Common Residency Program Manual

University of Utah Health
Department of Pharmacy Services
Salt Lake City, Utah

2023-2024

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Overarching Program Purpose and Goals

Our PGY1 pharmacy residency program builds upon a 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 our PGY1 residency program 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.

Our PGY2 pharmacy residency programs build on 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 our PGY2 residency programs are prepared for advanced patient care or other specialized positions, and board certification in the advanced practice area, if available.

The goal of our programs is to provide a training environment with exceptional learning experiences, preceptors, mentors, resources and support focused on promoting the success of each resident in becoming a competent, ethical, and caring pharmacy practitioner. The program aspires to inspire residents to become exceptional practitioners and leaders over the course of their pharmacy careers. Each U of U residency program aims to grow resident knowledge, skills and abilities and to see each resident complete their program positioned to meet their individual career goals.

Diversity, Equity & Inclusion Statement

The University of Utah Health Department of Pharmacy Services is committed to creating an inclusive learning and working environment and values diversity in all forms. We value the ongoing development of inclusive environments for students, residents, preceptors, and staff to strengthen our organization. We recognize the importance of respecting individual expressions and fostering safe spaces to promote growth in diversity, inclusion, and equity. We believe a diverse pharmacy community will enhance our professional and personal interactions in providing high quality care to all patients.

Residency Program Roles and Responsibilities

Chief Pharmacy Officer
The Chief Pharmacy Officer (CPO) has ultimate responsibility for all Pharmacy Department performance including all pharmacy residency programs. This role determines overall residency strategy (number of residency programs, number of residency positions, etc.); encourages a culture of mutual learning and continuous improvement; and sets the vision for how residency programs fit into the overall department structure.

Director of Pharmacy Education
The Director of Pharmacy Education provides strategic input on overall residency program strategy and coordinates the activities, committees, and programs that span across all residency programs. This role serves as Co-Chair of the Overall Residency Advisory Committee (O-RAC) committee, mentors new RPDs, provides accreditation expertise, develops global accreditation response documents, coordinates rotation schedules across programs, maintains the *Common Residency Program Manual,* monitors resident wellness, and is a liaison between each RAC sub-committee and the O-RAC – serving as a conduit of information.

Residency Program Director
Each program has a designated Residency Program Director who is responsible for the design and implementation of the residency year. The RPD is accountable for the program's compliance with the provision of the ASHP Regulation on Accreditation of Pharmacy Residencies. The Residency Program Director selects residency candidates, assesses overall resident performance (including entering skill level), maintains resident development plans, coordinates all resident evaluations, determines in collaboration with preceptors/leadership rotation schedules, sets expectations of residents / preceptors, provides feedback to residents, guides the development of all learning experiences, appoints preceptors, develops preceptors in collaboration with the department preceptor development program, chairs an associated Residency Advisory Committee for their program, and ensures continuous improvement of the program.

Residency Program Coordinator
RPDs may elect to have a Residency Program Coordinator. Residency Program Coordinators assist with the administrative functions of the residency under the oversight of the RPD. This could include: maintenance and upkeep of program structure (scheduling, manual updates, learning experience updates, PharmAcademic build, etc.), assisting with coordination of recruitment activities, participation in longitudinal precepting, monitoring of resident wellness, and acting as a preceptor advisor.

Residency Advocate/Mentor
Each resident can be assigned an advocate or mentor for the residency year. Advocates/Mentors check in with residents on a routine basis on a personal and professional level. Advocates/Mentors accompany residents to program-specific Residency Advisory Committee meetings, quarterly development plan meetings, or at the request of the resident to facilitate discussion on resident progress to date, areas of strength/opportunity, and to serve as a conduit between the program and the resident. Advocates/Mentors also provide guidance on navigating their year-long project, insight on the institution, and career counseling. The advocate/mentor should request to have rotation preceptors provide specific feedback directly to resident if feedback was not provided to resident during rotation.

Preceptors
Each rotation has a preceptor who develops and guides the learning experiences to meet the residency program's goals and objectives with consideration for the resident's goals, interests and skills. The preceptor periodically reviews the resident's performance and performs evaluations throughout the rotation as prescribed by the residency program including a final summative written evaluation at the conclusion of the learning experience.

Non-preceptor Trainers
Non-preceptor trainers are pharmacy staff members who support residency training in clinical and operational roles necessary to perform essential pharmacist functions. Non-preceptor trainers model and teach pharmacy workflow and skills while providing formative feedback to the resident. They

provide feedback to the resident, orientation preceptor and RPD regarding the readiness of each resident to competently staff in their assigned areas and support pharmacy services.

Executive Assistant
The administrative assistant supports the entire Department of Pharmacy, including residents and residency programs. Major activities include supporting resident onboarding, recruitment, travel (Mountain States Conference, ASHP Midyear, and specialty conferences), events (such as graduation) and supply purchases. The administrative assistant supports residents by directing them to appropriate individuals within the department.

Pharmacy Manager
Pharmacy Managers are accountable to staff performance and clinical service provision. Precepting and teaching are a core function of pharmacists within an academic health system. Feedback and open communication are necessary across team members to improve performance. Residents should share feedback, both positive and constructive, openly with whomever they are most comfortable. Concerns about employee performance need to be shared with both the pharmacy manager and RPD in a timely fashion for resolution and communication back to the involved parties within the bounds of employee confidentiality. Concerns regarding residency program design need to be directed to the RPD. Determination of the staffing and practice model are the purview of the pharmacy manager in collaboration with the RPDs and the rest of the leadership team.

Teaching Certificate Coach
Teaching Certificate Mentors coach residents through each of the requirements of the teaching certificate program, if a resident elects to participate. This includes gaining external feedback, monitoring progress, and approval of the final Teaching Certificate portfolio. They are required to meet at a minimum of every three months.

Major Project Advisor
A major project advisor is assigned with each resident project from the approved project list. Their role is to guide the resident in designing, performing, and documenting the outcomes of the project. They oversee the development of the project proposal and support its presentation to the appropriate sub-RAC. They provide editorial assistance in developing the platform presentation for Mountain States Residents Conference and the final project manuscript. The major project advisor is the final reviewer and approver of project completion.

Overall Residency Advisory Committee (O-RAC)
The Overall Residency Advisory Committee (O-RAC) is a standing committee that coordinates and develops standard practices across programs to ensure high quality and consistent residency training. They also oversee all policies pertaining to the residency programs and the *Common Residency Program Manual*.

Sub-Residency Advisory Committees
These are standing sub-committees of the overall Residency Advisory Committee specific to each individual residency program (defined above). These committees serve as the forum to check in on resident progress, guide the transition of residents between rotations, and to oversee the conduct and continuous improvement of the individual program.

RPD/RPC Selection Process: When a new RPD or RPC needs to be selected, individuals that meet ASHP RPD eligibility and qualifications are able to apply for the position. Qualifying applicants will be

interviewed by residency program leaders, area manager, and a representative group of preceptors for the program. The selection committee chooses the best candidate for the role after asking the same interview questions of all candidates. Ideally, the candidate will then shadow the current RPD or RPC during a transition period before taking over the role. Transitions may be considered when an RPD or RPC requests a transition away from the role or discussed as a possibility at least every 6 years to allow a break from the role.

Recruitment and Selection of Residents

The Department shall participate in the Resident Matching Program of the American Society of Health-System Pharmacists **(ASHP**).

The Department shall participate in the Residency Program Showcase at the ASHP Midyear Clinical Meeting. HSPAL and PGY2 programs may also conduct introductory interviews in the Personnel Placement Service (PPS). At the ASHP Midyear Clinical Meeting, the Residency Program Director **(RPD)** or designee and current residents attending virtually or in person shall participate in the recruitment of candidates for the residency program, and address questions raised by candidates considering application to the program. Program representatives will receive training on recognizing and avoiding recruitment bias and appropriate/legal interview questions.

In order to increase options for potential applicants to learn more about University of Utah Health pharmacy residency programs, each program may offer virtual open houses to allow more students and current residents to participate at no cost in learning about the program. Virtual open house dates and times will be posted on the residency web site.

Those candidates who wish to be considered for an interview shall submit an application, current curriculum vitae, college transcripts, and three letters of recommendation on standardized recommendation forms in PhORCAS by the date determined by the RPD which will be posted in PhORCAS and on the ASHP Residency Directory (No sooner than January 2nd). Programs may choose to require an additional writing sample and note this on the application requirements on the program website.

A standardized rubric will be used to assess required components of each application (e.g., PhORCAS standard application form, letter of intent, 3 letters of recommendation, curriculum vitae, and pharmacy school transcript). The average of at least 2 reviewer's scores will be calculated and the top scoring candidates will be offered an interview. If there is a significant difference between the 2 scores, a third review of the applications will be averaged into the application score. Communication and interpersonal skills are evaluated by current residents and preceptors in interactions before and during the resident selection process and are considered as part of the selection evaluation process. These can include, but are not limited to, interactions leading up to and during the Midyear meeting and social media.

In January, after evaluation of the applications submitted by residency applicants, a sufficient number of applicants shall be invited for an interview.

The virtual half-day interview shall include meeting with the RPD, RPC, key preceptor representatives and current program resident(s). Standardized, behavior-based or value-based questions will be used to interview all candidates. Prior to each set of annual interviews, all interviewers will receive training

on eliminating interview bias and illegal interview questions. Interviewers will also receive training on the objective use of interview question rubrics.

After the interview process is completed, the interview questions will be scored for each candidate using a standard rubric. Each interviewer or interview team shall submit the rubric score for each candidate to the RPD.

The RPD shall use the application and interview scores to determine a final candidate ordinal ranking list. The RPD shall submit the rank list to ASHP Resident Matching Program.

If the program does not match all positions, the RPD and designated interviewers will use the resources of the National Matching Service to identify candidates, score their applications, and interview them using standardized questions. Interviewers will then score candidates by applying a scoring rubric to responses to interview questions. Scores will be submitted to the RPD and a combination of application and interview scores will be used to create the final rank list. This list will be submitted by the RPD to Phase II of the National Matching Service Resident Matching Program. If unfilled positions still exist after Phase II is complete, the program will again use the resources of the National Matching Service to identify candidates, score applications, and interview them using standard rubrics. Based on a combination of application and interview scores, the RPD will offer position(s) to the top candidate(s) verbally.

Once residents are selected through the match, they will receive an offer letter citing the requirements of the program, salary and start and end dates with a link to this manual including overarching program policies. Residents must pass a drug test and background check, and each must sign and return the offer letter to accept the residency position. Candidates must graduate from an ACPE-accredited college of pharmacy or have an FPGEC certificate from the NABP. Prior to starting the residency, the resident must provide proof they are legally able to work in the state of Utah, a full or temporary Utah license, and for PGY2 residents, proof of graduation from PGY1 residency. Residents who are not able to provide proof of these items will not be allowed to start the residency program.

University of Utah Health PGY1 residents will receive guidance regarding the early commit process during residency orientation. Residents are **not guaranteed** an early commitment to a PGY2 program. Residents must make satisfactory progress in the PGY1 program and express interest to the PGY2 RPD by **November 15th** in order to be considered. The resident must then submit a letter of intent and CV to the PGY2 RPD to be considered. Each PGY2 program will use a standardized approach to assessing applications and interviewing each candidate for early commitment. Residents who are not candidates for early commit are encouraged to apply through the National Matching Service.

Program Onboarding

The resident shall meet with the RPD at the beginning of the program to evaluate their skills and knowledge and to develop an individualized plan based on the resident's previous preparation and professional practice goals.

- The evaluation and planning process shall be documented in the PharmAcademic Resident Development Plan using the Resident Self-Evaluation and Planning Form.

- The resident and RPD will develop a customized residency program plan for each resident to accomplish the specific program goals taking into account the resident's goals, interests, strengths, weaknesses, and opportunities available within University of Utah Health.

- The Resident Self-Evaluation and Planning Form will be used to develop each resident's schedule of rotations.

A copy of the *Common Residency Program Manual* and appropriate program supplement shall be provided electronically to each resident outlining the requirements of the residency program when they match with the program.

- Residents shall make themselves knowledgeable of all program requirements.
- Residents shall make themselves aware of important dates and deadlines set forth and identified in the program manual and appendices.

Orientation to University of Utah Health and to the Department of Pharmacy Services will take place during the first weeks of the program; however, orientation and skills development will continue on an as-needed basis.

Residency Administrative Policies

Residents are classified as regular, full-time, exempt employees of University of Utah Health (UUH) and are eligible for benefits as such. (See Appendix A for the Resident Job Description.) As full-time exempt employees, residents must follow University of Utah Health employee policies and Department of Pharmacy Services policies.

Vacation Leave – PTO-Scheduled

- Residents accrue 18 days paid time off **(PTO)** to cover vacation and sick leave during the residency year.
- To ensure the quality of the residency rotations, vacation is limited to 10 days over the course of the year and 2 days of "PTO-Scheduled" (PTO-S) per 4 week rotation experience. (Longitudinal experience activities, wellness events, and sick days do not count against the 2 day limit.) Additional PTO-S days must be approved by the RPD, but cannot exceed the total accrued PTO days for the year as a University employee. PTO remaining at the end of the residency will be cashed out or will be maintained if the resident accepts a position with UUH.
- PTO must be used to cover interviews and conferences that are **not** approved and paid for by the Department of Pharmacy Services.

- The resident will first discuss the PTO request with the affected rotation's preceptor to ensure that rotation objectives can be met, and the resident will obtain the preceptor's approval. Preferably this occurs prior to the first day of rotation. Vacation requests must then be submitted to the RPD. (Huntsman and University Hospital requests must be entered in Staff Ready.)

Holidays and Holiday Leave

Residents accrue 11 paid holidays as full-time exempt employees during the year in addition to PTO. Residents may count a worked holiday as part of service commitment if they have worked their regular commitment during the remaining weekdays and used the holiday from their holiday bank - making the worked holiday truly an extra shift. If the resident has worked less than a 40-hour commitment between the 8 hours of holiday pay (16 hours during the week of Thanksgiving), staffing, and regular rotation attendance, the resident must discuss PTO options with their RPD.

Benefit-eligible UUH employees may "bank" time worked on a company-paid holiday for use at a later time. However, the shift work on that holiday cannot count as a required shift or be paid as exempt clinical shifts (ECS – added compensation) if the holiday is banked. The banked holiday must be used by April 1st if earned in the first 6 months of residency, or by July 1st thereafter.

Residents are required to be available to staff Thanksgiving, Christmas, OR New Year's holidays as a 2-day major holiday coverage commitment. For example, the resident will work Thanksgiving and the day after, or Christmas Eve and Christmas Day, or New Year's Eve and Day (or University-designated holiday when holidays fall on weekends). Residents are also required to work two minor holidays including Martin Luther King. Day, Presidents' Day, Memorial Day, 4th of July, Pioneer Day, Juneteenth, or Labor Day. Specific assignments shall be made in conjunction with the pharmacist scheduling manager at the beginning of the residency year. (Requirements vary by program for holidays.) Of note, Christmas Eve and New Year's Eve are not University Holidays and cannot count toward required staffing shifts unless they fall on weekends. The resident will not attend rotation that day & will instead staff the area as part of their regular residency hours.

Residents shall discuss holiday service requirements with the affected rotation's preceptor as early as possible.

Residents may participate in staffing of shifts for other holidays consistent with the standards applied to regular staff.

Sick Leave – PTO-Unscheduled

Residents are afforded sick leave as a part of the PTO accruals. When the resident is unable to work as a result of illness, either on their rotation assignment or staffing assignment, the resident shall notify the appropriate supervisor. If sick on a rotation day, they should contact their rotation preceptor. Residents should contact the scheduling manager for sick days involving staffing shifts. Residents should notify their RPD if they are sick on project days. Residents are asked to contact the correct person between 6 am and 10 pm as soon as they know they are unable to come in. The resident shall subsequently and additionally notify the RPD of their absence from rotation, project days, or staffing shifts, and submit the sick day request as PTO-unscheduled (PTO-U) in the appropriate format (e.g., payroll exception form which may need to be revised/resubmitted if previously turned in).

The RPD will assess progress in the program when a resident reaches 5 days of PTO-U during the program year to determine if the resident is on track for graduation. The RPD will meet with the resident to discuss absences and review a plan for successful completion of residency.

Work from Home/Remote Work

Residents are generally expected to work onsite. Certain rotations or programs may allow residents to work from home. Project days may only be worked from home with the approval of the RPD. Residents will complete the University of Utah Health Telecommuting form (https://hrit.utah.edu/employee-relations/telecommute) and meet the requirements in the University of Utah Health Hospitals and Clinics Telecommuting Policy at https://pulse.utah.edu/policies/Lists/Policies/DispForm.aspx?ID=12000 in order to work remotely. Residents are expected to be able to come in to work onsite within 1 hour of notification, and will report any downtimes (including but not limited to internet or power downtimes) lasting 15 minutes or greater to their preceptor or RPD to discuss a plan which may require coming onsite. If the resident is planning to work more than 1 hour away from their primary office location, the resident must notify the RPD to provide special approval for working outside of the 1 hour radius. Residents are expected to maintain a similar level of productivity when working remotely as they would on-site and will be available via Microsoft Teams or another communication method during work hours as discussed with their preceptor or RPD. RPDs and preceptors may ask for a summary of progress on assignments when working from home.

Fitness for Duty

Residents will be sent home if an RPD, area manager determines the resident is unfit for duty. Preceptors who identify any issue with fitness for duty must notify the RPD and resident's supervisor (if the RPD is not a supervisor) if the resident needs to be sent home. Examples include excessive fatigue, chemical impairment, illness, emotional distress, or other issues affecting performance. The RPD/supervisor will explain the reason for being sent home to the resident and ensure that the resident has a way to get home safely. The RPD will document the incident in the resident's file and follow up with the resident when they return.

Residents will be referred to organizational resources as appropriate such as Employee Assistance Program, Resiliency Center, Employee Health, or Office of Equal Opportunity.

Residents will take PTO-U for rotation hours missed, and the resident will not count hours missed as required shifts or ECS.

Excessive Absence During the Program

A preceptor or RPD may determine that absences from the rotation or the program are excessive when there is the potential for a resident to not complete program expectations or requirements. Excessive absence may be due to illness or other factors. When situations such as these occur, the resident must work closely with the preceptor and RPD to make arrangements to meet the requirements. Total time away from the residency program may not exceed 37 days per residency year including PTO, holidays, jury duty, bereavement, military leave, medical/family leave, interviews, conferences, etc. Payroll exceptions are tracked in Kronos with reports available for RPD review. Other days away from the program such as interviews and conferences are tracked by the RPD.

Despite all arrangements, a situation may arise where the resident has not completed rotation and program requirements. This determination shall be made by the RPD in consultation with rotation preceptors. An alternate written plan will be developed to enable the resident to successfully complete the program requirements. Consultation with Human Resources may be necessary to determine if a medical leave of absence is needed. The residency year may be extended for no more than 3 months to allow completion of program requirements or to make up time away in excess of 37 days during the 12 month program.

If the resident fails to complete the plan, disciplinary action will be considered. Residents unable to complete program requirements according to the written plan and appropriate extended timeframe will not graduate from the program. Once the annual salary has been paid out at the amount offered in the offer letter, the time spent in completing requirements will then be unpaid.

Graduation from a PGY1 program is required prior to being eligible for PGY2 status. If a resident is in a 2-year program or has early committed to a PGY2 program at UUH, they must complete all requirements of the PGY1 program first.

Disciplinary Action and Dismissal

Residents are informed of pharmacy department administrative policies, program expectations, and the performance improvement process during orientation.

Disciplinary actions or dismissal from the program are actions that are considered when residents do not meet department or program expectations. Residents are informed of program requirements, expectations, and deadlines at orientation. The performance improvement process is also taught during orientation. Rotation expectations are communicated by the preceptor at the beginning of and throughout each rotation. The requirements of each rotation are documented in learning experience description.

When problems related to performance, professionalism, behavior or knowledge arise, the preceptors will counsel the resident on how to correct the problem. If the issues are not resolved, the ongoing concern will be clearly documented in PharmAcademic and elevated to the RPD with an in-person meeting that includes the resident. If the RPD is not a formal pharmacy supervisor, the resident's assigned H.R. supervisor will be notified. The Program Director may consult with the program's leadership and Overall Residency Advisory Committee **(O-RAC)** regarding appropriate action.

The RPD will discuss the issues with the resident and preceptors as appropriate. The RPD, preceptor(s), and resident will work together to create a performance improvement plan in writing. The resident is encouraged to include their mentor/advocate in these meetings. The RPD, relevant preceptors and resident will meet regularly to assess progress on the written performance improvement plan and provide feedback to the resident on their progress. Failure to make adequate progress will be documented on the plan, and adjustments to the plan made in writing.

When disciplinary action is indicated, the RPD (or rotation preceptor in conjunction with the RPD) will take the appropriate action based on the situation and circumstances (See also University Policy 5-111: Corrective Action and Termination Policy for Staff Employees).

When dismissal from the program may be indicated, the RPD will make recommendations to O-RAC. O-RAC will make the final decision concerning dismissal from the program.

Dismissal from the program will occur with consultation with Human Resources during the resident's first 6 months of employment (probationary term). Problems discovered in the 4th or 5th month of the residency may result in a 3-month extension of the probationary term and will be negotiated with Human Resources by the RPD and the location manager. After this time, the resident will go through the progressive discipline process outlined in University Policy 5-111.

Certain circumstances are grounds for immediate removal from the rotation or staffing location including but not limited to the following: loss of legal ability to work in Utah, loss of licensure, theft, abuse, harassment, workplace violence, or knowingly working while impaired. In these cases, preceptors or other pharmacy staff must contact the appropriate area manager and RPD immediately. The preceptor, RPD and area manager must document the event details and submit the event to HR immediately for determination of next steps. The resident may be placed on administrative leave and not have unsupervised pharmacy access while awaiting the decision of the manager and HR in these matters.

Pharmacist Licensure in Utah

All residents are required to be eligible to work in the Utah/United States prior to their first day of residency. Residents must have either a full or temporary Utah license **2 weeks prior** to the first day of residency.

Residents must be fully licensed in the state of Utah to practice as a pharmacist by **90 days from the first day of residency**. If a resident fails to obtain full pharmacist licensure in the state of Utah by 90 days, they will be released from the program. The Overall Residency Advisory Committee will review the circumstances of each case of non-licensure and may approve an extension beyond 90 days for circumstances outside of the resident's control.

Residency Program Certificate

Upon successful completion of all program requirements and compliance with all conditions of the residency program, the resident shall be awarded a certificate indicating successful completion of the residency for the appropriate program. The language on the certificate will match ASHP's requirements for certification of graduation including the official name of the residency program (e.g., "Postgraduate Year One in Pharmacy" or "Postgraduate Year Two in Critical Care Pharmacy.")

Residents that fail to complete program requirements and comply with all conditions of the residency program shall not be awarded a certificate of completion.

Certificates will only be awarded to residents who have completed the following in addition to program-specific assignments:

- Completed 85% or more of objectives as achieved for residency (**ACHR**) and all other goals and objectives marked as "satisfactory progress" or "achieved for rotation" in PharmAcademic.
    - All PGY1 and direct patient care PGY2 residents are expected to achieve all clinical goals for residency prior to graduation (e.g., R1.1 objectives).
- Completed all required learning experiences, assignments and documentation as required by each program and listed in the program-specific supplement.
- Submitted a residency portfolio

- Completed other program-specific requirements as outlined in the specific program's final graduation checklist.
- Signed the program's residency completion checklist.

