the residency year
 - 1. **Under no circumstance will project deadline be extended beyond June 30th.** Compliance is required prior to issuing a residency certificate.
 - 2. Journal submission may occur after completion of the residency program
- The research mentor deems that all of the revisions requested have been satisfactorily incorporated and that the final manuscript is suitable for publication
- The RAC Mentor/RPD deems that the final manuscript, PharmAcademic evaluations, and preceptor feedback to resident have been satisfactorily completed

- Final project files are uploaded to resident’s files tab in PharmAcademic (research protocol presentation, research poster, final manuscript, etc.)

See below for a suggested research project schedule timeline:

Date	Description
July	<ul style="list-style-type: none"> ▪ Approved topic and preceptor list is distributed to residents. ▪ <u>Residents MUST discuss topics with preceptors & share intent to select or rank their project</u>
End of July	<ul style="list-style-type: none"> ▪ PGY2 residents self-select topics & remaining projects shared with PGY1 residents ▪ PGY1 residents submit 5 ranked projects to RPM. RPM pairs PGY1 residents & projects. ▪ Selected project preceptors review project pairings & notify RPM of needed changes ▪ RPM distributes the final pairings ▪ Resident emails writing mentor(s) to set up initial meeting
August	<ul style="list-style-type: none"> ▪ Resident completes computerized literature search and collects and reads selected major articles on the topic ▪ Resident and preceptor meet to schedule meetings and to discuss scope of manuscript and individual responsibilities ▪ RPM to announce research protocol, Spring research presentation & CE presentation dates ▪ Start of Resident Research Series
Early September	Submit rough draft of research project protocol to preceptor(s)
Late Sept/Early Oct	Protocol presentations (PGY1 Residents only)
By October 31	<ul style="list-style-type: none"> ▪ Submit final written protocol to preceptor(s) ▪ IRB application, if applicable
November – February	Data collection
March 1 – April	<ul style="list-style-type: none"> ▪ Complete data collection ▪ Presentation of project results (with practice presentation w/ preceptors at least 3 days prior to this presentation)
Late April	Presentation of results at regional pharmacy resident conference
May – June	Prepare final manuscript, including results and discussion sections/completion of research project
Middle of June	Preceptor approval of manuscript; notification of approval to RAC mentor/RPD

SEMINARS

PURPOSE

The purpose of the pharmacy resident seminar presentations is to provide the opportunity to develop or continue to refine their skills related to:

- Organizing written or verbal communication in a logical manner
- Ensuring communication is appropriate for the level of the audience

- Using appropriate grammar, punctuation, spelling, style, and formatting conventions in the preparation of all written communications
- Utilizing public speaking skills to speak effectively in large and small group settings
- Designing visual aids to enhance the effectiveness of communications
- Employing persuasive communication techniques effectively, when appropriate
- Prepare all communications so that they reflect a positive image of pharmacy

SEMINAR PRESENTATIONS

During the course of the year, each resident will formally present the following:

- **Research project protocol seminar (Sept/Oct)**
 1. These should be approximately 20 minutes in length with 10 minutes at the end reserved for questions or comments.
 2. Required for PGY1 Residents only

- **Writing project seminar (ACPE Accredited CE presentation)**
 1. Typically presented from late January/early February through May, with 2 concurrent sessions per day
 2. CE presentations should be 50 minutes in length with 10 minutes at the end reserved for questions or comments.
 3. The schedule will be created by the RPM, RPA and Chief Residents and shared with writing project preceptors for approval before being disseminated to the residents.
 4. Residents may switch their day/time with a co-resident after obtaining approvals from the following:
 - Writing project preceptor(s) – for both affected residents
 - RPD
 - Residency Program Manager & Administrator

Prior to trading dates, residents & preceptors must ensure they are able to meet all deadlines for the new presentation date.
 5. All deadlines and rules imposed by the American Council on Pharmaceutical Education (ACPE) must be followed including the evaluation of the residents' presentations by faculty, fellow residents and students. **All materials must be sent to the U-M COP CE administrator by the following deadlines:**
 - At least **75 days** in advance of the presentation
 - MPA Faculty Agreement Form
 - Needs assessment
 - Learning objectives (minimum of 3)
 - Speaker information (updated CV and disclosure)
 - Planner information (disclosure)
 - Activity planning grid
 - At least **30 days*** in advance of the presentation
 - Final seminar slides (PowerPoint file)
 - PDF copy of handout(s) (if different from slides)
 - 8-10 post-test questions with answer key and explanation of correct answers
 - Written evidence of permission to use copyrighted materials, if applicable

**May be adjusted up to assure timely processing, due to the MPA office and University closures during holidays. Please see spreadsheet from COP CE administrator with resident specific deadlines.*

- At least **14 days** in advance of the presentation, the resident will identify 2 preceptors and a co-resident to provide verbal feedback immediately following the presentation.
 - One preceptor should practice in an area related to the topic, and the other preceptor can practice in any specialty area.
 - The resident must ensure evaluators are available to attend the presentation before submitting the evaluator names to their RPD for final approval.

- **Research project results seminar (March/April)**
 1. These should be approximately 20 minutes in length with 10 minutes at the end reserved for questions or comments.
 2. Residents from all programs are required to participate.

SEMINAR PRECEPTORS

The resident will require precepting for each seminar they present. Below is a listing of the types of preceptors for each seminar:

- All seminar presentations
 1. A RAC-appointed preceptor must serve as the resident's primary preceptor for each seminar and attend the respective event they precept or send an expert designee if they cannot attend.
- Research seminars (protocol and results)
 1. The resident's primary research preceptor(s) will serve as the research seminar preceptor
- Writing project seminar (CE presentation)
 1. The primary co-author of the resident's writing project will serve as the preceptor of the writing project presentation.

SEMINAR ANNOUNCEMENT AND EVALUATIONS

The topics of the presentations will be publicized so that College of Pharmacy faculty, acute care, ambulatory care, specialty pharmacy staff, and other interested persons may attend. Resident research presentations will be evaluated by those in attendance using a standard evaluation form ([Appendix F](#))

For the CE seminar presentations, residents will identify 3 evaluators for their CE seminar presentation – (1) a pharmacist content expert in the subject matter (may be writing project preceptor or another content subject matter expert), (2) a pharmacist not working in content area, and (3) a co-resident. To ensure timely feedback, the presenting resident and evaluators will meet immediately following the CE seminar presentation to discuss verbal feedback. The evaluators should also submit an evaluation form.

The announcements & evaluation process will be coordinated by the residency program administrator (RPA) and completed evaluations will be shared with the resident and their

project preceptors. The resident and preceptors should review and discuss the evaluations. This feedback should be included in the quarterly research and writing project evaluations in PharmAcademic and evaluation forms must be uploaded to the resident’s files tab in PharmAcademic.

TEACHING RESPONSIBILITIES

APPOINTMENT PROCESS

All residents will be granted adjunct clinical faculty appointments at the University of Michigan College of Pharmacy (U-M COP). Applications will be completed during orientation.

ASSIGNMENT OF REQUIRED TEACHING

The required teaching assignments at the COP are coordinated by the Associate Chair of the College of Pharmacy prior to the residency year and reviewed by the RPM and RPDs. Final assignments will be disseminated during orientation. Residents may not request specific courses but may trade their teaching assignments once they have been announced. Residents must have all trades approved by the RPM, RPD and the Associate Chair at the U-M COP.

Below is a listing of *example* courses that may be assigned:

Semester <i>(approx. 15 weeks)</i>	Course Number	Course Name
Fall	P501	Introduction to Pharmacy
	P504	Pharmacy Practice Skills I
	P506	Patient Care and Communication
	P602; P702	Therapeutic Problem Solving
	P703	Institutional IPPE
	P723	Pharmacy Practice Skills III
Winter	P512	Self-Care
	P514	Pharmaceutical Care
	P516	Healthcare Systems
	P537	Intro to Managed Care Pharmacy Elective
	P612; P712	Therapeutic Problem Solving
	P616	Health Systems Pharmacy Practice
	P617	Foundations of Pharmacy Leadership Elective
	P727	Career and Professional Development Elective
	P733	Pharmacy Practice Skills IV
P767	Critical Care Elective	

Note: These courses are subject to change and resident expectations and activities vary by course.

DIRECT PATIENT CARE RESPONSIBILITIES WHILE TEACHING

During required resident teaching experiences, pagers and other rotation responsibilities should be covered by primary preceptor or other pharmacist during designated teaching hours and the respective healthcare team should be notified of the temporary coverage changes.

Co-residents will cover the code pager when the resident is assigned code coverage during required teaching experiences. The cross-coverage will be coordinated by the resident needing coverage.

RESIDENT EXPECTATIONS

Residents are expected to complete the following:

- Each resident should contact the course coordinator prior to semester starting to discuss expectations. Each resident will have their own course responsibilities (e.g., teach in specific module) if multiple residents are assigned to the same course (e.g. therapeutic problem solving).
- Notify course coordinator(s) of any expected absences well in advance
- Residents are not expected to participate in class responsibilities outside of scheduled class time (this does not include grading or prep work)
- Each course has primary responsibilities, which will be distributed by the teaching coordinator during orientation. There are likely additional opportunities available. If you are interested in exploring *ADDITIONAL* teaching opportunities, please inform the course coordinator. There will be additional opportunities presented by the teaching coordinator as well during orientation.
- Complete PharmAcademic evaluations as scheduled

The expected time commitment is 5 hours per week when averaged over the semester. If your activities require more time, please speak with the course coordinator and your RPD.

COURSE COORDINATOR EXPECTATIONS

Courses are often taught by several COP faculty members. The lead faculty member is known as the course coordinator. Course coordinators should be a RAC appointed residency preceptor. To help ensure a mutually beneficial resident teaching experience, course coordinators should abide by the following:

- Share the course syllabus/schedule with the resident and RPD
 1. Clarify the resident teaching expectations including the day and time of weekly teaching (about 5 hours/week to include in class and prep/grading time)
 2. Describe the anticipated role(s) of the resident in the course
 3. Encourage the RPD and resident to communicate early about any additional teaching opportunities they would like to explore within the course based on the topic schedule. Note: These additional opportunities *may* help support attainment of the teaching certificate and would need to be reviewed with teaching certificate coordinators.
- Ensure expectations are clearly communicated/reinforced and discuss additional (optional) teaching opportunities available to the resident
- Clearly communicate with course faculty in advance to understand what support is needed from the resident on their assigned day in the classroom
- Work with the faculty to make suggestions on how to engage the residents. For example:
 1. Common tasks
 - Facilitating a case discussion with the students
 - Define who is responsible for creating assignments in Canvas and entering grades

- Describe required lab set-up
 - Grading assignments
- 2. Additional tasks to further engagement
 - Updating cases
 - Writing exam or assessment questions
- 3. Tasks will vary depending on the needs of the course
- As course coordinator, you should know the expectations and needs of individual faculty with regard to their use of the pharmacy residents and ensure the five hours every week time requirement is not exceeded
- Provide feedback to the resident either by completing a PharmAcademic evaluation directly or providing feedback to the RPD or designee for inclusion in a PharmAcademic evaluation.
 1. Course coordinators are encouraged to include feedback from other course faculty who worked closely with the resident. If COP students complete evaluations of the resident, the course coordinator should ensure the resident receives copies of the evaluations. Alternatively, the course coordinator should summarize the student feedback and include in the PharmAcademic summative evaluations.

IPPE AND/OR APPE PRECEPTORSHIP

Residents may serve as a co- preceptor for pharmacy student IPPE and/or APPE rotations. Precepting goals and objectives will be set by the rotation preceptor upon discussion with the resident. The rotation preceptor should evaluate the resident's precepting skills and include written feedback as part of the summative evaluation at the end of the rotation.

OPTIONAL: TEACHING CERTIFICATE

Residents have an optional experience to receive a teaching certificate with the University of Michigan College of Pharmacy. An overview of the program structure and requirements will be presented during orientation.

In order for a resident to receive a teaching certificate from the University of Michigan Health / U-M College of Pharmacy, the resident must complete the following criteria:

- Participation in 75-80% of the Teaching Discussion Series, hosted by the U-M COP
 1. Attendance at continuing education courses/seminars/lectures outside of the Teaching Discussion Series (e.g., CRLT, ASHP, ACCP, AACCP) may also count towards (or in place of) topics presented during the discussion series, at the discretion of the coordinator of the discussion series
 2. Resident must lead at least 1 of the teaching discussions
 3. The discussion series will be held in-person or virtually with asynchronous prework prior to session
- Completion of a RAC-approved teaching rotation. Available options are below:
 - Traditional teaching rotation (month block or longitudinal)
 - Clinical faculty teaching rotation (month block)
 - Teaching specific topics that are applied to direct patient care that rotation
 - Academic administration rotation (month block)
- All rotations will meet the same objectives included in ASHP elective objectives with different emphasis/focus based on the type of rotation.
- Submission of a teaching portfolio, which must include the following items:

- Self-reflection narrative of teaching strengths and areas of needed improvement
- Teaching philosophy
- 3 examples of the resident’s teaching accomplishments (e.g., syllabus, CE presentation slides, active learning exercises, quizzes, exams)
- A list of Teaching Discussion Series sessions attended (or equivalent experiences, as defined above)
- A description of teaching activities completed which are deemed equivalent to a teaching rotation (if the resident did not complete a teaching rotation)
- Participation in a minimum of 2 admissions interview sessions, ideally one per semester (if available)
- Residents must complete the requirements for a teaching certificate within one academic year (July to June)
- Participating residents will be assigned a mentor (consisting of the one of teaching series coordinators) to guide them through the program and ensure progress and achievement of the requirements

The teaching certificate coordinators will email the resident’s RPD and the RPM in mid-June to confirm whether all program requirements were met and if a teaching certificate will be awarded.

STAFFING

COMMITMENT

- **PGY1 Pharmacy, PGY1 IDRP and PGY1 HSPAL***
 1. 22 weekends annually (20 live weekends and 2 training).
 2. Residents will be assigned 2 training weekends during orientation, 1 clinical and 1 focused in operations.
 3. Independent weekend staffing will begin in late July or early August and include approximately 2 weekends per month divided between clinical day, clinical evening, and operations.
 - *Operations staffing:* residents will be divided into 2 cohorts – University Hospital (UH) or Children & Women’s Hospital (CW)
 - *Clinical staffing:* all clinical staffing will be completed in UH
 4. Residents may not staff independently until licensed and must trade weekends with licensed co-residents or arrange alternative coverage.
 - See the “Resident Staffing Licensure Delays Procedure” for pro
 5. Residents also staff one major and one minor holiday block and two gap-days between the Christmas and New Year holidays. (see “Holiday & Gap Days” below”

**HSPAL residents are assigned fewer weekends due to additional, unique program requirements*

- **PGY2 Specialty Residencies**
 1. 15 weekends per year starting in July for the majority of specialty programs and include the following locations/activities:
 - **Ambulatory Care PGY2:** Taubman pharmacy
 - **Cardiology PGY2:** UH clinical day shift

- **Critical Care PGY2:** 10 UH clinical day weekends and 5 emergency room weekends (beginning end of January)
 - **Emergency Medicine PGY2:** adult or pediatric emergency rooms
 - **HSPAL PGY2:** UH clinical/operational and/or CW operational shifts
 - **Informatics PGY2:** UH operations shifts
 - **Oncology PGY2:** infusion center staffing one weekend per month
 - **Pain Management and Palliative Care PGY2:** UH clinical day shift
 - **Pediatrics PGY2:** C&W clinical and operations shifts
 - **Psychiatric PGY2:** UH clinical day shift
 - **Transplant PGY2:** UH clinical day shift
2. PGY2 residents will be assigned 1 training weekend in July.
 - *Exception:* Early committed PGY2 residents that will be covering the same shifts they covered during their PGY1.
- Shift types may change depending on resident training/experience and department need. Residents must routinely monitor the electronic scheduling software or other scheduling process to ensure they are aware of all upcoming shift types and start times.
- **Other Residency Programs:**
 1. See program specific appendices for additional staffing requirements and details.

TYPES OF STAFFING SHIFTS

Shifts will be eight-hours plus a 30-minute lunch/dinner break.

Operations Shifts	<ul style="list-style-type: none"> ▪ Days: 6:00-14:30, 6:30-15:00, 7:00-15:30 ▪ Afternoons: 12:00-20:30, 12:30-21:00, 13:30-22:00 ▪ Lunch/dinner breaks are built into the UH and CW shift schedules
Clinical Shifts	<ul style="list-style-type: none"> ▪ Days: 7:00 – 15:30 ▪ Evenings (aka CE): 12:30 – 21:00 ▪ Lunch/dinner breaks: <ul style="list-style-type: none"> ○ Residents arrange breaks with shift colleagues ○ Suggestions: <ul style="list-style-type: none"> ▪ Clinical days: 12:30 – 13:00 ▪ Clinical evenings: CE 1 and CE 2 to arrange and cover each other

HOLIDAY & GAP DAYS

- Each resident will work 1 major holiday block, 1 minor holiday block, and two gap days between Christmas and New Year holidays.
- Each minor holiday block consists of 3 days and each major holiday block consists of 5 days that occur around and on the holiday. These exact dates will shift slight each year depending on the day the holiday falls. The residents will all work one minor & one major holiday block and have the other holiday blocks off.

Major Holidays	Thanksgiving, Christmas, New Year's	Each major holiday block consists of 2 weekend days and 3 weekdays that occur around and on the holiday.
Minor Holidays	Independence Day* Labor Day, Memorial Day <i>*PGY2 HSPAL and returning residents only</i>	Each major holiday block consists of 2 weekend days and 1 weekday that occur around and on the holiday.
Gap Days	2 days between Christmas and New Year holidays. <i>Dates vary each year</i>	Residents will staff 1 gap day, and the other day will be a dedicated project gap day. Residents may take PTO <u>ONLY</u> on their project gap day and must follow time off request process. Residents must be physically present on campus during the two gap days between Christmas and New Year holiday blocks. Resident gap day staffing assignments will be determined by the RPM, UH and CW schedulers, team leads, and/or area managers based on resident training, completed learning experiences and department need.

ORIENTATION, TRAINING, WEEKEND AND HOLIDAY SCHEDULES

The RPM will create the June and July operations/clinical orientation and training schedule with assistance from area team leads and schedulers. The Acute Care Pharmacist Scheduling Committee will develop a weekend/holiday schedule template for all pharmacists, including residents in the following programs: PGY1 Pharmacy, PGY1 HSPAL, PGY1 IDRP, and PGY2 Cardiology, PGY2 Critical Care (excluding ER staffing), PGY2 HSPAL, PGY2 Pain Management & Palliative Care, PGY2 Psychiatry, and PGY2 Solid Organ Transplant. The RPM or designee will review and resolve any errors, duty hour violations, etc. The RPM or designee will enter the finalized resident training and staffing schedules into the electronic scheduling software.

Specialized orientation/training and staffing schedules for other residents are managed by the RPD and/or team lead for the specialty area.

TRADING SHIFTS

Residents may trade weekends with co-residents. For PGY1 Pharmacy, HSPAL and IDRP residents, the ratio of clinical and operations experiences should be maintained, whenever possible. The resident must ensure the trade does not violate duty hours for any involved residents. The resident requesting the trade must email the RPM with the trade details and copy all involved residents. If approved, the RPM will update the electronic scheduling system.

FEEDBACK ON STAFFING

Resident staffing will be evaluated via electronic resident feedback forms or other mechanism. Feedback will be included in quarterly development plans and quarterly CORE evaluations. See “Assessment & Evaluations” section for instructions and details.

CODE BLUE RESPONSE

ORIENTATION

Residents that will be covering the code pager include: PGY1 Pharmacy, HSPAL, IDRP and PGY2 Cardiology and PGY2 Critical Care residents. An orientation to the contents of the cardiac arrest drug box, as well as pharmacist responsibilities at an arrest will be provided during orientation through code response training sessions.

ACLS CERTIFICATION

All PGY1 Pharmacy, HSPAL, IDRP residents and PGY2 Cardiology, Critical Care, Emergency Medicine residents are required to be ACLS certified. ACLS certification is required before residents are allowed to respond to codes by themselves. Other residents interested in being ACLS certified will receive business time, but not funding, unless directly needed for their job functions in the residency program.

PALS CERTIFICATION

PGY2 residents in Pediatrics and Emergency Medicine are required to be PALS certified. Other residents interested in being PALS certified will receive business time, but not funding, unless directly needed for their job functions in the residency program.

RESIDENT CODE PAGER EXPECTATIONS

Residents will be assigned code blue pager coverage in weekly blocks. The schedule is maintained by the Emergency Preparedness/Code Pager Committee (EPCP) Chair. Any major changes to the schedule must be communicated and coordinated by the EPCP chair.

Below are the expectations for coverage:

- Communicate code pager coverage dates with rotation preceptor on or before the 1st day of rotation
- The resident must remain in University Hospital from 0700 to 1600 on Monday through Friday to respond.
 1. You may still attend/schedule meetings, presentations, etc. in UH, CVC, Taubman, Cancer Center, or UH South as long as you can respond to a code within a reasonable time.
 2. If actively participating in a meeting (e.g., presenting), the resident must organize coverage with another resident for that time period and inform the EPCP Chair.
 3. You cannot cover the pager if you are:
 - Completing weekday staffing
 - Off-site for the entirety of the time you are on code coverage (i.e.: on PTO, on medication use policy rotation, off-site ambulatory rotation, etc.)

4. Residents will have code pager responsibilities on weekend clinical evening (CE) shifts. A CE resident pharmacist shall respond to the code with a supplemental bag as back-up for the primary responder (B2 operations pharmacist).
 - The resident must carry the red pager **with volume on at all times**
 - The resident must respond immediately to all codes called in UH, CVC, Taubman, Cancer Center, or UH South
 1. Residents are not responsible for codes in C&W
 - Residents will be provided back-up by pharmacists but are expected to be primary responder
 1. If pharmacist back-up doesn't arrive, the resident must call pharmacy for back-up
 2. Identify and communicate with the pharmacist backup if you have any questions or need any assistance.
 - Residents must stay for the entire duration of the code or until dismissed by the lead physician.
 - Respond to any follow-up from the code evaluation services as appropriate (may or may not contact you).
 - Contact the Emergency Preparedness/Code Pager Committee (EPCP) Chair, RPD, and/or RPM if code pager duties are impacting your ability to be successful in the residency for any reason.

CLINICAL CASE CONFERENCE

The weekly Resident Clinical Case Conference is a longitudinal experience for PGY1 residents to present challenging clinical cases in a discussion format. PGY1 residents **excluded** from this responsibility are those in the PGY1 Community-Based, and PGY1 Managed Care BCBSM programs.