Residency Advisory Committee Structure

Overall Residency Advisory Committee (O-RAC)

The O-RAC is a standing committee that coordinates and develops standard practices across programs to ensure high quality and consistent residency training. They also oversee all policies pertaining to the residency programs and the *Common Residency Program Manual.*

- Membership: All program directors, program coordinators, CPO, Clinical Manager representatives (inpatient and ambulatory), and a College of Pharmacy representative (ad hoc)
- Co-Chairs: CPO/Director of Pharmacy Education
- Invited Guests: All current residents, current and past year resident advisors/advocates
- Frequency: August, November, February, and May – with ad hoc meetings scheduled as needed by the Co-Chairs
- Charges:
    - Decide on *Common Residency Program Manual* and residency policy additions, changes, and revisions
    - Approve initial all resident rotation schedule
    - Review, discuss and approve RAC subcommittee changes that impact all programs.
- Subcommittees include: PGY1 RAC, PGY2 Infectious Diseases, PGY2 Internal Medicine, PGY2 Medication Use Safety and Policy, PGY2 Ambulatory Care, PGY2 Informatics, PGY2 Critical Care, PGY2 Oncology, PGY2 Emergency Medicine, PGY2 Solid Organ Transplantation, PGY2 Cardiology, and PGY2 Health System Pharmacy Administration and Leadership
- Approve the creation of new resident focused committees, RAC sub-committees and task forces on residency training
- Oversee and prioritize residency program improvement initiatives across programs (e.g. preceptor development, accreditation standards compliance, residency structure, PharmAcademic use, accreditation preparation, etc.)
- Coordinate recruitment and graduation activities that span across programs
- Ensure consistency across programs and serve as a general forum for communication across all residency programs

Operations: Meeting agenda to be distributed 48 hours prior to meeting, documentation of attendance and a summary of the discussion is provided in a timely fashion following the meeting and posted publicly in electronic form. Relevant items for all staff are routed to the CPO for distribution through the Pharmacy Staff Meeting.

O-RAC Members: 2023-2024

Brandon Tritle, PharmD, BCID	Clinical Pharmacist, Infectious Disease PGY2 Director, Infectious Disease
Dave Young, PharmD	Professor, Clinical

	PGY2 Director, Internal Medicine
Erin Fox, PharmD, BCPS, FASHP	Senior Pharmacy Director PGY2 Director, Medication Use Safety & Policy
Karen Gunning, PharmD, BCACP, BCPS	Professor, Clinical PGY2 Director, Ambulatory Care
Dallas Moore, PharmD, MS	Director, Pharmacy Automation and Informatics PGY2 Director, Pharmacy Informatics
Shantel Mullin, PharmD, BCPS (co-chair)	Director, Pharmacy Education PGY1 Pharmacy Residency Director
Kathryn Disney, PharmD, BCCCP	Clinical Pharmacist, Critical Care PGY2 Director, Critical Care
Kelley Julian, PharmD, BCOP	Clinical Pharmacist, Hematology/Oncology PGY2 Director, Oncology
Cole Sloan, PharmD, BCPS	Clinical Pharmacist, Emergency Medicine PGY2 Director, Emergency Medicine
Lonnie Smith, PharmD	Manager, Solid Organ Transplant PGY2 Director, Solid Organ Transplantation
Teshia Sorensen, PharmD, BCPS, BCCP	Clinical Pharmacist, Cardiology Services PGY2 Director, Cardiology
Kavish Choudhary, PharmD, MS (co-chair)	Chief Pharmacy Officer, Pharmacy Services
Ashley Bowden, PharmD, MS	Pharmacy Director, Inpatient Operations PGY1/PGY2 Director, HSPAL
Sonya Ruelle, RPh, MBA	Clinical Pharmacy Director – Clinical Leadership Liaison
Nancy Nickman, PhD	Pharmacotherapy Faculty (Ex Officio)

Residency Program Coordinators

Ashley Crosby, PharmD, BCPS (PGY1 Pharmacy - General)
John Dechand, PharmD, BCCP (Cardiology)
Sara DeHoll, PharmD, BCOP (Oncology)
Kristine Gray, PharmD, BCPS (Internal Medicine)
Nick Cox, PharmD, BCACP (PGY1 Pharmacy – Ambulatory Care)
Erin Lingenfelter, PharmD (Emergency Medicine)
Nicholas Link, PharmD (Informatics)
Ashley Ryther, PharmD, MS, BCPS (HSPAL)
Stephanie Sanders, PharmD, BCOP, BCCCP (Oncology)

Program-Specific Residency Advisory Committees

These are standing sub-committees of the Overall Residency Advisory Committee specific to each individual residency program (defined above). These committees serve as the forum to check in on resident progress, guide the transition of residents between rotations, and to oversee the conduct and continuous improvement of the individual program.

- Membership: Varies by program size. The PGY1 Residency Advisory Committee is broad and includes the RPD, RPCs for Track A and B, all current PGY1 residents inclusive of HSPAL residents, current resident advisors, and resident preceptors given the size and breadth of PGY1 training.
- Individual RACs may have different levels of involvement and are minimally required to incorporate: the RPD, RPC(s) (if applicable), resident advisors, resident(s) and key preceptors. Membership is set at the beginning of the residency year and is by appointment of the RPD who acts as the committee chair.
- Chair: For PGY1 RAC: PGY1 RPD; for other RACs the associated RPD is Chair
- Guests: Any preceptor or staff member who has resident interest with prior approval by the chair to attend
- Frequency: Varies by program as determined by the RPD and contained within the program specific supplement to the general manual. Sub-RACs must meet minimally quarterly to discuss development plan adjustments and program improvements.
- Charges:
    - Provide a regular forum for discussion of resident progress in all aspects of their respective programs, including a quarterly discussion of development plan adjustments
    - Provide a forum for continuous residency program improvement, surveying and discussing needed and planned changes within the residency program to ensure the success of residency training (these must be routed to O-RAC for review/approval)
    - Approval of resident project proposals
- Operations: An agenda, documentation of attendance, and a summary of the discussion is required to meet accreditation standards and can be saved or distributed at the direction of the RPD. All items for discussion at O-RAC need to include relevant sub-RAC discussion and rationale and then forwarded to the Chairs of O-RAC for inclusion in the next agenda. If sooner action is needed, a request for an ad hoc meeting can be made to the Chairs of O-RAC.

Research and Scholarship Sub-Committee

- Membership: Pharmacist volunteers with membership from Informatics, Drug Information/Policy, operational and clinical leadership, and the College of Pharmacy
- Guests: Any preceptor or staff member who has scholarship proposals and by consent of the Chair
- Chair: Self Nominated – approved by O-RAC
- Frequency: 3-4 meetings, April-July
- Charges:
    - Project list generation and idea approval
    - Tracking of scholarly activities and resident project completion

    - Be a resource to support scholarship across residency programs and the department
- Operations: No required agenda or summaries. Documentation will be final project list. Membership of the committee will be available in the *Common Residency Program Manual* and a call for new members will be made yearly. The Chair is rotated on a 3-year cycle (Chair, Co-Chair and Past Chair).

Preceptor Development and Teaching Certificate Sub-Committee (PDTC)

- Membership: Pharmacist volunteers, inclusive of the Director of Pharmacy Education
- Chair: Self Nominated – approved by O-RAC
- Guests: By consent of Chair
- Frequency: Every month with ad hoc meetings as needs arise
- Charges:
    - Assessment of preceptor development needs and development of content to meet those needs across all residency programs and learners
    - Approval of qualifying preceptor development from other sources
    - Management of the *Common Residency Program Manual* content and updates related to preceptor expectations
    - Audit of preceptor development hours annually
    - Oversight of the Teaching Certificate program design and conduct
- Operations: No required agenda or summaries. PTDC will provide an annual report to O-RAC including any recommended changes to the Common Manual's preceptor sections as documentation. Membership of the committee will be available in the *Common Residency Program Manual* and a call for new members will be made yearly. The Chair is rotated on a 3-year cycle (Chair, Co-Chair, and Past Chair).

Recruitment Committee

- Membership: Pharmacist volunteers, representative from each residency program, Executive Assistant, and Director of Pharmacy Education
- Chairs: Self-nominated and approved by O-RAC
- Guests: by consent of the Chair
- Frequency: Monthly
- Charges:
    - Coordinating residency recruitment plans across programs (eg, Midyear planning, overseeing website and directory recruitment content, recommending content for mailers, etc.), and reviewing/updating application rubrics
    - Review of interview questions
    - Provide training on unbiased/legal interviewing
    - Creating an annual satisfaction survey for interview candidates
- Operations: An agenda will be sent and minutes documented to share with O-RAC members. A call for new members will be made yearly. The Chair is rotated on a 3-year cycle (Chair, Co-Chair and Past Chair.)

Service Commitment (Required Staffing Shifts)

Residents are required to provide staffing support, within the department, as part of their program. The service commitment will be equivalent to 48 staffing shifts per year. 1 shift equivalent is an approximately 8.5 hour shift on the staffing schedules. See appendices for program-specific information. A service commitment tracking form example is available in Appendix B.

Residents may staff shifts in increments of 2 hours as assigned on the area staffing schedule. Residents may pick up open shifts once the schedule is published if it is approved in advance by the affected rotation preceptor and does not conflict with duty hour requirements. Rotation preceptors must allow residents to leave rotation with sufficient time to get to their staffing shift on time.

Opportunities for service are chosen for the resident by the program director in collaboration with staffing managers and may include on-call, staffing shifts on weekends, or swing shifts as appropriate for the resident and training program needs. Resident service commitment shifts will be assigned with as much advanced notice to the resident as possible. For pre-assigned shifts, residents must inform rotation preceptors of required shifts by the first day of rotation. If residents need time off when they have an assigned staffing shift, they will be responsible to trade the shift(s) with another resident or staff member. If they are unable to trade, the should contact the staffing manager as early as possible to assist with a coverage plan.

Duty Hour Requirements

ASHP's duty hour policy will be followed: https://www.ashp.org/-/media/assets/professional-development/residencies/docs/duty-hour-requirements.ashx. Work Hours are defined as all clinical, staffing and academic activities related to the residency program. Work hours **do** include internal moonlighting shifts worked. Work hours do not include time spent away from the work site (i.e. at home) for reading and preparation or time traveling to conferences. (Moonlighting outside of the organization is **not allowed**.)

Work hours must be limited to 80 hours per week averaged over a 4-week period inclusive of all in-house and virtual activities and all extra staffing shifts (i.e. moonlighting shifts). Extra paid staffing shifts may be available for residents to select, but these are in addition to their required staffing shifts. These extra shifts must not interfere with the ability of the resident to achieve the educational goals and objectives of the residency program. Residents must be given one day in seven free from all work-related responsibilities averaged over a 4-week period. One day is defined a 24-hour period free from all clinical, educational, and administrative activities.

Adequate time for rest and personal activities will be provided. This should consist of at least 10 hours between all daily duty periods averaged over 1 week. Residents must have 8 hours between scheduled duty periods. Residents attest to their duty hours by completing the monthly attestation form in PharmAcademic. All residents and staff will verify their work and rotation hours by signing off on the payroll software as required for all staff. RPDs will assess duty hours for compliance on a regular basis and work with staffing managers and residents to prevent exceeding duty hours.

Covering extra staffing shifts (i.e. moonlighting) are paid at the PRN pharmacist rate and must be documented by residents as exempt clinical shifts (ECS shifts) on the exception form. Residents must also report their moonlighting hours to their RPD. They must clock in and out in Kronos for all regular and ECS staffing shifts so the shifts can be tracked along with all other residency hours. The resident's

designated RPD or manager will assess compliance with the duty hours and the following staffing rules for required shifts and moonlighting shifts (i.e. ECS).

- No “double-doubles” (i.e. 16 hour shifts 2 days in a row including rotation hours)
- Not more than 8 total shifts in a Saturday through Friday work week (including rotation days & staffing shifts)
- No more than 12 consecutive days in a row (e.g., day 13 should be off)
- No more than 80 hours per work week

Moonlighting shifts that affect resident performance or create concerns for resident fatigue and patient safety will require a meeting with the RPD to create a plan for safely covering required shifts. If moonlighting shifts cannot be staffed safely, the resident may not pick up extra shifts.

Some programs may elect to include on-call hours as part of the service commitment. Each program will develop policies consistent with ASHP’s on-call standards including supervision and back-up support.

Residents are expected to read and prepare for rotations and work on their projects on evenings and weekends as part of their learning process. Time spent in the hospital on off-hours working on projects or catching up on rotation requirements may not be used for additional compensation or for required shifts. Time “on the clock” is subject to duty-hour limits.

Resident wellness and resilience are considered in assigning service commitments. Program leadership will assess residents for burnout risk and promote a culture of wellness including education on burnout risk and mitigation strategies. Preceptors will also receive education on signs of burnout.

Staffing during regular rotation hours on weekdays does not count toward required shifts or additional compensation shifts unless it is above the 40 hours of regular rotation week.

The resident may be required to staff their current rotation area during regular rotation hours after being deemed competent to the service in certain situations. These situations may include preceptor illness or when preparation of the schedule has exhausted all other options for finding competent coverage with PRN staff, condensing, calling in other team pharmacists, or finding cross-coverage. In extreme emergencies, residents may be pulled from their rotation site to cover other staffing locations due to acute illness or natural disaster and when all other options have been exhausted to cover these open shifts with other regular or PRN staff. Both the RPD and resident will be contacted to discuss the staffing situation prior to the shift being assigned. Other staff pharmacists may be moved to accommodate department needs and the staffing location is negotiated based resident competence. This is a program and rotation expectation and will NOT count toward additional service commitment hours as it occurs during the regular rotation work week and is not considered extra hours of work. In extreme emergencies such as natural disaster or pandemic, residents may be asked to work extra evening or weekend shifts and will be paid for these shifts above the regular rotation work week. In emergent situations, residents may need to staff any shift depending on department needs including technician or clinical pharmacist duties (see Appendix C).

Service commitment/staffing shifts are considered independent of training days, and are included in the total service commitment/staffing shifts required to complete the residency program requirements. The resident is serving as the independent pharmacist during service commitment/staffing shifts. Residents may be provided feedback on performance during service commitment/staffing shifts, but this does not constitute direct supervision by a pharmacist preceptor.

Rotation Guidelines

Rotation days involve direct supervision by a pharmacist preceptor. The resident performs the duties of a licensed pharmacist in the practice setting, with supplemental education, guidance, and input from the pharmacist preceptor. The supplemental education, guidance, and input from the pharmacist preceptor will vary based on individual resident ability and needs.

The resident shall provide complete pharmacy services in coordination and cooperation with departmental professional and support staff, consistent with departmental policies and procedures for operations and clinical practice, meeting all the requirements and obligations of pharmacists on staff.

The resident shall actively participate in rotation activities, including: team meetings, rounds, and other interdisciplinary conferences that occur on the services of their rotations. The rotation preceptor shall be responsible to identify these opportunities and to commit the resident to effectively participate. By participating, residents are expected to demonstrate minimum competencies as outlined by criteria for ASHP's competency areas, goals and objectives for each program. Appendix D.

The resident shall identify therapeutic issues or operational problems and shall develop and present therapeutic or operational recommendations. They will also present in-services to the medical, nursing, and pharmacy staff addressing those issues as needed. The resident is encouraged to seek opportunities to educate other ancillary health care practitioners such as physician's assistants, nurse practitioners, and physical therapists, etc., on subjects relating to pharmacology, therapeutics and medication use. The resident shall provide instruction for Doctor of Pharmacy students or other residents on clinical or administrative rotations, under the supervision and guidance of their rotation preceptor.

The residency programs at University of Utah Health take a holistic approach to post-graduate training. The expectation is that an interdisciplinary team philosophy will be used, and the team member with the greatest experience will provide leadership and mentorship to other team members.

The resident may be required to staff their current or past rotation area alone during regular rotation hours following orientation to the service in certain situations when the resident has been deemed competent to staff and the staffing manager has exhausted all other options for finding competent coverage. In extreme emergencies, residents may be pulled from their rotation site to cover other staffing locations due to acute illness or natural disaster and only when all other options have been exhausted to cover these open shifts with other regular staff. Both the RPD and resident will be contacted to discuss the staffing situation prior to the shift being assigned. This is a program and rotation expectation and will NOT count toward additional service commitment hours as it occurs during the regular rotation work week and is not considered extra hours of work. See Appendix C.

Non-University of Utah Health Rotations (N-UUH)

- Residents shall be allowed to obtain practice experience in N-UUH rotations as pre-approved by the RPD and Chief Pharmacy Officer.
- Residents shall not be permitted more than four weeks in an N-UUH site rotation during the residency training program.

- PGY1 residents are encouraged to take UUH rotations whenever possible to fulfill their learning objectives as N-UUH rotations do not count toward CMS site reimbursement.

Residency Project

The resident shall complete an approved residency project with the guidance and supervision of appropriate preceptor(s).

Project Purpose and Expected Outcomes: Residents will develop and complete a research or quality improvement project in a practice area or topic for advancing the pharmacy profession. Approved projects will align with the organization's strategic goals and Department of Pharmacy Services priorities. Projects should strive to fill knowledge gaps and aim to improve patient care or operations. Residents must summarize their outcomes as a platform presentation at a regional/national meeting (e.g. Mountain States Conference) and in a final project report suitable for publication.

The resident is responsible for working with a primary project advisor. If more than one preceptor or provider is involved with the project, one pharmacist preceptor will be designated as the resident's primary project preceptor for purposes of evaluations and clarity of project expectations.

The project advisor(s) shall be responsible to:

- Provide guidance to the resident in designing, performing, and documenting the outcomes of the project.
- Oversee the development of the project proposal.
- Meet with the resident at least bi-monthly to discuss the progress and deliverables on the project.
- Support the resident during presentation of the proposal to the program RAC.
- Provide technical expertise and advice to the resident.
- Provide editorial assistance in developing the platform presentation for Mountain States Residents Conference and the final project manuscript.
- Review the final report and notify the RPD when the project is complete by signing off on the project completion checklist and sending this to the resident and RPD.

The project must be approved by the program's Residency Advisory Committee using criteria created by the Research and Scholarship Committee. (Appendix E.) Approved projects must have leadership approval before the projects are offered to residents. The format for the proposal to RAC will follow the current requirements for submission to IRB. (See Appendix F.)

The resident shall meet the following project timelines unless the program uses a flipped project model:

- July — Identification of project idea & advisor(s)
- August — Development of project proposal (see Appendix F for format)
- August-September — Present project to the appropriate RAC Subcommittee
- September-October — Final proposal submitted to RPD, Research & Scholarship Subcommittee Chair, and Institutional Review Board if required.October Submit abstract to Vizient for poster presentation in December (required for

	Teaching Certificate, may be optional for other residents depending on program)
• October-March	Coordinate project team meetings, implement project, request, collect, and analyze data.
• March	Mountain States Conference (or appropriate conference as approved by the program RAC) abstract approved by project advisor(s) and RPD and submitted to Conference before the deadline
• April	Draft of project Mountain States Conference slides and handout to project advisor(s) and RPD
• April	Practice presentations for Mountain States Conference and submit slides to the Conference by April 30th
• May	Present project at Mountain States Conference
• June	Approximate deadline for submission of case studies and posters for next ASHP Midyear Clinical Meeting (Optional, but highly recommended)
• June	Final Summary Report (manuscript format) of project to RPD and project advisor(s) for approval. For projects with significant effects on exceptional patient experience, quality or financial impact, the resident must send approved project summary to the co-chairs of O-RAC.

If funding is needed to complete a project, the need and funding options will be assessed by department leadership on an as-needed basis.

A final written report of the residency project shall be submitted to the RPD as a requirement for successful completion of the residency. The report shall be written using format and style consistent with publication in a professional journal, including project subject, background, methods, results, and conclusions. Residents will be ready to submit their project manuscript for publication in a professional journal. (Some programs may require the manuscript to be submitted to a journal before the residency certificate is bestowed.)

Presentations

The resident shall participate in departmental staff development presentations as directed by the RPD. The residents shall attend other resident's presentations as assigned by program RPD. In the event of conflicts with rotation requirements, the resident shall resolve the conflict with the preceptor of the rotation and the RPD.

Residents shall prepare and deliver presentations under the direction of the RPD. The two presentations required of all residents include an ACPE accredited continuing education (CE) presentation and a platform presentation of the resident's project. See each program supplement for program-specific presentation requirements and the table below with presentation requirements.

Table of Presentations Required Outside of Specific Learning Experience Descriptions

Presentation Type	PGY1	PGY2 HSPAL	PGY2 Am Care	PGY2 Cards	PGY2 Crit Care	PGY2 Emerg Med	PGY2 ID	PGY2 Int Med	PGY2 MUSP	PGY2 Oncology	PGY2 Infor-matics	PGY2 Trans-plant

ACPE-accredited C.E. (eg, USHP)	x	x	x	x	x	x	(x)	x	x	x	(x)	(x)
MSC Project Platform	x	x	x	x	x	x	(x)	x	x	x	(x)	(x)
Evidence-Based Seminar	x											
Recitation Sessions (CoP)	4	4 (class of '24)					6		x or lecture			
Lecture (CoP)	(TC*)			x	x	x	2		x or recitations	x		x
RPD-approved Presentations			x				x				x	x
Pro/Con Debate					x	x						
METS x 6										x		
Onc Fellow's Biology of Cancer Prep										x		
Journal Club										x		
Cardiology Clinical Conference				x								
Family Medicine Grand Rounds			x									
Additional as part of rotations		4										
Poster Presentation (eg Vizient)	(TC*)											
Immunosuppression Lecture												x
SoTx Department Lunch & Learn												x

*TC=Optional Teaching Certificate

Shortly after each required presentation (within 1 week following presentation), the resident and either the RPD or the Content Advisor should meet and discuss the presentation including what the resident thought went well and did not go well, how the resident thinks they can improve for next time, and any comments on the evaluations that need further discussion.

Presentation handouts, slides, evaluations, and test questions (if appropriate) shall be included in the resident's electronic portfolio for all required presentations.

ACPE-Approved Presentation

A topic and Content Advisor must be selected for the **CE presentation** by the end of July (fall series) or beginning of December (spring series). Deadlines for contracts, title, objectives, biographical sketches, slides and handouts are set by the USHP Program Committee and deadlines **MUST** be met by residents. Presentation mentors must be given sufficient time to review and provide feedback on presentation materials prior to the USHP due dates. Failure to meet deadlines may mean losing CE accreditation for the presentation. Note that residents may **NOT** make changes to slides after they are submitted to USHP, therefore residents must ensure the slides are edited, reviewed and approved before submission to USHP. Residents and CE mentors must sign the conflict of interest statement for USHP in addition to the resident completing their contract. The USHP resident CE liaisons will provide residents with an updated handbook with more information and deadlines.

Failure to achieve satisfactory evaluations, meet the ACPE requirements, or meet deadlines will result in the presentation being revised and repeated by the resident. The resident will not receive a certificate

of residency completion until all presentation requirements are met. See Appendix G for a sample evaluation form.

Use of any copyrighted material must be approved. Work with your preceptor(s) to ensure that appropriate steps are being followed.

- Websites and journals often have end user agreements for use of their materials. Ensure you have read these agreements before using their materials.
- Screenshots of Epic
  - Any screenshots of Epic used for public-facing communication outside of our institution MUST be approved by Epic.
- This includes any presentation outside of our institution.

10. Please ensure appropriate use of any copyrighted material. Work with your preceptor(s) to ensure that appropriate steps are being followed.

- Screenshots of Epic
  - **Screenshots of certified applications in Epic used for public-facing communication outside of our institution MUST include the following copyright notice.**
    - © 2023 Epic Systems Corporation
  - Please ensure that any screenshots of Epic used complies with the Office of the National Coordinator Communication Rule, follows fair use of copyrighted work, does not share any proprietary information, and does not contain any PHI.

Project Platform Presentation

The Mountain States abstract is due March 20th. Mountain States presentation practice sessions will be held starting at least 2 weeks prior to the slide submission deadline on April 1st as slides cannot be changed after submission. Each resident will practice presenting at least twice to Research Committee members and/or project advisors prior to submitting final slides to the Mountain States Conference. See Appendix H for a sample evaluation form.

Resident Participation in Meetings and Committees

Resident Conference occurs on a regular basis for a 1 to 2 hour directed discussion. Attendance at teaching certificate and professional development conferences is **mandatory** for PGY1 residents. PGY2 residents are encouraged to attend to learn and to mentor the PGY1 residents as often as they are able.

The resident shall attend all departmental staff meetings related to their area of practice. Pharmacy Staff meetings are held on the fourth Wednesday of the month.

Residents are encouraged to participate in department and hospital-based committees and task forces (e.g., policy task forces, RAC subcommittees, etc.) Residents wishing to attend a P&T meeting will work with the director of Drug Information Services to develop an item to present for P&T.

Residents are encouraged to participate on state and national committees and task forces (i.e., ASHP, APhA, Vizient, or USHP). Residents must inform their preceptor and RPD of any meeting scheduled during rotation prior to the rotation starting to ensure they can attend.

Residents are encouraged to attend both program-specific and O-RAC meetings as they are able. Residents should attend their program's RAC meeting as scheduled by their RPD. O-RAC meetings are the third Thursday of every third month at 1500-1630. Residents will be excused for any O-RAC discussions involving specific resident performance updates.

Conference Attendance

Residents shall follow the Department Travel Policy on Pulse which includes submitting a travel request form and obtaining signatures prior to making any travel arrangements. Flights must be booked by the organization, or they will **NOT** be reimbursed. Travel is not guaranteed and is offered based on the availability of budgeted travel funds from the organization.

ASHP Midyear Clinical Meeting – attendance will depend on the availability of travel funds.
Residents will be given leave to attend the meeting virtually to assist with recruiting (PTO not required). Residents shall spend time helping recruit potential candidates for the next residency class and attend residency showcase. The residents will also attend CE presentations and will give summaries in writing or orally during Grand Rounds. PGY2 residents **may** choose to attend a specialty conference in place of ASHP Midyear.

Mountain States Residents Conference – required for all residents
The Mountain States Conference for Pharmacy Residents, Fellows and Preceptors will be held each May. University of Utah Health residents will present their project to other residents and preceptors during this meeting. Residents are expected to attend assigned presentations, and as many other resident presentations as possible as one of the host organizations.

Other Conferences
Other conferences may be attended at the resident's own expense and using accrued vacation time (PTO-S), provided the time away from rotation does not prevent the resident from meeting the required rotation or program objectives. If the resident has a presentation or poster prepared with a pharmacist preceptor at University of Utah Health, they should complete two steps. First, verify with the RPD and the preceptor of the rotation affected by the conference that the absence is acceptable. Once permission is granted by the preceptor and RPD, complete the Travel Request Form available on the online Pharmacy Help Book and submit the request to their department manager and director for signed approval. Educational leave and/or partial reimbursement for travel and registration may be available from the Pharmacy Department depending on available budget resources.

Professional conduct is expected from all attendees while representing the University of Utah at any conference. Unprofessional conduct during meetings may result in disciplinary action.

Residency Program Portfolio

The resident shall maintain a Residency Portfolio electronically which shall be a complete record of the resident's program activities. Residents are to maintain the e-portfolio throughout the year. The e-portfolio shall be submitted to the RPD at the conclusion of the residency training program and shall be a requirement for successful completion of the program.

The residency program portfolio shall include the following items:

- Completed Resident Self-Evaluation and Planning Form
- Residency profile and each customized development plan update
- Documentation of activities, projects, presentations, and edited document drafts.
- Evaluations that are **NOT** posted on PharmAcademic (e.g. preceptor, learning experience, self-assessments, presentation evaluations, etc.)
- A record of all in-services, presentations, and seminars given
    - Handouts developed
    - A list of attendees/participants (as available)
    - Evaluations
    - Slides
- Residency Project
    - RAC and IRB proposals
    - Grant/funding proposal (if applicable)
    - Data collection form
    - Final manuscript
    - Protected health information (PHI) should **NOT** be posted in the e-portfolio
- A list of all seminars/meetings attended
    - Staff meetings
    - Committee meetings (including professional associations)
    - Educational presentations (i.e., grand rounds)
    - Departmental staff development/pharmacy grand rounds
    - State/local continuing education
    - Regional/national meetings
    - Residency program retreat
- A current curriculum vitae
- Staffing/PTO/ECS log

An electronic file will be kept by programs for each resident and will contain planning forms, presentations, and projects.

Resident Wellness Program

Residents are highly encouraged to participate in the University of Utah Health Pharmacy Residency Wellness Program. The goal of the Wellness Program is to provide residents with opportunities to connect with other residents, learn about burnout and resiliency, and identify resources for available to residents like the Resiliency Center, Employee Assistance Program, mental health hotlines, etc. The program is led by a designated department wellness champion and a liaison from the Resiliency Center. Activities will be planned 5 times per year starting in Orientation. Sessions will include a fun activity and a wellbeing debrief with the Resiliency Center liaison. Sessions will be scheduled as far as possible in advance so preceptors can plan for residents to attend. Preceptors should allow residents to leave rotation with enough time to travel to events. If a situation arises where the preceptor would like the resident to miss the pre-scheduled wellness event, they must contact the RPD to discuss the reason for asking the resident to miss the event and to remain on rotation.

Resident Mentor/Advocate Program

The goal of the University of Utah (UUH) Resident Advocate Program is to enhance the resident experience during their training both personally and professionally. The advocate will serve a resource to the resident beyond their RPD, RPC and primary preceptors and act as an advocate on behalf the resident.

Participation in the UUH Resident Advocate Program is required of all PGY1 pharmacy residents (PGY1 and HSPAL) and recommended for all PGY2 subspecialty residents.

Advocates will be solicited by survey of the UUH pharmacy department each spring. A mentor can only work with one resident per residency year. Pairing will be determined by resident mentor rank list and RPD/coordinator discretion.

Advocate Eligibility:

- Current licensure as a pharmacist within the University of Utah Health
- At least two years of pharmacy practice experience at the University of Utah Health
- Completed a PGY1 pharmacy residency (or have 5 years of experience)
- Will not serve as a primary preceptor to the mentee through the first 6 months of the residency year
- Did not serve as a resident advocate in the year prior
- Agree to the responsibilities outlined below

Advocate Responsibilities:

- Be available for a mentor/preceptor meet and greet during resident orientation
- Check in with the resident mentee at baseline (within 2 weeks of mentor match) then every 6-8 weeks and as needed to discuss current issues and track overall progress
- Support the resident mentee throughout the year and respond to meeting requests from the resident mentee within one week
- Attend quarterly customized development plan (CDP) meetings with the resident & RPD
- Act as the resident mentee's advocate if the resident is being provided a resident memo of success or discussed at executive residency advisory committee meetings
- Act as a mentor/advocate at the request of the resident mentee (i.e. attend learning experience evaluations, professional presentations, etc.)
- Requirements for reporting harassment: private vs. confidential
- Optional Training: Peer support training with Resiliency Center staff

Resident Mentee Responsibilities:

Submit ranking of mentor/advocates to coordinator by August 1st

- Coordinate meetings with mentor by their preferred method of contact
- Be flexible with meeting times and locations
- Be open about professional and personal goals

Resident Evaluation Guidelines

All evaluations shall be timely and documented on appropriate forms in PharmAcademic.

If for any reason any additional evaluation is not documented in PharmAcademic, copies of the completed evaluations shall be forwarded to the RPD and uploaded to the resident's PharmAcademic supplemental documents (e.g. student evaluations of the resident.)

Evaluation of Resident

The performance of the resident shall be based upon the use of predetermined goals and objectives derived from the ASHP Standards. For additional guidance for preceptors, see the Evaluations by Preceptors section below.

Rotation objectives are scored on the following rating scale based on resident performance.

Rating	Definition
Needs Improvement (NI)	Resident is not performing at an expected level at that particular time; significant improvement is needed. For example: • Deficient in knowledge/skills in this area, • Often requires assistance to complete the objective, or • Unable to ask appropriate questions to supplement learning
Satisfactory Progress (SP)	Resident is performing and progressing at a level that should eventually lead to mastery of the goal/objective For example: • Adequate knowledge/skills in this area, • Sometimes requires assistance to complete the objective, • Able to ask appropriate questions to supplement learning, or • Requires skill development over more than one rotation
Achieved (ACH)	Resident can perform associated activities independently for this learning experience at the level of a first year clinical pharmacist post-residency. For example: • Fully accomplished the ability to perform the objective, • Rarely requires assistance to complete the objective; minimum supervision required, or • No further developmental work needed
Achieved for Residency (ACHR)	Resident can perform associated activities independently across the scope of pharmacy practice • Resident consistently performs objective at Achieved level, as defined above, for the residency.

The RPD may allow objectives to be marked as achieved only after completion of specific activities. For example, a resident is unlikely to achieve goals related to writing prior to successfully completing a RAC proposal.

Customized Development Plan

Quarterly evaluation sessions with the RPD shall be scheduled to assess progress toward meeting global goals and program requirements. The resident shall schedule the sessions to be held in approximately July (baseline), October, January, April and June. This information is documented as part of the Customized Development Plan (CDP). The development plan should address the resident's progress, strengths, areas for development, and adjustments to the plan.

The plan will address scheduling of rotations and experiences to meet both program and resident goals. Once residency rotations have been assigned, the resident may request a change in assigned

rotations. Requests will be accommodated whenever possible and appropriate based on their customized development plan.

Failure to demonstrate adequate performance or to meet program deadlines may result in the creation of a written performance improvement plan. Failure to meet the expectations outlined in this plan may result in formal disciplinary action including possible dismissal from the residency program as outlined in the Residency Administrative policy section above.

Evaluation of Preceptor and Learning Experience

Within seven days after the completion of each rotation, and **preferably by the last day of the rotation,** the resident shall complete the Preceptor and Learning Experience Evaluation. This evaluation shall be discussed with the preceptor and submitted to the RPD through PharmAcademic.

Evaluation Templates

The residency program uses standardized evaluation templates to prepare evaluations, both on the part of the preceptor and the resident. Preceptors are committed to preparing objective, specific, actionable feedback and to model these behaviors for residents. Residents are expected to learn during their program to also provide valuable feedback on their preceptors and learning experiences. The templates outline the required elements of the required evaluations in residency programs and are posted on https://pulse.utah.edu/site/dirc/Nonsearched/preceptor-003.pdf.

Evaluation of Program

Residents and preceptors are encouraged to bring program issues and recommendations for improvement to the attention of the program RPD, the Chief Pharmacy Officer, program RAC or O-RAC at any time during the year. Residents are encouraged to elevate concerns if the RPD is not responsive to the feedback.

Residency Program Retreat

The resident class (including PGY1 and PGY2 residents) shall be responsible to schedule two residency program retreats that shall be held in December and May. The residents and a non-leadership facilitator or external consultant will attend the meeting.

Residents shall develop an agenda for the retreat in cooperation with either the CPO or Chair of RAC. Residents may invite other staff or preceptors as appropriate for receiving feedback.

The purpose of the retreat shall be to address the strengths and weaknesses of the programs.

The facilitator shall produce a summary of the proceedings of the retreat that shall include recommendations for change that are identified by the program participants. This will be submitted to the residents, O-RAC, and the program specific RACs for review.

Preceptor Policies and Expectations

Education is a key mission of the University of Utah Health (UUH), Department of Pharmacy Services. All pharmacists are expected to contribute to the education mission by training pharmacy interns, residents, and new staff, teaching classes, or precepting rotations for students or residents.

This handbook provides guidance to residency preceptors on several levels. First, it outlines the administrative, precepting, and teaching requirements for preceptors who work with residents. Next, it describes the program requirements and priorities for residents. Finally, it provides several resources for preceptors to improve their administrative, teaching, and precepting skills. While this handbook is not specific to the program requirements and administrative tasks for precepting students, many of the principles and resources also apply to that realm of teaching.
After reading this handbook, please electronically sign the Preceptor Commitment Form (Form and link available in Appendix I). Preceptors will receive 2 hours of preceptor development credit toward the 5 required hours annually upon reading the complete handbook. This activity may count toward preceptor development credit hours once yearly, but preceptors are encouraged to review and refer to the handbook often. An electronic signature of the Preceptor Commitment Form is required a minimum of once per ASHP accreditation cycle. New preceptors and preceptors-in-training will submit an electronic signature prior to precepting residents.

Preceptor Qualifications and Responsibilities

ASHP preceptor qualification and responsibilities are included in the accreditation standards. See Residency Accreditation Standard 4at:

https://www.ashp.org/-/media/assets/professional-development/residencies/docs/examples/ASHP-Accreditation-Standard-for-Postgraduate-Residency-Programs-effective-July-2023.pdf

Preceptor Eligibility

Preceptors must demonstrate content knowledge and expertise in the areas(s) precepted, contribute to the pharmacy practice, and role model ongoing professional engagement. Preceptors who do not meet these criteria must have a development plan document to achieve qualifications within 2 years. Preceptors will maintain an active practice and ongoing responsibilities for the area in which they serve as preceptors. Preceptors will actively participate and guide the learning of residents on their learning experiences. (ASHP Standard 4.5)

Pharmacist preceptor eligibility for PGY1 include that the preceptors must be licensed pharmacists who:

- Have completed an ASHP-accredited PGY1 residency followed by a minimum of one year of pharmacy practice experience; **or**
- Have completed an ASHP-accredited PGY1 residency followed by an ASHP-accredited PGY2 residency and a minimum of six months of pharmacy practice experience; **or**
- Without completion of an ASHP-accredited residency, have three or more years of pharmacy practice experience.

Pharmacist preceptor eligibility for PGY2 programs include that preceptors must be licensed pharmacists who:

- Have completed an ASHP-accredited PGY2 residency followed by a minimum of one year of pharmacy practice in the advanced practice area; or,

- Without completion of an ASHP-accredited PGY2 residency, have three or more years of practice in the advanced area precepted.

Process for Appointment of Preceptors

RPDs will update their list of program-specific preceptors annually after carefully evaluating each preceptor's performance against the requirements outlined above. Data from PharmAcademic regarding preceptor timeliness and feedback quality will be assessed by RPDs. The PDTC will provide a list of preceptors who completed the required 5 hours of preceptor development credit each year to RPDs and preceptor's managers. Preceptors who have NOT met all criteria will receive feedback from the RPD regarding compliance with the requirements. Preceptors unable to comply with the preceptor requirements outlined in above within a reasonable amount of time will have a written plan developed for how they will meet the requirements.

Preceptor Responsibilities

Serve as role models for learning experiences by doing the following:

- Contribute to the success of residents and the program.
- Provide learning experiences that implement the program design for the residency program and conduct the learning experience in a manner that supports the residents in achieving the purpose and educational goals and objectives of the program.
- Participate actively in the residency program's continuous quality improvement processes.
- Demonstrate practice expertise, preceptor skills, and strive to continuously improve.
- Adhere to residency program and department policies pertaining to residents and services.
- Demonstrate commitment to advancing the residency program and pharmacy services.

Administrative Requirements

- Read the *Common Residency Program Manual*
- Complete the preceptor commitment form in Appendix I
- Participate in 5 hours of preceptor development each year from presentations or readings offered by the Preceptor Development and Teaching Certificate Committee between July 1st and June 30th.
- Write or update the learning experience description specific to each rotation type and update it annually by June. A different description is required for each residency program precepted. For example, the learning experience description for a MICU rotation should not be the same for a PGY1 rotation and a PGY2 Critical Care rotation). This is important because each program has different goals and objectives that will be assigned to the Learning Experience. As such, there may be different activities for each program, though many may be the same. The Learning Experience Description must available in PharmAcademic. For PGY1 rotations, the learning experience description must be submitted to the PGY1 RPD for posting on the residency website.
- Complete a Preceptor Academic and Professional Record (PAPR) and update it annually. Submit it to each residency program precepted.
    - Prepare orientation material and resident resources for each rotation precepted and update it at least annually.
    - Develop an evaluation format in PharmAcademic™ individually or as a preceptor team for each rotation available for residents to select.
    - Complete assigned rotation evaluations within a week of the end of rotation.

- Coordinate with your department for rotation availability each year for both students and residents.

Preceptor Development Requirements

Pharmacy preceptors at University of Utah Health are required to complete 5 hours of preceptor development each year (July 1 – June 30). Examples of topics that fulfill this requirement include the 4 teaching roles, evaluations and feedback, conflict resolution, communication (e.g., presenting, writing), individualized approaches to teaching or communication (e.g., PILS, Strength Finder, The People Code), certain leadership topics as they pertain to preceptor development, and using technology in teaching. Ideally, each preceptor will accrue hours in multiple topic areas over the course of a year. The Table below describes programs that count toward the preceptor development requirement without additional approval from the O-RAC or PDTC Committee. Other preceptor development activities must be approved by the PDTC Chair or O-RAC prior to submission.

Table. Approved Activities to Satisfy Preceptor Development Requirements Activity

	Calculation of Hours	Documentation
PDTC-sponsored program (live attendance)	Determined by PDTC	Sign attendance sheet
PDTC-sponsored program (Zoom or Teams attendance)	Determined by PDTC	Virtual attendance to be recorded by the host of the event
Read the *Common Residency Program Manual*	2 hours, but may only be included every **3rd** year.	Submit e-mail with the date upon which the manual was read and keep current Preceptor Agreement signature on file
Other Pharmacy Department programs or workshops related to precepting or leadership	Actual time (rounded up to the nearest 15-minute interval)	Sign attendance sheet (if available) or submit e-mail with title, date, and duration of the program/workshop
Mountain States Conference sessions on precepting or leadership	Actual time (rounded up to the nearest 15-minute interval)	Submit e-mail with title, date, and duration of the presentation
ACPE-accredited program on a precepting topic	CE hours per ACPE	Submit certificate or NABP documentation
Non-ACPE webinar or presentation offered by ASHP or Vizient on a preceptor development topic	Actual time (rounded up to the nearest 15 minute interval)	Submit e-mail with title, date, and duration of the presentation
Articles (on PDTC Intranet website) or book / book chapter on teaching or Precepting topic	Actual time for reading and reflecting (written or thought; rounded up to the nearest 15 minute interval)	Submit e-mail with citation and hour amount. Store written reflection (if completed) in red binder.
Active member of O-RAC or RAC subcommittee attending ≥75% of meetings	1 hour per residency year	Attendance to be recorded by the O-RAC or respective subcommittee chair in meeting minutes

Serving as a full-year residency project preceptor	1 hour per residency year	Submit e-mail with title of the residency project

Activities that do NOT Satisfy Preceptor Development Requirements

- Clinical Skills Instruction - Programs providing clinical skills instruction do not count for preceptor development hours, but programs addressing methods of teaching clinical skills to others would count.
- Precepting - Time spent precepting (e.g., rotation, health fair, shadowing) does not count toward preceptor development hours. The intention of the preceptor development requirement is for preceptors to take time outside of their normal daily activities to focus specifically on improving precepting capabilities.
- Reading topics that increase the preceptor's clinical or operational knowledge of their pharmacy practice area. This is an expectation of the job and is not specifically related to improving knowledge or skills related to precepting.

Submission and Tracking of Preceptor Development Hours

The Executive Assistant will compile preceptor development hours accrued over the course of each year (July 1 – June 30). Attendance at live activities sponsored by the PDTC Committee or Pharmacy Department will automatically be recorded on the spreadsheet according to the Zoom or Teams attendee list or sign-in sheet at the activity. Please submit all other activities to the Executive Assistant (tina.ellis@hsc.utah.edu). Refer to Appendix J. Preceptor Development Hours form to help record and track hours. Attach documentation described in the Table above to your email, if available. In cases where documentation is not available (e.g., webinar with no CE credit), your e-mail serves as your endorsement that the activity was completed in totality. Preceptor development hours can be tracked at https://pulse.utah.edu/site/dirc/Documents/Help-Book/Preceptor-Development-Tracking-Sheet.pdf. Any questions related to the appropriateness or validity of a specific activity will be directed to the Chair of O-RAC or the PDTC Committee. PDTC will perform an audit of accrued preceptor development hours each spring (e.g., March or April) and provide notification to preceptors with <5 hours so that they may complete the requirement prior to June 30th. A second audit will be performed by PDTC Committee each July; preceptor development hour deficits will be reported to preceptors, residency program directors, managers, and O-RAC.

Precepting Requirements

- Each preceptor must be available to precept at least 2 residents per year.
- Preceptors must orient each new resident to the rotation site, expectations, goals and objectives, and special projects or presentations within the first week of rotation using the Learning Experience (rotation).
- Preceptors must directly observe the performance of each resident in addition to requesting feedback from other health care team members on the resident's independent interactions.
- All evaluations posted in PharmAcademic™ must follow a face-to-face formal evaluation of the resident's performance on education goals and objectives selected for the rotation. PharmAcademic™ evaluations must be signed off by all parties by one week after the end of the rotation. If the evaluation in PharmAcademic™ cannot be completed within a week, the preceptor must contact the residency program director to negotiate a new deadline.
- Preceptors are required to bring any significant concerns regarding resident behaviors, professionalism, or knowledge retention to both the resident and the residency program director immediately.
- Preceptors must use the following preceptor roles in a customized fashion for each resident learner: instructing, modeling, coaching, and facilitating.
- Preceptor teams that precept a single rotation must communicate resident progress and issues to the other rotation preceptors in a timely fashion and include the resident for transparency. A single preceptor of record will be responsible for coordinating all preceptor team feedback for the resident's PharmAcademic™ evaluation.
- Preceptors are encouraged to review the resident's prior progress at the beginning of a rotation in PharmAcademic™ and by communicating with prior preceptor(s). Preceptors finishing a rotation with a resident and those having residents for the following rotations meet to discuss resident progress and areas of development for the next rotation. (For PGY1s, this will happen at PGY1 RAC on the last Thursday of the rotation at 1 PM on Zoom.) Pass off will include the sending and receiving preceptor, resident, advocate and any longitudinal preceptors who are able to attend. If the sending or receiving preceptor are unavailable, the sending preceptor will summarize the pass off in an email and CC the resident and RPD.

Preceptors are encouraged to bring questions and concerns to the RPD, program RAC, or O-RAC as issues arise. Preceptors are also asked to provide recommendations to the program's RAC for program improvements each month as part of our continuous quality improvement program.

Residency Learning Experience Descriptions

Each rotation available for PGY1 or PGY2 residents to select must have a learning experience description that is unique to each program. This process starts by the RPD assigning goals and objectives for that learning experience in PharmAcademic. The preceptor for a given learning experience will develop a description that gives a general overview of the rotation and explains the resident expectations. Learning experience descriptions are prepared in PharmAcademic. When completed, the learning experience descriptions can by printed or viewed in PharmAcademic during rotation orientation. PGY1 learning experience descriptions may also be posted on the department's residency program web site at: https://pharmacyservices.utah.edu/residency/rotations/index.php.

The following is the standard format for the learning experience descriptions. The information below is organized by the tabs you will use to enter the description in PharmAcademic.

Tab 1. Overview

Enter the following initial info at PharmAcademic.

Rotation Title: Be sure this describes the type of rotation adequately

Educational Site: Select from drop down menu.

Status: Indicate if this is an active, inactive or under review.

Required: Indicate if rotation is required or optional for graduation).

General Description: PharmAcademic provides a text box where the preceptor(s) must include the following information.

Preceptors: List all preceptors involved in the learning experience with their credentials. You will want to indicate who serves as a primary preceptor if applicable.

Rotation duration: List the usual duration of the rotation. Some elective experiences may have a range. If a range is indicated, you will want to be sure to explain in the resident progression and expectations, what is expected in a rotation that might be 2 weeks versus 4 weeks, for example.

General Rotation Description Overview: Include a brief overview of the rotation as an introduction to the rotation description. Include how they will be interacting with the teams.

Site Description: Clearly describe the unit, clinic, hospital, or service location and type for the rotation. Include information about the people and patients that the resident will interact with. Include statistics as appropriate.

Role of the Pharmacist: Clearly describe the role of the pharmacist assigned to the rotation clinic, unit or pharmacy service. Regular duties and responsibilities of the pharmacist should be included. The primary preceptor should serve in this role in order to be a positive role model for the resident.

Expectation of Learners: The expectations of the resident while on rotation should be clearly stated in this section. The following are the sections that need to be included. In PharmAcademic, this is another big blank box in which you will include the following sections.