The case conference schedule is determined in July and commences in August and concludes in June. Case conference takes place on Tuesdays from 12:00-13:00.

PGY1 Residents will be partnered with a PGY2 resident to serve as their facilitator for the discussion. A minimum of one clinical preceptor will serve as discussion moderator, along with PGY2 facilitators. The case conference coordinator will be responsible for contacting preceptors to determine availability.

PGY1 RESIDENT RESPONSIBILITIES

Identifying Cases

A minimum of 1 question will be required for each resident per case conference (enough to fill 30 minutes of discussion). These questions should be sourced from rotation or weekend staffing experiences.

Appropriate clinical questions are those that require a review of primary literature or in-depth review of clinical resources and clinical status of the patient. Normal workflow, basic PK, or routine anticoagulation questions are not appropriate.

If the PGY1 has difficulty attaining their case, they will discuss with their PGY2 resident facilitator and include cases assigned by the PGY2. Contact the case conference clinical coordinator if there is still difficulty obtaining a case.

PGY1 residents will contact their PGY2 facilitator at least 2 weeks in advance of their assigned case conference dates to review their clinical questions and develop a series of key discussion points.

Emailing Case Conference Questions

The PGY1 Resident will email case questions to “PHARM-ALL” *PRIOR to 8AM on the Monday the day prior to the Tuesday case conference.*

The email invitation to attend case conference should include:

- Questions in a bullet-point format in the body of the email without additional information (save details for case conference)
- Location and time of the meeting

All preceptors are invited to attend all case conference sessions and contribute to discussion.

PGY2 FACILITATOR RESPONSIBILITIES

Resident case conference is a longitudinal experience for PGY2 residents to mentor PGY1 residents and facilitate discussion during case conference. PGY2 residents **excluded** from this responsibility include those in PGY2 Pain Medicine & Palliative Care, and PGY2 Investigational Drugs & Research Pharmacy programs.

In conjunction with preceptor moderators, PGY2 residents will moderate case conference discussions for assigned PGY1 residents. The PGY2 resident case conference schedule is determined in July and commences August – June of the resident year.

PGY1 residents will contact their PGY2 facilitator at least 2 weeks in advance of their assigned case conference dates to review their clinical questions and develop a series of key discussion points.

During the case conference sessions, the PGY2 resident should facilitate the display of case information on the shared screen.

After the case conference session, the PGY2 Facilitator will complete a Resident Feedback Form. The evaluation should include feedback on the development of the questions/cases and the delivery of the information.

CASE CONFERENCE COORDINATOR

The primary responsibilities of the Case Conference Coordinator include:

- Maintaining quality of case conference program and implement changes as needed
- Providing resident and preceptor feedback to C-RAC regarding case conference program, as required
- Establishing the preceptor moderator schedule
- Assist with the guidance of case conference discussion and ensure all attending PGY1 residents participate
- Providing logistical support for residents in scheduling and other issues, as needed
 - Work in conjunction with and mentor the resident case conference coordinator
- Maintaining consistency and quality of resident case conference by ensuring:

- Case conference questions sent out via email on time
- Appropriate format is utilized
- PGY2 evaluations of PGY1s via Resident Feedback Forms are completed
- Resident participation and attendance during case conference discussions

RESIDENT CASE CONFERENCE COORDINATOR RESPONSIBILITIES

The primary responsibilities of the Resident Case Conference Coordinator include:

- Working in conjunction with the Case Conference Coordinator to maintain the quality of case conference and implement changes as needed
- Creating case conference schedule for PGY1 residents and PGY2 facilitators
- Reserving space/rooms for case conferences
- Sending Outlook calendar invitations for case conferences and setting up videoconferencing for hybrid meetings (i.e., Zoom or Teams)

DOCUMENTATION

Case conference questions and discussion will be documented in a shared document (e.g. Google doc). All documentation should be de-identified.

ATTENDANCE & ENGAGEMENT

In person attendance is required for residents in the PGY1 Pharmacy, PGY1 HSPAL, PGY1 IDRP and PGY1 Managed Care – UMPDP programs. In the event of ANY anticipated absence (pre-approved or otherwise) or to request an absence, contact the resident case conference coordinator AND case conference coordinator.

- If the resident is off-site for their rotation, they should attend case conference via videoconference.
- Pre-approved absences include: Pre-P&T and P&T meetings while on Pharmacy Operations/Med Use Policy (MUP) rotation
- **Attendance of the PGY2 facilitator is required.** Other PGY2 attendance is highly encouraged, but will be at the discretion of the resident and PGY2 RPD.

Each PGY1 resident is expected to contribute to the discussion. This can be in the form of asking a question, answering a question, or providing education to the group. The PGY2 facilitator will run the case discussion and prompt all residents for input on cases (round table format for discussion). If the PGY2 facilitator cannot attend, the preceptor moderator will run the case discussion.

PRECEPTOR MODERATOR RESPONSIBILITIES

The primary responsibility of the preceptor moderator is to facilitate a meaningful discussion where the goal is NOT for the resident to become the expert in the area or literature for which the question is asked, but rather to discuss their clinical approach, have other residents engage in that discussion, and for the preceptor to share their critical thinking process when presented with a unique patient case that may be out of their realm of specialty.

EVALUATION

The PGY1 resident will request a Resident Feedback Form from their PGY2 facilitator. Residents are also encouraged to request a feedback form from other preceptors in attendance.

ASSESSMENT & EVALUATIONS

All evaluation forms will be completed in PharmAcademic (except where noted).

ASSESSMENT OF BASELINE SKILLS AND INTERESTS

Prior to the scheduling of rotations, the resident will complete the Resident Entering Self-Assessment Form as part of the initial development plan (**ASHP Standard 3.3.a**). The resident is to upload the form to the “self-assessment & development plans” tab in PharmAcademic.

INITIAL DEVELOPMENT PLAN

The RPD or designee will use the information provided in the entering self-assessment form to develop the resident’s initial development plan. The resident and RPD or designee will review the plan during orientation and the RPD or designee will upload the plan to the “self-assessment & development plans” tab in PharmAcademic. The resident should also review their initial development plan with their chosen mentor.

The initial development plan must be created, discussed with the resident and uploaded to PharmAcademic® within **30 days** from the program start date (**ASHP Standard 3.3.b**). Preceptors may then review the development plan in PharmAcademic (**ASHP Standard 3.3.c**).

The resident development plan template is available on the RAC website.

QUARTERLY DEVELOPMENT PLAN EVALUATIONS

The resident and RAC mentor will complete a quarterly development plans every **90 days** from the program start (Sept, Dec, Mar, June). The development plan will include resident self-assessment, and self-reflection and feedback from learning experience preceptors and research and writing preceptors. The development plan will also include feedback provided via the resident feedback forms (staffing, code coverage, case conference), assessment of duty hours/moonlighting, and progress on graduation requirements. (**ASHP Standard 3.3.d & 3.3.e**)

The resident will schedule quarterly meetings with their RAC mentor, chosen mentor, and writing and research preceptors, to discuss the plan. The completed plan will be shared & reviewed by all participants at the quarterly development meetings. The RPD/RAC Mentor will then upload the quarterly development plans to PharmAcademic under the “self-assessment & development plans” tab.

The resident development plan template is available on the RAC website.

LEARNING EXPERIENCE EVALUATIONS

Formative Assessment & Feedback (ASHP Standard 3.4.a)

Preceptors are encouraged to provide on-going, timely, constructive feedback to residents on their progression. Specific strategies for improvement should be provided for identified areas of opportunity. Feedback should be documented for residents not progressing as expected.

Learning experience activities may need to be adjusted based on resident’s progression. Major adjustments should be shared with the resident’s RAC Mentor/RPD and included in the quarterly development plans.

Summative Evaluations (ASHP Standard 3.4b)

At the end of each learning experience (and/or at least every 12 weeks for longitudinal LEs), the preceptor and resident will complete a summative evaluation to evaluate the resident’s progress on rotation specific objectives and activities. Residents will complete a self-summative evaluation for each learning experience to help them refine their self-assessment and self-reflection skills.

Residents will also complete a learning experience and preceptor evaluation for each learning experience. **(ASHP Standard 3.5)** The resident and the preceptor will complete the appropriate evaluation(s) in PharmAcademic and verbally review with each other.

EVALUATION SCALE AND DEFINITIONS

Evaluation Term	Definition	Examples	Preceptor/Resident Actions
Needs Improvement (NI)	<p>Resident is not meeting expectations and is performing below the level that expected of a resident at this point in their training.</p> <p>Resident displays ≥ 1 of the following characteristics:</p> <ul style="list-style-type: none"> ▪ Significant deficiency in knowledge/skills ▪ Inability to complete tasks or assignments without preceptor guidance from start to finish ▪ Fails to seek out/incorporate feedback, or is unable to create an action plan for improvement ▪ Unprofessional behavior noted 	<ol style="list-style-type: none"> 1. Inability to gather and/or interpret patient information required to make clinical decisions. 2. Consistently requires preceptor prompting to communicate recommendations to team or follow up on patient care issues. 3. Recommendations are incomplete, poorly researched, and/or lack justification. 4. Resident makes unsafe, questionable decisions, or demonstrates significant clinical knowledge deficit. 5. Unable to complete assignments on time. 6. Unable to ask appropriate questions to supplement learning. 7. Unable to provide effective educational content to members of the healthcare team, learners, etc. 8. Unable to engage with or provide effective feedback to other learners on rotation 	<ol style="list-style-type: none"> 1. Preceptor must include commentary specifically addressing concerns and criteria/activities that resident is not achieving. 2. Preceptor and resident should include examples supporting the NI score. 3. The preceptor and resident must include specific strategies on how to improve performance
Satisfactory Progress (SP)	<p>Resident is meeting expectations and performing at the level that would be expected at this point in their training. Improvement evident throughout learning experience but objective is not yet mastered</p>	<ol style="list-style-type: none"> 1. Occasionally requires assistance/preceptor intervention to complete objective but degree of independence appropriately increased throughout experience. 2. Resident makes safe, appropriate recommendations to treatment team and seeks preceptor guidance as appropriate with more complex situations. 3. Able to ask appropriate questions to supplement learning. 4. Resident accurately reflects on performance and creates a sound plan for improvement. 5. Resident acts in a professional manner. 6. Able to provide effective educational content to members of the healthcare team, learners, etc. 	<ol style="list-style-type: none"> 1. Preceptor must include commentary specifically addressing strengths and opportunities for improvement that are criteria/activities based. 2. The resident should provide commentary on areas of success and opportunities for growth. 3. The preceptor and resident must include specific strategies for continued development.

		7. Resident engages with and/or provides effective feedback to other learners on rotation	
Achieved (ACH)	Resident demonstrates independent, consistent mastery of the objective.	<ol style="list-style-type: none"> 1. Resident rarely requires assistance; minimal supervision required. 2. Resident consistently makes safe, evidence-based recommendations with minimal guidance. 3. Consistently provides rationale for therapy recommendations. 4. Follows-up on patient care issues without prompting. 5. Resident appropriately seeks guidance when needed. 6. Resident acts in a professional manner. 7. Able to provide effective educational content to members of the healthcare team, learners, etc. that is tailored to the intended audience. 8. Resident routinely engages with and provides effective, timely criteria-based feedback to other learners on rotation 	<ol style="list-style-type: none"> 1. Preceptor may include commentary highlighting areas of strength and any opportunities for continued growth. 2. The resident must highlight areas of strength and opportunities for continued growth. 3. The preceptor and resident may include specific strategies for continued development, if applicable.
Achieved for Residency (ACHR)	Resident's performance meets what is expected of a graduate of the residency program over multiple learning experiences (when applicable) with consistency, independence, and professionalism.	Objectives taught and evaluated in ≥ 3 experiences may be marked as ACHR after being achieved on 2 learning experiences with no subsequent NI ratings thereafter. 2. Objectives taught and evaluated in ≤ 2 experiences may be marked as ACHR after being achieved.	ACHR will be marked by RPD/RPC/RAC Mentor/RPM ONLY
<p>Note: Once an objective is marked as ACHR, future evaluations do not need to comment on that objective unless there is a concern. If concern is noted, please contact RPD/Assigned Mentor to discuss. If preceptor or resident wishes to provide commentary for an objective previously scored as ACHR, they will mark the objective achieved and provide comments. If no additional commentary desired, preceptor or resident will mark objective as achieved with no additional action required.</p>			
C-RAC approved 6/9/2023			

RESEARCH & WRITING PROJECT EVALUATIONS

Residents' research and writing projects will be evaluated via quarterly PharmAcademic evaluations. The resident will complete a self-summative evaluation and learning experience and preceptor evaluations. The preceptor(s) will complete a summative evaluation and will meet with the resident to verbally review the feedback.

General progress updates will also be discussed at the quarterly development plan meetings. It is helpful for the formal PharmAcademic evaluations to be submitted prior to the quarterly development plan meetings. This allows the RAC Mentor/RPD to include the evaluation scores in the NI/SP/ACH/ACHR tally at each quarterly development plan.

SEMINAR EVALUATIONS

There are three main seminars that are formally evaluated throughout the residency year:

1. Research project protocol presentation (PGY1 residents only)
2. Writing project/CE presentation
3. Research results presentation

The research seminars and CE presentation will be evaluated via an electronic seminar evaluation form ([Appendix F](#)), The CE presentations will also be evaluated by the standard evaluation form provided by the accrediting provider.

TEACHING EVALUATIONS

Resident performance during the required U-M College of Pharmacy teaching will be evaluated via a PharmAcademic evaluation. However, an *optional* teaching evaluation is also available for course coordinators to provide feedback to residents during their teaching experiences (see [Appendix G](#)). If received, the resident should be uploaded into PharmAcademic files tab and share with their RAC mentor.

RESIDENT FEEDBACK FORMS

PGY1 Pharmacy, HSPAL and IDRPs resident performance during weekend, holiday and gap day staffing, clinical case conference and code blue response is evaluated via the electronic resident feedback forms. The feedback will be shared with the resident and RAC Mentor, RPD or RPC and is to be incorporated into the quarterly PharmAcademic CORE – Clinical and Operations Residency Experience and quarterly development plan evaluations. Residents in other programs will solicit feedback via program-specific processes.

Resident Responsibilities

Request the pharmacists/technicians complete the evaluation forms via electronic resident feedback forms immediately following the experience. The resident should send polite reminders every 3-4 days until the form is submitted.

Pharmacist/Technician Responsibilities

Complete the resident feedback form within 5 days of receipt. Responses will be automatically sent to the resident and their RAC Mentor or RPD/RPC.

Resident Feedback Form Procedure:

Complete instructions can be found in the “**U-M Pharmacy Residency Feedback Form – Operating Procedure & Educational Document**” available on the internal website.

Staffing

Feedback is to be requested immediately after each staffing weekend.

- Operations shifts: a pharmacist and/or technician who worked with the resident that weekend
- Clinical shifts: a pharmacist who will be following patients during the week where significant resident intervention was required over the weekend.

The resident is responsible for ensuring that they receive feedback on a variety of shift activities by asking for feedback from pharmacists and technicians.

Clinical Case Conference

Feedback is to be requested immediately after each case conference presentation. Feedback should be requested from the PGY2 Resident back-up and at least 1 preceptor in attendance.

Code Blue Response

Feedback is to be requested from pharmacists that attended codes with the resident during their assigned code response week.

RAC ASSIGNED MENTOR RESPONSIBILITIES WITH ALL EVALUATIONS

1. Monitor the resident's progress through all evaluations and follow up with the resident and/or preceptors regarding any issues identified in the evaluations.
2. Ensure residents receive evaluations in a timely manner. If the evaluations are not received in a timely manner despite efforts of the RAC Mentor, notify the RPD.
3. Complete quarterly CORE evaluations in PharmAcademic using preceptor feedback provided in the resident feedback forms.
4. Include summary of the following evaluations into quarterly development plans:
 - a. Resident feedback forms
 - b. Quarterly CORE learning experience evaluations in PharmAcademic
 - c. Summative self-evaluation by resident
 - d. Summative evaluation by preceptor
 - e. Learning experience evaluation by resident
 - f. Preceptor evaluation by resident

DUTY HOURS AND MOONLIGHTING

(ASHP STANDARD 2.3)

DEFINITIONS

U-M Health Pharmacy Residency Programs follow the ASHP Duty Hour Policy which can be referenced on the [ASHP website](#).

DUTY HOURS: all hours spent on scheduled clinical and academic activities, regardless of setting, related to the pharmacy residency program that are required to meet the educational goals and objectives of the program.

Duty hours **includes:** 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.

MOONLIGHTING: voluntary, compensated, work performed outside the organization (external), or within the organization where the resident is in training (internal), or at any of its related participating sites. These are compensated hours beyond the resident's salary and are not part of the scheduled duty periods of the residency program.

CONTINUOUS DUTY: assigned duty periods without breaks for strategic napping or resting to reduce fatigue or sleep deprivation.

DUTY HOUR REQUIREMENTS

The RPM and/or RPD will orient residents to the duty hour policy during orientation. Residents, program directors, and preceptors have the professional responsibility to ensure residents are fit to provide services that promote patient safety. Resident training must be planned, scheduled and balanced with concerns for patients' safety and residents' well-being. The residency program director (RPD) must ensure that there is not excessive reliance on residents to fulfill service obligations that do not contribute to the educational value of the residency program or that may compromise their fitness for duty and endanger patient safety.

Therefore, programs must comply with the following duty-hour requirements:

- Personal and Professional Responsibility for Patient Safety
 1. RPDs must educate residents and preceptors about their professional responsibilities to be appropriately rested and fit for duty to provide services required by patients.
 2. RPDs must educate residents and preceptors to recognize signs of fatigue and sleep deprivation and adopt processes to manage negative effects of fatigue and sleep deprivation to ensure safe patient care and successful learning.
 3. Residents will be educated on burnout syndrome and mitigation strategies, resiliency, and available support resources during orientation. Preceptors will receive similar information as part of the preceptor orientation and/or preceptor development program.
 4. Residents and preceptors must accept personal and professional responsibility for patient care that supersedes self-interest. At times, it may be in the best interest of patients to transition care to another qualified, rested provider.
 5. The RPD must ensure that residents participate in structured handoff processes when they complete their duty hours to facilitate information exchange to maintain continuity-of-care and patient safety.

- Maximum Hours of Work per Week and Duty-Free Times
 1. Duty hours must be limited to no more than 80 hours per week, averaged over a four-week period, inclusive of all activities described above.
- Mandatory Duty-Free Times
 1. Residents must have a minimum of one day in seven days free of duty (when averaged over four weeks).
 2. Residents must have at least 8 hours between scheduled duty periods
- Maximum Duty Period Length
 1. Continuous duty periods of residents should not exceed 16 hours. The maximum allowable duty assignment must not exceed 24 hours even with built in strategic napping or other strategies to reduce fatigue and sleep deprivation, with an additional period of up to two hours permitted for transitions of care or educational activities.
 2. At-Home Call
 - At-home call must not be so frequent or taxing as to preclude rest of reasonable personal time for each resident.
 - Program directors must have a method for evaluating the impact on residents of the at-home call program to ensure there is not a

negative effect on patient care or residents' learning due to sleep deprivation or serious fatigue.

- Program directors must define the level of supervision provided to residents during at-home call & design a back-up system if the resident needs assistance.
- The frequency of at-home call must satisfy the requirement for one-day-in-seven free of duty, when averaged over four weeks. No at-home call can occur on the day free of duty.
- Residents should include only the time spent on on-call related work activities during their assigned on-call shift when tracking and documenting duty hours.

INTERNAL AND EXTERNAL MOONLIGHTING PROCEDURES

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. **In general, moonlighting is discouraged for residents.**

All moonlighting hours must be counted towards duty hours and must not exceed duty hour limits. Residents are eligible for moonlighting up to 16 hours per month only during times not usually scheduled for regular duty hours (i.e., evenings or weekends).

- Process to pick up shifts internally:
 3. Residents must complete a Temporary Employment application at U-M Health for internal moonlighting hours with the Residency Program Administrator **PRIOR** to the 1st moonlighting shift. This may take up to 2 weeks to process. The temp status will end after 90 days of inactivity and will need to be renewed to maintain active temporary status.
 4. Residents will be included on notices that go out to permanent staff informing them of open shifts and requesting volunteers to pick up additional shifts.
 5. The resident will volunteer for the shift(s) by responding to the requestor expressing interest in the shift, and then must follow-up with the requestor once approval is obtained from below individuals (see approval process)
 6. Residents must complete a timecard in Wolverine Access to be compensated for all internal moonlighting shifts. This should occur within 48 hours of the shift(s) worked.
 - Moonlighting hours should be reported using code "**REG**" for regular pay
 - As temporary employees, residents are not eligible for overtime pay, but are eligible for shift premiums using the following codes:
 - Weekday afternoon shifts: **REG + ESA**
 - Weekend day shift: **REG + WSD**
 - Weekend afternoon shift: **REG + WSE**
 - Example: if you pick up an open UH Clinical RPh 1 on a Saturday, you'll report 8 hours REG (regular time) + 8 hours WSD (weekend day premium).
 - Please contact the RPM or RPA with questions about timecards.
- Moonlighting shift approval process:

1. Residents must receive approval from the following individuals PRIOR to EACH internal or external moonlighting shift:
 - RPD
 - RAC-assigned mentor (if different than the RPD)
Current rotation preceptor
 - Research preceptor(s)
 - Writing preceptor(s)
2. The resident is responsible for maintaining record of internal or external moonlighting hours. The RPD/RAC Mentor is responsible for monitoring performance including any impact moonlighting hours have on scheduled duty hours and the ability of the resident to achieve the educational goals and objectives of the residency program and provide safe patient care.
3. If the residents' participation in internal or external moonlighting affects their judgment while on scheduled duty hours the RPD or RAC Mentor may decline future requests to moonlight.
 - Preceptors are responsible for contacting the RPD if they have any concerns about the residents' judgment related to moonlighting.

TRACKING DUTY HOURS (ASHP STANDARD 2.3.B)

The resident must complete a monthly duty hour attestation in PharmAcademic. Residents must provide comments for all "no" answers. The RPD will be automatically notified via email of reported violations and follow-up with resident.

RPDs are encouraged to co-sign and/or review the monthly duty hour attestation statement. RPDs will evaluate moonlighting/weekends using electronic scheduling system to evaluate for duty hour violations prior to approving.

Process for duty hour violations:

- If a resident attests to a violation in PharmAcademic:
 1. RPD and RPM meet with the resident and discuss the situation and the factors that led to a duty hour violation
 2. The resident is re-educated on duty hours & moonlighting policy
 3. The RPD will enter a written assessment & plan into PharmAcademic using the "provide feedback to resident" function. This must address how the current violation was/will be corrected and how future duty hour violations will be avoided.