Expectations of the resident: Include what your general expectations are for residents on your service including both the knowledge, skills and behaviors you expect. This can include specific expectations for dress, professionalism, communication, etc. It may also be a place to include consequences of not meeting expectations. For some rotations and in some programs it may be important to indicate that there are different levels of achievement expected if the resident completes the rotation early in the year versus later in their residency program.

Pre-rotation Preparation: Indicate if there are any things the resident needs to have completed or have ready prior to the start of rotation. You may want to indicate that residents should come with their personal goals for the rotation.

Readings and Preparatory Work: Include a list of topics that will be covered during the rotation and include references and how to access them in this section. If an article is to be read prior to the first day, list the article here and be sure the resident receives this information prior to the first day of rotation.

Project or Presentation Description: Include a description of any required projects, journal clubs, presentations, etc. that are required during the rotation. The timing, materials, and deadlines for these activities should be clearly delineated.

Typical Daily, Weekly, and Monthly Activities: State the time the resident is expected to arrive in this section along with a description of where they will typically need to be during a given day. Include a list of any special conferences, rounds, meetings, or other activities that the resident will participate in on a regular basis. List the daily end time for the rotation, barring any urgent patient care issues the resident can contribute to resolving or any rotation activities noted with times on the resident rotation calendar that extend into the evening.

Residency Progression: Include a week by week description of how the resident is to progress on the rotation. Include as appropriate: goals and objectives, readings, projects, to accomplish in the given week. Reflect the progression and development of skills the resident should experience as they grow and develop during the learning experience.

Evaluation: Include an overview of how the resident can expect to receive feedback and the timing and methods of evaluations of the resident. Include the specific summative evaluations that are documented in PharmAcademic at the end of the learning experience description document.

Tab 2. Education Objectives

In this section, you will select the goals and objectives for this learning experience in conjunction with the RPD. These represent the specific objectives that will be taught and evaluated for the rotation as determined by the RPD of each program.

Tab 3. Activities
In this section, you enter in the rotation activities. You will then map each activity to the objective to which that activity relates.

Tab 4. Evaluations
In this section you will indicate the evaluations that will be completed by the preceptor(s) and resident, in conjunction with the RPD. Longitudinal rotations need at least quarterly evaluations. Not all rotations will have midpoint so that will need to be selected if it is required by either the preceptor or resident. Note if custom evaluations are required to be completed.

Tab 5. Preceptors
In this section you will select the preceptors for the rotation. If one preceptor always serves as primary, you may include that information.. The primary preceptor can vary for each resident. However, it is important that for each resident there is one primary preceptor. This section does not print from PharmAcademic which is why it is important to include at the top of the general description.

Guidance for Assessment of Resident Performance

The preceptor should assess each resident during orientation and the first few days of the rotation. There are several ways to determine levels of motivation, knowledge, skill, and learning preferences.

Prepare: Review PharmAcademic™ reports available for the resident, particularly the evaluation summary from prior preceptors. Attend preceptor pass off, ask the resident to send a self-assessment, or contact preceptors or the residency director to discover what they think the resident needs to learn or practice most on your rotation.

Q&A: Develop a list of questions that will help you to better understand the resident's experiences, goals, motivation, and progress to date. Ask these questions, but remember to share some of your own answers to these questions with your resident, too.

Quiz: Prepare a short quiz or pre-test with knowledge or skills required to complete your rotation. Before giving the quiz, explain that this helps you to focus on topics that are less familiar to the resident during the rotation. If they know all of the answers to your quiz, get ready for more in-depth topic reviews or new topics to challenge the resident. For example, asking the resident to describe the best antibiotics and duration of therapy for a newly diagnosed ventilator-associated pneumonia (VAP) in the SICU would help the preceptor to gauge the resident's knowledge of current evidence as it relates to VAP.

Learning Style: Ask how the resident learns best and how they like to interact with their preceptor during rotations. Learners always have more than one learning style, but may have preferences that will help them engage with information. Some learning style inventories can be found at the following web sites:

- http://www.learning-styles-online.com/inventory/questions.php?cookieset=y
- http://www.engr.ncsu.edu/learningstyles/ilsweb.html

Goal Alignment: Be very clear about your expectations and asking the resident about their expectations of you and of the rotation. Have the residents write 3 personal objectives for the rotation and then discuss activities that will help them meet these goals on your rotation. Make sure you know

their schedule conflicts and negotiate make-up time on rotation if the absences are excessive or unavoidable.

Model then Observe: Show the resident how you would like them to work up patients, behave on rounds, speak with patients, or present patient cases. On rotations that do not involve direct patient care, this may also include modeling behaviors in meetings, planning projects, or outlining presentations. Then preceptors must observe the resident performing these activities alone before stepping back to allow full independence. Direct observation will allow for more meaningful feedback and coaching early in the rotation.

Teaching and Training Methods: Preceptor Roles

Direct Instruction

- Examples - direct a resident to a specific set of readings, references, or provide a discussion on a specific topic.
- This method of instruction builds on the resident's current knowledge base or skill set.

Modeling

- Examples - teach specific methods of problem solving such as thinking out loud while you work up a case, or outlining in detail how to work up a patient or outlining a search strategy.
- This method of instruction helps the resident to apply the information being taught by showing him or her how to apply it.

Coaching

- Examples - give residents autonomy to solve patient-care problems with additional feedback from the preceptor or asking the resident to think out loud as they solve a problem. "What are the next steps?" "What did you find that led you to that conclusion?"
- This method of instruction helps the resident to apply the information being taught and work toward integrating the knowledge or skill into their practice.

Facilitation

- Examples – teach the resident to evaluate their own work and problem solving strategies by asking the resident to self-evaluate and provide feedback on the evaluation. "What would you do differently next time?"
- This method of instruction helps the resident integrate the knowledge into their practice.

Evaluations by Preceptors

Formal and informal evaluation of resident performance is a critical component of their professional development. Evaluations can be in the form of preceptor or coach feedback or resident self-evaluation. Formative evaluation and summative evaluation are two key ways to help the resident to achieve their goals for residency. Definitions and examples are provided below.

Formative Evaluation

- Regular day to day feedback about the resident's progress. Use specific criteria to evaluate the resident – for example "you forgot to account for the patient's reduced renal function in your

recommendation." Another example is editing a residents writing and providing feedback in person and via editing marks on the paper.

- Formative feedback includes the resident's self-assessment of performance. For example, ask what they thought of their own performance related to daily activities.
- A snapshot of a specific ASHP goal may be useful and could be incorporated into a rotation by asking the resident to complete a specific snapshot each week of rotation. This can include what went well and what could be improved around a specific interaction or project on rotation.
- Written formative feedback is important to use when verbal feedback seems ineffective, or if the resident states that they prefer written feedback.

Summative Evaluation

- Occurs at the end of a rotation and includes a resident self-assessment and preceptor assessment of all the goals and objectives for the rotation. Some rotations also include a complete summative evaluation at the midpoint of the rotation.
- Discuss the summative evaluation with the resident and make sure differences between preceptor assessment and self-assessment are addressed.
- The preceptor rates each rotation objective as "Achieved," "Satisfactory Progress," or "Needs Improvement."
- If the preceptor has marked all of the objectives related to a goal as "Achieved", and the resident demonstrated exceptional knowledge and skill around the ASHP goal, they may also mark the resident as "Achieved for Residency" on that particular goal in PharmAcademic™. *Exceptional knowledge and skill* are defined in light of the practice setting and specific goal in question, but may include the ability to perform independently at the level of an experienced practitioner, or the ability to teach the goal and objectives to others.
- Goals are automatically achieved for residency if all sub-objectives are marked "achieved for Residency" (AChR) See page 27 above for definitions under Evaluation of Residents.

Evaluation Tips and Hints

- "Good Job!" or "Nice Work!" do not offer the resident any assistance in improving or progressing, nor do they flag out for the resident what went well on rotation.
- Write evaluation statements that are specific. When the resident has an opportunity for improvement, list at least one recommendation for how the resident can improve.
    - Examples when the resident is exceeding your expectations:
        - Jim communicates very effectively. Jim has asked appropriate questions when uncertain and has been successful in communicating with the medical team and has gained their confidence in managing their patients.
        - Jim should continue to critically evaluate every patient for drug related problems regardless of their primary diagnosis.
        - Jim performed a gap analysis with an excellent list of recommendations for improving the organization's processes.
        - Jim the resident is self-directed and works independently on projects.
    - Examples when the resident needs additional direction to improve:
        - Jim needs more attention to detail when reviewing medication orders – orders verified by Jim have been inaccurate. For example…. I recommend Jim use a checklist initially to ensure he has looked at each key component when verifying orders.
        - Jim did not complete the project on time and did not renegotiate a deadline. Jim needs to work on meeting deadlines and letting the preceptor know ahead of time if

a project cannot be completed on time. Consider providing a verbal update on projects during each “Feedback Friday”.
        - Jim did not notice that several patients were not receiving an ACEI after their myocardial infarction. Jim will review recent guidelines, and we will have a topic discussion about optimum post-MI therapy on Friday.
        - Jim needs to work on nonverbal cues – folded arms and rolling eyes make the impression he is not interested on rounds or in listening to the preceptors during topic discussions. I recommend Jim assess his posture and facial expressions during group activities and assess how they may be perceived to others in the room.
    - RPDs play a role in ensuring that feedback written in PharmAcademic evaluations is specific by sending back evaluations that do not have specific examples and recommendations for improvement.
- Provide resident feedback to the next preceptor by completing PharmAcademic™ evaluations in a timely manner providing preceptor pass off at scheduled meetings with the resident and next preceptor or by emailing the next preceptor and RPD.

PharmAcademic™ Requirements

- Develop your PharmAcademic™ evaluation to match your learning experience description.
- During the first week of rotation, check to see if you are the preceptor scheduled for the resident.
- Complete any midpoint evaluations immediately after the evaluation is generated in PharmAcademic™.
- Complete the final summative evaluation on or as close to the last day as possible. Contact the residency director if the evaluation will not be completed for more than a week after the end of the rotation.
- Meet face to face with the resident before or during your completion of the PharmAcademic™ evaluation.

Every evaluation in PharmAcademic™ should contain both resident strengths and at specific recommendations for knowledge or skill improvement when needs improvement or satisfactory progress are selected. The RPD will send the evaluation back to the preceptor to add content if these are not included.

Preceptor and Resident Resources and References

Preceptor Resources can be found on the Pharmacy Help Book at https://pulse.utah.edu/site/dirc/Pages/preceptor-dev.aspx.

Past Graduates and Projects

See Appendix K for a list of graduates from the University of Utah Health residency programs with completed research projects.

Resident Calendar

A general timeline of residency requirements and activities are listed in Appendix L for residents and preceptors. Residents should consult with their RPD, RPC and program supplement for program specific dates and deadlines.

Appendix A. Job Description

HOSPITALS AND CLINICS HUMAN RESOURCES
515 E 100 S, 7th Floor Salt Lake City, UT 84102
PH 801.581.6500 | FX 801.585.5144

Pharmacy Resident (7578)

Position Summary

This position functions as a clinical pharmacist as part of a 1-2 year structured training program to further develop the resident's skills and knowledge. The program requirements will be unique and are set by the residency program director. As part of this training program, the resident will complete a major project. Residents are supervised by program preceptors for each of their assigned training rotations. Applications are accepted until January 1st each year. University Hospitals & Clinics participates in the ASHP Resident Matching Program for the selection of residents into the program. Applications may be accepted in late March for any positions not filled during the matching process.

Corporate Overview

The University of Utah is a Level 1 Trauma Center and is nationally ranked and recognized for our academic research, quality standards and overall patient experience. Our five hospitals and eleven clinics provide excellence in our comprehensive services, medical advancement, and overall patient outcomes.

Essential Functions

- Performs all the essential functions of a Clinical Pharmacist.
- Meets all the program requirements of a resident as outlined in the program requirements.
- Conducts a major project.

Knowledge / Skills / Abilities

- Ability to perform the essential functions of the job as outlined above.
- Knowledge and skills necessary to provide care appropriate to the age of the patients served on his or her assigned unit.

- Knowledge of the principles of life span growth and development and the ability to assess data regarding the patient's status and provide care as described in the department's policies and procedures manual.

Qualifications

Required

- One of the Following:
  - Current Pharmacist license in the State of Utah.
  - Current Temporary Pharmacist License issued through the State of Utah.
- Graduate of an ACPE-accredited college of pharmacy in the United States.
- Must obtain Pharmacist License in the State of Utah within 90 days of start in the pharmacy resident program.
- Current licensure to dispense controlled substances in the State of Utah or work under the supervision of a pharmacist with a controlled substance license and license to practice as a pharmacist in the State of Utah.

Working Conditions

Employee must be able to meet the following requirements with or without an accommodation.

- This position involves light work that may exert up to 20 pounds and may consistently require light work involving lifting, carrying, pushing, pulling or otherwise moving objects. This position involves standing for extended periods of time and is not exposed to adverse environmental conditions.

Disclaimer

This job description has been designed to indicate the general nature and level of work performed by employees within this classification. It is not designed to contain or be interpreted as a comprehensive inventory of all duties, responsibilities and qualifications required of employees assigned to the job.

The above job description reflects the general physical and mental demands and environmental conditions required to perform the essential functions for this position. Nothing in this job description restricts management's right to assign or reassign duties to this job at any time. The University of Utah Health complies with the Americans with Disabilities Act, as amended and Sections 503 & 504 of the Rehabilitation Act, and extends reasonable accommodations to qualified applicants or employees with disabilities. A qualified applicant must be able to perform the essential functions of the job, with or without a reasonable accommodation.

Appendix B. Service Commitment Record Example

Date	Shift	Shift Equiv	Type (Required, ECS, PTO S, PTO US)	Status (Completed, Scheduled, Predicted)	Shift Note
16-Jul	AIM4	1	Required	Completed	
17-Jul	AIM4	1	Required	Completed	
25-Jul	CVMU1	1	Required	Completed	
30-Jul	AIM2	1	Required	Completed	
31-Jul	AIM2	1	Required	Completed	
8-Aug		1	PTO-U		Sick Day
13-Aug	CVMU1	1	Required	Scheduled	
14-Aug	CVMU1	1	Required	Scheduled	
15-Aug	CS1-1400	1	ECS		
21-Aug	AIM4	1	Required	Predicted	
6-Sep	CS2	1	Required	Predicted	
10-Sep	CVMU1	1	Required	Predicted	
11-Sep	CVMU1	1	Required	Predicted	
24-Sep	AIM2	1	Required		
1-Oct	CVMU1	1	Required	Predicted	
2-Oct	CVMU1	1	Required	Predicted	
12-Oct		1	PTO-S		vacation
22-Oct	AIM	1	Required	Predicted	
22-Oct	CS2	1	Required	Predicted	
23-Oct	AIM	1	Required	Predicted	
12-Nov	AIM	1	Required	Predicted	
12-Nov	CS2	1	Required	Predicted	

Summary				
Month	Required Shifts	ECS Shift Equiv.	PTO-S Shift Equiv	PTO-US Shift Equiv
July-20	5	0	0	0
August-20	3	1	0	1
September-20	4	0	0	0
October-20	5	0	1	0
November-20	2	0	0	0
December-20	0	0	0	0
January-21	0	0	0	0
February-21	0	0	0	0
March-21	0	0	0	0
April-21	0	0	0	0
May-21	0	0	0	0
June-21	0	0	0	0
July-21	0	0	0	0
Total	19	1	1	1

Appendix C. Emergency Staffing Plan

Emergency Planning: University of Utah Resident Emergency Staffing Plan

Residents are considered part of Pharmacy staff, and staffing plans and adjustments apply to residents. Two scenarios exist in emergency situations, regular staffing shift days or evenings and rotation days. The following outlines the current plan for staffing in emergency situations including natural disaster and pandemic.

Independent staffing shifts (evenings and weekends): Residents will be included in hospital, clinic and community pharmacy staffing plans in emergencies. These plans will be determined by staffing managers to meet the needs of our patients.

- Residents will be updated on any staffing changes affecting their workday or rotation such as being moved to a different location to staff.
- Residents will also be notified if they are to take on expanded roles such as covering more patients, units, or operational duties.
- Residents who are not affected by the disaster, pandemic, or other emergency situation and can help cover staffing shifts may be asked to pick up extra shifts based on the needs of the department.
- Residents are to observe duty hours and notify RPDs and staffing managers if they are asked to exceed duty hour limits (e.g., work is limited to 80 hours per week averaged over 4 weeks, and residents must have one day free from work in 7 days averaged over 4 weeks.)
- Shifts covered on evenings, midnights and weekends outside of rotation hours may be counted toward required staffing shifts.

Staffing During Regular Rotation Hours (weekdays): Residents should plan to continue to come to rotation each day unless they are ill or impacted by the emergency situation personally.

- Residents MAY work from home if they establish a mechanism for working from home with their preceptor and RPD and if they signed a telecommute agreement that is approved by their manager online in Pulse.
- As the number of available pharmacy staff decrease based on illness, child care, cross-coverage, inability to reach the hospital, etc., residents will be asked to staff during regular weekday rotation hours.
- Staffing may be in areas where the resident has been trained or where they can follow standard operating procedures and instructions to complete operational tasks, including tasks typically performed by technicians.
- Residents may need to serve as a support to rotation preceptors who are on-site while other preceptors are working from home. Residents will put patient care needs over rotation requirements during the emergency.

- If the resident has been trained in their current rotation location, and their preceptor is not able to come to work during the emergency, the resident MAY be asked to staff their rotation site.
- Staffing during regular weekday hours is part of the residency experience and will not count toward required staffing shifts.

Staffing managers and residents will follow the residency policy in the *Common Residency Program Manual*: “The resident may be required to staff their current or past rotation area alone during regular rotation hours following orientation to the service in certain situations. These situations may include preceptor illness or when preparation of the schedule has exhausted all other options for finding competent coverage. In extreme emergencies, residents may be pulled from their rotation site to cover other staffing locations due to acute illness or natural disaster and when all other options have been exhausted to cover these open shifts regular staff. Both the RPD and resident will be contacted to discuss the staffing situation prior to the shift being assigned to the resident. This is a program and rotation expectation and will NOT count toward additional service commitment hours as it occurs during the regular rotation work week and is not considered extra hours of work.”

Appendix D. Competency Areas, Goals, and Objectives

PGY1 Required Competency Areas, Goals, and Objectives: See the following section on the ASHP website for information related to the PGY1 Competency Areas

PGY2 Outcomes, Educational Goals and Objectives: See the following section on the ASHP website for information related to the PGY2 Competency Areas

https://www.ashp.org/Professional-Development/Residency-Information/Residency-Program-Resources

Appendix E. Scoring criteria for resident research or quality improvement proposals

Criterion	Score	Guidance
Feasibility	High Medium Low	*Higher Scoring Characteristics:* ▪ Sample size: <150-200 patients as a general rule for chart reviews ▪ Support from hospital leadership and other stakeholders ▪ Design: retrospective chart review, pre/post-interventional, survey ▪ Study team has expertise to complete intended research/QI, including analyses ▪ Well defined project, clear questions/methods ▪ Includes an experienced project mentor ▪ Includes faculty from the COP ▪ Contingency plans described for threats to project aims *Lower Scoring Characteristics:* ▪ Sample size: Several hundred patients requiring chart review ▪ Design = prospective, interventional, randomized, multicenter ▪ IRB barriers (e.g. protected populations, multicenter, interventional) ▪ Reliance outside of the study team for statistical support ▪ Study team lacks an experienced project mentor ▪ Limited pre-vetting with stakeholders
Interest to others	High Medium Low	*Higher Scoring Characteristics:* ▪ Hot topic within research/QI community ▪ Large community working on this problem/question *Lower Scoring Characteristics:* ▪ Out of vogue topic ▪ Offers no new perspective to the problem
Novelty	High Medium Low	*Higher Scoring Characteristics:* ▪ Unique approach to solving the problem ▪ Potential to provide new findings or refute previous findings ▪ Addresses gap in literature ▪ Challenges existing paradigms ▪ Positions pharmacists in a unique position to influence care *Lower Scoring Characteristics:* ▪ Scope is confirmatory ▪ Methods replicate previous studies
Relevance	High Medium Low	*Higher Scoring Characteristics:* ▪ High impact to patients ▪ Advances pharmacy practice ▪ Generates new knowledge ▪ Significant financial consequences ▪ Directly aligns with departmental or organizational goals *Lower Scoring Characteristics:* ▪ Poor alignment with departmental or organizational goals ▪ Limited quality or financial impact ▪ The value of the problem to be solved is low
Approach	High Medium	*Higher Scoring Characteristics:* ▪ Anticipated design is appropriate to accomplish the intended aims ▪ Study objectives are clearly stated

	Low	▪ Anticipated sample size is adequate to answer the research question *Lower Scoring Characteristics:* ▪ Significant gap between design and aims ▪ Considerable bias/confounding ▪ Study design and anticipated results are low value based on previous work in the field
Resource needs (data reports, IT build, statistical analysis, funding)	Low Medium High	*Higher Scoring Characteristics:* ▪ Data gathered from existing reports ▪ Study team can handle statistical analyses on their own (e.g. descriptive, chi-square, t-test) ▪ Team will need assistance with data pull but elements are readily available (e.g. LOS, mortality) ▪ Team will need assistance for statistical analyses but people readily available in the department to help (e.g. simpler logistic regression, survival analyses) *Lower Scoring Characteristics:* ▪ Extensive data request—heroic efforts necessary from EDW team to obtain ▪ Need to recruit a statistician to complete planned analyses ▪ Intervention will require considerable IT build ▪ Considerable funding required for materials

Appendix F. RAC Proposal Format
Quality Improvement and Research Templates

Protocol Summary for Quality Improvement Projects
Version: Date

Title
(Indicate in title that this is an initiative to improve healthcare quality e.g. quality, safety, effectiveness, patient-centeredness, timeliness, cost, equity)

Principal Investigator
Resident Name, Affiliation, and Contact Information

Co-Investigators
Names and Affiliations

Physician Champions
Names and Affiliations

BACKGROUND AND INTRODUCTION:
(Per SQUIRE guidelines: Describe the nature and significance of the local problem. What baseline analysis or investigations have been completed (e.g. Gemba walk, root-cause analysis, FEMA, operational outcomes, billing/financial analyses, process metrics, benchmarking, gap analysis, workload metrics)? Summarize what is currently known about the problem, both locally and outside of the institution, including relevant previous studies. This literature review will be helpful later when you write your introduction and discussion sections for an actual manuscript. Describe the rationale for your proposed intervention. What would be the impact to the organization if the local problem was improved? How does this project align with departmental or organizational strategic objectives? In other words, if this project achieves its aim, how will that help us achieve a departmental or organizational goal? *Try to keep to a 3-4 paragraphs.)*
Specific aims:
(What is the purpose of this project? What do you hope to achieve?)
PROJECT DEFINITION:

Problem Statement:
(A succinct, 1-2 sentence definition of the problem.)

Scope:
(Which areas or service lines are included?)

SMART goals:

(List ~1-4 goals for this intervention (e.g. increase proportion of patients with medication reconciliation completed within 24 hours of hospital admission, reduce 30-day readmission rate for diabetic foot infections). Please include at least one balancing measure (e.g. maintain length-of-stay averages, no worsening of readmission rate)

INTERVENTION:
(Describe the planned intervention, along with any specific elements necessary to understand the intervention (e.g. practice setting, established workflows, Epic environment, patient mix))

ASSESSMENT PLAN:

(This section should be 100% comprehensive! Describe how you are going to assess the impact of the intervention. How will you know if outcomes are attributable to the intervention? Define every variable you want to collect [inclusion/exclusion criteria, co-variates, outcomes], how the variable will be identified/defined, what to do if there are

multiple values/missing values [ex: serum creatinine on admission vs. average during admission], and how you plan to manipulate data in the form it comes in [multiple Excel sheets, merging files, etc.])