PRECEPTOR APPOINTMENT & DEVELOPMENT

PRECEPTOR ELIGIBILITY AND QUALIFICATIONS (ASHP STANDARD 4.4 - 4.8)

U-M residency program preceptors **must** hold an active preceptor appointment to serve as a preceptor of record in PharmAcademic for any learning experience. This includes preceptors of rotations and projects, longitudinal experiences, RAC Mentors, COP teaching assignment course coordinators, etc. Exceptions are made for non-pharmacist preceptors in accordance with ASHP Standard 4.8.

- **PGY1 Preceptor Eligibility** - Pharmacist preceptors must be licensed pharmacist preceptors who:

1. Have completed an ASHP-accredited PGY1 residency followed by a minimum of 1 year of pharmacy practice experience in the area precepted; or
 2. Have completed an ASHP-accredited PGY1 residency followed by an ASHP-accredited PGY2 residency and a minimum of 6 months of pharmacy practice experience in the area precepted; or
 3. Have 3 or more years of pharmacy practice experience in the area precepted, without having completed an ASHP-accredited residency program, or if completed PGY2 in area different from area precepted
- **PGY2 Preceptor Eligibility:** Pharmacist preceptors must be licensed pharmacist preceptors who:
 1. Have completed an ASHP-accredited PGY2 residency followed by a minimum of 1 year of pharmacy practice in the area precepted; or
 2. Have three or more years of pharmacy practice experience in the area precepted, without having completed an ASHP-accredited residency program, or if completed PGY2 in area different from area precepted
 - **Qualifications** - Preceptors must demonstrate the ability to precept residents' learning experiences by demonstrating the qualifications below as evidenced by examples in their APR that correspond with ASHP Standard 4.6 and guidance:
 1. Content knowledge/expertise in area(s) of pharmacy practice precepted
 2. Contribution to pharmacy practice in the area precepted

PRECEPTOR APPOINTMENT AND RE-APPOINTMENT PROCEDURE (ASHP STANDARD 4.4.C)

- Initial appointment
 1. U-M Health pharmacists meeting the eligibility and qualification requirements outlined above and interested in becoming a PGY1 and/or PGY2 preceptor should email the Preceptor Appointment Sub-Committee (Pharm-Preceptorappoint@med.umich.edu)
 2. The sub-committee will provide instructions on completing the electronic academic and professional record (eAPR) within PharmAcademic.
 3. The sub-committee will review the eAPR and notify the preceptor candidate of the workgroup decision
 - **APPOINTED:**
 - New preceptor appointments will be presented at quarterly C-RAC meetings as a consent agenda item
 - Preceptor is notified of their 2-year appointment and whether they are appointed as PGY1 and/or a PGY2 preceptor.
 - Newly appointed preceptors will:
 - Contact individual program directors to request be added to their program roster. Approval is left up to individual RPDs and the RPD will communicate their decision to the preceptor.
 - Submit their eAPR to all programs they are approved to precept
 - Review new preceptor orientation presentation
 - Determine which learning experience they will precept. Preceptors are encouraged to join an existing learning experience (LE), whenever

possible. If an appropriate LE does not exist, the preceptor will develop an LE description in PharmAcademic. A template is available on the residency website. Program directors should review all new learning experience descriptions to ensure compliance with ASHP Standard 3.2

- Complete a preceptor profile for the U-M Health residency program website
- **NOT APPOINTED:**
 - Areas of deficiency will be shared with the preceptor candidate
 - Preceptor candidate should work with the RPD and/or an experienced program preceptor to develop an individualized preceptor development plan to achieve qualifications within two years. See [Appendix H](#) for preceptor development plan template.
- Re-appointment
 1. Established program preceptors will be evaluated every **2 years** for re-appointment.
 2. Preceptors will:
 - Update their APR forms on a biennial basis from the date of initial appointment or last re-appointment. Specifically, new qualifications should be added and items that are older than then required APR specifications removed.
 - Updated APRs should be sent to the Preceptor Appointment Sub-Committee for review.
 3. The Preceptor Appointment Sub-Committee will review records of preceptors due for re-appointment on a quarterly basis and bring recommendations for action to C-RAC meetings.
 4. Failure to maintain an active preceptor appointment may result in the inability to precept in the U-M pharmacy residency programs and removal from preceptor rosters in PharmAcademic.
- Record Keeping
 1. Preceptor appointment sub-committee decisions will be formally documented and maintained electronically.
 2. A list of RAC-appointed preceptors will be available on the residency website and will include the most recent appointment date & next re-appointment date.

PRECEPTOR DEVELOPMENT

All preceptors are expected to participate in preceptor development activities throughout the residency year. Preceptor development activities may include but are not limited to participation in live or virtual activities such as:

- Newly appointed preceptors will review preceptor orientation presentation
- Departmental preceptor development sessions
 - The RPM, RPDs and RPCs are encouraged to utilize needs assessment data, feedback from residents and preceptors to identify topics for future departmental preceptor development sessions.

- Live preceptor development sessions may be provided by any member of the department.
- Sessions will be recorded and made available on the residency website, whenever possible.
- Preceptor development continuing education provided by schools of higher education
- Preceptor development webinars provided by the external sources (i.e., ASHP, ACCP, APhA, ACPE, Pharmacist’s Letter, etc.)
- Accreditation/Preceptor Development Resources provided on the ASHP website.
- Attendance at the National Pharmacy Preceptors Conference

Foundational Training Modules:

- [Understanding Learning Taxonomies and Levels](#)
- [Starring Roles: The four preceptor roles and when to use them](#)

Preceptors should perform on-going self-evaluation of their preceptor skills by soliciting and reviewing to feedback received from learners, other preceptors, RPDs, RPCs and the RPM. Preceptors should actively seek training for self-improvement in their precepting skills for areas of opportunity.

The RPM will also provide updates on the residency program during monthly all-staff meetings, monthly Resident meetings, and quarterly COP Clinical Pharmacy Faculty meetings. Preceptors and residents should review C-RAC minutes on the residency website to stay informed of program assessment and changes.

MEETING ATTENDANCE

RECRUITMENT SHOWCASES (AS FUNDING ALLOWS)

There are several residency recruitment events which may require resident participation.

- ASHP Midyear Residency Showcase
- Southeastern Michigan Society of Health System Pharmacists (SMSHP) Residency Showcase
- SNPhA x ACCP Residency Showcase
- University of Michigan College of Pharmacy Career Gateway
- U-M Health Virtual Residency Showcase
- Western Michigan Society of Health System Pharmacists (WMSHP) Residency Showcase
- Others as time and funding allow

Resident attendance at recruitment showcases will be coordinated by the RPM, RPA, Chief Residents and Midyear Committee. Residents are expected to volunteer for at least 1 recruitment event in addition to the ASHP Midyear Residency Showcase. Residents are responsible for organizing, preparing, and transporting showcase materials.

RPDs and RPCs should make revisions of recruitment materials prior to the showcases, including the U-M Health pharmacy residency website, program pamphlets and brochures.

MEETINGS/EVENTS

All residents must attend and be actively engaged at meetings and events. These include:

- Poster presentation (can be at College of Pharmacy, ASHP, Vizient, or another local, state, national conference based on residency program)
- Oral platform presentation at Great Lakes Pharmacy Residency Conference or equivalent conference decided upon by the RPD
- PGY2 specialty conference (i.e.: HOPA, SCCM, ICAAC, etc.), if available.
- Resi Trip
- Any deviations from the attendance above must be approved by the RPD and C-RAC.

TIME AWAY FROM RESIDENCY

Per ASHP Standard 2.2.a, residents can miss no more than 37 days per 52-week training period without requiring extension of the program. Time away from the program is defined as total number of days taken for vacation, sick, interview, and personal time; holidays; religious time; jury duty; bereavement leave; military leave; parental leave; leaves of absence; and extended leave and wellness days.

Program directors must closely monitor resident time away to ensure compliance. Program modifications may be required; however, modifications must not negatively impact the resident's ability to meet the graduation requirements.

PAID TIME OFF (PERSONAL, SICK, INTERVIEW)

- Residents receive 15 paid time off (PTO) days to be used for personal time, illness and interviews.
- PTO days may be used on any rotation and will be deducted from the PTO bank.
- Any PTO bank reduction does not result in having to make up time (unless exceeds 15 days of PTO bank).
- Residents may not use PTO for weekend/holiday/gap day staffing. Residents must trade with a co-resident or make up the shift(s) per pharmacy procedures.
- PGY1 residents may take up to 3 days off from rotation at the end of June (if not taking any other days off and has PTO available) if needed to move to a new location for a PGY2 residency. All requests must be approved by the RPD. The resident must complete all program requirements and residency & department off-boarding process prior to their last day.
- Absences of >20% of a residency rotation experience (monthly or longitudinal) are viewed as challenging to evaluate on progress and could be considered for make-up time in the program.
 - Absences include vacation, illness, wellness time, interviews, holiday blocks, and professional leave/business days for conferences.
 - Residents must evaluate their planned PTO to ensure adequate exposure to learning experiences prior to requesting time off. Program directors will evaluate the request before approving a PTO request that would cause the resident to be absent for >20% of a rotation experience.
 - Ex.: if a rotation has 22 business days, the resident cannot miss more than 4 days without approval from the RPD. Additional make-up days or activities may be considered.
- Procedure for requesting vacation and interview days (all programs):

- Residents must provide 7-day notice for PTO requests. Approval of emergent requests or requests where a 7-day notice is not possible will be at the discretion of the RPD.
- Residents must request approval from rotation preceptor, (research and writing preceptors for December requests) and the RPD. All approvals must be documented via email, even if previously approved verbally.
- Residents must ensure PTO does not conflict with other residency responsibilities **prior to** requesting PTO. This includes arranging coverage/trade with a co-resident for code pager coverage, presentation/facilitation at clinical case conference, etc.).
- The resident will forward all approval email(s) to RPA & RPD for attendance tracking.
- PTO does not “roll over” if a resident stays on for a PGY2 residency or another position in the department.

HOLIDAYS

There are seven official University holiday days. Each resident will work two holiday blocks (one minor holiday and one major holiday) and have the other 5 holiday blocks off.

- **Minor Holidays:** Independence Day, Labor Day, Memorial Day
- **Major Holiday:** Thanksgiving Day and the day following, Christmas Day, New Year’s Day

If a resident observes an unofficial University holiday, they need to follow vacation day procedure to request time off. When requesting a vacation day in December, PGY1 and PGY2 residents will need permission from their research and writing project preceptors and final approval from their RPD.

PROFESSIONAL LEAVE AND BUSINESS DAYS

Professional leave may be granted to attend the ASHP Midyear Clinical Meeting, Great Lakes Pharmacy Resident Conference (GLPRC), and Resi Trip. Additional days may be approved to attend other professional organization meetings; however, approval by the resident’s preceptor and RPD must be obtained. Travel arrangements for business purposes must be approved by the RPD. Additionally, approved travel dates must be shared with all affected learning experience preceptors as soon as possible.

Standard Resident Travel (ASHP Midyear, GLPRC, ResiTrip)

A budget for each trip will be determined by the RPM, RPA and department travel oversight team. Standard travel does not require *pre-travel* approval, authorization forms or per diem worksheets. However, these forms and all travel receipts must be emailed to the RPM, RPA and department travel administrator within **10 days** of travel. Expenses incurred outside of the approved budget will not be reimbursed.

Non-Standard Resident Travel

All non-standard travel requires pre-approval by the RPM (if < \$750) and/or the oversight committee (if >\$750). A pre-travel authorization form with all estimated expenses and per diem worksheet and mileage log, if applicable, should be submitted to the RPM at **least 60 days** in advance of the conference to allow time for the review process.

The department travel administrator will notify the resident if the travel has been approved and provide the approved budget. If approved, the resident may start booking travel.

Post-travel authorization forms, per diem worksheets, mileage log, if applicable, travel receipts and proof of attendance must be emailed to the RPM, RPA and travel administrator within **10 days** of the travel. Expenses incurred outside of the approved budget will not be reimbursed.

Travel Expense Reimbursement Procedure

For *all* travel, the resident must email the following documents to the RPM and Travel Administrator within **10 days** of their return:

- Post-travel authorization & funding form with actual expenses
 - Includes expenses paid via corporate/P-Card and out of pocket expenses
- Updated per diem worksheet reflecting any meals provided by the conference/event organizers
- Mileage log (if applicable)
- Receipts for the following expenses, showing zero balance:
 - Conference registration
 - Airline/bus/train tickets
 - Luggage fees
 - Lodging
 - Airport parking receipts
 - Ground transportation (ride share, taxi, etc.)
- Expense report table
 - Includes expenses paid via corporate/P-Card and out of pocket expenses
- Proof of attendance
 - Conference brochure or agenda or other document AND conference name tag/badge to support date, location and topic of conference attended

SICK DAY NOTIFICATION

If the sick-day is a **weekday**, the following procedure needs to occur:

- Contact rotation preceptor via email to notify them of illness a minimum of 2 hours prior to the start of rotation or 7:00 am at the latest
- If your rotation preceptor is not at work that day, be sure to notify the person covering.
 1. Pharmacy operations:
 - Call the appropriate number below **at least 2 hours** prior to shift at to let them know which shift you were scheduled, they will contact via email Pharm-Sched@med.umich.edu and work to find coverage
 - UH: 734-936-8251
 - CW: 734-764-8208
 - Forward notifications for record keeping to the appropriate RPD and RPA

If the sick-day is a **weekend**, the following procedure needs to occur:

- Minimum of 2 hours prior to the start of your scheduled shift (or earlier if possible)
 1. Try to trade shifts with a co-resident as the first option. Trades must not result in a duty hour violation for either resident.
 2. Call **UH B2 Rx (734-764-7596)** or **C&W 10 (734-764-8208)** to report your absence and share which shift you were scheduled for, steps you've taken to find coverage and any other pertinent details.
 3. Email pharm-sched@med.umich.edu and include your name, scheduled shift, work location and any steps already taken to arrange coverage. If a co-resident will be covering, please provide their name.
 4. Contact the Administrator On-Call (AOC) (**pager: 30164**)
 - **Page #1:** explain the situation and that the resident is (1) currently attempting to find coverage within the resident class or (2) has found coverage from a co-resident.
 - **Page #2:** update AOC if coverage is not found within the residency class and request further help to find coverage.
 5. Residents must make up any weekend shifts that are not traded with a co-resident (or other pharmacist)
 6. The resident will report the illness/call-in and any resident coverage that was found to the RPM and RPA before the Monday following the weekend.

This procedure is in accordance with the departmental procedure for inpatient pharmacy call-in/late notification.

LEAVE OF ABSENCE (ASHP STANDARD 2.2.A, 2.2.B)

Leave of Absence is defined as any time off longer than five (5) workdays (excludes business travel/conferences). If a leave of absence is needed, a resident is eligible for time off in accordance with the appropriate University of Michigan Human Resource Policy:

- UM Standard Practice Guideline 201.30: Unpaid Leaves of Absence
- UM Standard Practice Guidelines 201.29: Jury and Witness

All requests for Leave of Absence must be submitted in writing to the respective Residency Program Director (RPD). The RPD shall notify the appropriate pharmacy leadership (e.g., Residency Pharmacy Manager, Pharmacy Director, etc.). Please refer to individual HR policies and procedures for specific processes and documentation requirements based on type of leave.

The RPD (or designee) will be responsible for approving the Leave of Absence request. Please refer to individual HR policies and procedures for specific processes and documentation requirements based on type of leave.

Extended leave of absence (beyond the allotted 15 days of PTO) will result in an *unpaid* leave. If eligible, the resident may receive short/long term disability payments per HR policies.

- The resident will be required to extend their residency training for the period equal to the days of unpaid leave up to 90 days.
 1. This will extend the residency beyond the original appointment term.

- Any resident taking a leave of absence that is greater than 90 days will be ineligible to complete the remainder of their residency program and will not receive a certificate of completion.
 1. The resident may reapply to the Pharmacy Residency Program and will be evaluated against other prospective candidates should an absence extend past 90 days.
- If a resident chooses to continue their benefits during the unpaid leave, U-M will not contribute to benefit expenses during the unpaid leave and the resident will be responsible for all costs. Benefit plans not continued during the leave will be reinstated upon return from leave and deductions for reinstated benefits will resume.
- Upon returning from leave:
 1. Hours must be worked under the guidance of a preceptor, and equal to the hours missed. These supplemental hours will be paid at the rate stated in the original offer letter and must equal but not exceed hours missed during leave.
 2. RPD and Resident must develop a plan to ensure all program requirements will be completed.
 3. RPD will update the resident's schedule, including learning experiences and dates of quarterly development plan meetings, as required.

The Residency Program Director is responsible for assuring that the resident is aware of this policy and has received a signed acceptance notification.

See policy 114.50: Attendance Policy for Allied Health and Office Staff

RESIDENT WELLNESS AND WELL-BEING

Residents are encouraged to seek advice and guidance from mentors and other members of their support network, especially in times of difficulty. This may include their RPD, RPC, RAC Mentor, Chosen Mentor, preceptor(s), co-residents, family, friends, etc.

ORIENTATION SESSIONS

Residents will share their wellbeing and resiliency strategies as part of the entering self-assessment form. Residents will also participate in a well-being and wellness session during orientation that will review the signs and symptoms of burnout, strategies for maintaining well-being and resilience, as well as department and institutional well-being resources. **(ASHP Standard 3.1.a.4)** Additional sessions may be scheduled throughout the year, as needed.

QUARTERLY DEVELOPMENT PLAN CHECK-INS

At a minimum, residents will discuss their wellness, well-being and resilience during their quarterly development meetings with their RAC Mentor, Chosen Mentor and project preceptors. **(ASHP Standard 3.3.d)**.

WELLNESS DAYS

All residents will receive **5 wellness days** during the residency year to be used for well-being and wellness activities - 3 days in the Fall and 2 days in the Spring. The dates will be

coordinated by the Resident Wellness Committee and standardized for all residents. Wellness days will begin in August and will not be scheduled in November and December. The proposed wellness dates must be approved by C-RAC (August meeting for Fall dates and November for Winter/Spring dates). The approved dates can be found on the residency website. Residents must discuss the wellness days with their preceptors at the beginning of each learning experience. Wellness days count toward the maximum 37 days away from residency and 20% time away from an individual rotation and should be factored in when requesting PTO.

Residents are excused from residency related activities on wellness days. The only exception is for those completing a required teaching assignment at the College of Pharmacy during a wellness day. These residents will need to work with their rotation preceptor to identify an alternate wellness day for that month. Individual resident or preceptor requests to move wellness days are strongly discouraged. Maintaining standardized wellness day dates allows residents to attend group activities organized by the Wellness Committee. Unused wellness days may not be converted to PTO for future use.

Residents scheduled for code blue coverage on a wellness day must notify the clinical pharmacist assigned code coverage, preferably the day before or the morning of the wellness day. The clinical pharmacist assignment can be found in the electronic scheduling software.

CHIEF RESIDENTS

DESCRIPTION

The Chief Pharmacy Residents are two pharmacy residents (a PGY1 and a PGY2) who coordinate the activities of all concurrent pharmacy residents.

QUALIFICATIONS

The following are minimum criteria that should be considered to qualify for a Chief resident position:

- Must be a pharmacy resident for the full fiscal year for which he/she/they will serve as Chief Resident
- Demonstrate following qualifications through interview, previous accomplishments as documented on the curriculum vitae, letters of recommendations and/or previous evaluations:
 1. Leadership skills
 2. Excellent communication skills
 3. Ability to work with others and coordinate activities
 4. Ability to manage time efficiently
 5. Expressed interest in the positions

NOMINATION & SELECTION

The RPM will solicit nominations in mid-July. Residents may self-nominate or be nominated by a resident colleague. The RPM will organize a vote, and all residents will be invited to participate. PGY1 residents will nominate & vote for the PGY1 Chief and PGY2 residents will nominate & vote for the PGY2 Chief. The PGY1 and PGY2 nominees with the most votes will be awarded the positions.

CHIEF RESIDENT RESPONSIBILITIES

- PGY1 and PGY2 chiefs will attend all C-RAC meetings
 - Chiefs will communicate issues/feedback from residents to RPM and present resident- issues/proposals at C-RAC meetings
 - Chiefs will disseminate information/decisions from C-RAC meeting to all residents at monthly resident meetings. The RPM will model during Q1 meetings.
 - The PGY1 chief will sit on the Clinical Practice Committee (CPC) and PGY1 RAC
 - The PGY2 chief will sit on the Pharmacy Practice Council (PPC)
- Work with the RPM and RPA to develop and disseminate a schedule for the following residency activities:
 - Seminar presentations (research protocol, CE, and final research presentations)
 - Others, as needed
- Schedule monthly meetings in conjunction with the department administration assistant for the following meetings:
 - Professional development meetings monthly with all residents (leadership series, research series, and other miscellaneous topics)
 - Residents-only meeting (required for all residents to attend)
 - Create an agenda for the meeting
 - Discuss issues to go to C-RAC, upcoming trips, committee updates, etc.
 - Regularly gather feedback on case conference, code response, staffing, teaching activities, resident wellness etc.
 - RPM – Chief meetings with both chiefs at least monthly in Q1 and Q2 and then quarterly thereafter
- Residency Committees
 - In July/August, organize the residents into committees based on their preferences
 - Follow-up with committees to make sure they are on task throughout the year
- Work with RPM on important date list annually to ensure residents understand program- wide due dates
 - Early commitment
 - Development plan due dates
 - Deadlines on Great Lakes/Midyear research requirements
- Plan agenda/activities if another residency program comes to visit U-M Health residency program
- Delegate scheduling of additional activities

BENEFITS OF THE CHIEF RESIDENT ROLES

Due to the additional responsibilities of the Chief Pharmacy Resident, this individual will be entitled to the following benefits and/or relief from standard resident obligations:

- Opportunity to develop/refine leadership skills
- More direct involvement in residency program and larger opportunity to help shape the program
- Role on resident run committees and projects limited to oversight and supervision of activities
- Opportunity to go to a State/National Leadership Conference

EARLY COMMITMENT PROCESS

(ASHP Standard 1.1.f)

The decision regarding participation of each PGY2 residency program in the early acceptance process will be left up to the individual programs. See [Appendix I](#) for early commitment process diagram.

The PGY2 program and position must be registered for the Match. The PGY1 resident does not need to be registered for the Match.

RESIDENT RESPONSIBILITY

The resident should contact the RPD of the program(s) of interest to discuss the program, the resident's goals, the application and interview process, deadlines etc. The resident should send a formal statement of intent to the program director(s) of the program(s) for which the resident would like to apply. A resident may apply to more than one PGY2 program.

Residents must notify the PGY2 RPDs of their interest / intention to apply for early commitment no later than October 1st to facilitate interview scheduling.

PRE-MIDYEAR AND POST-MIDYEAR EARLY COMMITMENT OPTIONS

There are two timeline options for the early commitment process for which each PGY2 RPD will decide how to proceed for their respective programs. If there are multiple interested candidates, it is also up to the discretion of the PGY2 RPD to offer early commitment to the resident(s) versus attending ASHP Midyear to recruit further.

An interview must be conducted to evaluate the PGY1 resident's candidacy. An assessment of each applicant's candidacy must be documented in writing. PGY2 RPDs should also discuss candidate performance with the PGY1 RPD and/or RAC Mentor and/or associated preceptors and factor the information into the evaluation process.

- **Pre-Midyear Early Commitment Procedure**
 - PGY1 resident to contact PGY2 RPD to express interest on or before October 1st
 - RPDs and program preceptors will conduct interviews of eligible PGY1 resident(s) during October and/or November.
 - PGY2 RPD may provide an early commitment offer to a resident between the 3rd Friday of October and 3rd Wednesday of November.
 - If offered, the resident must accept the early commitment offer on or before the 3rd Friday of November.
 - Residents that receive & accept an early commitment offer prior to Midyear do not need to participate in the personnel placement service (PPS).

- **Post-Midyear Early Commitment Procedure**
 - PGY1 resident to contact PGY2 RPD to express interest on or before October 1st
 - PGY2 RPDs have the option of interviewing eligible PGY1 resident(s) in prior to Midyear, but still attend Midyear to recruit. This also allows the PGY1

resident(s) to participate in Midyear recruitment opportunities [i.e.: residency showcases, PPS, etc.).

- PGY2 RPD must offer early commitment to the resident no later than Monday after ASHP Midyear Meeting.
- If offered, the resident must accept the early commitment offer on or before the Tuesday after Midyear meeting by the end of the business day.

ACTIONS WITH ACCEPTING OR DECLINING EARLY COMMITMENT

- Early commitment is offered and accepted by RPD and Resident
 - An early commitment agreement must be completed electronically by the PGY2 RPD and Resident. The PGY2 RPD may access the program early commitment agreement by logging into the NMS Match System. **PGY2 RPDs and Residents must complete this step by the NMS/ASHP deadline.**
 - The annual deadline varies but is generally the second Friday of December.
 - The PGY2 program must pay a non-refundable fee for each position committed via the early commitment process. RPDs should submit the invoice to the RPM and RPA for payment as soon as the agreement is signed.
 - Once early commitment agreements are signed and fee is paid, program should automatically be closed to future applications. The RPD will verify this step has been completed.
 - RPD will contact RPM to update residency website to indicate the position(s) were filled via early commitment.
 - Full details and instructions for program and residents can be found on the [National Matching Services website](#).
 - The resident should also sign a U-M Health residency program offer letter. PGY2 RPDs should contact the RPM to obtain the offer letter template that can be modified for individual programs. The PGY2 RPD should upload the signed offer letter to the resident's PharmAcademic files tab shortly after beginning the PGY2 program.
- Resident declines OR is not offered the early commitment offer
 - The PGY2 RPD may make an offer to another PGY1 resident who was also deemed an appropriate candidate for the early commitment program and who completed the interview process for that program.
- If a PGY1 resident is not offered or declines an early acceptance position, the resident will be permitted to apply to a U-M Health PGY2 program through the formal application process without prejudice or bias.
 - Additionally, should a PGY1 resident who did not participate in the early commitment program decide to apply to a U-M Health PGY2 program, their candidacy will also be considered without prejudice or bias.

COMMITTEES

NON-RESIDENT RUN

All residents will participate in at least 1 non-resident run committee (either local, state, or national) to develop essential leadership skills. They have the responsibility of determining

committee involvement with the assistance of preceptors and their mentors during orientation.

RESIDENT RUN

PGY1 residents are expected to be involved in two resident -run committees, while PGY2 residents are expected to be involved in at least one resident-run committee. Residents will be assigned to the committees based on areas of interest by the Chief Residents. Most committees have a resident chair and preceptor liaison to facilitate and act as a support system. Restructuring of committees and responsibilities is done by the Chief Residents in conjunction with the RPM. Committee responsibilities should be split amongst members and all residents are expected to be actively engaged. Any concerns should be escalated to the committee's preceptor liaison.

Below is a brief description of the available committees. Full descriptions of each committee, including key activities/responsibilities and membership can be found in the "resident-run committee" folder on Dropbox.

COLLEGE OF PHARMACY / TEACHING SERIES COMMITTEE

- Purpose
 - To organize and communicate the requirements and responsibilities for all interested residents to achieve the teaching certificate offered by U-M Health, potentially including VA and St Joe's residents.
- Responsibilities
 - Organize teaching series lectures, including topics, schedule, location, etc.
 - Create resident roster with contact information
 - Ensure all requirements are met for all residents to earn certificate
 - Communicating with College of Pharmacy faculty to resolve issues and plan lectures and other teaching certificate responsibilities

COMMUNITY SERVICE COMMITTEE

- Purpose
 - To organize community service events for the residency class to participate in. All residents are required to participate in at least one event per year.
- Responsibilities
 - Organize at least 2-3 community service events spread throughout the year
 - Student run free clinic precepting counts as a community service event, but prefer to encourage residents to participate in other events as well
 - ***NOTE: PGY1 Pharmacy, PGY1 Community-Based, PGY1 HSPAL, PGY1 IDRP and PGY2 Ambulatory Care residents are required to participate in the student-led free clinic, and participation counts toward the required community service component. Other residents are welcome to participate as desired.***

EMERGENCY PREPAREDNESS CODE PAGER (EPCP) COMMITTEE

- Purpose
 - Plan and manage the resident code pager responsibilities throughout the year as well as provide emergency preparedness training and communication as needed

- Responsibilities
 - Organize the resident code pager schedule
 - Must avoid scheduling code pager coverage when residents are on rotations off-site, or in C&W. This includes rotations in the ambulatory care clinics. If unsure, contact the rotation preceptor to clarify the work location.
 - Update residents on emergency preparedness measures specific to Michigan and U-M Health
 - Facilitate any emergency preparedness training or communication that occurs during the year

GREAT LAKES PHARMACY RESIDENT CONFERENCE COMMITTEE (GLPRC)

- Purpose
 - Plan the GLPRC trip to Purdue University
- Responsibilities
 - Inform residents of the deadlines for registration, abstracts and presentation slide submission
 - Create & disseminate a schedule overview/travel itinerary with key events
 - Develop schedule of U-M Health resident presentations with assigned U-M Health preceptor moderators for each presentation & distribute to all attendees
 - Organize a dinner reservation for the group

LEGACY COMMITTEE

- Purpose
 - To maintain documentation of resident activities throughout the year through the use of multi-media in a history committee book and to keep resident alumni informed of annual residency events (e.g. Annual Report)
- Responsibilities
 - Every May/June, update history committee book with residents' post-residency plans and personal email addresses
 - Works with social committee to compile pictures from various social and residency events/activities
 - Send out email to alumni for updates

MIDYEAR COMMITTEE

- Purpose
 - This committee handles everything that deals with Midyear. I.e., working with the RPA to organize group registration and book of group travel. Committee members also help organize events during Midyear, and providing instructions on re-imburement, etc.
- Responsibilities
 - Send out reminders preparing for Midyear
 - Approved budget/resident & what is included in budget
 - Registration instructions & deadline
 - Poster/abstract deadlines

- Pre-travel authorization forms + per diem worksheet instructions & deadlines
 - Re-imbursement instructions & deadlines
- Provide poster template & instructions for how to print posters
- Plan the Resident & Preceptor dinner while at Midyear
- Set up PPS booth facilitator assignments
- Work with RPA to organize Residency Showcase/PPS booth materials & have shipped to Midyear
- Create & disseminate a schedule overview/travel itinerary with key events

NEWSLETTER COMMITTEE

- Purpose
 - The Newsletter Committee submits one article for publication in the December issue of the MSHP Monitor (MSHP = Michigan Society of Health-System Pharmacists, a publication of the Michigan Pharmacists Association)
 - The Committee also puts together the year-end newsletter that is distributed to resident alumni
- Responsibilities
 - MSHP Monitor submission by November 1st
 - Year-end alumni newsletter by May 1st

CASE CONFERENCE COORDINATOR

- Purpose
 - The coordinator will facilitate case conference report scheduling for the PGY1 residents and PGY2 backups
 - The coordinator helps ensure appropriate preceptor attendance and mentorship at each case conference
- Responsibilities
 - Create case conference schedule
 - Contact preceptors to obtain availability for report
 - Send Outlook invitations with room locations for each case conference
 - Track attendance of PGY1 residents and report to RPD as needed
 - Troubleshoot any logistic issues with scheduling

ORIENTATION & TRAINING COMMITTEE

- Purpose
 - The committee works with the residency manager to ensure feedback from previous year(s) is constructively incorporated into next year's orientation and to streamline training for new residents
 - The purpose is to serve as a guide for PGY1s and incoming PGY2s through direct mentorship and by providing resources
- Responsibilities
 - Participate in orientation debrief
 - Provide consultation to RPM & RPA on the orientation schedule (residency program manager will create schedule)

- Communicate with new residency class regarding NAPLEX materials, resources and deadlines
- Provide information on housing in Ann Arbor
- Coordinate garage sale with outgoing and incoming residents
- Organize resident office seating chart, share with RPM & label desks for incoming residents
- Hosting tours during orientation
- Organize resi-buddies

RESIDENCY TRIP (RESI-TRIP) / SOCIAL COMMITTEE

- Purpose
 - To coordinate the annual residency exchange program
 - To organize events to ensure the residency class spends time together outside of work
- Responsibilities
 - Coordinate the annual residency exchange (year-long activity) which includes planning/organizing the following:
 - Site
 - Budget
 - Dates
 - Transportation
 - Food
 - Social
 - Lodging
 - 2-3 preceptors to attend
 - Draft and present a final ResiTrip report at a future C-RAC meeting.
 - Coordinate a variety of social events for the residency class
 - Organize an incoming-outgoing resident welcome event in June

SOCIAL MEDIA COMMITTEE

- Purpose
 - To run the resident Instagram page (@umichrxresidency)
- Responsibilities
 - Highlight residency program, residents, and preceptors/RPD/RPCs and other program staff
 - Advertise recruitment events and materials
 - Organize resi-takeovers of resident Instagram page

TREASURER

- Purpose
 - To manage the Resi Bank, used to fund activities throughout the year
- Responsibilities
 - Collect dues from each resident at the beginning of the year (\$20)
 - Manage and budget funds throughout the year for various activities

WEBMASTER

- Purpose
 - Maintain the pharmacy residency website, and occasionally handle other tech issues as needed
- Responsibilities
 - Collect information from all the residents for their resi-website profiles (complete by early August)
 - Work with RPA to arrange for individual headshots to include with the profiles
 - Ensure program and preceptor lists are accurate on the resident website
 - Upload resident CE presentations to the appropriate Dropbox folder

WELLNESS COMMITTEE

- Purpose
 - To help identify residency wellness activities for the class to participate in
- Responsibilities in conjunction with preceptor chair(s):
 - Propose dates for monthly wellness days (3 in Fall and 2 in Spring) for approval at August C-RAC meeting.
 - Date of the week should vary (i.e., wellness days should not always fall on Fridays)
 - Work with RPM to have wellness dates added to PharmWeb/RAC website for awareness
 - Schedule and coordinate programming for resident wellness days + PRN events
 - Act as liaison between wellness preceptors and resident class

END-OF-YEAR BANQUET (EOYB) COMMITTEE

- Purpose
 - Plan and host the end of the year banquet in mid-late June to honor all residents completing the residency program and thank preceptors for their support of the program
- Responsibilities
 - Identify venue & ACPOs to set a budget for the banquet
 - Select menu for the banquet
 - Determine guest list – Residents, RPDs, RPCs, RAC Mentors, Chosen Mentors, others as space/budget allows etc.
 - Work with RPM and RPA to develop event invitation (RPM or RPA to send the invitation on behalf of U-M Health residency programs)
 - Work with RPM and RPA to create event agenda, including annual preceptor of the year address
 - Purchase gifts for key leaders of residency & ResiTrip preceptors
 - Purchase gifts/favors for residents
 - Coordinate resident superlatives

END-OF-YEAR VIDEO

- Purpose

- To summarize the year’s residency experience from the resident perspective in video format to be shared at End of Year Banquet
- Responsibilities
 - Create a master video (from day 1 of residency) that is ~15 minutes and documents the year

CORRECTIVE ACTION AND DISMISSAL

(ASHP STANDARD 2.6)

Pharmacy residents are expected to perform and behave in a manner consistent with the expectations of all other U-M Health employees. If a resident breaches these expectations, the situation and resident will be managed in the same manner as any other U-M Health employee, which may include dismissal. Residents who are dismissed from the program will not receive a certificate of completion.

Preceptors should review the *Escalation Guidance for Pharmacy Resident Performance Concerns* document in [Appendix J](#). The document provides framework for intervention and support that promote the resident’s growth and development while ensuring accountability within the pharmacy residency program. All level 3 concerns require involvement of the pharmacy department Human Resources Business Partner.

At a minimum, the following areas, will be monitored and are subject to escalating corrective action:

- Attendance and time away from residency
- Unprofessional behavior, including, but not limited to
 - Failure to practice in accordance with state and federal drug laws
 - Failure to practice in accordance with the policies and procedures of the institution
 - Failure to communicate or collaborate with colleagues and/or preceptors when such is required for optimal patient care
- Learning experience evaluations and progression on goals and objectives
 - Failure to progress can be identified through quarterly evaluations, residency leadership or preceptor evaluations
 - Failure to make satisfactory progress in achieving the goals and objectives of the residency training program includes receiving a score of “needs improvement” on an objective more than 2 times
 - Preceptors should notify the RAC Mentor and RPD as soon as possible regarding any performance issues that arise during learning experiences
- Writing project (see responsibilities and deadlines in writing project section)
- Research project (see responsibilities and deadlines in in research project section).
- Theft and moral turpitude, including, but not limited to, the following:
 - Conviction for theft of a controlled substance or a felony is subject to immediate residency termination and dismissal.
 - Any inappropriate use of or access to patient information in the electronic health record system is subject to immediate resident termination and dismissal.
- Licensure
 - Corrective action will begin from 60-days of hire if pharmacist/controlled substance licensure is not obtained. Residents that are not licensed within

- 60 days are required to complete a licensure remediation plan (see [Appendix A](#) for template).
- The resident will be dismissed from the program if licensure is not obtained by deadlines outlined in the licensure section.

BENEFITS

SALARY

Each resident receives a competitive stipend. Residents will be paid the last working day of each month. Direct deposit can be set up through Wolverine Access.

HEALTH BENEFITS

The University of Michigan offers a menu of health benefit packages to pharmacy residents. Nominal fees may need to be paid to enroll in the residents' choice of a health plan. Dental coverage is not provided for residents in their first year of training.

Further details and answers to questions may be obtained from the U-M Shared Services Center.

JOB-INCURRED INJURIES

Residents must inform the RPM and RPD of work-related injuries as soon as possible after the incident and a report must be filed with [U-M Occupational Health Services](#) describing the incident.

Injuries sustained in Ann Arbor should be treated at the University Hospital Emergency Suite. Injuries sustained outside the city should be treated at the nearest medical facility. The University will not be responsible for incurred costs if treatment can be obtained at University Hospital but the injured staff member elects to receive treatment at another medical facility.

MISCELLANEOUS BENEFITS

Additional benefits such as gymnasium passes, free city bus transportation, and discounts on other goods and services are available to residents as University of Michigan staff and Clinical Instructors at the College of Pharmacy. A list of MCard discounts can be found in Wolverine Access.

RESOURCES AND TECHNOLOGY

(ASHP STANDARD 2.12)

OFFICE SPACE

Residents will be provided office space in the Victor Vaughan House (VVH), or at primary worksite for residents in the PGY1 Managed Care and PGY1 Community (specialty setting) programs. Offices should be kept clean and at a reasonable noise level that allows for appropriate concentration and limited distractions or interruptions.

COMPUTERS & PRINTERS

Residents will be provided with a laptop computer and charger to be used when on-site or when working remotely. Residents are welcome to use network printers in VVH or pharmacy and patient care areas for hospital-related business.

The RPA/RPM will maintain an inventory and roster of assigned laptops. Laptops must be returned to the RPA/RPM by the last day of the residency program in working order. **Issues or concerns with laptop function should be escalated to the RPA and RPM prior to the resident opening a ticket with Health Information Technology & Service (HITS).**

Residents will have electronic access to various clinical information systems, databases and references. Orientation to these resources will occur in June/July.

USE OF ARTIFICIAL INTELLIGENCE

The ASHP position on the use of artificial intelligence (AI) in pharmacy states “pharmacists are responsible for determining which aspects of medication use and management are best handled by pharmacists, by artificial intelligence (AI), or by pharmacists who receive advice from AI-based systems.” It is further highlighted that education about and exposure to AI is necessary throughout all domains of pharmacy practice.¹ In alignment with these positions, preceptors are encouraged to afford residents opportunities to evaluate and use these tools appropriately in their practice.

Accordingly, the following guidelines are provided to residents and preceptors related to the use of AI in fulfillment of any residency requirements:

- Residents should not assume that AI tools, including U-M GPT or other [UM AI resources](#), may be used to complete any part of learning experience assignments.
- AI use must never supersede professional judgment. If a resident utilizes AI, it is crucial that it is employed as a supplemental resource, rather than a replacement for clinical and professional judgement.
- Residents must discuss with each preceptor if and how they may use AI tools to prepare deliverables and assignments. In addition, guidance for the specific experiences listed below is provided:
 - **Patient care activities (i.e. rotations, clinical staffing, code response):** residents may not use must discuss with each preceptor if and how they may not use AI tools to prepare deliverables and assignments, including but not limited to clinical/patient care, topic discussions, case presentations, and other deliverables unless explicitly discussed with and approved in advance by the preceptor or RPD. If approved, AI tools must only be used as a supplemental resource and all AI generated recommendations must be reviewed with a preceptor prior to sharing with other members of the healthcare team. A preceptor or RPD should indicate when use of AI is not allowed during the learning experience orientation.
 - **Longitudinal activities (i.e., case conference, teaching, etc.):** residents should only use AI as a supplemental resource. All recommendations provided by AI

tools must be critically evaluated and validated prior to implementation or sharing with other healthcare team members.

- **Manuscripts:** initial drafts of manuscripts for the mandatory writing and research projects must be done without the use of AI to allow the preceptor to evaluate the resident's independent work. Subsequent use of AI can be at preceptor discretion and must take journal submission requirements about the use of AI into consideration.
- All policies related to confidentiality must be followed; no patient information should ever be shared with an external AI platform.
- To avoid plagiarism or inappropriate use of AI, residents must acknowledge all AI-generated work by using highlighting, comments, track changes, reference citations, or other method acceptable to the preceptor to clearly delineate the parts of the assignment that are generated by an AI tool and not the resident's original work.

¹Schutz et al. ASHP Statement on the Use of Artificial Intelligence in Pharmacy. *AJHP*, Volume 77, Issue 23, 1 December 2020, Pages 2015-2018. <https://doi.org/10.1093/ajhp/zxaa249>

PAGERS & PAGING

Each resident will be provided with a pager. Paging can be accomplished by accessing the Michigan Medicine clinical home page. Professional behavior is expected when utilizing the paging system.

During longitudinal ambulatory care activities, pagers should be switched to preceptor coverage during clinic hours if prompt response will not be possible to pages. The respective medical team should be notified of the temporary coverage changes. Fellow residents will cover the code pager when the resident is assigned code coverage and is off-site. The resident has responsibility of arranging this coverage.

TELEPHONE SYSTEM

For local calls: Dial "97" and then the phone number if within the pharmacy at the hospital. To call locally from the Victor Vaughan Building, dial "9" and then the phone number.
Long distance calls: May not be made on office phones unless directly related to work.

FAX GUIDELINES

Facsimiles may be sent and should be restricted to business use only.

PHOTOCOPYING

Residents may use the photocopying machine in the B2 pharmacy or in the copier rooms in the Victor Vaughan building for hospital-related business.

PROFESSIONAL POSTERS

Campus Computing offers a free, pre-order service for residents to print professional posters. The RPA will coordinate resident printing accounts to facilitate the process. Posters can be picked up at the Angel Hall Computing Site (Fishbowl) on Central Campus or Pierpont

Commons Tech Shop on North Campus. Location details can be found on the [Campus Computing website](#). See poster template for guideline to poster format.

GUIDELINES FOR PHARMACIST DOCUMENTATION IN THE MEDICAL RECORD

Pharmacists within the University of Michigan Hospitals and Health Centers are authorized to write in the Progress Notes section (under Medication Management and Pharmacy Note templates) of the patient medical record in the following circumstances:

- Documentation of patient-specific clinical activities, including patient counseling and education
- Provision of patient-specific pharmaceutical information and drug therapy monitoring and detection of potential adverse drug reactions and drug interactions as the result of solicited or unsolicited consultations
- Pharmacokinetic and Anticoagulation Pharmacy provided service
- Entries in the patient medical record shall be made only by pharmacists licensed in the State of Michigan. Pharmacy students and unlicensed pharmacy residents may write in the medical record providing that a licensed pharmacist reviews and co-signs each notation.
- Notations by pharmacists shall be entered in the Progress Notes section of the medical record in an approved template.

APPENDICES

APPENDIX A: LICENSURE REMEDIATION PLAN TEMPLATE

Residents that are not licensed within 60-days from the program start date are required to develop a written action outlining how licensure will be obtained prior to the mandatory deadline. The plan should also include the reasons for delayed licensure, actions taken, impact on schedules and activities, expected timeframe and plan for RPD check-ins. Please see the UMH residency manual for complete licensure requirements and deadlines.

The resident must review the initial plan with their residency program director (RPD) and email the finalized plan to C-RAC and the RPM. The resident must meet with the RPD at least every other week to discuss progress and an updated plan must be submitted to C-RAC monthly.

If resident does not obtain licensure within the timeframe defined by written plan, discipline up to and including termination may occur.