Inclusion Criteria:

(This section should be comprehensive. It should reflect the patient population you define in your objective, and/or the process components you plan to assess. Inclusion and exclusion criteria should reflect three types of criteria: 1) defining your patient population or process 2) avoiding confounding and selection bias and 3) feasibility based on vulnerable populations and extraction of data points.)

Table 1: Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria

Measures:
(List measures chosen for assessing the impact of the intervention. Some examples of outcomes to consider including are process measures (e.g. number of prescriptions filled, number of consultations completed, number of patients enrolled in a program, number of progress notes documented), patient outcome measures (e.g. readmissions, adverse events, treatment success, patient satisfaction score), financial measures (e.g. cost of care, reimbursement, length of stay), and efficiency measures (e.g. number of phone calls, time to complete). Define these clearly, and strive for valid, reliable measures)

Table 2: Data Elements
(Spell out in extensive detail where each variable will be collected. Be specific on temporal components/multiple values and missing values as this will help you with any data requests you might have. If you are relying on the EDW or other electronic database for data collection, please contact Pharmacy Informatics by submitting a "Data Request Survey" via this link: **https://utahhealth.sjc1.qualtrics.com/jfe/form/SV_0jjJaKklHEKdEvY** *to make sure the data are available before submitting this proposal.)*

Data from EDW or Other Database (e.g. Epic report, retail pharmacy system, other pharmacy department-specific databases)	Manual Chart Review

Data Safety and Monitoring:
(Describe your plan to safeguard PHI)

Example statements to consider including:
All data will be collected from a password-protected electronic health record.
Data will be stored in a secure, password-protected Excel sheet that is only accessibly by study investigators.
No patient-specific identifiers will be included in the data analysis.
PHI collected will be limited to the minimum necessary to complete the study objectives.
Patient identifiers will be destroyed after conclusion of the study.

Ethical/Regulatory approval:
(In most cases, these quality-improvement projects will be exempt from IRB review. If you are planning a project with a larger scope than strictly quality-improvement, please describe your plans for IRB approval. Additionally, for the purposes of publication or presentation later, IRB review may be necessary, so please describe your plan for IRB submission if applicable. This could include describing the informed consent process if relevant to your project, or your plan to request a waiver of informed consent)

Examples:
Given the quality-improvement focus of this proposal it is anticipated that it will be exempt from IRB review
A waiver of informed consent will be requested from our IRB.

STATISTICAL METHODS, DATA ANALYSIS, AND INTERPRETATION:

(Please describe analysis plan in detail, including qualitative (e.g. process maps, Ishikawa diagrams, 5 Whys) and quantitative (e.g. Pareto charts, run or control charts, descriptive statistics, univariate analyses, linear/logistic

regression) as appropriate. Please include an estimated sample size and/or power calculation. Describe any efforts to address potential sources of bias or confounding here or in the study design section. Any pre-planned subgroup or sensitivity analyses should be listed here. Describe any plans for how to handle missing data or patients lost to follow up.)

Example statements to consider including if applicable:
Descriptive statistics will be used to summarize all observations.
A chi-square, or Fisher exact test as appropriate, will be used to compare…
A student t-test, or Mann Whitney U test as appropriate, will be used to compare…
Based on our historical averages we anticipate approximately X patients will be included in the pre- and Y patients included in the post-intervention time periods
Data will be analyzed using software package X…
P-charts for process and outcome metrics will be created and followed in real-time to monitor performance

ADMINISTRATIVE RESPONSIBILITIES:

Study Resources:

(Describe departmental or institutional resources needed to complete the proposal and whether those have been arranged. These might include data warehouse support for data collection, informatics support for Epic or other IT builds, statistical support for items beyond the research team's expertise, funding for supplies, reliance on a study coordinator, etc.)

Example statements to consider including if applicable:
The University of Utah Health electronic medical record will be utilized to generate a data report containing the inclusion criteria outlined above.
Data will be collected using REDCap
Data will be collected from existing reports in Epic.
An external statistical consultant will be necessary for the analysis of…
Departmental funding for X will be necessary for…
IT support for construction of X in Epic will be needed for…

MOCK TABLES/FIGURES:

(This section should include mock tables and figures to present your data. This will help you select data you want to collect, avoid unnecessary data collection, and conceptualize how you want analyses to be presented.)

Figure 1. CONSORT Diagram

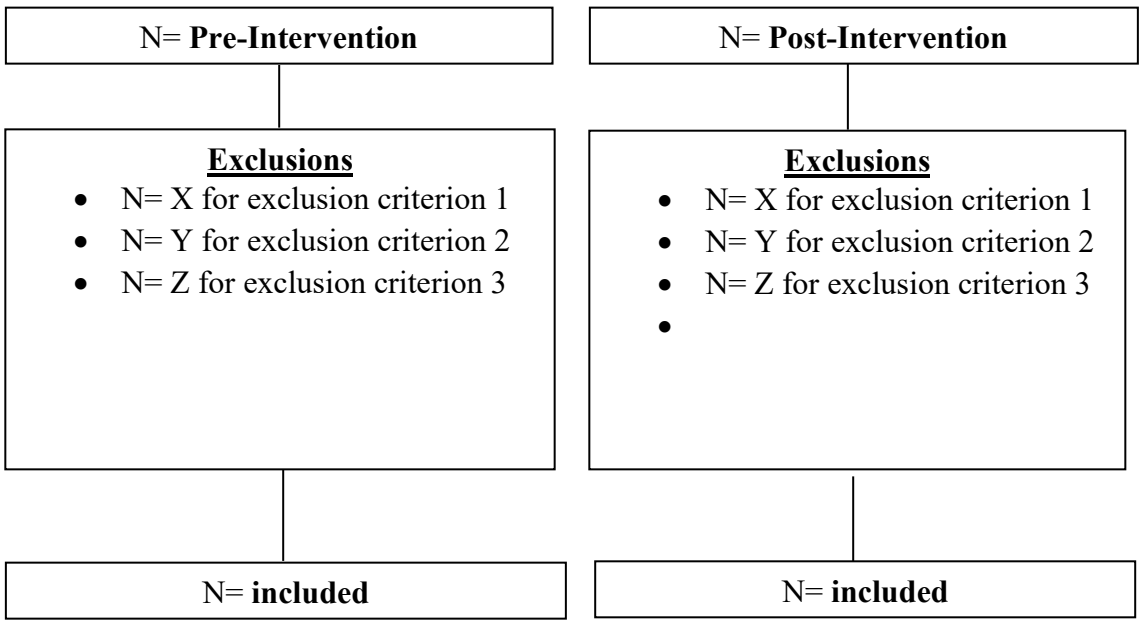

Table 1. Baseline Demographics

	Pre-Intervention (n=)	Post-Intervention (n=)
Female, n (%)	xx (xx.x%)	
Age, years – mean (SD)	xx.x (xx.x)	
Weight, kg – mean (SD)		
*CrCl, mL/min – mean (SD)		
*Creatinine clearance was calculated using the Cockcroft-Gault equation.		

Table 2: Outcomes Associated with Intervention

	Pre-Intervention (n = X)	Post-Intervention (n = Y)	p-value
Outcome 1	xx.x (xx.x – xx.x)	xx.x (xx.x – xx.x)	x.xx
Outcome 2			
Outcome 3			

(Examples of outcomes to consider including in a table, or more than one table, are patient outcomes like readmissions, adverse events, etc., efficiency measures like number of phone calls, time to complete, etc., process measures like number of prescriptions filled, number of consultations completed, number of notes documented, etc., or financial measures like cost of care, reimbursement, etc. In general, figures are more effective visualizations than tables, so strive for figures when possible.

Figure 1: Control charts for monitoring improvement after intervention
(Describe as text. Example: P-chart for proportion of patients readmitted before and after the intervention)
Figure 2:
[Other figures commonly used in quality-improvement work that might be helpful to consider include Pareto charts, histograms, process maps, scatter plots, fishbone diagrams, examples of the intervention (e.g. screenshots of new tool in Epic, before and after photos of medication cart layout), dot plots, box and whisker plots, various types of bar charts. Other figures that are less common that could be considered include pyramid charts, violin charts, waffle charts, Sankey diagrams, waterfall charts, bubble plots, heat maps. Please avoid pie charts in nearly all cases.]

TIMELINE FOR PROJECT (CONVENTIONAL PROJECT)

July/August	Preceptors and resident obtain necessary institutional approvals for the project from relevant committees beyond RAC. Some examples, depending on the scope of the project, might include Pharmacy Informatics, Pharmacy Operations, Electronic Health Record Operations (EHR Ops), Clinical Decision Support (CDS), P&T, Nursing Clinical Operations Council (NCOC), Electronic Nursing Documentation (END), the Patient Safety Committee. These should generally be obtained by preceptors prior to pitching a project idea to a

	resident, but depending on the schedule of committee meetings there may be some approvals to obtain in July or August.
August	Resident submits RAC proposal to preceptors for feedback
September	Resident, with preceptor support, presents proposal to RAC Resident revises proposal based on RAC feedback Resident and preceptors request data set Resident and preceptors format data collection tool Resident and preceptors submit protocol to IRB
October	Resident begins data collection after IRB approval with coaching from preceptors as necessary Resident submits Vizient abstract draft to preceptors for feedback
November	Resident submits Vizient abstract once approved by preceptors Resident submits Vizient poster draft to preceptors for feedback
December	Resident presents poster at Vizient meeting Resident continues data collection with support from preceptors
January	Resident continues data collection
February	Resident and preceptors analyze data Resident submits Mountain States abstract to preceptors for feedback
March	Resident submits final draft of Mountain States abstract Resident submits Mountain States slides to preceptors for feedback
April	Resident and preceptors practice Mountain States presentation Resident and preceptors present data to relevant project stakeholders (e.g. medical leadership, pharmacy leadership)
May	Resident presents at Mountain States Resident submits manuscript draft to preceptors and RPD for feedback
June	Resident submits final draft of manuscript to RPD
Post-residency (typically)	Preceptors, with past-resident as able, submit abstract for presentation at a scientific conference and/or submit manuscript for publication Preceptors, with past-resident as able, present the project at a meeting and/or complete the steps involved in publication process (e.g. revision, resubmission if necessary)

(Provide extra dates ahead of deadlines where you will send drafts to your preceptors in order to meet these deadlines)

TIMELINE FOR PROJECT (FLIPPED MODEL)

July	Preceptors transition project to incoming PGY2 resident Resident and preceptors develop data collection tool Resident begins data collection after IRB approval with coaching from preceptors as necessary
August-October	Resident completes data collection Resident and preceptors analyze data Resident submits Vizient abstract draft to preceptors for feedback Resident begins drafting manuscript
November	Resident submits Vizient abstract once approved by preceptors Resident sends Vizient poster draft to preceptors for feedback
December	Resident presents poster at Vizient meeting
February	Resident submits Mountain States abstract to preceptors for feedback
March	Resident submits final draft of abstract to Mountain States Resident sends draft of Mountain States slides to preceptors for feedback
April	Resident sends final draft of manuscript to primary project preceptor and RPD for feedback Resident and preceptors practice Mountain States presentation Resident and preceptors present data to relevant project stakeholders (e.g. medical leadership, pharmacy leadership)

	Resident develops research proposal for incoming PGY2 in conjunction with co-investigators
May	Resident presents protocol summary to relevant stakeholders Resident presents project proposal to RAC Resident presents at Mountain States
May/June	Resident and preceptors obtain IRB approval Resident and preceptors request data from EDW Resident and preceptors submit abstract for presentation at a scientific conference and/or submit manuscript for publication
Post-residency (typically)	Preceptors, with past-resident as able, present the project at a meeting and/or complete the steps involved in publication process (e.g. revision, resubmission if necessary)

ROLE OF RESIDENT IN COMPLETING THE PROJECT

Example statements to consider including:
The resident will be responsible for implementing the intervention, composing the data collection tool, manual chart review to collect all data, data analysis, and presenting the project at state and national conferences.
Once the data analysis is complete, the results will be presented to local stakeholders and leadership teams including…

PRESENTATION AND PUBLICATION

Planned Meeting for Abstract Submission (other than Vizient and Mountain States)

(Target a meeting with an abstract deadline around the time when your data will be collected and analyzed, one quality meeting to consider is the High Value Practice Academic Alliance (HVPAA))

Potential Journals for Publication:
(Consider healthcare-related quality improvement or patient safety journals, in addition to pharmacy practice journals or journals within a specialty area that publish quality improvement work (e.g. ID, heme/onc)

References:

(I highly encourage using a citation manager. EndNote, Zotero, and Mendeley are all fine, but it will save you hours of time to learn it up front.)

Protocol Summary for Research Projects

Version: Date

Title
(Try to indicate study's design with a commonly used term in the title)

Principal Investigator
Resident Name, Affiliation, and Contact Information

Co-Investigators
Names and Affiliations

Physician Champions
Names and Affiliations

BACKGROUND AND INTRODUCTION:
(This section is helpful to do a comprehensive literature review to help write your introduction and discussion sections for an actual manuscript. It also is helpful in guiding your research question to ask a question that is both feasible and pertinent. Utilize this section to build the rationale for your study, the research question that your study will attempt to answer or gap in literature that your study will attempt to fill, and the potential impact to the organization in terms of patient care or other institutional changes. Try to keep to 2-3 paragraphs.)
OBJECTIVES AND HYPOTHESIS:

(This section is where you choose your objectives. Make sure they follow both PICO and SMART format. Having a well-defined PICO objective is necessary to proceed. Your primary objective should be your #1 goal. Secondary objectives are objectives that you can try to achieve, but not necessary for the completion of the primary objective.)

Primary Objective:

Secondary Objectives:

Hypothesis (or null hypothesis)

PARTICIPANT SELECTION CRITERIA:

(This section should be comprehensive. It should reflect the patient population you define in your objective. Inclusion and exclusion criteria should reflect three types of criteria: 1) defining your

patient population 2) avoiding confounding and selection bias and 3) feasibility based on vulnerable populations and extraction of data points.)

Table 1: Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria

DESIGN:

(This section should include reasonable dates for data abstraction and a simplified version of your patient population and primary objective.)

STUDY PROCEDURES:

(This section should be 100% comprehensive! Define every variable you want to collect [inclusion/exclusion criteria, co-variates, outcomes], how the variable will be identified/defined, what to do if there are multiple values/missing values [ex: serum creatinine on admission vs. average during admission], and how you plan to manipulate data in the form it comes in [REDCap, multiple Excel sheets, merging files, etc.])

Table 2: Data Elements
(Spell out in extensive detail where each variable will be collected from. Be specific on temporal components/multiple values and missing values as this will help you with any data requests you might have. If you are relying on the EDW or another electronic database for data collection, please contact Pharmacy Informatics by submitting a "Data Request Survey" via this link: **https://utahhealth.sjc1.qualtrics.com/jfe/form/SV_0jjJaKklHEKdEvY** *to make sure the data are available before submitting this proposal.)*

Data from EDW or Other Databases	Manual Chart Review

Standard of Care vs. Research-Related Procedures:

Example statements to consider including:
The retrospective nature of this study ensures that there will be no direct intervention in patient care.

Data Safety and Monitoring:
(Describe your plan to safeguard PHI)

Example statements to consider including:
All data will be collected from a password-protected electronic health record.
Data will be stored in a secure, password-protected Excel sheet that is only accessibly by study investigators.
No patient-specific identifiers will be included in the data analysis.
PHI collected will be limited to the minimum necessary to complete the study objectives.
Patient identifiers will be destroyed after conclusion of the study.

Informed consent:
(Describe the informed consent process if applicable, or your plan to request a waiver of informed consent)

Example:
A waiver of informed consent will be requested from our IRB.

STATISTICAL METHODS, DATA ANALYSIS, AND INTERPRETATION:

(Please describe statistical analysis plan in detail, including descriptive statistics, univariate analyses, linear/logistic regression, or survival analyses as appropriate. Please include an estimated sample size to help us gauge workload and feasibility, even if it is imprecise. If a power calculation is relevant for your project please include that here. Describe any efforts to address potential sources of bias or confounding here or in the study design section. Any pre-planned subgroup or sensitivity analyses should be listed here. Describe any plans for how to handle missing data or patients lost to follow up.)

Example statements to consider including if applicable:
Descriptive statistics will be used to summarize all observations.
A chi-square, or Fisher exact test as appropriate, will be used to compare…
A student t-test, or Mann Whitney U test as appropriate, will be used to compare…
The calculated sample size to detect a X difference between groups using an anticipated effect size of Y and standard deviation Z, one-sided alpha of 0.05, and 80% power is W samples (T in each group).
A linear regression model will be performed on the primary endpoint using the following variables…
Survival functions for time-to-X will be estimated using the Kaplan-Meier method and assessed for statistical significance using the log-rank test.
Data will be analyzed using software package X…

ADMINISTRATIVE RESPONSIBILITIES:

Study Resources:

(Describe departmental or institutional resources needed to complete the proposal and whether those have been arranged. These might include data warehouse support for data collection, informatics support for Epic or other IT builds, statistical support for items beyond the research team's expertise, funding for supplies, reliance on a study coordinator, etc.)

Example statements to consider including if applicable:
The University of Utah Health electronic medical record will be utilized to generate a data report containing the inclusion criteria outlined above.
Data will be collected using REDCap
Data will be collected from existing reports in Epic.
An external statistical consultant will be necessary for the analysis of…
Departmental funding for X will be necessary for…
IT support for construction of X in Epic will be needed for…

MOCK TABLES/FIGURES:

(This section should include mock tables and figures to present your data. This will help you select data you want to collect, avoid unnecessary data collection, and conceptualize how you want analyses to be presented.)

Figure 1. CONSORT Diagram

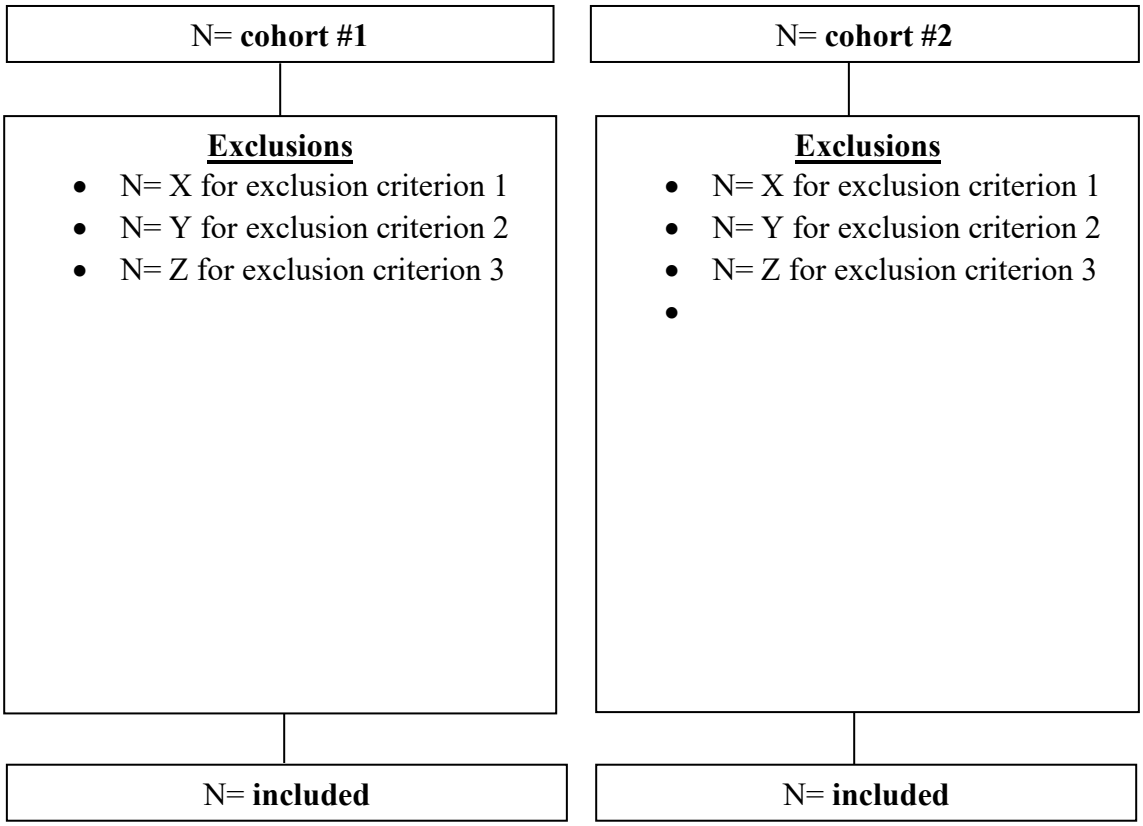

Table 1. Baseline Demographics

	Group 1 (n=)	Group 2 (n=)
Female, n (%)	xx (xx.x%)	
Age, years – mean (SD)	xx.x (xx.x)	
Weight, kg – mean (SD)		
*CrCl, mL/min – mean (SD)		
*Creatinine clearance was calculated using the Cockcroft-Gault equation.		

Table 2: Treatment Characteristics

	Group 1 (n = X)	Group 2 (n = Y)	p-value
Characteristic 1	xx.x (xx.x-xx.x)	xx.x (xx.x-xx.x)	x.xx
Characteristic 2			
Characteristic 3			

Table 3: Treatment Outcomes

	Group 1 (n = X)	Group 2 (n = Y)	p-value
Outcome 1	xx.x (xx.x – xx.x)	xx.x (xx.x – xx.x)	x.xx
Outcome 2			
Outcome 3			

(In general, figures are more effective visualizations than tables, so strive for figures when possible.)

Table 4: Outcomes Adjusted for Covariates

	Unadjusted Model			Adjusted Model		
	Estimate	95% CI	p-value	Odds Ratio‡	95% CI	p-value
Primary						
Primary Outcome	x.xx	x.xx – x.xx	x.xx	x.xx	x.xx – x.xx	x.xx
Secondary						
Outcome 1						
Outcome 2						
Outcome 3						
‡ Adjusted for x, y, z covariates						

Figure 2: Kaplan-Meier plots for time-to-event comparisons
(Describe as text. Example: Kaplan-Meier plot of time-to-adverse event based on treatment with Drug A vs Drug B
Other figures to consider if applicable
Distribution: histograms, dot plot or pyramid chart, box and whisker plot, violin chart
Categorical: various types of bar charts, dot plots, waffle charts, Sankey diagrams, waterfall charts
Other: scatter plots, bubble plots, line charts, please avoid pie charts in nearly all cases, heat maps

TIMELINE FOR PROJECT (CONVENTIONAL PROJECT)

July/August	Preceptors and resident obtain necessary institutional approvals for the project from relevant committees beyond RAC. Some examples, depending on the scope of the project, might include Pharmacy Informatics, Pharmacy Operations, Electronic Health Record Operations (EHR Ops), Clinical Decision Support (CDS), P&T, Nursing Clinical Operations Council (NCOC), Electronic Nursing Documentation (END), the Patient Safety Committee. These should generally be obtained by preceptors prior to pitching a project idea to a resident, but depending on the schedule of committee meetings there may be some approvals to obtain in July or August.
August	Resident submits RAC proposal to preceptors for feedback
September	Resident, with preceptor support, presents proposal to RAC Resident revises proposal based on RAC feedback Resident and preceptors request data set Resident and preceptors format data collection tool Resident and preceptors submit protocol to IRB

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April	Resident and preceptors practice Mountain States presentation Resident and preceptors present data to relevant project stakeholders (e.g. medical leadership, pharmacy leadership)
May	Resident presents at Mountain States Resident submits manuscript draft to preceptors and RPD for feedback
June	Resident submits final draft of manuscript to RPD
Post-residency (typically)	Preceptors, with past-resident as able, submit abstract for presentation at a scientific conference and/or submit manuscript for publication Preceptors, with past-resident as able, present the project at a meeting and/or complete the steps involved in publication process (e.g. revision, resubmission if necessary)

(Provide extra dates ahead of deadlines where you will send drafts to your preceptors in order to meet these deadlines)

TIMELINE FOR PROJECT (FLIPPED MODEL)

July	Preceptors transition project to incoming PGY2 resident Resident and preceptors develop data collection tool Resident begins data collection after IRB approval with coaching from preceptors as necessary
August-October	Resident completes data collection Resident and preceptors analyze data Resident submits Vizient abstract draft to preceptors for feedback Resident begins drafting manuscript
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March	Resident submits final draft of abstract to Mountain States

	Resident sends draft of Mountain States slides to preceptors for feedback
April	Resident sends final draft of manuscript to primary project preceptor and RPD for feedback Resident and preceptors practice Mountain States presentation Resident and preceptors present data to relevant project stakeholders (e.g. medical leadership, pharmacy leadership) Resident develops research proposal for incoming PGY2 in conjunction with co-investigators
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May/June	Resident and preceptors obtain IRB approval Resident and preceptors request data from EDW Resident and preceptors submit abstract for presentation at a scientific conference and/or submit manuscript for publication
Post-residency (typically)	Preceptors, with past-resident as able, present the project at a meeting and/or complete the steps involved in publication process (e.g. revision, resubmission if necessary)

ROLE OF RESIDENT IN COMPLETING THE PROJECT

Example statements to consider including:
The resident will be responsible for composing the data collection tool, manual chart review to collect all data, data analysis, and presenting the project at state and national conferences. Once the data analysis is complete, the results will be presented to local stakeholders and leadership teams including…

PRESENTATION AND PUBLICATION

Planned Meeting for Abstract Submission (other than Vizient and Mountain States)

(Target a meeting with an abstract deadline around the time when your data will be collected and analyzed)

Potential Journals for Publication:

REFERENCES:

(I highly encourage using a citation manager. EndNote, Zotero, and Mendeley are all fine, but it will save you hours of time to learn it up front.)