Resident: _____

Residency Program: _____

Program Start Date: _____

Residency Program Director: _____

College/School of Pharmacy: _____

Graduation Date: _____

	Exam #1		Exam #2		Exam #2	
	Date	Result	Date	Result	Date	Result
NAPLEX						

Reason(s) for delayed licensure:

Actions taken (or to be taken) to expedite licensure:

Impact to activities and schedules with planned resolutions:

(resolution must include a plan to make-up required weekend and/or holiday staffing shifts)

Schedule Type	Impact	Resolution
Orientation	▪	▪
Weekend/Holiday Staffing	▪	▪
Learning Experience	▪	▪

Anticipated timeline for licensure:

RPD check-in dates:

(Resident must schedule/initiate check-ins every other week (at a minimum) to ensure items addressed in the plan are completed)

Plan type:	Date of RPD review:	Date of C-RAC review:
<input type="checkbox"/> Initial		(RPM use only)
<input type="checkbox"/> Update		

APPENDIX B: DOCUMENTS TO BE UPLOADED TO PHARMAcademic

DOCUMENT DESCRIPTION	NAMING CONVENTION <i>(add as file comment when uploading, add objective number if item is a required deliverable (i.e., R1.4.2 – Drug Monograph)</i>	ASSOCIATED COMPETENCY AREA	TIMELINE	RESPONSIBLE PARTY
Acceptance of program terms and policies	Signed offer letter	Miscellaneous	Q1	RPD/RPC
Pharmacist & Controlled Substance Licenses	Licensure	Miscellaneous	Q1	Resident
Research Protocol Presentation ^{&}	Research Protocol Presentation	R2: Practice Advancement	Q2	Resident
Vizient Poster Presentation [^]	Research Poster Presentation	R2: Practice Advancement	Q2	Resident
Final Research Project Presentation [^]	Research Presentation	R2: Practice Advancement	Q4	Resident
Final Research Project Manuscript [^]	Research Project Manuscript	R2: Practice Advancement	Q4	Resident
Final Writing Project Manuscript [^]	Writing Project Manuscript	R2: Practice Advancement	Q4	Resident
Completed Longitudinal Grid	Longitudinal Grid	Miscellaneous	Q4	Resident
Graduation Requirements Checklist	Graduation Requirements Checklist	Miscellaneous	Q4	Resident
Signed Residency Certificate of Completion	Certificate of Completion	Miscellaneous	Q4	RPD/RPC
Signed Teaching Certificate	Teaching Certificate	Miscellaneous	Q4	RPD/RPC
CE Presentation Slides [§]	CE Presentation	R4: Teaching and Education	Throughout	Resident
Drug Monograph, Drug Class Review, Treatment Guideline, Treatment Protocol, Utilization Management Criteria and/or Order Set [*]	Document Title	R1: Patient Care	Throughout	Resident
Case Conference Cases [§]	Case Conference - <i>date</i>	R4: Teaching and Education	Throughout	Resident
Residency Feedback Form <i>Types: weekend staffing, case conference, code response</i>	Residency Feedback Form (<i>TYPE</i>) - <i>date</i>	Miscellaneous	Throughout	Resident
COP Teaching & Teaching Certificate Assignment <i>Ex: lecture slides, handouts, teaching portfolio, evaluations from students/faculty, etc.</i>	Teaching – <i>document title</i>	R4: Teaching and Education	Throughout	Resident
Other documents, as determined by resident, RPD or Designee		Resident/RPD discretion	Throughout	All

ASHP Required Deliverable – PGY1 Pharmacy

(evidence of residents' completion of CAGO requirements)

*R1.4.2

[&]R2.1.2

[^]R2.1.6

[§]R4.1.1, R4.1.2, 4.1.3

APPENDIX C: GRADUATION REQUIREMENT CHECKLIST

GRADUATION REQUIREMENT CHECKLIST

Resident Name: _____ **RAC Mentor/RPD Name:** _____

Instructions: Completion of all checklist items is required for residents to receive a certificate of completion. The resident is to upload the completed & signed checklist to their “files” tab in PharmAcademic on or before the last date of the residency program.

RESIDENCY REQUIREMENTS	RAC MENTOR OR RPD INITIALS	DATE COMPLETED
State of Michigan Pharmacist and Controlled Substance licensure obtained by deadlines outlined in manual		
<i>Learning Experiences</i>		
Completion of all PharmAcademic evaluations		
Achievement of ACHR score on ≥ 80% of required program objectives		
Upload of resident development plans (Initial, Q1, Q2 and Q3, Q4) to PharmAcademic		
Completion of a drug class review, monograph, treatment guideline, protocol, utilization management criteria and/or order set		
Completion of all clinical practice requirements as stated in residency manual		
Completion of <u>research project</u> & supporting manuscript deemed suitable for publication		
Presentation of research project at regional/national conference		
Completion of <u>writing project</u> & supporting manuscript deemed suitable for publication		
Presentation of continuing education lecture		
Participation in Professional Development Series - Research/Writing Seminars		
<i>Leadership & Professional Involvement</i>		
Involvement in professional committees (institutional, local, state national and resident-run) as stated in residency manual		
Participation in Professional Development Series - Leadership Sessions		
Completion of teaching assignments and activities as stated in residency manual		
<i>Optional:</i> Teaching Certificate assignments completed as stated in residency manual		
Completion of clinical, operational, holiday and gap day staffing activities		
Participation in the management of medical emergencies (code blue response)		
Completion of residency clinical case conference presentations		
Participation in ≥ 1 community service activity <i>(participation in the student-led free clinic is mandatory for PGY1 Pharmacy, PGY1 Community-Based, PGY1 HSPAL, PGY1 IDRP and PGY2 Ambulatory Care residents)</i>		
Final residency documents, assignments, presentations uploaded to files tab in PharmAcademic (APPENDIX B)		

Resident Signature

Date

RAC Mentor/RPD Signature

Date

APPENDIX D: PGY1 PHARMACY, HSPAL, IDRP LEARNING EXPERIENCES

Along with the required 6-week orientation and December research month, and longitudinal activities, the PGY1 residents will complete 5 required rotations and may select 5 additional elective rotations. The elective LEs may be fulfilled via elective LEs or by taking additional required LEs in a different setting.

Category (min # of required rotations)	Notes	Learning Experiences
REQUIRED (may also take a 2nd LE as an elective)		
Ambulatory Care (1)	<p>*Offered longitudinally and 1-month block</p> <p>**Offered only longitudinally (Can be taken as elective as well)</p>	Outpatient Anticoagulation/Cardiovascular Medicine*
		Family Medicine*
		Hematology
		Internal Medicine*
		Oncology: GI/GU/Lung
		Oncology: Breast/Melanoma/GU
		Oral Chemotherapy
		Pediatric Pulmonary/Cystic Fibrosis Clinic
		Adult Solid Organ Transplant Clinic
		Bone Marrow Transplant Clinic
Critical Care (1)	May be fulfilled by various LEs	Cardiac Intensive Care Unit (CCU)
		Cardiovascular ICU (CVICU)
		Medical ICU (CCMU)
		Neurology/Neurosurgery
		Surgical Critical Care (SICU)
		Trauma/Burn ICU
Adult Internal Medicine (1)	<p>May be fulfilled by various LEs</p> <p>**Elective rotation that may be used to fulfil the internal medicine requirement</p>	Adult Internal Medicine
		Adult Inpatient General Cardiology**
		Adult Inpatient Hematology**
		Adult Inpatient Medical Oncology**
		Adult Internal Medicine - Hospital Care at Home (HCAH)**
Pharmacy Practice Management (1)	May be fulfilled in various settings (see column to right)	Academic Administration
		Ambulatory Care Services
		Central Pharmacy Services
		Community Pharmacy & Transitions of Care
		Education & Professional Development
		Executive Pharmacy Leadership (CPO, ACPO)
		Human Resources
		Heme/Onc and Infusion Center
		Practice Management – Adult Services
		Practice Management – Pediatric Services

		Pharmacy, Quality, Safety, Compliance & Analytics
		Research Pharmacy
		Residency Program Design & Conduct
		Specialty Pharmacy Services
Medication Use Policy (1)		Medication Use Policy
ELECTIVES		
Addiction Consult		Medication Safety
Adult Emergency Medicine		Pain Management
Adult General Neurology		Pediatrics: Cardiology & Cardiothoracic Unit (PTCU)
Adult Infectious Diseases Consult		Pediatrics: Emergency Medicine
Adult Inpatient Cardiology**		Pediatrics: General Pediatrics
Adult Inpatient Hematology**		Pediatrics: General Pediatrics – Pulmonary/Nephrology
Adult Inpatient Medical Oncology**		Pediatrics: Hematology/Oncology
Adult Inpatient Psychiatry		Pediatrics: Infectious Diseases
Adult Inpatient Solid Organ Transplant		Pediatrics: Neonatal Intensive Care Unit ICU (NICU)
Adult Internal Medicine II		Pediatrics: Pediatric Critical Care (PICU)
Adult Internal Medicine – Hospital Care at Home (HCAH)**		Pharmacogenetics
Adult Palliative Care Consult Service		Pharmacy Analytics
Bone Marrow Transplant		Pharmacy Analytics, Quality, Regulatory & Safety Outcomes
Clinical Faculty Teaching: Pharmacogenomics or Outpatient Leukemia		Pharmacy Operations
Compounding Compliance Administration (HSPAL PGY1 only)		Research Pharmacy: Role of Pharmacy Services in Clinical Trials
Informatics		Surgery-Nutrition
Lung Transplant/Medicine Pulmonary		Teaching/Academia
Managed Care		

APPENDIX E: OFF-SITE LEARNING EXPERIENCE REQUEST FORM

Instructions: For each new off-site LE and pre-existing off-site rotation LE, the RPD must fill out the following form and forward to the C-RAC Chair. The RPD will present the request at the **August** C-RAC meeting:

Resident Name: _____
Residency Program: _____
RPD: _____

Information for Requested Off-Site LE:

Learning Experience Title: _____
Site / Location: _____
Preceptor Name: _____
New or Existing Off-Site LE Offering? * _____

*Existing = there is already an affiliation agreement between U-M Health and other site that has been approved by U-M Health legal team

<ul style="list-style-type: none">▪ Explain the rationale for the off-site LE vs. a UMH site:
<ul style="list-style-type: none">▪ What options have been explored in the attempt to find a similar experience at a UMH site?
<ul style="list-style-type: none">▪ What role will the resident have during the off-site LE (observer vs. active pharmacist)?
<ul style="list-style-type: none">▪ How will the RPD evaluate the quality of preceptorship received at the off-site LE?
<ul style="list-style-type: none">▪ Describe the impact to the resident’s other responsibilities if the off-site LE is approved (including but not limited to weekend/weekday staffing, on-call, case conference or code obligations)

APPENDIX F: SEMINAR EVALUATION FORM

Evaluator Name: _____
 Presentation Title: _____ Date: _____
 Speaker: _____

Scale:

- 1 = Unacceptable Needs extensive improvement, does not meet expectations
- 2 = Needs improvement Meets some expectations, but often falls short
- 3 = Meets expectations Meets all expectations consistently
- 4 = Exceeds expectations Meets and exceeds most expectations
- 5 = Exceptional Exceeds all expectations

	Score	Comments
<u>Speaker Evaluation</u> <ul style="list-style-type: none"> ▪ Appropriate volume, pronunciation, articulation and pace ▪ Presentation was spoken, not read ▪ Adequate eye contact ▪ Utilized effective non-verbal communication ▪ Engaged audience and maintained their interest ▪ Absence of distracting mannerisms and filler words 		
<u>Presentation Organizations</u> <ul style="list-style-type: none"> ▪ Opened with a prepared, inviting introduction ▪ Presented in a logical sequence ▪ Transitions between concepts clearly ▪ Summarized conclusions and actionable ideas 		
<u>Presentation Content</u> <ul style="list-style-type: none"> ▪ Stated purpose clearly ▪ Stated methods clearly ▪ Discussed results in sufficient detail ▪ Stated conclusions appropriate, well supported ▪ Appropriate to audience and time allotted ▪ Speaker conveyed how the project would improve patient care and/or positively impact the organization or others 		
<u>Mastery of Subject</u> <ul style="list-style-type: none"> ▪ Demonstrated substantial contribution to and ownership of project ▪ Material was relevant and contemporary ▪ Presentation was authoritative ▪ Answered questions completely and logically 		
<u>Quality of Project</u> <ul style="list-style-type: none"> ▪ New insights were gained by audience ▪ High likelihood project improves patient care and positively impacts the organization or others 		
<u>Audiovisual Aids</u> <ul style="list-style-type: none"> ▪ Legible, uncluttered, visually appealing slides ▪ No spelling or grammar errors ▪ Tables and graphs were visually appealing ▪ Graphics and/or animations used appropriately ▪ Slides complemented verbal presentation 		
<u>Bias and Referencing</u> <ul style="list-style-type: none"> ▪ Outside information appropriately referenced ▪ Presentation was unbiased 		

APPENDIX G: TEACHING EVALUATION FORM (OPTIONAL)

Feedback on GSI and Fellow/Resident Course Performance

Instructor's Name: _____ Course Name: _____
 Lecture Title: _____ Date: _____

Direct Classroom Teaching				
The GSI/Fellow/Resident...	Done	Needs Improvement	Not Done	N/A
Demonstrates command of the classroom <ul style="list-style-type: none"> ▪ Effectively holds class attention ▪ Manages disruptive behavior constructively ▪ Manages classroom time efficiently ▪ Gives clear and concise directions 				
Uses attending behaviors effectively <ul style="list-style-type: none"> ▪ Good eye contact ▪ Employs an appropriate rate of speech ▪ Has a relaxed but attentive posture ▪ Moves about the room 				
Conducts self in a professional and confident manner <ul style="list-style-type: none"> ▪ Is enthusiastic and confident in explaining the subject matter ▪ Appears knowledgeable ▪ Tone is professional and academic 				
Answers questions clearly and effectively <ul style="list-style-type: none"> ▪ Repeats student questions so all can hear ▪ Checks for student understanding ▪ Provides clear and comprehensive explanations when required ▪ Tells the class that he/she will follow-up on questions if necessary 				
Creates an engaging environment where students openly ask questions and give their own ideas and opinions <ul style="list-style-type: none"> ▪ Creates an inclusive space for students to speak ▪ Ensures an effective balance between student discussion and faculty lecturing ▪ Prevents or terminates discussion monopolies ▪ Is sensitive to individual interests, abilities, and experiences 				
Contributes to a positive climate with students in the classroom <ul style="list-style-type: none"> ▪ Demonstrates patience in helping students understand difficult concepts ▪ Corrects student mistakes in a non-threatening manner and recommends additional information to benefit all learners 				
Ensures learning activities align with material being taught <ul style="list-style-type: none"> ▪ Coordinates learning content with instructional objectives 				
Logical Tasks				
The GSI/Fellow/Resident...	Done	Needs Improvement	Not Done	N/A
Is prepared for classroom lecture or activities				

<ul style="list-style-type: none"> ▪ Has necessary lecture materials ready at the beginning of the classroom session (e.g. PowerPoint presentations, lecture handouts, quizzes, etc.) ▪ Is prepared for recitation sessions ▪ Is prepared for lab sessions 				
Demonstrates accountability <ul style="list-style-type: none"> ▪ Meets deadlines in grading ▪ Meets deadlines for content preparation ▪ Holds office hours, if required 				
Follows through with teaching tasks <ul style="list-style-type: none"> ▪ Responds to student questions in a timely manner ▪ Responds to faculty member and/or other instructors in a timely manner 				

List the major strengths of this GSI or fellow/resident:
List at least 2 areas where you feel the GSI or fellow/resident can improve:
Additional comments:

Observer's Signature _____ Date: _____

Observer's Printed Name: _____

APPENDIX H: PRECEPTOR DEVELOPMENT PLAN

Name & Credentials:		
Mentor Name*:		
PGY1 learning Experience(s) and program(s) to be precepted:		
PGY2 learning experience(s) and program(s) to be precepted:		
Other learning experiences to be precepted or role: (i.e., research project mentor, RAC mentor)		
Review of Preceptor Orientation Presentation (hosted by Preceptor Appointment Committee)		Date attended/reviewed:
Evaluations	<input type="checkbox"/> Modeled at least one verbal formative feedback session with Mentor	Date:
	<input type="checkbox"/> Completed at least one PharmAcademic evaluation with Mentor	Date:
Preceptor Eligibility	PGY1 Preceptors (select 1):	
	<input type="checkbox"/>	Completed an ASHP-accredited PGY1 residency program AND ≥ 1 year of pharmacy practice experience <u>in area precepted</u>
	<input type="checkbox"/>	Completed an ASHP-accredited PGY1 residency AND PGY2 residency program AND ≥ 6 months of pharmacy practice experience <u>in area precepted</u>
	<input type="checkbox"/>	At least 3 years of pharmacy practice experience <u>in area precepted</u> if have not completed an ASHP-accredited residency program (or if completed PGY2 program in area different from area precepted)
	PGY2 Preceptors (select 1):	
	<input type="checkbox"/>	Completed an ASHP-accredited PGY2 residency program AND ≥ 1 year of pharmacy practice experience <u>in area precepted</u>
	<input type="checkbox"/>	At least 3 years of pharmacy practice experience <u>in area precepted</u> if have not completed an ASHP-accredited residency program (or if completed PGY2 program in area different from area precepted)
Preceptor Qualifications: Please review and list examples of preceptor qualifications per the ASHP Standard. <i>See ASHP Standard and guidance document for allowable evidence & additional details.</i> <i>Evidence of qualifications must be:</i> <ul style="list-style-type: none"> ● AFTER licensure ● AFTER completion of residency training (exception: teaching certificate) ● WITHIN the last 4 years of practice 	Content knowledge/expertise in the area(s) of pharmacy practice precepted (ASHP Standard 4.6.a): <u>Evidence of qualifications (at least 1, more encouraged):</u> <ul style="list-style-type: none"> ● 	
	Contribution to pharmacy practice in the area(s) precepted (ASHP Standard 4.6.b): <u>Evidence of qualifications (at least 1, more encouraged):</u> <ul style="list-style-type: none"> ● 	
Preceptor Development Sessions	Attendance at Preceptor Development Session (at least 2 annually) <u>Presentations attended (topic/date):</u> <ul style="list-style-type: none"> ● 	

OPPORTUNITY #1	OPPORTUNITY #2	OPPORTUNITY #3
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Opportunities for Growth
(i.e., qualifications not met)

Action Plan for Opportunities
(i.e., activities to be completed, anticipated timeline)

Progress Update

Date:	Date:	Date:
Comments:	Comments:	Comments:

Preceptor Self-Evaluation

Date:	Date:	Date:
Comments:	Comments:	Comments:

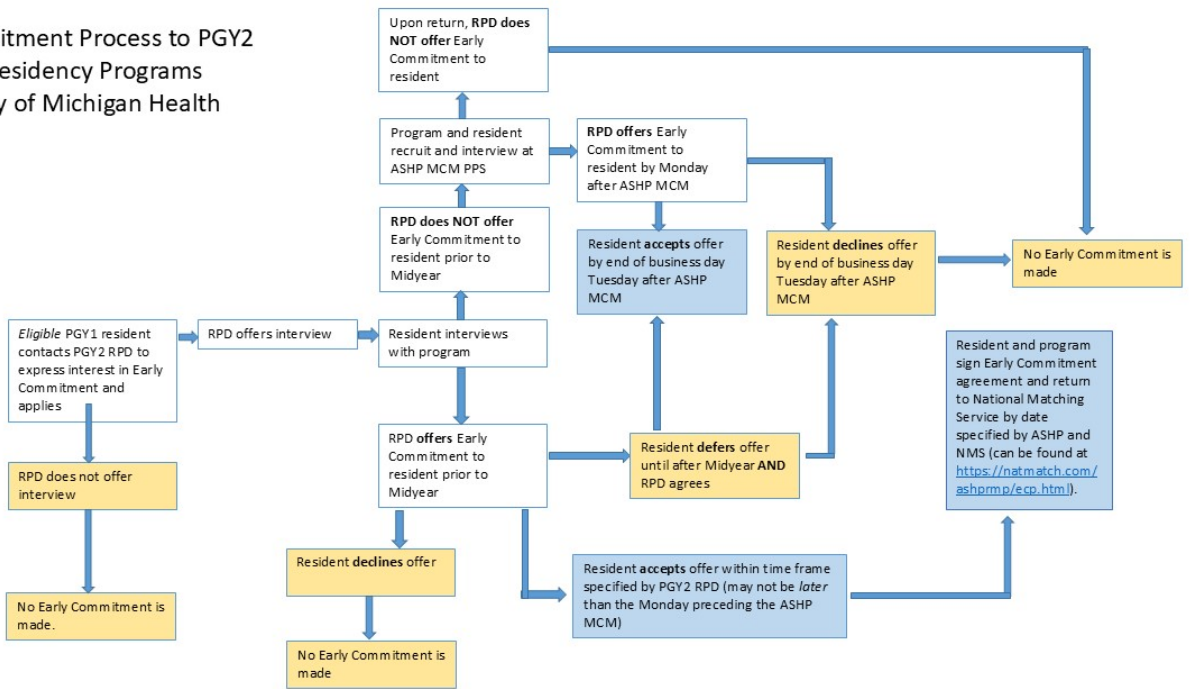
Mentor Comments

*Mentor = a RAC-approved preceptor in your area of specialty. If unable to find a mentor, contact the RPD of the program you'll precept in to assist.

Once all eligibility and qualifications criteria are met, the pharmacist should email the preceptor appointment committee (pharm-preceptorappoint@med.umich.edu) to begin the formal review process. See the Preceptor Appointment & Reappointment Procedure section for full details.

APPENDIX I: EARLY COMMITMENT WORKFLOW

Early Commitment Process to PGY2 Pharmacy Residency Programs at University of Michigan Health



* RPD – Residency Program Director

APPENDIX J: ESCALATION GUIDANCE FOR PHARMACY RESIDENT PERFORMANCE CONCERNS

The following steps are intended to provide a framework for intervention and support that promote the resident's growth and development while ensuring accountability within the pharmacy residency program.

Level 1: Initial Feedback and Support

Direct Preceptor Intervention

- **Purpose:** Address performance concerns promptly and constructively.
 - Example concerns: failure to meet project deadlines, insufficient work quality, unpreparedness for work, inability to cope with excess stress, poor time management skills.
- **Approach:** Conduct a private meeting with the resident to discuss observed performance issues.
- **Actions:**
 - Review specific examples highlighting areas for improvement.
 - Provide constructive feedback and specific strategies for improvement.
 - Offer additional resources, training, or mentorship
 - Schedule and facilitate frequent formative feedback sessions to assess for improvement. Sessions should include resident self-reflection on progress.
 - Document formative feedback provided to the resident in PharmAcademic.
 - Select resident, then click green "Provide Feedback to Resident" button

Level 2: Involvement of Residency Leadership

- **Involvement of RAC Mentor and/or RPD**
 - **Purpose:** Seek higher-level support and intervention if performance issues persist.
 - **Approach:** discuss ongoing performance concerns with RAC Mentor and/or RPD
 - **Actions:**
 - Review performance concern(s), feedback provided and steps taken to date.
 - Collaborate on potential interventions and strategies.
 - Discuss program modifications or additional support mechanisms.
 - Develop written action plan to include to outline reason(s) for performance concerns, expected behaviors/performance, and timeline to address identified concerns.
 - Schedule weekly check-ins to monitor progress, offer support, and adjust the plan as needed

Level 3: Performance Improvement Plan (PIP)

- **Develop a Formalized Plan with Human Resources**
 - **Purpose:** Establish a structured roadmap for improvement

- **Approach:** develop written plan using PIP template (see internal website for template)
- **Actions:**
 - The resident, RAC mentor, affected preceptors/mentors, RPD and Human Resources will develop a Performance Improvement Plan (PIP) outlining:
 - Clear and achievable goals.
 - Defined timelines and benchmarks for improvement.
 - Specific actionable steps and strategies.
 - Schedule weekly check-ins to monitor progress, offer support, and update the plan.
 - If the resident does not demonstrate progressive improvement or if a more serious incident occurs during any portion of the performance improvement period, further disciplinary action could take place up to and including discharge.