Appendix G. Example C.E. Speaker Evaluation

USHP Resident CE Series
Resident Name Here
"CE TITLE GOES HERE"

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1. Did the presenter meet the stated educational objectives? (Place Pharmacist Objectives 1st, then Tech Objectives 2nd, clearly delineating which is which.)
   a. Objective #1 written out here. Yes No
   b. Objective #2 written out here. Yes No
   c. Objective #3 written out here. Yes No
   d. Objective #4 written out here. Yes No
   e. Objective #5 written out here. Yes No

Please rate the following, 1 = very dissatisfied, 5 = very satisfied

2. How satisfied are you with this presentation? 1 2 3 4 5

3. Was the content of this presentation relevant to your area of practice? Yes No

4. How does this topic pertain to your educational goals?

_____
_____

5. The speaker was:
   a. Interesting 1 2 3 4 5
   b. Practical 1 2 3 4 5
   c. Answered questions appropriately 1 2 3 4 5
   d. Showed mastery of the subject 1 2 3 4 5

6. Please rate the quality of the learning materials. 1 2 3 4 5
7. Please rate the effectiveness of the learning activity. 1 2 3 4 5
8. The presentation was free from bias, promotion, or advertisement? Yes No
   If no, please explain:

9. What other topics would you like to see presented in the future?

_____

10. Please use the space below to provide any constructive comments about the presenter or the topic presented and if you had any unanswered questions.

Appendix H. Example Project Platform Evaluation

Mountain States Conference
Platform Presentation Evaluation Form

Presenter's Name: _____ Abstract #: _____

Presenter's Institution: _____

Evaluator: ☐ Resident ☐ Fellow ☐ Preceptor ☐ RPD ☐ Other: _____

Presentation Feedback	1=Needs Improvement 5=Excellent	Comments
Presenter demonstrated strong presentation skills: pace and volume were appropriate. Good eye contact. Free of distracting mannerisms.	1 2 3 4 5	
Slides were clear and readable and augmented the presentation well.	1 2 3 4 5	
The presentation was organized and flowed well.	1 2 3 4 5	
Project was clearly described: sufficient background to understand the project; methods clearly described; results presented for each objective; conclusions are clear.	1 2 3 4 5	
Presenter handled questions well.	1 2 3 4 5	
Handout is well organized and contains useful information.	1 2 3 4 5	
Presentation strengths:		
One key way to improve presentation:		

Project / Research Feedback	1=Needs Improvement 5=Excellent	Comments
Reasons for selecting project clear; objectives clearly stated.	1 2 3 4 5	
Methods appropriate to answer research question; statistics appropriate for the study design.	1 2 3 4 5	
Results relevant to pharmacy practice.	1 2 3 4 5	
Conclusions match the results presented.	1 2 3 4 5	
Resident's interest and participation in project evident.	1 2 3 4 5	

Please provide additional comments that will help the presenter with future research.

Appendix I. Preceptor Commitment Form

Preceptor Name: _____ Practice Area: _____

1. What is the **task**?	The task is committing to and completing the preceptor requirements found in the *Common Residency Program Manual* for University of Utah Health Department of Pharmacy Services. This includes both the annual administrative requirements for preceptors and the teaching and coaching requirements related to each learning experience that the preceptor is responsible for during the residency program year. Preceptors are asked to be willing to precept learners on an ongoing basis.
2. What is the outcome and deliverables?	Administrative Deliverables: • Read the *Common Residency Program Manual* at least every other year • Develop a rotation description in the standard format • Update the rotation description annually by **June** to be used as a rotation syllabus • Maintain an active practice site and demonstrate expertise and recognition in the area of the resident learning experience • Participate in activities that promote pharmacy practice and maintain a current Preceptor Academic and Professional Record (PAPR) • Complete the PharmAcademic™ requirements to establish evaluations prior to rotations and complete PharmAcademic™ evaluations by the last day of each rotation • Participate in 5 hours of preceptor development activities each year Teaching and Precepting Deliverables: • Perform baseline assessments of each resident that is precepted or coached. • Orient each trainee to the learning experience. • Provide regular formative evaluation (feedback in the form of edits or oral comments) and document formal summative evaluation in PharmAcademic for each resident experience that is precepted or coached. • Notify the program director immediately when it becomes clear that the resident will not or cannot meet expectations of the residency learning experience or any other residency-related requirements.
3. What **actions** are required to complete the task & achieve the outcome?	The preceptor or preceptor teams must make time during their work day to complete the tasks outlined in this clear agreement. The resources available include this document and examples in the *Common Residency Program Manual* and online on the Pharmacy Help Book. Other preceptors, residency program directors, and members of the program's RAC or Overall RAC may also serve as guides for preceptors.
4. What are the **deadlines**?	The administrative responsibilities are divided into annual requirements that are due by **June** and rotational responsibilities that are due at several points, but should be completed by the last day of a rotation or other learning experience.
5. What are the **stakes** - benefits and consequences?	The success of each resident and residency program relies on well-planned and well-managed learning experiences. Success also depends on preceptors who are prepared and motivated to work with each resident to meet the goals and objectives outlined by preceptor, resident, program, and ASHP.
Commitment	I commit to completing the preceptor tasks and requirements outlined here and in the *Common Residency Program Manual*. Preceptor Signature: Date:

Appendix J. Preceptor Development Tracking Form

Preceptor Name:
Academic Year: 20_____ to 20_____

Date	Title/Topic	Hours

Target: 5 or more hours of preceptor development from July 1st through June 30th annually.

Appendix K. Residency Graduates and Project Titles

University of Utah Health Residency Programs: Past Resident Projects 1992-2023

Last Name	First Name	School	Year	Resident Project
Abbinanti	Alan	U of Utah	2022-23 (Am Care-2)	Collaborative Pharmacy and Nursing Hypertension Management in a Primary Care Community Clinic
Andrews	Sam	UCSF	2022-23 (ID)	Validation of BCID2 platform for detecting ESBL resistance
Bartley	Nathan	U of WI	2022-23 (HSPAL-1)	Hospital at Home
Best	Henry Bernard	MUSC	2022-23 (Am Care-1)	Nephropathy Screening and Monitoring in Primary Care Patients with Diabetes
Blake	Caitlyn	U of RI	2022-23 (MUSP)	Review all half and quarter tablets that are packaged in central pharmacy and make system changes to eliminate unnecessary doses particularly dietary supplements.
Bucher	Bridget	U of NE	2022-23 (SoTx)	Low-Dose Fluconazole as Antifungal Prophylaxis in Lung Transplant Recipients
Cairns	Taylor	U of IL	2022-23 (Gen-1)	VTE prophylaxis in Lung Transplant Recipients
Campbell	Maren	U of MN	2022-23 (Onc)	Impact of Day 21 Compared to Day 14 Bone Marrow Biopsy on Prediction of Complete Response, RE-Induction Rtes and Leukemia Free Survival in Newly Diagnosed AML Patients
Carsten	Ryan	Concordia	2021-22 (IT)	Integrated Calculator to Manage Real Time Medication Supply Issues in Anesthesiology
Chavez	Guadalupe	U of IA	2022-23 (Am Care-2)	Implementation of a collaborative care model to improve access to depression treatment
Everhardt	Tyler	OH State	2022-23 (Onc)	Comparison of Thrombocytopenia Resolution following Dexamethasone Treatment in Obese and Non-Obese Patients with Immune Thrombocytopenia (ITP)
Ford	Khalil	SD State	2022-23 (EM)	Optimal Labetalol Dosing for Acute Ischemic Stroke
Gamvroulas	Eleni	U of Utah	2022-23 (Onc)	Evaluation of dose-reduced carboplatin in metastatic urothelial cancer
Giravi	Hayam	U of Utah	2022-23 (Am Care-1)	Primary care pharmacist intervention improves blood pressure outcomes and population health measures
Gray	Julie		2022-23 (Gen-1)	Assessment of the IV to PO Antibiotic Treatment Guideline for Orthopedic-Related Infections
Hunter	Melanie	U of Utah	2022-23 (Onc)	Safety of Iron Dextran Slow Titration versus Standard Test Dose Protocol in Patients with Cancer-Associated Iron Deficiency Anemia
Marquez	Clyde	U of CO	2022-23 (Gen-1)	Anti-Xa Monitoring In Obese Patients On Therapeutic Enoxaparin
Miller	Travis	Palm Beach Atl	2022-23 (HSPAL-1)	Evaluation of a Remote Hybrid Staffing Model for Investigational Drug Service Pharmacists
Ortbals	Chloe	U of KS	2022-23 (HSPAL-2)	Standardization of Critically Stocked Medications in Automated Dispensing Cabinets at an Academic Medical Center
Peterson	Haley	U of Utah	2022-23 (Gen-1)	Naloxone Utilization on the Internal Medicine Floor
Price	Erin	U of Utah	2022-23 (Gen-1)	Diuretic dose and heart failure readmissions post-TAVR
Relias	Samantha	U of WI	2022-23 (HSPAL-2)	REMS Drug Lifecycle Management in a Health System
Smith	Abbey	U of Utah	2022-23 (Am Care-1)	Suboptimal GLP1 agonist dosing with QI to improve
Smith	Savanna	UMKC	2022-23 (IM)	Survey of CFF-Accredited Care Centers Regarding Drug Therapy During Pregnancy and Lactation
Whetman	Presley	U of Utah	2022-23 (Crit Care)	Clinical Correlation of MRSA PCR and Wound Cultures at a Large Regional Burn Center
Abbinanti	Alan	U of Utah	2021-22 (B)	Providers Perceived Value of Clinical Pharmacist and Technician Services within Primary Care Clinics

Brinkman	Luke	U of MN	2021-22 (Onc)	Responses to CAR-T Cell Therapy Based on Tumor Biology for Diffuse Large B-Cell Lymphoma
Campbell	Maren	U of MN	2021-22 (A)	Impact of Protocol Implementation on the Appropriate Use of Vancomycin in Patients with Febrile Neutropenia
Chavez	Guadalupe	U of IA	2021-22 (B)	Impact of clinical pharmacists in patients with HbA1c >10% in primary care clinics
Christensen	Sean	U of Utah	2021-22 (MUSP)	Comparison of Electronic Medical Record, Policy, and Infusion Pump Library for Continuous Infusions and Developing an Ongoing Maintenance Program at an Academic Medical Center
Dwyer	Katie	U of KS	2021-22 (EM)	Direct Oral Anticoagulant versus Warfarin to Prevent Recurrent Thrombosis in Patients with Singe- or Dual-Positive Antiphospholipid Syndrome
Fitton	Kathryn (Katie)	U of GA	2021-22 (Cards)	Comparison of DOAC loading strategies after parenteral anticoagulation for acute thromboembolism
Fonteno	Megan	Auburn U	2021-22 (Onc)	Impact of Pharmacist-Led Medication Interaction Reviews for Oncology Patients on Clinical Trials
Gallagher	Chanah	U of KY	2021-22 (IM)	Impact of Implementing an IV to PO Antibiotic Treatment Protocol for Orthopedic Infections on Prescribing Habits and Health Utilization Outcomes
Heinen	Krystal	U of MN	2021-22 (SoTx)	Outcomes of Very Small Pediatric Donor Kidneys Utilizing Belatacept-Based Immunosuppression in Adult Recipients
Hunsaker	Aaron	UMKC	2021-22 (CC)	Assessment of two different Nimodipine doses after subarachnoid hemorrhage
Hunter	Melanie	U of Utah	2021-22 (B)	Clinical Outcomes of Patients Following Pharmacist Education on Immunotherapy and Immune-Related Adverse Events
Jackson	Ashley	U of Utah	2021-22 (A)	Evaluating the Appropriateness and Safety of IV Iron Administration at the University of Utah Hospital
Lee	Julia	UCSF	2021-22 (Onc)	Assessment of midostaurin with idarubicin and cytarabine induction for acute myeloid leukemia
Relias	Samantha	U of WI	2021-22 (HSPAL1)	Development of a REMS Compliance Evaluation Process and an Interdisciplinary REMS Compliance Review Committee at an Academic Medical Center
Manning	Kyle	Auburn U	2021-22 (ID)	Outcomes associated with the creation of an inpatient pharmacy-led outpatient parenteral antimicrobial therapy (OPAT) service to facilitate transitions of care
Miller	Sabrina	U of MI	2021-22 (Am Care)	Justifying a part-time ambulatory pharmacist position through chronic care management billing and improvement in diabetes quality measures.
Nazminia	Kara	U of WY	2021-22 (IM)	Ceftriaxone versus ampicillin/sulbactam for treatment of community-acquired complicated parapneumonic effusion
Ortbals	Chloe	U of KS	2021-22 (HSPAL1)	Evaluation of Medication Overrides from Automated Dispensing Cabinets Associated with a Standardized Criteria at an Academic Medical Center
Palandri-Rodriguez	Diana	U of NE	2021-22 (Am Care)	Increasing patient access to primary care services via pharmacist co-visit model
Ren	Dylan	U of WY	2021-22 (IT)	Implementation of a pharmacy-specific, transplant documentation tool
Swomley	Aaron	U of Cincinnati	2021-22 (A)	Letermovir Prophylaxis in Hematopoietic Stem Cell Transplant: Evaluation of Clinically Relevant Risk Factors
Vadipour	Omeid	U of Utah	2021-22 (A)	Adjusting the subcutaneous insulin protocol for patients with diabetic ketoacidosis to reduce rates of hypoglycemia
Whetman	Presley	U of Utah	2021-22 (A)	Advanced Chemotherapy Preparation
Jensen	Victoria	Butler	2021-22 (Onc)	Safety of intravenous pentamidine for Pneumocystis jiroveci pneumonia prophylaxis in patients with malignancy
Wilke	Carlie	U of WI	2021-22 (HSPAL-2)	Implementation of Radio Frequency Identification (RFID) Technology to Optimize Medication Inventory Management in the Intraoperative Setting

Chen	Suzie	St. Louis CoP	20-21 (IT)	Data at your fingertips: Improving pharmacist clinical decision support through push notifications
Christensen	Sean	U of Utah	20-21 (A)	Evaluating Inpatient Safety of Vancomycin Therapy at an Academic Medical Center
Clark	Jessica	U of KY	20-21 (Cards)	Evaluation of safety and efficacy of fixed dose versus weight-based intravenous digoxin loading based on ideal body weight
Finnerty	Thomas (Kyle)	Findlay	20-21 (HSPAL-2)	Implementation of a Centralized Product Validation Queue
Fitton	Kathryn (Katie)	U of GA	20-21 (A)	Review of antifungal prophylaxis during the preoperative phase of liver transplant
Gallagher	Chanah	U of KY	20-21 (A)	Impact of Outpatient IV to PO De-escalation vs Continued Vancomycin Therapy on Safety and Effectiveness Outcomes for Patients with Orthopedic-Related Infections
Halloran	Stephani	VCU	20-21 (Int Med)	Duration of antibiotics for treatment of Empyema
Hou	Helen	UCSF	20-21 (EM)	Pre-Post Assessment of Best Practice Alert Intervention for Ondansetron in the Emergency Department to Minimize Adverse Effects in High Risk Patients
Jahng	Calvin	U of Utah	20-21 (B)	Pharmacist Supported Pre-Exposure HIV Prophylaxis in Primary Care
Jones	Shannon	UMKC	20-21 (Int Med)	Development of a pharmacist consult protocol for patients receiving medications via feeding tube during hospital admission
Konietzko	Michael	U of WI	20-21 (HSPAL-2)	Implementation and Optimization of a Drug-Diversion and Prevention Program
Lee	Julia	UCSF	20-21 (A)	Continued Utilization of Self-Reported Work Sampling Method for Evaluating Inpatient and Ambulatory Oncology/Hematology Clinical Pharmacist Activities
Lindley	Bryn	U of Utah	20-21 (Int Med)	The use of continuous infusion vancomycin compared to intermittent dosed vancomycin in the treatment of acute pulmonary exacerbations in patients with cystic fibrosis
Miller	Sabrina	U of MI	20-21 (B)	Adherence barriers experienced by refugees at the Redwood Pharmacy
Mills	Mikayla	U of Utah	20-21 (Am Care)	Baseline characteristics of transgender adults seeking care for gender-affirming hormone treatment in a family medicine clinic
Nazminia	Kara	U of WY	20-21 (A)	Evaluation of a standardized AUC-based initial vancomycin dosing protocol on an internal medicine service
Palandri	Diana	U of NE	20-21 (B)	Impact of clinical pharmacist management of type 2 diabetes mellitus using personal continuous glucose monitoring in the ambulatory care setting
Radford	Colton	ID State	20-21 (Crit Care)	Evaluation of the efficacy and safety of the acute massive pulmonary embolism (PE) protocol
Rustem	Danielle (Dani)	Ferris State U	20-21 (Onc)	Agnostic Tumor Treatment with CDK 4/6 Inhibitors
Schneider	Sabrina	Concordia	20-21 (Onc)	Assessing Quality and Value of Live vs Recorded Chemotherapy Education in an Ambulatory Cancer Care Setting
Tagare	Rosemarie (Dawn)	U of IL Chicago	20-21 (ID)	Seroconversion of people living with HIV with recombinant, adjuvanted hepatitis B vaccination
Wasef	Bestis	U of WA	20-21 (Onc)	Agnostic approaches to tumor treatment
Westfield	Jaelyn	U of IA	20-21 (Onc)	Evaluation of infections among adults with CLL and AML receiving venetoclax
Wilke	Carlie	U of WI	20-21 (HSPAL-1)	Is there a remote chance? Central pharmacy workload and staffing model evaluation to increase pharmacist capacity
Zukauckas	Kelsea	U of WY	20-21 (SOTx)	AMR Treatment Outcomes in Kidney Transplant Patients at an Academic Medical Center
			20-21	
			20-21	
Chan	Alissa	UCSD	19-20 (SoTx)	Effects of dose reduction of azathioprine in lung transplant patients

Cisowska	Tamara	UCSF	19-20 (IM)	Comparative efficacy and safety of oral metolazone versus intravenous chlorothiazide for acute decompensated heart failure sequential nephron blockade
Clark	Lillian	U of KY	19-20 (HSPA-2)	Improving Inpatient Pharmacy Services to the Emergency Department in a Growing Academic Health System
Finnerty	T. Kyle	Findlay	19-20 (HSPA-1)	Improved workflow efficiency of intrathecal pain pump compounding using volumetric mid-preparation review
Froerer	Camryn	U of Utah	19-20 (HSPA-2)	Development and implementation of a patient acuity scoring system in kidney transplant patients
Gabriel	Christian	U of Co	19-20 (IM)	Survey of CFF-accredited care centers regarding antibiotic utilization for treatment of *Mycobacterium abscessus* infection
Jensen	Brita	Midwestern	19-20 (CC)	The impact of sleep aids on the nurse perceived quality of sleep in the cardiovascular ICU
Klink	Graham	U of KY	19-20 (Onc)	Appropriate laboratory monitoring for denosumab in solid tumor patients
Konietzko	Michael	U of WI	19-20 (HSPA-1)	The Price is Right! Outpatient therapeutic interchange optimization and impact
Kramer	Elizabeth	OH Northern	19-20 (Onc)	A weight-based, dose-response assessment of tyrosine kinase inhibitor therapy for patients with chronic myeloid leukemia
Kuznicki	Joanne	U of WI	19-20 (IM)	Time to therapeutic range of activated partial thromboplastin time compared to antifactor-Xa for unfractionated heparin infusion monitoring in end-stage renal disease patients
Lindley	Bryn	U of Utah	19-20 (A)	Implementing changes to a subcutaneous insulin diabetic ketoacidosis protocol to improve hypoglycemia rates at an academic medical center
Mcclure	Lauren	UT Austin	19-20 (Em Med)	Education and assessment of understanding of appropriate dosing of ketamine for sedation by emergency medical service providers in the field
Mcdonald	Joshua	U of IA	19-20 (B)	Identifying factors that predict the occurrence of adverse drug reactions leading to the discontinuation of vancomycin in outpatient parenteral antimicrobial therapy
Mills	Mikayla	U of Utah	19-20 (B)	Evaluation of patient satisfaction with pharmacist performance in delivering comprehensive medication management (CMM) within select University of Utah community clinics
Moore	Shelby	U Cincinnati	19-20 (Onc)	Dosing Strategy During Rechallenge with Nivolumab After Immune-Related Adverse Events in Patients with Solid Tumors: An Observational Cohort Study
O'Brien	Shea	Drake	19-20 (IT)	A dynamic clinical checklist to standardize pharmacist intervention documentation and clinical review
Oliver	Meredith	U of MS	19-20 (ID)	Validation of the Drug Resistance in Pneumonia (DRIP) clinical prediction score at the University of Utah Health
Schneider	Sabrina	Concordia	19-20 (A)	Evaluation of Pre-Transplant Serologies and Vaccination Rates in Kidney Transplant Candidates
Tham	Kenneth	UCSF	19-20 (Onc)	Evaluation of Infections in Patients Receiving Ibrutinib
Tuttle	Shannon	U of Utah	19-20 (B)	A Value Assessment of Pharmacy Primary Care Clinical Technician Services
Wasef	Bestis	U of WA	19-20 (A)	Implementing standard operating procedures for compounding hazardous and specialty drug
Windscheffel	Joe	U of KS	19-20 (Am Care)	Pharmacist Driven Annual Wellness Visits for Medicinally Complex Patients
Zukauckas	Kelsea	U of WY	19-20 (A)	Do These Labs Really Matter?: Searching for the Benefit of Laboratory Monitoring in Outpatient Parenteral Antimicrobial Therapy (OPAT)
Baxa	Jared	U of WI	18-19 (A)	Association of the use of acetaminophen with opioid use and clinical outcomes in postoperative critically ill patients
Clark	Lillian	U of KY	18-20 (HSPA-1)	Evaluation and optimization of the central pharmacy triage role in a large academic health system: Assessing the cause of phone calls and medication messages

Clark	Rebecca	Lipscomb	18-19 (Onc)	Resident Project Title: Impact of Glucose-Lowering Agents on TKI Response in CML
Clark	Breanna	U of KS	18-19 (SoTxp)	Impact of everolimus on secondary non-melanoma skin cancer prevention in sold orgain transplant recipients
Collins	Lynsi	UNC	18-19 (Int Med)	Survey of CFF-accredited care centers regarding treatment of fat soluble vitamin levels assessment and management
Crockett	Keaton	U of U	18-19 (AmCare)	Stimulant Stewardship: Analysis of Pharmacist Engagement in the Care of Adult Patients Prescribed Stimulants for ADHD at a Family Medicine Clinic
DeLor	Jeremy	Wayne State	18-19 (B)	The impact of a pharmacist-centered transitions-of-care workflow on patient readmission rates in a large academic medical center
Dunn	Louis	Creighton	18-19(Informatics)	Clinical Decision Support Implementation: QTc Prolongation Risk Scoring and Stratification System
Freeman	Rachael	UIC	18-19 (DI)	Developing an impact severity rating scale to characterize drug shortages
Froerer	Camryn	U of U	18-20 (HSPA-1)	Trial of new discharge workflow on time to discharge in a rehabilitation hospital
Jankowski	Mika	U of AZ	18-19 (Onc)	Retrospective review of original versus modified R-CODOX-M/IVAC regimens in patients with non-Hodgkins' Lymphomas
Joshi	Rutvik	OSU	18-19 (A)	Insulin Safety Through FMEA and Application of National Best Practices
Kramer	Elizabeth	ONU	18-19 (A)	Evaluation of methotrexate clearance with an enteral urine alkalinization protocol in a large academic medical center
Kuznicki	Joanne	U of WI	18-19 (A)	Impact on pneumococcal vaccination rates in immunocompromised patients with the presence of a pharmacist in a specialty clinic
Lux	Alexandrea	OSU	18-19 (HSPA-2)	Assessment of the prior-authorization staffing model for outpatient infusion at a large academic health center
Martin	Rebecca	SUNY	18-19 (Onc)	Post-progression treatment with targeted therapy of patients with NSCLC
Miller	Rebecca	Purdue	18-19 (Int Med)	Survey of CFF-accredited care centers regarding the use of colistimethate sodium and polymyxin B
Morlan	Natalie	U of U	18-19 (B)	Identification of Patients for Comprehensive Medication Management by Pharmacists in Community Are Clinics through Assessment of 30-day Readmission Risk at Transitions of Care
O'Brien	Shea	Drake	18-19 (HSPA-2)	Implementation and optimization of a new medication inventory management system
Oliver	Meredith	U of MIS	18-19 (A)	Safety of daily vs every 48-hour dosing of daptomycin in patients with renal insufficiency
Sherwood	Sabrina	Idaho S	18-19 (Int Med)	A comparison of anti-pseudomonalantibioticserum concentrations collected by peripherally inserted cnetral catheters and peripheral veins in adults with cystic fibrosis
Tritle	Brandon	U of WY	18-19 (ID)	Liposomal amphotericin B associated nephrotoxicity in obese and non-obese patients
Turcotte	Kelsey	Union U	18-19 (Onc)	Evaluating change in antifungal prophylaxis strategies from fluconazole to posaconazole for AML patients undergoing induction chemotherapy
Windscheffel	Joe	U of KA	18-19 (B)	Assessing revenue capture and provider satisfaction utilizing pharmacists to complete comprehensive medication reveiws as part of transitional care management within community clinics
Athern	Kathleen	U of CO	17-18 (Int Med)	Impact of Pregnancy on Antibiotic Clearance in Cystic Fibrosis Patients
Barnicoat	Marie	U of FL	17-18 (Informatics)	Development and Validation of a Computer Based Nomogram for Methotrexate Monitoring and Leucovorin Dose Adjustment
Boyd	Alexander	Oregon State	17-18 (B)	Implementation of enhanced pharmacy services (Comprehensive Medication Management) to improve prescribing rates of osteoporosis medications in women who had a fracture
Clark	Breanna	U of Kansas	17-18 (A)	How much do our transplant patients really understand about their medications?