Additional Preceptor & Resident Resources

ASHP Preceptor Toolkit

- *Podcast:* [Teaching to Teach: The 4 Preceptor Roles for Residents](#)
- *Article:* [Starring roles: The four preceptor roles and when to use them](#)
- *Infographic:* [Tips for Generational Learning](#)
- Additional resources available for ASHP Members (requires log-in)

ASHP Well-Being and Resilience Guide for Pharmacy Residency Programs

- Aims to support the mental health, wellness, and resilience of pharmacy residents.
- Offers guidance and strategies to help residency programs create environments that prioritize the well-being of their residents.

Mentoring Resources - ASHP (ashp.org)

- ASHP Mentoring Resources offer a platform designed to facilitate mentorship opportunities within the pharmacy profession.

Michigan Medicine Office of Counseling and Workplace Resilience

- Provides confidential, short-term counseling, consultation and support to all MM faculty and staff.
- Phone: 734-763-5409 or
- Email: counseling@med.umich.edu

PROGRAM SPECIFIC APPENDICES

PGY1 COMMUNITY-BASED PHARMACY

Program Director: Jennifer Baldrige, PharmD, BCACP, DPLA

Program Description

The PGY1 Community-Based Pharmacy Practice Residency is a one-year program designed to build knowledgeable, confident pharmacy practitioners equipped to deliver high quality patient care in the community and ambulatory care settings. The program is built to adapt to resident's future plans and current needs. The purpose of the program is to build upon the Doctor of Pharmacy (PharmD) education and outcomes to develop community-based pharmacist practitioners with diverse patient care, leadership, and education skills who are eligible to pursue advanced training opportunities including postgraduate year two (PGY2) residencies and professional certifications.

Rotations

The community pharmacy resident experiences a mix of required and elective rotations tailored to their interest in both content and duration. Rotations are primarily longitudinal, however some exceptions exist. Specifically, internal medicine is a one-month, inpatient care rotation.

Required Rotations

- Orientation (July)
- Ambulatory Care Administration (3-6 months)
- Pharmacy Practice, Proposal, and Implementation (1 year)
- Staffing (1 year)
- Medication Use Policy (1 month)
- Primary Care Clinic (5 months)
- Teaching Pharmacy Practice Skills I (1 semester)
- Transitions of care – geriatric (5 months)
- Writing project (1 year)
- Research project (1 year)
- Inpatient Internal Medicine (1 month)
- Medication Safety (3 months)
- Health and Wellness
- Immunization and Community Wellness

Elective Rotations

- Transitions of Care – inpatient/administration (3-6 months)
- Specialty Pharmacy (3-9 months)
- Ambulatory Anticoagulation (3-9 months)
- Collaborative Practice Development (varies)
- Oral Oncolytic Clinic (3-9 months)
- Pharmacy Practice Leadership (3-6 months)
- Medication Therapy Management (6 months)
- Second Semester Teaching (6 months)

- Second Rotation Primary Care Clinic (6 months)
- Transplant (Lung)
- Michigan Collaborative for Type 2 Diabetes/Clinic

Example longitudinal rotation schedule:

Community PGY1 Resident Sample Schedule						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Taubman Outpatient Pharmacy	Oral Outpatient Oncolytic Clinic	Primary Care Clinic	Teaching	Specialty Pharmacy	Staff every other weekend* 7:00 am – 5:00 pm	Staff every other weekend* 8:00 am – 4:00 pm
	Specialty Pharmacy	Pharmacy Administration	Outpatient Anticoagulation	Health and Wellness		

*The community resident is responsible for staffing 1 major holiday (Thanksgiving, Christmas, New Year’s) and one minor holiday (July 4th, Memorial Day, Labor Day), and two gap days between Christmas and New Year’s.

Staffing Responsibilities:

Community-based residents will provide a service component of, on average, two weekends per month practicing in a health-system community pharmacy. All residents are expected to work one minor holiday (Labor Day, Friday after Thanksgiving, or Memorial Day), one major holiday (Thanksgiving, Christmas, New Year’s Day), and two gap days between Christmas and New Year’s during their residency year. If the pharmacy is not open on the day of the holiday the resident can be scheduled before and/or after the holiday as needed.

Daily responsibilities while staffing include:

- Processing prescriptions
- Paging physicians regarding dose recommendations, dose changes, or prior authorizations
- Filling prescriptions
- Checking prescriptions for accuracy
- Counseling patients

Graduation Requirements:

Generally, graduation requirements for the Community-based program mirror those of the PGY1 pharmacy listed in the body of the residency manual. Deviations/clarifications are outlined below.

- All residents receive faculty appointments at the College of Pharmacy. They are instructors for a one-semester course and may serve as a preceptor for clerkship students
- You will serve as an instructor in P504, Community Pharmacy sequence, or other class assignment at the College of Pharmacy for either the Fall or Winter semester. This commitment is approximately 4-6 hours weekly in class with a preparation of a half hour to hour each week. Additionally, there will be grading

work involved. Your grading will be approximately two hours per week. You will also be involved in providing direction to pharmacy students in various experiential ways at the hospital. Many of your rotations will include students. You will have the opportunity to complete an optional teaching certificate.

- There is an optional teaching certificate opportunity
- All community residents are expected to be BLS (basic life support) certified. If you are not currently certified, the department will arrange for you to become certified during the orientation period. An option to pursue ACLS (advanced care life support) is available and encouraged.
- At a minimum, residents will participate in 1 community service activity. The community service committee will organize this event on the behalf of the residents.
- Student-led free clinic: PGY1 pharmacy, PGY1 community-based, PGY1 HSPAL, PGY1 IDR and PGY2 ambulatory care residents are required to participate in clinic and it may count towards the community service component pending discussion with their RPD.

PGY1 COMMUNITY-BASED PHARMACY – SPECIALTY PHARMACY SETTING

Program Director: Melissa Pleva, PharmD, MBA

Program Description

The PGY1 Community-Based Pharmacy Residency (Specialty Pharmacy Setting) is a one-year program designed to build knowledgeable, confident pharmacy practitioners equipped to deliver high quality patient care in the Health System Specialty Pharmacy setting. The program is built to adapt to the resident's future plans and current needs. The purpose of the program is to build upon the Doctor of Pharmacy (PharmD) education and outcomes to develop community-based Specialty pharmacist practitioners with diverse patient care, leadership, and education skills who are ready to enter Specialty Pharmacy practice and/or eligible to pursue advanced training opportunities including postgraduate year two (PGY2) residencies and professional certifications.

Rotations

The PGY1 Community-Based Specialty Pharmacy resident will experience a mix of required and elective rotations tailored to their interest. Rotations are a mix of longitudinal and block experiences.

Required Rotations

- Block:
 - Orientation (July)
 - Inpatient Internal Medicine (1 month, tentatively February)
 - Autoimmune diseases (rheumatology, dermatology, IBD, Allergy/asthma) (1 month)
 - Non-autoimmune disease states (neurology, cardiovascular) (1 month)
 - Hem/onc (1 month)
- Longitudinal:
 - Specialty Pharmacy Administration (1/2 day per week, 1 year)
 - Staffing (~4 days per month, 1 year)
 - Ambulatory/Specialty Medication Use Policy (1/2 day per week, 6 months)
 - Teaching Pharmacy Practice Skills I (1/2 day per week, 1 semester)
 - Writing project (1 year)
 - Research project (1 year)
 - Medication Safety (1/2 day per week, 3 months)

Elective Rotations

- Bone Marrow Transplant (block or longitudinal)
- Pediatrics (block or longitudinal)
- CF Clinic (longitudinal)
- Hep C/HIV (longitudinal)
- Primary Care Clinic (longitudinal)
- Transitions of care (longitudinal)
- Ambulatory Anticoagulation (longitudinal)
- Medication Therapy Management (longitudinal)
- Managed Care (with UM Prescription Drug Plan) (month block)

- Any other Specialty Pharmacy disease state area not covered by required rotations (i.e. could complete a rheumatology experience as an elective if a dermatology experience completed as required autoimmune rotation)

- **Example Schedule*:**

July	August	September	October	November	December
Orientation/ Training	Hem/Onc	Non- autoimmune diseases	Spilt longitudinal/block to complete units*		Project
January	February	March	April	May	June
Autoimmune diseases	Inpatient Internal Medicine	Longitudinal rotations (see below)			Pediatrics

- **Example longitudinal rotation schedule:**

Monday	Tuesday	Wednesday	Thursday	Friday
Primary Care Clinic	Pharmacy Administration	BMT clinic	Specialty Mail Order Fulfillment Pharmacy	Med Safety
CF Clinic	Teaching			Medication Use Policy

*Many experiences can be configured as either blocks or longitudinal experiences, depending on resident interest and other scheduling considerations. Therefore, rotations may be scheduled in terms of “units,” where a unit is either a 1-month block or equivalent (equivalent to approximately 20 days) completed longitudinally.

Staffing Responsibilities

Community-based residents will provide a service component of, on average, 4 days per month staffing with a mix of practice in a UMH Community Pharmacy and in the UMH Specialty Mail Order Fulfillment Pharmacy. All residents are expected to work one minor holiday (Labor Day, Friday after Thanksgiving, or Memorial Day) and one major holiday (Thanksgiving, Christmas, New Year’s Day) during their residency year. If the pharmacy is not open on the day of the holiday the resident can be scheduled before and/or after the holiday as needed.

On Call Responsibilities

Specialty Pharmacists provide after-hours and weekend on-call coverage from home for questions from patients as part of our service requirements to meet Specialty Pharmacy accreditation requirements. The PGY1 resident will take call for a total of 2 weeks during the second semester of residency.

- A Specialty Pharmacist back-up will be available at all times to support the resident with any call they would like reviewed by a Specialty Pharmacist in the moment. The on call back up pharmacist will retrospectively review and provide feedback on all calls managed by the resident at a minimum.

- On call weeks will be scheduled in conjunction with staffing and rotation responsibilities in a manner that ensures the resident maintains at least one day in seven free of duty, when averaged over four weeks.
- Time spent responding to on call questions will be tracked and accounted for as duty hours.
- If on call responsibilities result in fatigue or sleep deprivation that impact the ability for the resident to safely perform responsibilities during duty hours, the resident can arrange an alternate schedule with the RPD on a case-by-case basis (e.g. take time off from rotation to sleep and offset rotation time missed at another time).

Graduation Requirements

Generally, graduation requirements for the Community-based program mirror those of the PGY1 pharmacy listed in the body of the residency manual. Deviations/clarifications are outlined below.

- All community residents will develop a business plan for a new or enhanced service. This deliverable will be incorporated into the required longitudinal Specialty Pharmacy Administration learning experience.
- All community residents are expected to be BLS (basic life support) certified. If you are not currently certified, the department will arrange for you to become certified during the orientation period. An option to pursue ACLS (advanced care life support) is available and encouraged.

PGY1 MANAGED CARE – UNIVERSITY OF MICHIGAN PRESCRIPTION DRUG PLAN (UMPDP)

Program Director: Stephen Lott, PharmD, MS

Introduction & Background

The PGY1 Managed Care Residency Program at the University of Michigan Prescription Drug Plan (PDP) offers a unique experience working in the pharmacy benefits world from a payer perspective. The PDP PGY1 residency program abides by the standards set forth by ASHP and AMCP for accredited PGY1 Managed Care programs. The pharmacy benefit team interacts with world-renowned experts in the fields of medicine, pharmacy and managed care to achieve the best mix of state-of-the-art care and cost-effectiveness. In many instances, we work with subject matter experts within our organization who are pivotal in the drug research, development, and approval process. By collaborating with clinicians and academics, we obtain the unique perspective that only a few managed care residencies can offer.

The University of Michigan PDP manages and administers prescription drug benefits for university staff, faculty, retirees and dependents. As of 2024, the plan is administered by three pharmacists, one pharmacy resident, and one compliance officer. The plan is self-administered by the Benefits Administration Office, which allows the university to closely manage an evidence-based quality prescription drug benefit in a fiscally responsible manner.

The PDP covers outpatient drugs for more than 124,000 members, including faculty, staff, retirees, and dependents, at three campuses and throughout Michigan Medicine. The PDP collaborates with University of Michigan Health, which includes pharmacies, hospitals, and clinics throughout Michigan. The PDP also collaborates with the University of Michigan's College of Pharmacy with didactic teaching opportunities, hands-on patient-care learning experiences, and research initiatives.

Purpose

The University of Michigan PDP PGY1 managed care residency program prepares the resident to be proficient in several areas of managed care pharmacy, including formulary management, pharmacy benefit design, clinical program development, drug use management and drug information communications.

The PDP PGY1 residency program builds upon the Doctor of Pharmacy (PharmD) education and outcomes to develop pharmacist clinicians with diverse patient care, leadership and education skills who are eligible for board certification and postgraduate year two (PGY2) pharmacy residency training.

Residents completing this program will be qualified and confident to practice as managed care pharmacists in a variety of managed care practice settings including, but not limited to, health plans, pharmacy benefit management organizations, pharmaceutical manufacturers, and consultants.

Mission

The mission of the University of Michigan's PDP PGY1 Managed Care Residency Program is to facilitate the pursuit of professionalism, personal excellence, and leadership resulting in managed care pharmacists that are competent and well prepared.

Program Structure

The PDP PGY1 Managed Care Residency Program is a 52-week program that follows the core structure outlined in the common Resident Manual. The program is designed to allow the resident the ability to achieve every objective required for completion of the residency.

The PGY1 Managed Care Residency Program takes place in a hybrid work environment, with a mix of on-site and off-site (remote) work. The LEs for the PDP PGY1 residency program are scheduled by the RPD with the intent of balancing workload among concentrated and longitudinal experiences. Each year, residents receive a written schedule depicting all LE dates.

At the end of each LE, the preceptor and resident will evaluate each other's performance. Each will complete the appropriate evaluation(s) in PharmAcademic®. An LE-specific evaluation will be used by the preceptor to evaluate the resident's progress on LE-specific goals. In addition, each preceptor will evaluate the resident's performance on the overall residency goals and objectives, as demonstrated on their specific LE.

Required Learning Experiences

The managed care resident has a mix of concentrated and longitudinal required learning experiences, with two four-week blocks reserved for electives that will be determined based on the resident interests and preceptor availability.

- Orientation and Managed Care Basics
- Pharmacy Networks and Vendor Relations
- Formulary Management and Business Analytics
- Quality Standards and Population Health
- Clinical Program Development I: Traditional and Ambulatory Care Services
- Clinical Program Development II: Specialty Pharmacy and Outcomes
- Academia
- Pharmacy Innovations and Partnerships
- Professional Development and Committee involvement
- Specialty Pharmacy
- Staffing Outpatient Pharmacies
- Research Project
- Writing Project

Holidays and Vacation

The PDP PGY1 managed care pharmacy resident is entitled to the seven official university holidays: Independence Day, Labor Day, Thanksgiving and the day following, Christmas Day, New Year's Day and Memorial Day. The PDP PGY1 resident is not required to work any

university holidays. The PDP PGY1 managed care pharmacy resident is not entitled to the season days offered to campus faculty and staff. Vacation days may be used for residents who observe holidays other than official university holidays.

The PDP PGY1 managed care pharmacy resident may follow the vacation request procedures of the PDP team except during rotations at Michigan Medicine or the College of Pharmacy. During those LEs, the resident will follow the procedure described in the common Residency Program Manual. All vacation days and absences shall be reported to the RPD so that all duty hours can be tracked.

Travel Requirements

The PDP PGY1 managed care pharmacy resident is required to attend two national conferences (ASHP Midyear, AMCP Nexus, or AMCP Managed Care & Specialty Pharmacy Annual Meeting), as well as a regional pharmacy residency conference. In years where the AMCP Annual Meeting is scheduled next to or during the regional pharmacy residency conference, the resident will attend the AMCP Annual Meeting pending approval to miss the regional pharmacy residency conference from the Michigan Medicine C-RAC. The resident is required to promote the residency program and recruit prospective applicants at ASHP Midyear.

Requirements for Program Completion

To successfully complete the PGY1 Managed Care (UMPPDP) residency program and achieve a certificate of completion, the resident must achieve each of the following:

- Complete 90% or more of the 2024 ASHP/AMCP harmonized objectives as “Achieved for Residency” (ACHR), with no outstanding objectives marked “needs improvement” (NI) by the completion of the final learning experience.
- Complete all (100%) of the Managed Care Appendix CAGO (2024) items
- Satisfy all travel requirements and longitudinal project obligations as described in the residency manual, including the presentation of the research-in-progress at a national conference, presentation of the final research project at a regional pharmacy residency conference, and submission of the final research and writing manuscripts.
- Submit all final projects, presentations, and other work products to the program as part of the final residency portfolio.

Residency Advisory Committee

The RPD of the PDP PGY1 residency program participates in U-M Health’s Colossal Residency Advisory Committee (C-RAC) for all programs associated with the university. In addition to the C-RAC, the PDP PGY1 residency program has a program RAC (RAC-PDP). The preceptors and PDP RPD meet monthly, or more often if needed, to discuss matters directly related to the program. Issues that require attention from the C-RAC are included on their meeting agenda as requested. The typical monthly RAC-PDP meeting will consist of a 30-minute meeting with the pharmacy resident, resident, and RPD, followed by a 30-minute meeting with the preceptors and RPD. Meeting minutes will be documented following each RAC-PDP meeting.

Program Evaluation and Continuous Improvement Plan

In addition to the monthly meetings, the RAC-PDP will meet annually to review and make necessary changes to the following:

- Program Schedule
- Learning Experiences
- Preceptor Roster
- Preceptor Development Plan
- Taught and Evaluated (T&E) grid
- Final Review of the Research Project
- Final Review of the Writing Project
- Quality Improvement Projects
- Summative Program Feedback from Resident(s)
- Past-Resident Career Tracking

PGY1 PHARMACY & PGY2 HEALTH SYSTEM PHARMACY ADMINISTRATION AND LEADERSHIP

Program Director: John Clark, PharmD, MS, BCPS, FASHP

Program Coordinators: Andrew Lucarotti, PharmD, MBA, DPLA; Lindsey Clark, PharmD, MBA, DPLA

Description of Program

This PGY1/PGY2 combined Health-System Pharmacy Administration and Leadership (HSPAL) residency program is designed to prepare residents to become successful pharmacy leaders by providing a wide array of experiences with leaders in pharmacy administration, renowned clinicians, and world class experts in research, education, and population health. Upon completion of the program, residents will be prepared to accept leadership positions in settings throughout the healthcare enterprise. After the 2-year residency, University of Michigan Health has implemented a third-year fellowship experience for those completing a dual MBA program.

Requirements for Graduation

- **PGY1 HSPAL Year:** requirements are the same as outlined in the general [graduation requirement section](#) of the residency manual
- **PGY2 HSPAL Year:** requirements are the same as outlined in the general [graduation requirement section](#) of the residency manual with the following exceptions:
 - Completion of a drug class review, monograph, treatment guideline, treatment protocol, utilization management criteria and/or order set is not required
 - A quality improvement project and associated manuscript deemed suitable for publication will be completed in place of research project, writing project and CE presentation.
 - Code blue response is not required

Due to the nature of some longitudinal administrative projects that HSPAL residents may undertake (i.e.: implementing and evaluating a program or service) the HSPAL resident projects may span a period of up to 2 years. A defined plan and timetable for the project must be established and the specific progress expected by the end of the first year must be determined by the project mentor. Otherwise, all other requirements for the project remain the same as for other residents as outlined in the manual.

Required and Elective Rotations

PGY1 Required and Elective Rotations		
Required rotations		Longitudinal activities/projects
<u>1 month</u>		Research project and presentation
Adult internal medicine	Critical care	
Ambulatory care	Medication use policy	
Pharmacy operations	Acute Care Practice Management (2-month rotation)	Professional writing project and pharmacist continuing education presentation

	Weekly HSPAL topic discussion
Elective rotations (3)	
1 month	<u>Attendance and participation on following committees, as times allows:</u> Pharmacy Management Team Pharmacy Executive Council Professional Organization Involvement (optional)
Direct patient care electives	

PGY2 Required and Elective Rotations			
Required rotations		Longitudinal activities/projects	
6 weeks		Coursework for MBA (if enrolled)	
Informatics and technology (4 weeks)			
Medication use systems		Weekly HSPAL Topic Discussions	
Ambulatory services management			
Longitudinal rotations		<u>Attendance and participation on following committees*:</u>	
5-6 months		Pharmacy Management Team	
Medication safety (includes 4 weeks of focus)	Health-system education		
12 months			
Financial management (budgeting & variance reporting)		Pharmacy Executive Council	
Human resource management through serving as the 'assistant manager' for a pharmacy team		Medication Safety Committee	
Departmental/institutional leadership and personal and professional development		Pharmacy & Therapeutics Committee	
Process improvement project (with suitable written manuscript and presentation)		Clinical Practice Committee	
Staffing and on-call activities of the residency		Medication Distribution Workflow Committee	
Committee leadership		Professional Organization Involvement (optional)	
Elective rotations (3)			
4 weeks			
Academia administration	Home care administration	Medication use policy	Transitions of care
Community pharmacy administration	Managed care administration	Inpatient pharmacy services management	Research pharmacy administration
Infusion services	Pharmacy senior leadership	Policy, regulatory compliance, and medication safety	

Staffing Requirements

	PGY1*	PGY2
No MBA	22 weekends (~every other weekend)	15 weekends (~every 3rd weekend)
OMBA	15 weekends (~every 3rd weekend)	17 weekends (~every 3rd weekend)
Holidays	<p style="text-align: center;">1 major (Thanksgiving, Christmas, New Year) as a 5-day block +</p> <p style="text-align: center;">1 minor (Memorial Day /Labor Day) as a 3-day block</p> <p style="text-align: center;">1 minor (Independence Day) as a 3-day block</p>	
Required Operations	Pharmacy Operations rotation – 1 month	20 weekdays

*plus additional training days

On-Call Requirements

	PGY1	PGY2
	<ul style="list-style-type: none"> ▪ Clinical on-call pager in 1-week increments* ▪ Code pager response in 1-week increments* <p>*Both of these are rotated equally amongst PGY1 residents.</p>	<ul style="list-style-type: none"> ▪ Technician supervisor on-call pager – 1 week ▪ Administrator on-call pager – 3 x 1-week blocks (2 learning weeks and one live week)

Meeting Attendance

- Clinical Practice Committee* (PGY1 year – required during admin rotations)
- Medication Distribution Workflow Committee* (PGY1 year – required during admin rotations)
- Regulatory Readiness Policy Compliance Committee (optional in 1st year, required to attend 3 meetings in second year)
- Medication Safety (optional)
- Pharmacy & Therapeutics (optional)
- Management team (optional)
- Pharmacy Executive Council^ (required in PGY2 year)
- Professional Society Committee Involvement (optional)
- HSPAL Topic Discussions and Coffee Talks& (required)

*Co- Chair during PGY2 for six months in each Clinical Practice Committee and Medication Distribution Workflow Committee. Residents switch half-way through the year.

^Rotating secretary in PGY2

& Scheduled by PGY2 residents

Conference/Travel Support

- PGY1
 - ASHP MCM - December - 5 days
 - GLPRC - April - 3 days (Present Research Project)
 - ResiTrip - May - 4 days
- PGY2
 - PARE - July/August - 3 days (If meeting occurs)
 - ASHP Leaders Conference - Oct - 3 days
 - ASHP MCM - December - 5 days,
 - GLPRC - April - 3 days (Present Improvement Project)
- Fellowship Year
 - Requests similar to other manager, as appropriate

PGY1/2 Requirements and Expectations to Coordinate

- HSPAL All Quarterly Meetings
- HSPAL Site Visits
- PPS scheduling
- On-site interview scheduling/coordination
- Participation in HSPAL program recruitment, including application review and interviews

PGY1/2 Hospital Site Visits

Format

- PGY1 Residents handle the scheduling and communication
- Both PGY1 and PGY2 residents participate in all visits
- Residents should assure that a rotation of pharmacy leaders, including technician leaders, also participate
- Requires a formal agenda/list of things to see
- Residents write a brief report on the visit identifying differences between U-M Health and other sites
- Residents include recommendations for improvement at U-M Health

Even Years

- Sparrow health system – summer or fall
- Detroit area hospital – winter or spring

Odd Years

- UMH-West – winter or spring
- MyMichigan – summer or fall

HSPAL Fellowship Year Information

The following provides details about the third year of this combined program. The third year is called a fellowship year, for lack of a better term. If it was technically labeled a PGY3 year then there would need to be specific goals and objectives included in PharmAcademic and accredited by ASHP as a PGY1-3 residency. This is neither the intent nor the case.

Background

- It is the goal of the U-M Health pharmacy department to provide our HSPAL residents with the best possible learning experience and to provide them with the best academic training available so that they can be successful in future careers as pharmacy leaders in complex health systems.
- Another goal is to be recognized as one of the top 5 combined HSPAL/Master's degree programs in the country. Oversight of pharmacy services in complex health systems requires years of practice and management experience. It also requires skills and in-depth understanding of operations, hospital and pharmacy finances, strategic planning, personnel management, innovative thinking and continuous improvement.
- The MBA is chosen over an MHA or MPA because pharmacists already have a sound knowledge of healthcare and healthcare systems. The MBA focuses more on the business side of management, which are critical skills in the jobs for which this program intends to train residents. Also, the MBA is a more universally applicable degree than an MHA.
- The Ross MBA is the best graduate training program at the University of Michigan to prepare these future pharmacy leaders to fulfill those responsibilities. We want our graduates to have the best chance of competing for the best positions and to be successful in those positions, as they represent the University of Michigan.
 - The Ross Business School is rated as a top 5 business school by Financial Times.
- Both the residency program and MBA are designed to be 2 years in length. They are concurrent, but separate programs. The on-line MBA can be completed over more than 2 years as it is not a lock-step program like the weekend MBA program.
- Tuition for the on-line MBA program from the UM Ross business school costs approximately \$115,000-125,000. Michigan Medicine employees do not receive a discount on tuition.
- Michigan Medicine competes with about 30 other HSPAL/M programs for the best resident candidates.
- All other training programs either waive M degree tuition for their residents or the cost is minimal.
- In order for the tuition to be affordable to the resident, and for Michigan Medicine to attract trainees, we agree to cover approximately 80% of tuition costs by supplementing salaries.
- In order to justify the additional salary supplement residents are required to spend a third year working at Michigan Medicine, referred to as a fellowship year.

Fellowship year

- This year is intended to provide the resident with an additional year of experience under the guidance of Michigan Medicine pharmacy leaders.
- The year has the following goals:
 - To have the fellow serve as either an interim manager in an area without a manager or to serve in a leadership role supporting the Department as follows:
 - To manage personnel and an aspect of pharmacy operations
 - To complete a project or projects of importance and need to the department or health system
- During the course of the year the fellow will be assessed for potential as a manager for a permanent role at Michigan Medicine.
- Upon completion of the third year the fellow completes their obligation to Michigan Medicine.
- If the resident does not complete the third year they are required to re-pay Michigan Medicine \$30,000 of the salary supplement paid to them over the year.
- Since the fellowship positions are classified in the Michigan Medicine HR system as pharmacy residents (not managers) they will continue with the same health benefits they had during the first 2 years.
- Paid time off will accrue the same as a starting pharmacist (16 hours/month).
- Compensation - salary the third year will be \$105,000 or as per the letter of acceptance.
- Manager positions occasionally become open due to vacancy or newly created positions.
 - If a manager position becomes available during the PGY2 or fellowship year the PGY2 resident or fellow can apply for the position (along with any other applicants), however there is no guarantee that they will get that job. This is the same process that is followed for all positions.
 - If a PGY2 resident or fellow does get the manager job, then their salary the first year as a manager will be \$95,000.
- Attendance at, and support for, professional development conferences will be handled the same as for other managers. There is neither a requirement nor expectation that the fellow will attend the same conferences that they did as a resident.
- The fellow will participate in HSPAL residency advisory committee meetings. They will also support the topic discussions and coffee talks as any other manager.
- The fellow will meet on a monthly basis with the Chief Pharmacy Officer along with their supervisor to assure they are overseeing personnel and operations as intended as well as to check on the status of assigned work.

PGY1 PHARMACY & PGY2 INVESTIGATIONAL DRUGS AND RESEARCH PHARMACY

Program Director: Kim Redic, PharmD

Program Coordinator: Yihan Sun, PharmD, BCPS

Description of Program

This two-year specialty residency training program in Investigational Drugs & Research Pharmacy is designed to provide the resident with a wide array of experiences in clinical drug research while affording opportunities for collaboration with renowned clinicians and world class experts in research, education, and population health. The program is designed to provide a strong clinical foundation while developing analytical, leadership, teaching, and writing skills. It will also provide experiences in clinical trial research and research pharmacy staffing experiences. The first year is aligned with the PGY1 pharmacy program, with elective and longitudinal experiences in research-related areas. The PGY2 year provides specialized experiences in clinical research. Upon completion of the program, the resident will be prepared to secure a specialized pharmacist position in a variety of clinical research, regulatory, and drug development settings, including industry, academia, and research pharmacy practice.

Graduation Requirements

Graduation requirements are as noted in the Manual, apply to each year separately, and include completion of 80% or more of the ASHP required objectives for each year. It is expected that the requirements for the PGY1 residency be completed wholly within the first year.

Separate certificates will be issued upon successful completion of each year.

Required and Elective Rotations for PGY1 Year

- Per Manual

Required Rotations for PGY2 Year

Learning experiences are defined as units equal to 20 rotation days to allow flexibility in scheduling. Experiences are scheduled as blocks of 4-6 weeks or as longitudinal experiences across multiple months, depending on resident interest and other scheduling considerations.

- Human Subject Protection and IRBMED (1 unit)
- MICHR IND/IDE Assistance Program (1 unit)
- Orientation: IRB and On-line training and on-boarding (2 Units)
- Outpatient Research Clinic (1 unit)
- Practice Management I: Managing a Research Pharmacy Team (0.5 unit)
- Practice Management II: Leading a Research Pharmacy Service (1 unit)
- Quality and Safety I: Foundations and Principles (0.5 unit)
- Quality and Safety II: Applications to Research Pharmacy Practice (0.5 unit)
- Research Pharmacy Services: Operations (1 unit)
- Study Management I: The Role of the Lead Pharmacist (0.5 unit)
- Study Management II: Advanced Topics (0.5 unit)

Additional Required Experiences:

- Longitudinal writing project and continuing education presentation (PGY1 and PGY2)
- Longitudinal research project (PGY1 and PGY2)
- Clinical on-call (PGY2) & code response and on-call (PGY1)
- Teaching assignment at the College of Pharmacy (PGY1 and PGY2)
- Resident Leadership and Research Series (PGY1)
- Committee involvement per Manual (PGY1 and PGY2)

Elective Rotations for PGY2 Year

- Protocol Review Committee - Scientific Merit (1 unit)
- Compounding Compliance Management (1 unit)
- Infusion Pharmacy Research Operations (1 unit)
- Senior/Executive Leadership: Research Enterprise (1 unit)
- Many required rotation noted above can be developed into an advanced level elective learning experience for residents who wish to develop additional skills or competencies in a specific area.
- Patient Care Rotations: any RAC-approved patient care rotation can be developed into an elective in the PGY2 year and should be considered for residents who want to develop additional clinical competency in a specific patient population. The patient population should include opportunities for care of research participants and/or should develop skills of relevance in the care of research participants.

Additional opportunities for electives that can be considered/explored based on resident interest and alignment with residency goals and objectives.

Additional Elective Experiences:

- Teaching Certificate in cooperation with the College of Pharmacy (PGY1)

Staffing Requirements

- PGY1: per the Manual
- PGY2: Staffing is an average of one research pharmacist dispensing shift per week. These shifts range from 4-6 hours per shift and occur during the prevailing research pharmacy hours of operation.

On-Call Requirement (PGY2 Year)

Resident on-call coverage is according to the Research Pharmacy on-call rotation, which is comprised of 1-week on call assignments an average of every 7-12 weeks, and must include at least one major and one minor holiday.

PGY2 AMBULATORY CARE PHARMACY

Program Director: Emily Miretti, PharmD, BCPS, BCACP, CDCEs

Description of Program

The PGY2 Ambulatory Care Pharmacy Residency is designed to provide a strong clinical foundation and help the resident further develop research, teaching, leadership, and writing skills. Clinical rotations are longitudinal in nature and include core and elective experiences that focus on direct patient care in the Patient Centered Medical Home (PCMH) and specialty clinics. Each resident is offered the opportunity to customize their elective rotations to their clinical interest(s), selecting from opportunities in chronic kidney disease, cystic fibrosis, hematology/oncology, hypertension, infectious disease stewardship, oral chemotherapy, palliative care, pharmacogenetics, solid organ transplant, specialty pharmacy, transitions of care – geriatrics and transitions of care – heart failure/cardiology. A multitude of teaching opportunities are available to the resident, who will receive a faculty appointment as an Adjunct Clinical Instructor at the University of Michigan College of Pharmacy.

Graduation Requirements

The completion requirements will be reviewed at the initial development plan meeting and each quarterly update meeting thereafter. Changes to the program will be made at that time if resident is not progressing towards completion.

- Completion of at least 80% of ASHP objectives
- Completion of the areas/topics listed in the PGY2 Ambulatory Care CAGO appendix
- Completion of required and elective rotations
- Teaching at the College of Pharmacy for 1 semester
- Completion of a research project with the submission of a finalized manuscript suitable for publication
- Completion of a writing project with the submission of a finalized manuscript suitable for publication
- Completion of a 1-hour ACPE accredited CE presentation
- Completion of final research presentation
- Completion of all evaluations within PharmAcademic
- Completion of the ASHP entering self-assessment interest form and participation in quarterly update meetings
- Completion of staffing requirements
- Completion of core Ambulatory Care topic discussions, journal clubs, journal watch
- Participation on an institutional and/or professional committee
- Participation on a U-M Health Residency committee
- Completion of community service (at least 3 sessions at Student Run Free Clinic)
- Serve as a mentor for at least 3 PGY1 residency case conference presentations

Required Rotations

Scheduled as longitudinal rotations (1/2 day per week), unless otherwise noted

- Orientation (July) – month long block
- Independent Patient Centered Medical Home (PCMH) Clinic – 11 months, ½ day per week

- Primary PCMH Clinic – 10 months, ½ day per week
- Secondary PCHM Clinic – 10 months, ½ day per week
- Anticoagulation – 3-4 months; ½ day per week
- Administration – 3-4 months; ½ day per week
- Medication Optimization – 5.5-months; ½ day per week
- Psychiatry – 3-4 months; ½ day per week
- Transitions of Care – Ypsilanti Health Center – 5.5-months; ½ day per week
- Transitions of Care – Central – 3-4 month block; ½ day per week

Elective Rotations (3-4 months, 1/2 day per week)

- Chronic Kidney Disease
- Cystic Fibrosis
- Hematology/oncology
- Hypertension
- Infectious Disease Stewardship
- Oral chemotherapy
- Palliative Care
- Pharmacogenetics
- Solid organ transplant
- Specialty pharmacy
- Transitions of Care – Geriatrics
- Transitions of Care – Heart Failure/Cardiology

Staffing Requirements

Residents will participate in outpatient pharmacy staffing approximately every 3rd weekend, including one minor holiday and one major holiday block. Residents will be on-call on Sundays (10am-4pm) 1-2 times per month. Residents receive all minor and major holiday blocks off that they are not scheduled to staff. Resident feedback forms are not required to evaluate staffing.

Meeting Attendance

- Attendance at ASHP Midyear Clinical Meeting with poster presentation at Vizient poster session
- Attendance at Great Lakes Pharmacy Residency Conference with presentation of research project results
- Attendance at Resi-Trip

PGY2 CARDIOLOGY PHARMACY

Program Director: Sabrina Dunham, PharmD, BCPS, BCCP

Description of Program

The PGY2 Cardiology Residency is an organized, directed postgraduate training program that focuses on the development of the knowledge, attitudes, and skills needed to provide pharmaceutical care in cardiovascular pharmacy practice. The program is structured in accordance with the ASHP Accreditation Standard for Specialized Pharmacy Residency Training in Cardiology.

Required Rotations

- Cardiology Pharmacy Practice Orientation (1 month)
- General Cardiology (2 months)
- Cardiac Intensive Care Unit (CICU) (2 months)
- Heart Failure/Transplant (2 months)
- Cardiovascular Intensive Care Unit (CVICU) (1 month)
- Ambulatory Cardiology (VA) (1 month)
- Longitudinal Outpatient Anticoagulation Service/Cardiology or Post-Intensive Cardiac Care Outpatient Long-Term Outreach (PICCOLO) Clinic (4 hours per week for 16 weeks. Note: anticoagulation experience may be condensed to a 2-week, 8 hour/day experience)

Elective Rotations

- Pediatric Cardiology (1 month)
- Cardiovascular Intensive Care unit (CVICU) II (1 month)
- Electrophysiology Clinic (2 weeks), as available
- Cardiology Consults (2-4 weeks)
- Anticoagulation and Transitions of Care – Cardiology/heart Failure (Outpatient) (1 month). If this option is selected, will also fulfill the required longitudinal outpatient anticoagulation requirement above
- Adult Emergency Medicine (1 month)
- Medical Intensive Care Unit (MICU) (1 month)

Graduation Requirements

- Completion of at least 80% of ASHP objectives
- Completion of the areas/topics listed in the PGY2 Cardiology CAGO appendix via the PGY2 Cardiology Residency Requirements Tracking/Checklist
- Completion of required and elective rotations and longitudinal requirements
- Completion of a research project with the submission of a finalized manuscript suitable for publication
- Completion of a writing project (or additional research project if previously published a review article) with the submission of a finalized manuscript suitable for publication
- Completion of an ACPE-accredited 1-hour CE presentation
- Research poster-podium presentation to the department of pharmacy and professional organizational meeting

- Teaching at College of Pharmacy (3 hours per week for 1 semester)
- Develop/modify content for online learning for the Doctor of Nurse Practitioner Pharmacology Course
- Rotation based teaching (minimum 2 topic discussions per rotation; serve as primary preceptor for 1 or more P4 APPE rotations)
- Professional & institutional committee involvement
- ACLS code blue pager coverage (approximately 10-15days throughout the year)
- Core cardiology topic discussions and journal club (6-7 topics and 6 journal clubs/late breaking clinical review)
- Development of a guideline or protocol for cardiology or related areas
- Completion of cardiology-related quality improvement project
- Develop and deliver medication-related talk to LVAD/heart transplant patient support group (if scheduling allows)
- Develop nursing and/or physician in-service
- Participation in pharmacist code response training
- Participation in at least 1 community service event/activity

Meeting Attendance

Attendance at PGY2 cardiology specific conference with presentation of results of one research project (e.g., ACC)

Staffing Requirements

Approximately every 3rd weekend for no more than 15 clinical weekends, one minor holiday and one 5-day major holiday block.

PGY2 CRITICAL CARE PHARMACY

Program Director: Jim Miller, PharmD, BCCCP

ASHP Purpose Statement

PGY2 residency programs build upon Doctor of Pharmacy (PharmD) education and PGY1 pharmacy residency training to develop pharmacist practitioners with knowledge, skills, and abilities as defined in the educational competency areas, goals, and objectives for advanced practice areas. Residents who successfully complete PGY2 residency programs are prepared for advanced patient care or other specialized positions, and board certification in the advanced practice area, if available.

Description of Program

The PGY2 Critical Care pharmacy residency at University of Michigan Health is a 12-month program designed to provide clinical, research, and teaching experiences for pharmacists in the care of critically ill and injured patients. The program accommodates one resident each year beginning on the first business day of July.

Program Structure

An orientation rotation in July is required unless the resident completed the PGY1 Pharmacy residency at University of Michigan Health during the preceding residency year. In that case, the orientation rotation will be waived, and the July rotation block can be used as an additional clinical rotation.

Required and Elective Rotations

Required Rotations (1 month block)	Elective rotations (1 month block)
Orientation* - July	Infectious Diseases
Nutrition support – August	Solid Organ Transplantation
Critical Care Medicine Unit (CCMU)	Acute Pain Service
Surgical ICU (SICU)	Post-ICU Clinic**
Cardiovascular ICU (CVICU)	Others can be discussed with RPD
Cardiac ICU (CCU)	
Neurological ICU (NICU)	
Trauma/Burn ICU (TBICU)	
Research month (December)	
Emergency Medicine (AES) - January	

* A PGY2 resident who completed PGY1 at University of Michigan Health is exempt from a month-long orientation rotation. Initial program overview will be reviewed with RPD.

**Post-ICU Clinic is a longitudinal, 11-month rotation to be scheduled with preceptor.

Graduation Requirements

Category	Requirement	Deliverables
Clinical rotations	The resident must be evaluated as “Achieved for Residency” (ACHR) on $\geq 80\%$ of Goals & Objectives (R1)	<ul style="list-style-type: none">Completed Topic Tracking document.

		<ul style="list-style-type: none"> Completed Learning experience evaluations.
Research project	The resident must complete a research project and produce a manuscript suitable for publication. (R2)	<ul style="list-style-type: none"> Manuscript suitable for publication Slides from final research presentation Any posters presented at conferences related to project(s)
Writing project	The resident must complete a writing project (or 2 nd smaller research project as applicable) and produce a manuscript suitable for publication. (R2)	<ul style="list-style-type: none"> Manuscript suitable for publication. Slides from Continuing Education (CE) presentation
Quality improvement project	The resident must complete a project related to quality improvement, often in conjunction with their hospital committee involvement (though not required). (R2)	<ul style="list-style-type: none"> Summation of quality improvement project (can be in Word, PowerPoint, etc.)
Committee involvement	The resident must sit on an ICU-specific quality improvement committee. The resident must seek membership on a committee of a professional organization (may be local, regional, or national) and actively serve the profession through it. (R2)	<ul style="list-style-type: none"> Summation of any work accomplished through these committees.
Major topic presentations	The resident must present a series of presentations on major topics (in conjunction with PGY2 Cardiology resident) to preceptor group. (R3, R4)	<ul style="list-style-type: none"> Slides/handouts from presentation.
Weekend staffing	The resident must staff all required weekend shifts (~15 total; ~10 weekend clinical shifts and ~5 emergency department staffing shifts). (R1)	<ul style="list-style-type: none"> Any applicable CANOPY feedback forms.
Teaching	The resident must satisfactorily complete all required teaching assignments. (R4)	<ul style="list-style-type: none"> Slides/handouts/documents demonstrating completion.
Code blue pager coverage	The resident must provide ~3 weeks per year of code blue pager coverage. (R1)	<ul style="list-style-type: none"> Any applicable CANOPY feedback forms.
Clinical case conference	The resident must serve as a backup for PGY1 residents for their clinical case conference presentations. (R4)	<ul style="list-style-type: none"> Any applicable CANOPY feedback forms.
Professional conference participation	The resident must present a poster/platform presentation at a professional conference. (R4)	<ul style="list-style-type: none"> Slides and/or poster from presentation.

PGY2 EMERGENCY MEDICINE PHARMACY

Program Director: Elizabeth VanWert, PharmD, BCPS

Program Coordinator: Adrienne Bell, PharmD, BCPS

Description of Program

The PGY2 Emergency Medicine (EM) Pharmacy Residency is an organized, directed postgraduate training program that focuses on the development of the knowledge, attitudes, and skills needed to provide pharmaceutical care in both adult and pediatric emergency medicine pharmacy practice. The program is structured in accordance with the ASHP Accreditation Standard for Specialized Residency Training in Emergency Medicine.