Crockett	Keaton	UofU	17-18 (B)	Pharmacist intervention to address antimicrobial stewardship in the primary care setting
Fisher	Jonathan	MUSC	17-18 (A)	The Pre and Post-assessment of the Impact of a Vancomycin Dosing Guideline for IV Drug Users
Freeman	Rachael	U of Illinois	17-18 (B)	Impact of a Community Pharmacy Medication Synchronization Program on Adherence in an Academic Medical Center Patient Population
Gaskill	Eric	MUSC	17-18 (A)	PJP prophylaxis BPA improvement
Gibson	Amanda	Jefferson CoP	17-18 (ID)	Weight and BMI Changes in HIV-Infected Virologically Suppressed Adults after Switching to an Elvitegravir- or Dolutegravir-Containing Regimen
Griswold	Cassia	U of AZ	17-18 (Onc)	Risk factors for VTE during chemotherapy in patients with bladder and testicular cancer
Hayes	Lisa	U of TN	17-18 (Crit Care)	Update of emergency department CA-MRSA antibiogram with review of antibiotic prescribing practices
Jones	Emma	U of NE	17-18 (Onc)	Analysis of various dosing strategies of capecitabine monotherapy for HER2-negative metastatic breast cancer
Ku	Jennifer	UNC	17-18 (A)	Implementation of a Neurocritical Care Unit Pain Management Guidance Document and its Impact on Nurse Satisfaction in Managing Pain in Neurocritical Care Patients
Kurtti	Amanda	U of MN	17-18 (Onc)	Levofloxacin prophylaxis in obese versus non-obese patients
Larson	Todd	MUSC	17-18 (SoTx	Effectiveness of a renal sparing mTOR inhibitor based protocol in liver transplant recipients at a large academic medical center
Lux	Alexandria	U of Ohio	17-18 (Admin-1)	Impact of a standardized method of processing prior authorizations at outpatient infusion clinics
O'Brien	M. Shea	Drake	17-18 (Admin-1)	Implementation of a new medication inventory management system and the effects on central pharmacy quality, performance and operations efficiency
Pigott	Heidi	Duquesne U	17-18 (Am Care)	Pharmacist intervention in patients with treatment resistant hypertension at an urban family medicine clinic
Ratte	Morgan	U of RI	17-18 (Int Med)	Treatment of Venous Thromboembolism in Cystic Fibrosis Patients
Sandahl	Tyler	U of IA	17-18 (Onc)	Examination of the Effect of Rituximab and Acetazolamide on Creatinine Elevation and Methotrexate Clearance in Patients Receiving High Dose Methotrexate
Sherwood	Sabrina	Idaho State	17-18 (A)	Development of an immunosuppression weaning protocol for kidney transplant recipients with allograft
Steffens	Laura	UofU	17-18 (Crit Care)	Amiodarone Dosing in Obese Post-Cardiac Surgery Patients
Trovato	Anthony	UofU	17-18 (Drug Info)	Preventing Transition Sticker Shock
Wiederrich	Jennifer	UMKC	17-18 (Int Med)	Evaluation of Nephrotoxicity in Cystic Fibrosis Patients treated with systemic Colistin for acute pulmonary exacerbation
Allen	Scott	U of U	16-17 (Crit Care)	Evaluation of High-dose Ascorbic Acid in Thermal Injury
Bertolaccini	Corinne	Northeastern	16-17 (Crit Care)	Evaluation of anti-Xa levels in surgery patients receiving fixed dose heparin
Biksacky	Meryl	U of U	16-17 (B)	Implementation and evaluation of a clinical decision support tool to minimize drug-drug interactions among older patient populations in emergency department and ambulatory care settings.
Bliven	Katie	MUSC	16-17 (Onc)	Utilization of granulocyte colony stimulating factors in metastatic solid tumors
Bowden	Ashley	Ohio State	16-17 (Admin-2)	Assessing the Impact of a Central Refill Center Using a Culture of Safety Survey
Buss	Brian	U of Wisconsin	16-17 (Infec Dis)	Impact of a Molecular Based Rapid Diagnostic for Bloodstream Infections with Antimicrobial Stewardship Notification at a National Cancer Institute
Carey	Jessica	U of U	16-17 (A)	Antineoplastic Policy Compliance among Clinical Pharmacists at an Academic Medical Center
Carroll	Emma	U of Illinois	16-17 (Onc)	Evaluation of Molecular Biomarkers and Response to Therapy in Prostate Cancer

Copeland	Vanessa	Ohio State	16-17 (Onc)	Outcomes evaluation for adult Ewing's, osteosarcoma, and rhabdomyosarcoma patients treated with off-label COG protocols
Cotiguala	Laura	Creighton	16-17 (SOTx)	Evaluation of immediate versus delayed valganciclovir initiation for the prevention of cytomegalovirus in abdominal transplant recipients
Cox	Nicholas	U of U	16-17 (Am Care)	Retrospective analysis of pharmacist engagement with patients with non-cancer pain on chronic opioid therapy at a family medicine clinic
Dwenger	Andrew	U of U	16-17 (Drug Info)	There was a policy for that? Implementing policies, guidelines, and formulary guidance into the electronic health record
Ferreira	Kristine	Albany COP	16-17 (Int Med)	Evaluation of Vancomycin Dosing and Nephrotoxicity in Intravenous Drug Users Admitted to the Internal Medicine Service
Huynh	Hoa	U of U	16-17 (Int Med)	Optimizing Pharmacokinetics and Pharmacodynamics of Intravenous Amikacin in Cystic Fibrosis Patients: Assessment of Clinical Outcomes and Nephrotoxicity
Jones	Emma	U of Nebraska	16-17 (B)	Implementation of inpatient chemotherapy education at an academic cancer center
Kappenman	Ashley	U of Iowa	16-17 (Admin-2)	Designing and Implementing Centralized Mail Order Pharmacy Services: Phase 2
Namanny	Halee	U of U	16-17 (Onc)	Emergent inpatient anticancer therapy administration in patients with metastatic solid tumors
Palasik	Brittany	U of Maryland	16-17 (Int Med)	Evaluation of Single High-dose Oral Vitamin D3 Therapy versus Standard Care in Adult Cystic Fibrosis Patients
Pan	Irene	U of U	16-17 (A)	Incidence of Thrombosis Post-Kidney Transplant and the Use of Venous Thromboembolism Prophylaxis
Pigott	Heidi	Duquesne	16-17 (B)	Implementation and evaluation in opioid risk reduction strategies in a suburban family medicine clinic
Ratte'	Morgan	U of Rhode Island	16-17 (A)	Review of methylprednisolone use for diffuse alveolar hemorrhage (DAH) in hematopoietic stem cell transplant (HSCT) recipients and the subsequent implementation of an evidence-based guideline
Steffens	Laura	U of U	16-17 (A)	Minimizing the Delay in Time to Antibiotics in Patients Presenting to the Emergency Department with Urosepsis
Trovato	Anthony	U of U	16-17 (A)	Implementation of a medication reconciliation improvement bundle for acute care inpatients
Black	William	U of KY	15-16 (Admin-2)	Standardizing the Medication Reconciliation Process: Phase II
Bliven	Katherine	MUSC	15-16	Evaluating a change in surgical prophylaxis in kidney transplant recipients
Bowden	Ashley	Ohio State	15-16 (Admin-1)	AHRQ Community Pharmacy Survey on Patient Safety Culture: The results are in, what to implement now?
Carroll	Emma	U of IL	15-16	Effect of a Structured Pharmacist Education and Documentation Process on HCAHPS Pain Management Scores
Clough	Alyson	Purdue	15-16 (Onc)	Characteristics of Long-Term Responders and Survivors of Metastatic Colorectal Cancer
Coleman	Abby	Creighton	15-16 (CC)	Reducing pulmonary vasodilator dependence using oral sildenafil after coronary artery bypass grafting or valve procedure
Cox	Nicholas	U of U	15-16	Descriptive Analysis of Thrombophilia Testing in Hospitalized and Emergency Department Patients
Ferreira	Kristine	Albany	15-16	Improving pneumococcal vaccination rates of diabetic patients with use of a pharmacist workflow within a family medicine residency clinic
Garcia	Breanne	U of U	15-16 (Comm)	Implementation of a pharmacy workflow process intended to improve Prevnar 13 immunization rates in patients 65 years and older
Geurts	Kelsee	Roseman	15-16 (Comm)	Evaluation of the use of statin therapy for primary prevention in type 2 diabetes patients between the ages of 40-75 years old: a retrospective, observational study
Harrington	Erik	U of U	15-16 (Onc)	Correlation of Genomic Aberrations and Response to First line VEGFR-TKI in Metastatic Renal Cell Carcinoma

Hedges	Ashley	UNC	15-16 (CC)	Retrospective Analysis of Levetiracetam Dosing in Neurosurgical Patients for Seizure Prophylaxis
Holesh	Lauren	UNC	15-16 (Admin-2)	Health-System and Patient Care Benefits of a Centralized Prior Authorization Service: Phase II
Hummert	Shelly	UofAZ	15-16 (Onc)	Evaluation of safety and effectiveness of rivaroxaban compared to enoxaparin for treatment of venous thromboembolism in patients with malignancy
Huynh	Hoa	U of U	15-16	Survey of audiology testing in cystic fibrosis patients who receive aminoglycosides for the treatment of acute pulmonary exacerbations
Kappenman	Ashley	U of IA	15-16 (Admin-1)	Designing and Implementing Centralized Mail Order Pharmacy Services
Kelley	Dawnyle	U of SC	15-16 (IT)	Pharmacist Evaluation of Fall-Risk via Use of a Medication Based Fall-Risk Assessment
Prelewicz	Stacy	Wilkes	15-16 (Onc)	FOLFOX relative dose intensity and correlation with survival outcomes in metastatic colorectal cancer
Pugazhenthi	Vidya	U of CO	15-16 (IM)	Survey of antibiotic utilization for treatment of Stenotrophomonas maltophilia infection in cystic fibrosis patients
Smith	Tonya	MUSC	15-16 (IM)	Pharmacokinetics of Intermittent Vancomycin in Adult Cystic Fibrosis Patients
Traylor	Katie	UNC	15-16 (am care)	Aspirin Prescribing Practices for Primary Stroke Prevention in Elderly Women Following Monthly Population-Based Clinical Pharmacist Evaluation
Witt	Benjamin	Findlay	15-16 (DI)	Development of a Method to Measure Adherence to Medication Management Policies
Yeager	Sarah	Temple	15-16 (SOTx)	Evaluation of the use of mTOR inhibitors in pancreas transplant recipients
Arterbury (Beatty)	Allison	Arizona	14-15	Evaluating Warfarin versus Aspirin for Post-operative VTE Prophylaxis in Patients with TKA and THA
Au	Trang	Creighton	14-15 (onc)	Evaluation of Safety and Effectiveness of Vascular Endothelial Growth Factor-Tyrosine Kinase Inhibitors with Concomitant Proton Pump Inhibitors or Statins in Advanced Renal Cell Carcinoma
Babin	Jennifer	Alabama	14-15 (IM)	Implementation of an Inpatient Computer-Based Inhaler Education Program
Bailey	Hanna	Florida	14-15 (onc)	Evaluation of neutropenic fever admissions in patients with solid tumors
Black	William	Kentucky	14-15 (admin-1)	Standardizing the Medication Reconciliation Process
Caffiero	Nicole	Wilkes U	14-15 (Comm)	Interruptions and Distractions Before and After the Implementation of a Central Call Center on Pharmacists and Technicians in a Community Pharmacy Setting
Coleman	Abby	Creighton	14-15	Left Ventricular Assist Devices as Independent Risk Factors for GI Bleeding in Cardiovascular Surgery Patients
Diamantopoulos	Anastasia	TX Tech	14-15 (CC)	Evaluation of the Efficacy and Safety of a Dexmedetomidine Protocol in Traumatic Brain Injury Patients
Fung	Brian	Florida	14-15 (IT)	Implementation of Antimicrobial Renal Dosing Decision Support in EPIC Using SmartText
Hansen	Alisyn	Nebraska	14-15 (Am Care)	Implementation of Hypertension Shared Medical Appointments in An Academic Family Practice Clinic
Holesh	Lauren	UNC	14-15 (admin-1)	Health-System and Patient Care Benefits of a Centralized Prior Authorization Service
Hong	Lisa	Colorado	14-15 (IM)	Pharmacokinetics of continuous infusion beta-lactams and tobramycin in the treatment of acute pulmonary exacerbations in adult cystic fibrosis patients
Hoyt (Luzi)	Jessica	Wisconsin	14-15	Analysis of Adherence to Asymptomatic Bacteriuria Treatment Guidelines for an Emergency Department at an Academic Medical Center
Kosloske	Ashley	Minnesota	14-15	Assessment of Empiric Antibiotic Prescribing Practices in the Emergency Department for Patients Admitted with a Diagnosis of Acute Pyelonephritis

Louie	Jessica	Southern Cal	14-15 (CC)	A comparison of dexmedetomidine-propofol sedation to propofol sedation in mechanically ventilated patients
Marini	Erica	Northeastern	14-15 (admin-2)	Impact of Central Call Center on Distribution of Work Activities in Outpatient Pharmacies
McPherson	Jordan	WVU	14-15 (onc)	Predictors of Systemic Chemotherapy Utilization Within the Last 30 Days of Life
Palmer	Kelsey	Montana	14-15 (Comm)	Using failure mode and effects analysis (FMEA) methods to identify barriers contributing to low human papillomavirus (HPV) vaccination rates in a University of Utah community-based clinic
Schoen	John	Colorado	14-15 (DI)	Developing a Guideline for Weight-Based Dosing of Medications in Obese Adults
Sirandas	Bhanupriya	UI Chicago	14-15 (SOTx)	Evaluation of Induction Therapy in Renal Transplant Recipients
Smith	Tonya	MUSC	14-15	Survey of Antibiotic Utilization for Treatment of *Burkholderia cepacia complex* Infection in Cystic Fibrosis Patients
Tanner	Natalee	Arizona	14-15 (onc)	Utilization of Antineoplastic Chemotherapy Near the End-of-Life
VanWagoner	Eve	Utah	14-15 (Comm)	Patient Safety Culture within the University of Utah Health Care Community Pharmacies
Burger	Jordan	Drake	13-14 (admin-2)	Strategizing Dispensing of Medications Prescribed in Specialty Clinics
Diamantopoulos	Anastasia	Texas Tech	13-14	Risk of Venous Thromboembolism in Patients Receiving BID versus TID Prophylactic Heparin Dosing Based on a 90 kg Weight Cut-off
Ford	Ian	UoPacific	13-14 (IT)	The Effect of an Improved, Guideline-Based Clinical Decision Support Tool on Ambulatory Clinic Vaccination Rates
Fritz	Kelly	Ohio Northern	13-14 (onc)	Evaluation of Complications of Chemotherapy in HIV-positive Patients on HAART Therapy Compared to HIV-negative Matched Controls
Garza	Carissa	Incarnate Word	13-14 (SoTX)	Use and Outcomes of Rabbit Antithymocyte Globulin for Induction Therapy in Cardiac Transplantation: A Single Center Experience
Hansen	Alisyn	Nebraska	13-14	Evaluation of Aspirin Prescribing Practices in Elderly Women at the University of Utah Sugar House Health Center
Holcomb	Kelly	Auburn	13-14 (IM)	Survey of Antibiotic Utilization for Treatment of *Mycobacterium abscessus* Infection in Cystic Fibrosis Patients
Jacquez	Machaela	Utah	13-14 (Comm)	The Identification of Medication Related Problems from a Medication Review Provided by clinical Pharmacist in a Community Setting
Johnston	Kiersten	Utah	13-14 (DI)	Did we do What we Said we Would do? Developing a Process to Follow-up on P&T Decisions
Liu	Cindy	Maryland	13-14 (Comm)	Socio-economic and Clinical Characteristics of Patients Hospitalized with Prescription Opioid-Related Overdose
Louie	Jessica	Southern Cal	13-14	Safety of Continuous Infusion Beta-lactam Antibiotics in Adult Cystic Fibrosis Patients During an Acute Pulmonary Exacerbation
Marini	Erica	Northeastern	13-14 (admin-1)	Optimization of Care Transition practices Performed by Pharmacy Services Across a University Health System
Maxa	Kim	Drake	13-14 (onc)	Voriconazole Safety in Obese and Non-Obese Patients
McTish	Ryan	Georgia	13-14 (CC)	Experience with Colistin in the Management of an Extensive Drug Resistant Acinetobacter Outbreak in an ICU
Miles	A. Meredith	Georgia	13-14 (Comm)	The Gap in Transitions of Care in Heart Failure Patients: When, Why and Who do Drug-related Problems Affect?
Paul	Shilpa	Illinois-Chicago	13-14 (onc)	Utilization of Antineoplastic Chemotherapy Near the End-of-Life
Ratermann	Kelley	Kentucky	13-14	Effect of Pharmacy-Initiated Chronic Pain Management Admission Notes on HCAHPS Scores
Schoen	John	Colorado	13-14	Descriptive Case-series of the Use of Kcentra™ for the Reversal of Warfarin-associated Major Bleeding
Thompson	Johanna	Washington	13-14 (Am Care)	A Clinical pharmacist's Assessment of Bisphosphonate Use for Osteoporosis and Appropriateness of Long Term Therapy

Wilds	Brandon	LECOM	13-14 (onc)	Clinical Outcomes and Risk Factors for Treatment Failure and Recurrence of *Clostridium difficile* Infections in Hematopoietic Stem Cell Transplant Patients
Wolfe	Brianne	Montana	13-14 (CC)	'Development and Implementation of a Protocol for the Treatment of Acute Massive Pulmonary Embolism
Bhakta	Zubin	TX Tech	12-13 (Int Med)	A Survey of the Pharmacist's Role at U.S. Cystic Fibrosis Foundation - Accredited Centers
Bowles	Harmony	New Mexico	12-13 (onc)	Incidence of febrile neutropenia in patients with HER2 positive breast cancer receiving docetaxel, carboplatin, and trastuzumab (TCH) for adjuvant treatment
Burger	Jordan	Drake	12-13 (admin-1)	Verification of benefits for clinic and infusion medication administration
Buu	Jenni	Idaho State U	12-13 (comm)	Improving evidence-based guideline implementation – Identifying barriers and developing a process to improve adult influenza vaccination rates and clinical guideline implementation in a community clinic setting
Ford	Ian	UoPacific	12-13	Effect of Implementation of a Barcode Medication Administration System In the Incidence of Medication Administration Errors
Fritz	Kelly	Ohio Northern	12-13	Analysis of Community-Oriented Resistance Patterns in Urinary Tract Infections for an Emergency Department at an Academic Medical Center
Gillespie	Matthew	Michigan	12-13 (TX)	Cytomegalovirus prophylaxis with valganciclovir in kidney transplant recipients: A single-center experience
Hays	Emily	Nebraska	12-13 (Am Care)	Pharmacist intervention to decrease risk of hypoglycemia in older patients with diabetes mellitus
Holsopple	Megan	Creighton	12-13 (DI)	How SMART can we be? – Maximizing the use of smart pump infusion data to improve guardrail programming
Johnston	Kiersten	Utah	12-13	One-Stop Shopping: Integrating Medication Use Information into the Online Formulary at the University of Utah Hospitals and Clinics
McTish	Ryan	Georgia	12-13	Observational Study of a High Dose Heparin Protocol with Bolus in Comparison to a Bolus-free Low Dose Heparin Protocol in Brain Injured Patients with Concomitant Thrombosis
Mishra	Adya	Utah	12-13	Evaluation of acute coronary syndrome/myocardial infarction (ACS/MI) heparin drip protocols in obese patients at the University of Utah Hospital
Nguyen	Truong	UMKC	12-13 (IT)	Implementing Clinical Decision Support - Medication Dosing in Renal Impairment
Ogborn	Diane	Utah	12-13 (comm)	Tdap Vaccination Rates in Pregnant Women through Electronic Medical Record Process Changes
Parikh	Kinjal	UNC	12-13 (onc)	Outcomes of Metastatic Renal Cell Carcinoma Patients with Favorable Clinical and Histologic Features Treated with High-Dose Interleukin-2 Therapy
Pecoraro	Joshua	Wyoming	12-13 (onc)	Effect of thrombocytosis on venous thromboembolism risk in pancreatic cancer patients receiving chemotherapy
Rim	Matthew	Western U	12-13 (admin-2)	Developing a Pharmacy Benefit Management Program (Part II)
Sledge	Tyler	TX Tech	12-13 (CC)	Measuring the clinical impact of surgical intensive care pharmacists using documentation in the electronic medical record
Bailey	Erin	West Virginia	11-12 (onc)	Opportunity to Optimize Oral Chemotherapy Outcomes: The Pharmacist's Role
Bhakta	Zubin	TX Tech	11-12	Evaluation of Prasugrel vs. High-Dose Clopidogrel in Acute Coronary Syndrome Patients
Burgeson	Mick	Colorado	11-12 (IT)	Developing a Web-Based Collaborative Information Sharing Environment
Cline	Kyle	UMKC	11-12	Comparison of the Treatment and Prophylaxis of Patients with Heparin-Induced Thrombocytopenia Prior to and Following Hospital Guideline Implementation
Ghaffarian	Sanaz	UCSF	11-12 (DI)	Reformulating the Formulary at the University of Utah Hospitals and Clinics
Hiller	Sara	UMKC	11-12 (onc)	Evaluation of Iron Deficiency Anemia and Treatment in Cancer Patients