Graduation Requirements

- Completion of at least 80% achieved for residency (ACHR) for ASHP required objectives
- Research project and manuscript suitable for publication in addition to presenting final project
- Writing project and manuscript suitable for publication
- Completion of an ACPE-accredited 1-hour CE presentation
- Teaching at College of Pharmacy
 - 1 lecture in critical care elective for 1 semester
 - 1 course assigned by the COP for 1 semester
- Rotation based teaching (serve as co-preceptor for one P4 APPE rotation or PGY1 rotation)
- ED focused in-service or lecture (1)
- Professional & institutional committee involvement
 - 1 residency committee
 - 2 ED committees (one institutional; one local, state or national)
- Journal Club – complete 6
- Development of guideline or protocol for Adult or Pediatric Emergency Department
- Completion of EM-related quality improvement project
- Participation in pharmacist code response training (1 – 2 sessions in 2nd half of residency year)
- EMS Ride-Along Shadow (at least 1 session)
- Attend wilderness medicine day (September)
- Complete required topics on topic tracker
- Facilitator for PGY1 resident case conference series (1-week commitment, approximately 3-6 times throughout the year)

Required Rotations

- Orientation (1 month)
- Adult Emergency Medicine I (1.5 months)
- Adult Emergency Medicine II (1 month)
- Adult Emergency Medicine III (1 month)
- Pediatric Emergency Medicine (1.5 months)
- Adult ICU (1 month)
- Pediatric ICU (1 month)

- Emergency Medicine Pharmacy Practice Management (1 month)
- Research (1 month & longitudinal)
- ED staffing (longitudinal)
- Teaching and Writing (longitudinal)

Elective Rotations (Select 2, one from each category, 1 month each):

- 1 ED elective
 - Repeat Pediatric or Adult ED
 - Urban ED*
- 1 ED-related rotation at MM*
 - Options include Trauma/Burn ICU, Surgical ICU, Neurology ICU, Cardiac ICU, Pediatric Cardiology ICU, Infectious Diseases or Psychiatry

*Rotation availability varies year by year

Staffing Requirements

Approximately every 3rd weekend for no more than 15 weekends, 1 minor holiday, and 5-day major holiday block throughout the year, one gap day between Christmas and New Year holiday; location is in both adult and pediatric emergency department satellites.

Meeting Attendance

- Attendance at ASHP Midyear Clinical Meeting (MCM) with poster presentation at Vizient poster session
- Attendance at Great Lakes Pharmacy Residency Conference with presentation of results of one research project
- Attendance at PGY2 Emergency Medicine specific conference (e.g. ACCP, ACEP, SCCM, SAEM/AEMP)

PGY2 ONCOLOGY PHARMACY

Program Director: Allison Schepers, PharmD, BCOP

Program Coordinator: Madeleine Ochs, PharmD. BCOP

Description of Program

The U-M Health PGY2 Oncology Pharmacy Residency is designed to provide residents with a diverse set of experiences in hematology/oncology, while allowing collaboration with top experts at an NCCN-designated Comprehensive Cancer Center. The program will challenge residents to develop high-level clinical and literature evaluation skills through a wide variety of inpatient and outpatient experiences. The strong affiliation with the University of Michigan College of Pharmacy allows residents to hone educational skills through didactic lectures, round table discussions, and precepting of fellows, residents, students. Residents will become experts in academic performance through completion of high-level research and writing endeavors throughout the year. The program also affords the opportunity to work with experts in oncology practice management and design of unique services. Upon completion of the program, residents will be among the leaders and best in hematology/oncology practice, poised to secure a specialized pharmacist position in hematology/oncology.

Program Structure

Rotation experiences are tailored according to resident interests in conjunction with the residency program director and coordinator in July.

- **Block Rotations** – Required experiences are 1 month unless otherwise specified. May repeat any required rotation as an elective experience. Elective rotations can be taken for 2-4 weeks. Rotation hand-offs occur between block rotations.

Rotation	Required or Elective
Orientation	Required (July)
Adult Inpatient Hematology (MHE)	Required
Inpatient Hematology (MHP)	Elective
Inpatient Oncology (MON)	Elective
Inpatient Bone Marrow Transplant	Required
Pediatric Hematology/Oncology	Required
Oncology Administration	Required ((2 weeks minimum)
Ambulatory Oncology GI/GU/Lung (Blue)	Required
Ambulatory Oncology GYO/Melanoma/Breast (Gold)	Required
Ambulatory Hematology (Lymphoma/Myeloma/Leukemia)	Elective
Hematology Consult Service	Elective
Ambulatory Bone Marrow Transplant	Elective

Infectious Diseases	Elective§
Medical ICU	Elective
Teaching/Academia	Elective <i>(Typically offered in November or January depending on academic scheduling – check with preceptor)</i>

- **Longitudinal rotations** - Fall is considered August through December & Winter is considered January through May or February through June.

Rotation	Required or Elective
Ambulatory Hematology (Lymphoma)	Two required for longitudinal experience (4 hours per week; ½ year)
Ambulatory Hematology (Myeloma)	
Ambulatory Hematology (Leukemia)	
Ambulatory Bone Marrow Transplant	
Ambulatory Oncology (Melanoma)i	
Ambulatory Oncology (Melanoma)	
Ambulatory Oncology (Breast)	
Ambulatory Oncology (Head and Neck)	
Ambulatory Oncology (GU)	
Ambulatory Oncology (GI)	
Ambulatory Oncology (Sarcoma)	
Ambulatory Oncology (Lung)	
Ambulatory Oral Chemotherapy	

- All required block rotations and longitudinal clinics take place at the UM Ann Arbor campus. Infusion orientation may be scheduled at UM satellite sites in SE Michigan (UM West Ann Arbor, UM Brighton). Residents are responsible for their own transportation to rotations and staffing.

Graduation Requirements

- Research Project
 - Includes protocol presentation and final research presentation
- Writing Project
 - Includes departmental continuing education presentation
- Major topic discussions (Michigan Oncology Pharmacy Symposium; MOPS)
 - Occur approximately every other month (2 residents alternate)
 - Topics that must be covered throughout the year, either on rotation or in major topic discussions are shown in topic tracker.
- ONC-STAR will be evaluated throughout the year on a quarterly basis
- Case Conference Facilitator
 - PGY2 Oncology residents serve as the back-up/facilitator for PGY1 residents during their assigned case conference week. Residents help PGY1s in selecting complex clinical questions, as well as facilitating a productive discussion.
- Contentedness/Well-Being

- Residents will be responsible for identifying a goal to help promote their well-being and contentedness throughout their residency year. Mental health and well-being are an important aspect and oncology pharmacists should look to identify enjoyable activities outside of work to maintain optimal health and well-being to be successful.
- Staffing
 - Residents will work approximately 1 weekend per month in the ambulatory infusion setting, ensuring the safe preparation of hazardous oncologic medications by overseeing pharmacy technicians in this area. Residents will undergo training in orientation month and by the end of the month will be able to independently verify and dispense oncologic medications in the infusion pharmacy. By the final quarter of the year, residents should require minimal oversight from pharmacy preceptors and be able to respond to emergency situations, including anaphylaxis, extravasations, and other emergent situations in the infusion pharmacy with confidence. Residents will work one major and one minor holiday block, but dates of these blocks may differ slightly from other programs due to the hours of the infusion pharmacy.
- Teaching
 - Course assignments and term (Fall or Winter) will be determined at the beginning of the year by the College of Pharmacy in conjunction with the Resident Advisory Committee.
 - Residents are expected to attend each class session, facilitate discussion of pharmacy students, effectively manage classrooms, understand classwork and curriculum development, and assist in grading/evaluating students. In certain classes, residents are expected to give didactic lectures on various topics. Throughout the year, residents will be expected to gain confidence in teaching methods and take a larger role in facilitating class discussions. By the end of the year, residents should be able to manage a classroom independently.
- Association/Committee Work
 - Residents will serve as active members of the Cancer Pharmacy Committee, in addition to an external regional or national committee.
 - Residents are expected to attend necessary committee meetings (may be in person or electronically via skype/phone) and actively participate in advancing pharmacy practice through the specific mission and objectives of the association/committee.
- Research Pharmacy
 - Residents will coordinate with the PGY2 IDRP Pharmacy Resident to complete required readings and topic discussions pertaining to the scientific merit of protocols, compliance and blinding, managing NCI studies, and other miscellaneous topics. Other resident expectations include:
 - 2 sessions of investigational drug dispensing with a research pharmacist in B2
 - Complete IRB assigned readings and attend IRB symposium and/or IRBMED meeting, schedule permitting

- Complete assigned readings on research pharmacy practice, NCI studies, and expanded access
- Complete assigned readings on protocols, review two protocols and attend PRC meeting
- Complete assigned readings on order set development and prepare an ERx template, Beacon paper order template, and dispensing guideline for one intravenous and one oral medication
- Present poster at Midyear Clinical Meeting and HOPA Annual Conference (or other specialty conference at the discretion of the RPD/resident) and platform presentation at Great Lakes Pharmacy Resident Conference
- Present one ONS lecture on Cancer Pharmacology
- Longitudinal oncology leadership series (1 hour per month) with Prabha Vogel. The longitudinal leadership series offered to all residents is optional
- PGY2 Oncology residents do not participate in code blue response.
- Completion of PGY2 Oncology Graduation Checklist

Meeting Attendance

The following meetings are required for PGY2 Oncology Residents. Residents will present one or more posters at the Midyear Clinical Meeting and the HOPA Annual Conference and present on their research project at the Great Lakes Conference.

- Midyear Clinical Meeting
- HOPA Annual Conference
- Great Lakes Pharmacy Resident Conference
- Residency Trip

PGY2 PALLIATIVE CARE AND PAIN MANAGEMENT PHARMACY

Program Director: Jillian DiClemente, PharmD

Program Coordinator: Abbey Galligan, PharmD, BCPS

Description of Program

The PGY2 Pain Management and Palliative Care Pharmacy Residency is designed to provide the resident with a wide array of experiences in pain and symptom management, while affording opportunities for collaboration with renowned clinicians and world class experts in research and education. The program is designed to provide a strong clinical foundation while developing analytical, leadership, teaching, and writing skills. It will also provide experiences in pain pharmacy, palliative care, hospice, addiction medicine, and institutional policy around pain management. Upon completion of the program, the resident will be prepared to secure a specialized pharmacist position in pain management, palliative care, substance use, or hospice.

The residency program in pain management and palliative care is designed to develop clinician expertise in pain and symptom management pharmacotherapy in order to practice in the inpatient, outpatient, or hospice setting as a clinical pharmacy specialist.

Graduation Requirements

	Completion of 10 rotations, one month in length (unless noted elsewhere) with July assigned as Orientation and December as Research
	Completion of required rotations: Acute Pain Management, Addiction Consult Team, Adult Palliative Care I and II, Ambulatory Pain and Palliative Care (longitudinal or block), Hospice I (longitudinal or block), Pain Pharmacy Service, Psychiatry, and Institutional Pain Management (Longitudinal)
	Completion of elective rotations: 3 electives if Ambulatory Pain and Palliative Care or Hospice is chosen as a block, or 4 if longitudinal
	Submission of a manuscript suitable for publication for the research project
	Submission of a manuscript suitable for publication for the writing project
	Completion of a formal CE presentation
	Completion of research presentation
	Completion of weekend staffing requirements (approximately 15 clinical day weekend shifts per year with 1 major and minor holiday block)
	Participation on a pain or palliative-specific institutional committee and a resident-level committee
	Development or modification of a guideline/protocol/monograph/patient handout/clinical service/quality project for pain, palliative, hospice, or addiction related area (minimum of 2)
	Completion of teaching P733 course at the University of Michigan College of Pharmacy in the Winter Semester
	Attendance at Hospice and Palliative Medicine Fellows Seminar Series (longitudinal)
	Major Topic Discussions: the resident will present select formal (power point presentation) topics to preceptor groups

Attendance and platform presentation/poster at a conference – can take place as ASHP Midyear Clinical Meeting, Vizient Academic Group, or other conferences attended (e.g. ACCP, PAINWeek, AAHPM, ASAM)

Required Rotations

- Orientation
- Acute Pain Management
- Addiction Consult Team
- Adult Palliative Care I and II
- Ambulatory Pain and Palliative Care (longitudinal or block, as available)
- Hospice I (longitudinal or block, as available)
- Pain Pharmacy Service
- Psychiatry
- Institutional Pain Management

Elective Rotations

The program is flexible in design to offer three-to-four months of elective rotations targeted to the resident's interest. Any of the rotations listed above may be repeated or elective rotations can be tailored specifically to meet an individual resident's needs, not limited to:

- Academia
- Acute Pain Management II
- Addiction Consult Team II
- Adult Heart Failure/Transplant
- Adult Palliative Care III
- Hospice II
- Inpatient Medical Oncology
- Opioid Stewardship
- Pediatric Palliative Care
- Pharmacogenomics

Staffing Requirements

Approximately every 3rd weekend for no more than 15 weekends, 1 minor holiday and 1 major holiday block, and 2 gap days throughout the year.

PGY2 PEDIATRIC PHARMACY

Program Director: Erin Munsel, PharmD, BCPPS

Program Coordinator: Kayla Rice, PharmD, BCPPS

Description of Program

The PGY2 pediatric residency is a twelve-month program based upon American Society of Health-System Pharmacists (ASHP) standards for PGY2 hospital pharmacy residencies and the ASHP Supplemental Standard and Learning Objectives for Residency training in Pediatric Pharmacy Practice. This residency focuses upon development of special competence in clinical therapeutics of pediatric patients, an introduction to clinical research, as well as introductory experiences in the management of sophisticated pharmacy service programs. It is required that the resident has already achieved a basic level of competence in institutional and clinical pharmacy practice. The specific program for each resident may vary in structure and area of emphasis based upon the resident's entering level of knowledge, skills, abilities and interests. In addition to meeting the requirements set forth in the "ASHP Accreditation Standard for Post Graduate Year Two Pharmacy Residency Training" the resident must have previously completed an ASHP-Accredited Pharmacy Practice Residency (PGY1). The resident must provide documentation of successful completion of an accredited PGY1 residency prior to beginning orientation.

The main goals of this residency program:

- Develop pediatric knowledge and build clinical skills required to practice as an independent pediatric practitioner.
- Emphasize the role of continuous professional development through literature evaluation, didactic lectures, discussions, self-learning, and self-reflection.
- Apply evidence-based guidelines and standards in tailoring treatment plans to optimize pediatric patient care and outcomes.
- Facilitate the development of leadership qualities through participation in committees, organizations, and other management opportunities.

Requirements for Graduation

- ACPE-Accredited 1-hour CE Seminar Presentation
- Complete all staffing requirements (defined below)
- Completion of ASHP PGY2 Pediatric Appendix
- Fulfill all rotation requirements
- Institutional committee involvement (minimum of 1 committee)
- Obtain Michigan pharmacist licensure
- PALS Certification
- Poster presentation at ASHP Midyear or other regional conference
- Research project and manuscript submitted to research mentor and RPD
- Resident presentation at a national conference
- Teaching at College of Pharmacy (3 hours per week for 1 semester)

- Writing project (or additional research project if previously published a review article) and manuscript submitted to writing mentor and RPD
- Minimum of 2 journal club presentations
- Minimum of 2 patient case presentations

Required Rotations

- Orientation (1 month)
- General Pediatrics (1 month)
- Neonatal Intensive Care (1 month)
- Pediatric Cardiothoracic ICU and Congenital Heart Center (1 month)
- Pediatric Emergency Medicine (1 month)
- Pediatric Hematology/Oncology (1 month)
- Pediatric Critical Care (1 month)
- Research (1 month)
- CORE – Clinical and Operational Residency Experience) (longitudinal)
- Pediatric Pharmacy Practice Management (longitudinal)
- Pediatric Pulmonary Clinic - Cystic Fibrosis (longitudinal)

Elective Rotations

The program is flexible in design to offer four-to-five months of elective rotations targeted to the resident's interest. Any of the rotations listed above may be repeated or elective rotations can be tailored specifically to meet an individual resident's needs, not limited to:

- Child Psych Consults/Child Psych Emergencies
- Pediatric Bone Marrow Transplant*
- Pediatric Clinical Academia
- Pediatric Hematology
- Pediatric Infectious Diseases
- Pediatric Medication Safety
- Pediatric Nutrition/Clinical Eves
- Pediatric Oncology Ambulatory Care

*Residents with no previous oncology exposure will need to take oncology prior to considering BMT

Staffing Requirements

Approximately every 3rd weekend for no more than 15 weekends, 1 minor holiday, and 5-day major holiday block throughout the year

Meeting Attendance

Attendance at a national meeting with poster or platform presentation

PGY2 PSYCHIATRIC PHARMACY

Program Director: Amy VandenBerg, PharmD, BCPP

Program Coordinator: Megan O'Connell, PharmD, BCPP

Description of Program

The PGY2 Psychiatric Pharmacy Residency at U-M Health is a one-year post-graduate training program designed to develop essential knowledge and skills for psychiatric pharmacy practice at a major academic medical center, community-based hospital or other mental health facility. The residency program provides the flexibility to adapt to the resident's specific learning needs and goals. The training is provided through concentrated inpatient clinical rotations and longitudinal ambulatory experiences.

The program is structured in accordance with the ASHP Accreditation Standards and ASHP Educational Outcomes, Goals, and Objectives for a PGY2 Psychiatric Pharmacy residency and utilizes the Residency Learning System model. This program has a four-part assessment strategy of learning experiences: resident evaluation of learning experience, resident evaluation of preceptor, resident self-evaluation, and preceptor evaluation of the resident's performance during the learning experience.

Graduation Requirements

The completion requirements will be reviewed during quarterly evaluations 3 and 4. Changes to the program will be made at that time if resident is not progressing towards completion.

- Completion of required and elective rotations
- Completion of all assigned PharmAcademic evaluations
- Submission of a manuscript suitable for publication for the research project
- Submission of a manuscript suitable for publication for the writing project
- Completion of a formal seminar CE presentation
- Completion of research report presentation
- Completion of regional or national presentation
- Completion of 80% or more of ASHP program objectives
- Completion of the ASHP entering interest form and objective-based self-evaluation
- Completion of staffing requirements
- Completion of teaching assignment requirements
- Participation on an institutional committee
- Completion of Lunch and Learn teaching series presentations (monthly)
- Major topic discussions
- Maintenance of PharmAcademic profile with updated files tab

Required Rotations

- Orientation
- Adult Inpatient Psychiatry
- Advanced Inpatient Psychiatry

- Advanced Inpatient Psychiatry (Precepting)
- Addictions Consult Service
- Consult Liaison Service
- Child Psychiatry Consult Service
- Psychiatric Emergency Services
- Ambulatory Psychiatry (longitudinal)

Elective Rotations

- Adult General Neurology
- Psychopharmacology Stewardship
- Inpatient Child and Adolescent Psychiatry
- Advanced Consult Liaison Psychiatry
- Combination of services

Additional Longitudinal Activities

- Research project and manuscript
- Writing project and manuscript
- Continuing education seminar
- Teaching Requirement
 - Residents will receive a faculty appointment as Adjunct Clinical Instructor with the University of Michigan College of Pharmacy. Experience in rotation-related precepting and in teaching of Pharm.D. students and PGY1 residents is widely available. In addition, the Resident will gain experience in didactic teaching of second-year Pharm.D. students at the College of Pharmacy.
 - Residents will also have opportunities to educate medical students, nursing staff, psychiatry residents throughout the year

Staffing Requirements

Approximately every 3rd weekend for no more than 15 weekends, 1 minor holiday, and 5-day major holiday block throughout the year.

Meeting Attendance

- Attendance at ASHP Midyear Clinical Meeting with poster presentation at Vizient poster session
- Attendance at Great Lakes Pharmacy Resident Conference (or equivalent) with presentation of results of one research project

PGY2 SOLID ORGAN TRANSPLANT PHARMACY

Program Director: Jennifer Hagopian, PharmD, BCPS, BCTXP

Program Coordinator: Krysta Walter, PharmD, BCTXP

Description of Program

The U-M Health PGY2 solid organ transplant residency prepares its graduates to assume positions in abdominal, cardiothoracic, or pediatric transplantation as clinical specialists employed by an institution or as a non-tenure track faculty member at a college of pharmacy. Graduates from this program will be proficient in the care of transplant recipients within all aspects of the transplant process, including pre-transplant, during the acute care phase of transplant, and ongoing post-transplant care. The program is structured in accordance with the ASHP Accreditation Standard for Specialized Pharmacy Residency Training in Solid Organ Transplant.

Learning Experience	Duration	Designation
Orientation (July)	1 month	Required
Surgery Transplant	1 month	Required
Surgery Transplant 2	1 month	Required
Lung Transplant	1 month	Required
Lung Transplant 2	1 month	Required
Heart Failure/Transplant	1 month	Required
Kidney Transplant Clinic	1 month	Required
Liver Transplant Clinic	1 month	Required
Transplant Infectious Disease	1 month	Required
Research Month (December)	1 month	Required – not evaluated
Electives Rotation ¹ (2)	1 month	Elective
Research Project	Longitudinal, 52 weeks	Required
CE / Writing Project	Longitudinal, 52 weeks	Required
Transplant Topic Discussion Series	Longitudinal, 52 weeks Cadence: ~1 per month	Required
Solid Organ Transplant Practice Management	Longitudinal, 52 weeks <ul style="list-style-type: none">▪ Clinical weekends▪ Protocol development/updates▪ Committees▪ Case conference mentorship▪ Teaching	Required

¹Elective options include Cardiovascular Intensive Care Unit, Surgical Critical Care/Nutrition Support, Pediatric Transplant, Medicine GI, Transplant Clinic (Abdominal) or repeat of required organ experience (Kidney Transplant Clinic 2, Liver Transplant Clinic 2, Surgery Transplant 3). Other elective learning experiences may be developed based on resident interest and preceptor availability.

Graduation Requirements

- Attain ACHR of $\geq 80\%$ of program objectives
- Completion of ASHP PGY2 Solid Organ Transplant Appendix Items
- Completion of research project with manuscript suitable for publication
- Presentation of research project findings at an outside meeting (platform or poster presentation)
- Completion of CE presentation with associated writing project OR secondary research project and manuscript suitable for publication
- Completion of weekend service commitment (13-15 clinical weekends, 1 major and 1 minor holiday block)
- Presentation of core transplant foundation topics and associated presentations to transplant preceptors (approximately 10 throughout the year)
- Development or modification of a guideline/protocol/monograph/patient handout/clinical service/quality project for transplant or related area (minimum of 2)
- Involvement in professional committees
 - National - AST Transplant Pharmacy Community of Practice Subcommittee of choice
 - Institutional – Kidney Pancreas Operations Committee
 - Local - Residency Committee
- Completion of mentorship role for residency case conference
 - Provide mentorship to PGY1 residents and facilitate discussion for assigned PGY1 case conference presentations (approximately 5-6 times throughout the year)
 - Completion of teaching assignment through the University of Michigan College of Pharmacy Resident receives faculty appointment as Adjunct Clinical Instructor. Assigned class during Winter semester, meets approximately 3 hours per week.

Meeting Attendance

- Attendance at ASHP Midyear Clinical Meeting
- Attendance at PGY2 transplant specific conference (examples: ATC, ISHLT)
- Attendance at Great Lakes Pharmacy Resident Conference with presentation of results of one research project (optional if research presented at another conference)
- Attendance at AST Fellows Symposium in September is encouraged