Parikh	Kinjal	UNC	11-12	Use of Simvastatin in Transplant Patients and the Incidence of Side Effects, and Evaluation of Efficacy
Rim	Matthew	Western U	11-12 (admin)	Developing a Pharmacy Benefit Management Program
Robinson	McKay	Wyoming	11-12 (comm)	Bridging the Gap Between FDA Safety Warnings and Patients: Are Pharmacists the Appropriate Messengers?
Sledge	Tyler	TX Tech	11-12	Evaluation of a New Hyperglycemia Protocol Across Multiple Intensive Care Units
Soni	Nimisha	Wayne State	11-12 (TX)	Analysis of Risk Factors for the Development of Chronic Kidney Disease After Orthotopic Liver Transplant
Sorensen	Teshia	Wyoming	11-12	Development of Albumin Use Guidelines
Streeter	Jessica	New Mexico	11-12 (onc)	Hematologic Effects of Sulfamethoxazole/Trimethoprim and Dapsone for Pneumocystis jiroveci Pneumonia Prophylaxis in Patients with Glioblastoma Multiforme Receiving Concomitant Temozolomide and Radiation
White	Jacob	Utah	11-12 (CC)	Evaluation of Administration Rate of 23.4% Sodium Chloride on Duration of Intracranial Pressure Control
Bailey	Erin	West Virginia	10-11	Clinical outcomes of MRSA bacteremia treated with vancomycin: Assessing the utility of vancomycin trough serum concentrations and AUC24/MIC
Carlson	Adrian	South Carolina	10-11 (TX)	Analysis of Rabbit Antithymocyte Globulin Induction Therapy in Elderly Kidney Transplant Patients
Filtz	Michael	Maryland	10-11 (onc)	Feasibility, Justification and Clinical Development of a Hospice Care Program
Gebarski	Matt	U Michigan	10-11 (IT)	A Comparison of Medication Order Error Rates in a Neonatal Intensive Care Unit Before and After Computerized Prescriber Order Entry Implementation
Ghaffarian	Sanaz	UCSF	10-11	Antiplatelet Therapy Versus Anticoagulation in Patients with Cervical Artery Dissection
Giouroukakis	Mary	New York	10-11 (DI)	Descriptive Case-Series of the Treatment and Prophylaxis of Patients with HIT at University of Utah Hospital
Hatch	Heather	Utah	10-11	Evaluation of Adherence to Thienopyridines After Discharge from University of Utah Hospital Cardiovascular Medicine Unit
Katzourakis	Michael	Utah	10-11 (admin)	Impact of CPOE decision support on IV to PO medication interchange initiative: Assessing quality and cost
Hiller	Sara	UMKC	10-11	Evaluation of Peri-procedural Anticoagulation in Patients Undergoing Atrial Fibrillation Ablation
Prazak	Ann Marie	Houston	10-11 (CC)	Evaluation of the Efficacy and Safety of a Dexmedetomidine Protocol
Stenehjem	David	Minnesota	10-11 (onc)	Factors affecting clinical response to tyrosine kinase inhibitors in chronic myeloid leukemia
Votroubek	Nathan	U Iowa	10-11	What are the Underlying Causes of Resistance to Erythropoiesis Stimulating Agents?
Williams	Kali	Wisconsin	10-11 (onc)	Clinical outcomes of rasburicase administration in tumor lysis syndrome: A retrospective cohort study
Alwan	Michael	Butler	09-10 (admin)	Evaluation of workflow before and after implementation of computerized provider order entry (post-implementation)
Filtz	Michael	Maryland	09-10	Evaluation of 14.6% NaCl for the Treatment of Increased Intracranial Pressure in Traumatic Brain Injury
Mahmoudjafari	Zahra	Missouri	09-10 (onc)	Correlating electrolyte abnormalities with hematopoietic recovery following myelosuppressive chemotherapy
MacDonald	Elyse	Creighton	09-10 (DI)	Drug Shortages Impact on Patient Safety
Miars	Laura	Butler	09-10 (onc)	Comparative toxicities of 2 high-dose IL-2 treatment doses at Huntsman Cancer Hospital
Milne	Nikki	Utah	09-10	Evaluation of the Appropriateness of Bisphosphonate Therapy Using the FRAX Calculator

Prazak	Ann Marie	Houston	09-10	Evaluation of the cardiothoracic surgery heparin protocol at the University of Utah Hospital
Simons	Heidi	Montana	09-10 (CC)	Evaluation of Cardiac Arrest Documentation in an Academic Teaching Hospital with Pilot Implementation of Electronic Cardiac Arrest Documentation
Stenehjem	David	Minnesota	09-10	Effects of P-glycoprotein Modulators on Acute Epileptic Events
Wagstaff	Dustin	USN	09-10 (CC)	Surgical ICU Nurse-Owned Wake-up, Extubate and Discharge: (SNOWED) Trial
Williams	Kali	Wisconsin	09-10	A Retrospective Dose-finding Study of Hydroxyurea for Leukocytoreduction in Myelogenous Leukemia
Alwan	Michael	Butler	08-09 (admin)	Evaluation of workflow before and after implementation of computerized provider order entry (pre-implementation)
Burt	Lauren	U Florida	08-09 (onc)	Vitamin Deficiencies in Anemic Cancer Patients
Dryer	Megan	Utah	08-09	Medication Use Evaluation of Intravenous Acyclovir for Suspected Viral Encephalitis
Kenyon	Nicole	Midwestern IL	08-09 (TX)	Evaluation of a transplant specialty pharmacy service line on renal allograft function and survival
Mason	Russell	UC San Diego	08-09	Visual Compatibility of Intravenous 3% Hypertonic Saline
Myers	Kathryn	U Conn	08-09 (CC)	Hospital-wide Evaluation of Off-Label Use of Recombinant Activated Factor VII
Ngo	Nolan	U of Iowa	08-09 (onc)	Efficacy Assessment of Current Antiemetic Regimens for Chemotherapy-Induced Nausea and Vomiting at the Huntsman Cancer Institute
Simons	Heidi	Montana	08-09	Implementation of an Enoxaparin Dosing Protocol for Venous Thromboembolism Prophylaxis in Obese Surgical Intensive Care Unit Patients
Walker	Amanda	Kansas	08-09	Evaluation of Combined Warfarin and Antiplatelet Use at the University of Utah Thrombosis Center and Community Clinics
Walraven	Carla	New Mexico	08-09	Evaluation of the diagnostic and therapeutic management of CA-MRSA SSTIs in the emergency department
Winslow	Roger	USN (NV)	08-09 (admin)	Breakeven Analysis of a Proposed Pharmacy Discharge Prescription Medication Reconciliation Program
Lin	Hsin	Northeastern	07-08 (CC)	The Early Use of Intravenous Neostigmine for the Prevention of Barbiturate-induced Ileus and Necessity for Parenteral Nutrition in Neurosurgical Patients in Barbiturate Coma
Gallegos	Amanda	Utah	07-08	Cystic Fibrosis Quality Improvement Study
Truax	Crystal	Drake	07-08 (TX)	Impact of reduced-dose mycophenolic acid therapy on the incidence of renal transplant rejection and graft loss in corticosteroid withdrawal patients
Shipley	R. Wayne	Creighton U	07-08 (CC)	A Monte Carlo Simulation of Piperacillin-Tazobactam in Critically Ill Patients with Pseudomonas Aeruginosa
Myers	Kathryn	U Conn	07-08	Electrolyte Replacement Protocol Design and Assessment in the ICU Setting
Miles	LeeAnn	Utah	07-08	Comparison of Indomethacin and Ibuprofen in Neonates with Patent Ductus Arteriosus
VanDemark	Kimberly	Wisconsin	07-08	Conversion of chronic hemodialysis patients from intravenous erythropoietin alfa to intravenous darbepoetin alfa
Ponce	Paola	Kansas	07-08	Establishing Optimal Dosing of Intravenous Amiodarone in the Treatment of New Onset Atrial Fibrillation for Postoperative Surgical Patients
Sanders	Stephanie	Ferris State U	07-08 (Onc)	Establishing and Outpatient Anticoagulation Clinic for Oncology Patients
Lampas	Mary	Purdue	07-08 (Onc)	Assessment of Appropriate Vancomycin Use in Neutropenic Patients
Sanders	Tom	Ferris State U	07-08 (DI)	Building a Better Drug Budgeting System: A Survey and Assessment

Winslow	Roger	USN (NV)	07-08 (admin)	The Financial Impact of Pharmacy Specialty Billing Services
Au	Cam	Utah	06-07	Insulin availability in a parenteral nutrition solution
Au	Lara	Utah	06-07 (Onc)	Analysis of anticoagulation practices in multiple myeloma patients treated with thalidomide and dexamethasone
Canann	David	Midwestern AZ	06-07	Drug compatibility during Y-site infusions
Condie	Chad	Utah	06-07	Drug compatibility during Y-site infusions
Dang	Kim	Utah	06-07 (CC)	Levothyroxine infusions in the setting of shock and its effects on hemodynamic stability
Draper	Leslie	Utah	06-07	Venous thromboembolism prevention in the morbidly obese medically ill patient: A pharmacological analysis of the predictability of prophylactic weight-based enoxaparin dosing
Kantesaria	Pranish	Massachusetts	06-07 (admin)	Improved patient outcomes in a pharmacist managed anemia clinical at Huntsman Cancer Hospital
Lingenfelter	Erin	Ohio Northern	06-07 (CC)	The management of sepsis and septic shock in the SICU of the University of Utah Hospitals and Clinics
Masck	Mary	Purdue	06-07	The role of D-ribose in patients diagnosed with fibromyalgia
Truax	Crystal	Drake	06-07	Evaluation of the drug interaction between low-dose fluconazole and tacrolimus in renal transplant patients
Brooks	Tyson	Wyoming	05-06 (IM)	Exacerbation rates associated with non-selective vs.B1 selective beta-blocker use in patients with asthma or chronic obstructive pulmonary disease
Burns	Shauna	Mercer	05-06 (Onc)	Impact of cytokine prophylaxis on patients receiving moderately myelosuppressive chemotherapy regimens
Dang	Cathyyen	Utah	05-06 (CC)	Intensive insulin therapy in critically Ill surgical patients: evaluation of outcome benefit of tighter glucose control
Gilreath	Jeffrey	Wisconsin	05-06	Developing a collaborative practice agreement between pharmacists and oncologists to manage erythropoietic growth factor therapy for oncology patients in a pharmacist run ambulatory oncology center
Ho	Mei-Jen	Rutgers U	05-06 (IT)	Economic benefits of self-managed pharmacy benefit manager in a large academic hospital
Kantesaria	Pranish	Massachusetts	05-06	Retrospective analysis of Cinacalcet use in renal transplant patients at an academic medical center
Nighorn	Katie	Wisconsin	05-06	Efficacy of a pharmacist managed hypertension service
Roberts	Keri	Northeastern	05-06 (TX)	Impact of a rapid steroid withdrawal protocol on height and weight outcomes in pediatric renal transplant recipients
Sederholm	Benson	Utah	05-06	Pharmacist managed hyperlipidemia care versus usual care for patients with dyslipidemia in a UUHCS community clinic setting
Smith	Lara	Utah	05-06	Evaluation of venous thromboembolism prophylaxis in medically ill oncology patients
Allard	Jill	Nebraska	04-05	Retrospective Review of Steroid Withdrawal in Renal Transplant Patients
Howarth	Shannon	UNC	04-05	Improving Immunization Rates for Inpatients at UUHC
Neyens	Ron	So Dakota	04-05	Intensive Insulin Therapy in Burn Trauma Patients
Puett	Heather	UNC	04-05	Workplace Contamination with Antineoplastic Agents in a new Cancer Hospital Using a Closed Drug preparation System
Wohlt	Paul	Wisconsin	04-05	Outpatient Management Protocol for Venous Thromoboembolic Disease
Bohm	Nicole	Florida	04-05 (IM)	Appropriateness of Fluoroquinolones as Empiric Therapy for Nosocomial UTIs
Ludwig	Kyle	St. Louis CoP	04-05 (CC)	Ventilator-Associated Pneumonia: A Retrospective Look at the Pharmacological Management in the SICU
Mills	Kyle	Wyoming	04-05 (IM)	Asthma Medications and their association with Symptomatic Gastroesophagels Reflux

Wilkinson	Joey	Wyoming	04-05 (Tx)	Retrospective Review of BK Nephropathy in a Renal Transplant Population
Aggers	Patricia	Idaho State	03-04	Review of Efficacy and Safety of Valganciclovir for CMV Prophylaxis in Adult Renal Transplant Recipients
Beaumont	Cody	Michigan	03-04	Investigation of the Venous Thromoboembolism (VTE) Prophylaxis in Patients at our Rehabilitation Unit
Buchanan	Christie	PCP	03-04(Tx)	Assessing the pharmacokinetics of MMF by bound and free levels of MPA and MPAG in Renal Failure
Christensen	Russell	Utah	03-04 (IM)	The Predictability of Antibiotic Sensitivities Based on the Urine Analysis Nitrite Test
Gebhart	Benjamin	Drake	03-04 (CC)	Sedation Management in a Surgical Intensive Care Unit
Hermansen	Erica	Utah	03-04 (PC)	Evaluation of pharmacist vs physician anticoagulation management in a family medicine residency clinic
Jefferies	Kristen	Utah	03-04	The Impact of a Pharmacist initiated mediation History on Patient Satisfaction and Accuracy of Medications Ordered
Kay	Brent	Utah	03-04	Evaluation of Medication Ordering for University Hospital
Wilkinson	Joey	Wyoming	03-04	Describing the Usage Patterns, Reimbursement Rates, Acquisition Costs and Efficacy of Epoetin alfa and Darbepoetin at the Huntsman Cancer Institute
Dell	Kamila	UNC	02-03 (CC)	Medication propensity to clog nasoduodenal feeding tubes
Feddema	Sarah	U of Wyoming	02-03 (DI)	Evaluating Online Formulary Vendors for a University Hospital
Gebhart	Benjamin	Drake	02-03	Glucose control using a standardized sliding scale insulin protocol in a surgical intensive care unit
McDevitt	Lisa	Nebraska	02-03 (Tx)	Evaluating the Benefit of aggressive anemia treatment in renal transplant patients
Scott	Amy M	Idaho State	02-03	Inpatient utilization of erythropoietin and darbepoetin: improving treatment of anemia
Skordos	LeAnne	Utah	02-03	Evaluation of the Venous Thromboembolism prophylaxis in medical patients
Strain	Joe	South Dakota	02-03	Health Care Screening at University Hockey Games
VanBeuge	Derrick	Idaho State	02-03	Retrospective Analysis of anemia and associated cardiovascular and renal allograft complications post primary renal transplant
Dell	Kamila	UNC	01-02	Evaluation of a Heparin Nomogram
Fakata	Keri	Nebraska	01-02	Sirolimus inhibitions of P-Glycoprotein: a Possible Mechanism for increased Nephrotoxicity with concomitant use with Cyclosporine
Feddema	Sarah	U of Wyoming	01-02	Physical Compatibility of Vasopressin with Commonly Used Medications in Cardiac Arrest
Moaleji	Norwan	Colorado	01-02	Assessment of Cholesterol Treatment in a Family Medicine Clinic: Are we at goal with NCEPIII
Peterson	Dave	Utah	01-02 (DI)	Improving Documentation During Codes: A Process Improvement Project
Sundberg	Aimee	U of Wisconsin	01-02 (Tx)	Opinions of Pediatric Renal Transplant Patients about Switching from Cyclosporine to Tacrolimus
Wick	Catherine	U Washington	01-02	Evaluation of Surface and Personnel Cytotoxic Contamination at the Huntsman Cancer Institute
Carter	Orly	U of Utah	00-01 (PC)	A Multidisciplinary Approach to Hypertension Management: Utilizing a Pharmacist as an Education Provider in a Family Medicine Clinic
Chalverus	Carrie	U Washington	00-01	Surfactant Adverse Outcomes Monitor: A Comparison of Infasurf vs. Survanta
Crompton	Jason	Philadelphia	00-01 (Tx)	Impact of Basiliximab Induction Therapy in Adult Living Renal Transplants

Dalpiaz	Anthony	U of Montana	00-01 (DI)	Outcome Evaluation of Combination High Dose Daily interferon Alfa Plus Ribavirin in Patients with Hepatitis C
Davis	Lynn	U of Florida	00-01	Estimation of Creatinine Clearance between Aminoglycoside Pharmacokinetics, Cockcroft-Gault, and Jelliffe Methods in Critically Ill Patients
Sundberg	Aimee	U of Wisconsin	00-01	Opinions of Pediatric Renal Transplant Patients about Switching from Cyclosporine to Tacrolimus
Crompton	Jason	Philadelphia	99-00	Development of a Fail-Safe Medication Error Prevention System in Cancer Chemotherapy
Dalpiaz	Anthony	U of Montana	99-00	Treatment of Myofascial Trigger Point Pain with Topical Lidocaine Patches
Fox	Erin	U of Utah	99-00 (DI)	Assessing the Cost Savings of a Pharmacy-Administered IV to PO Interchange Program
Johnson	Stephanie	Creighton U	99-00	Assessing the Impact of Switching Maintenance Immunosuppression from Cyclosporine to Tacrolimus in Pediatric Renal Transplant Patients
McGee	Kelly	U of Cincinnati	99-00 (PC)	Homocysteine Reduction in a Geriatric Clinic Population: Effectiveness of Multivitamin Supplements
Raap	Jonathon	U of Texas at Austin	99-00	Movement Toward Becoming an Integrated Health Delivery System: Initiation of Pharmacy Services in a Primary Care Clinic
Grahmann	Paula	Texas at Austin	98-9	Analysis of Pain Clinicians' Perceptions of Opioid Use in Chronic Non-malignant Pain
Martin	Andrew	Ferris State U	98-9 (DI)	Developing a Drug Evaluation Process
Panjwani	Nooruddin	Texas at Austin	98-9	Treatment of Post-Ictal Vascular headaches with Intra-Nasal Sumatriptan (Imitrex)
Smith	Lonnie	Tennessee	98-9	Prophylactic Low Dose Fluconazole after Primary Renal Transplantation
Voytilla	Krista	U of Pittsburgh	98-9	Compatibility of Dolasetron with Commonly Used Post-Surgical Drugs During Y-Site Delivery
Wellman (Sater)	Melinda	Utah	98-9 (PC)	Assessing Medication prescribing Appropriateness, Patient Educational Needs and Compliance in Ambulatory Family Medicine Patients: A Descriptive Study
Bearden	David	U of Illinois	97-8	Evaluation of Amiloride Use with Amphotericin B in the Oncology Patient
Mathiason	Mark	Creighton	97-8	A Three Year Retrospective Survey of Yeast Isolates Compared to Fluconazole Use in a University Hospital
Nguyen	Long	Houston	97-8	Evaluation of Patient's Satisfaction Utilizing Telepharmacy to Deliver Pharmaceutical Care
Phillips	Mark	Idaho State	97-8	An Assessment of Hyperlipidemia in HIV Patients Treated with Protease Inhibitors
Wetzstein	Gene	N.Dakota State	97-8	The Impact of a Clinical Event Management System on Pharmacy Services in a University Medical Center
Brumfield	Lauren	MCV	96-7	Effect of Administration Sets and Volumes on the Delivery of Gentamicin to Low-Birth-Weight Infants
Salverson	Sandra	U of Illinois	96-7	Using Telemedicine as a Tool to Implement Pharmaceutical Care in Remote Ambulatory Setting
Mullin	Shantel	Idaho State U	96-7 (DI)	Computerizing Drug Information Services- External Survey and Internal Evaluation
Shah	Hetal	Rutgers U	96-7	Assessment of Clinical Outcomes Utilizing Predicted Carboplatin AUC in Autologous Bone Marrow Transplant (ABMT) Patients Treated with a Stamp V Regimen
Vaezi	Liza	Creighton U	96-7	Application of a Multi-Attribute Utility Theory (MAUT) Model to Select Agents for Use in ICU Sedation
Hutchings	Steven	Idaho State U	95-6	Y-Site Physical Compatibility of Cefmetazole with Other Commonly Used Drugs

Johnson	Melissa	St Louis U	95-6	Evaluation of Current Serotonin Antagonist Use in Chemotherapy Treated Patients
Mullin	Shantel	Idaho State U	95-6	Assessing the Use of an Emesis Questionnaire for Monitoring Chemotherapy and Antiemetic Outcomes in Ambulatory Oncology Patients
Rubingh	Carla	U of Nebraska	95-6	Therapeutic Interchange by Pharmacists: Outcomes in an Ambulatory Care Clinic
Albright	Lisa	U of Nebraska	94-5	Evaluating Inpatient and Outpatient Allergy Documentation in a University Hospital Setting
Cerveney	Joli	U of Nebraska	94-5 (HIV)	Using Pharmaceutical Manufacturer Support to Fund an HIV Residency Program at University Hospital
Furniss	Shawn	Idaho State U	94-5	Indomethacin vs Surgical Ligation for the Treatment of Patent Ductus Arteriosus- A Retrospective Chart Review
Loeffelbein	Robert	U of Nebraska	94-5	A Comparison of Parenteral Nutrition Solution Osmolarity and Loss of Peripheral Venous Access in Neonates
Muncey	Lance	Idaho State U	94-5	Implementation and Evaluation of New American Diabetes Association Standards of Care for the Diabetic Patients in a Family Practice Clinic
Portley	Bonnie	Idaho State U	94-5	The Effect of Osmolality on Feeding Tolerance in the Preterm Neonate
Andrews-Boudreaux	Stacey	Idaho State U	93-4	Evaluation of Depression in the Elderly Using the Geriatric Depression Scale
Cerveney	Joli	U of Nebraska	93-4	Evaluation of a Pharmacist's Role During Cardiac Arrest
DiGregorio	Vicky	UC SF	93-4	Evaluating the Accuracy of Medical and Drug Histories in Russian Patients' Charts- An Evaluative Study
Grunden	John	U of Utah	93-4 (DI)	Evaluation of an Electronic Formulary
Najari	Zohre	U of Arizona	93-4	Y Site Physical Compatibility of Common BMT Drug Combos
Beckwith	Christina	U of Utah	92-3 (DI)	Surveying Former Drug Information Residents for Career Aspirations
Cafee	Anne	U of Florida	92-3	Pharmacist Counseling when a Sample Medication is Dispensed
Davis	Gary	U of Arizona	92-3	Evaluation of Transdermal Nicotine Replacement Therapy in the Outpatient Population - an Evaluative Study
Kelsey	Julie	U of the Pacific	92-3	First Dose Gentamicin Pharmacokinetics in Obstetric Patients
Moser	Lynette	U of Illinois	92-3	Pharmacist Participation in an Established Hyperlipidemia Clinic- A Descriptive Report
Dwinell	Andrea	U of Minnesota	91-2	Patient Compliance with Prescription Filling After Discharge from the Emergency Department
Robinette	Bryan	Tennessee	91-2	Physical Compatibility of Ceftazidime Sodium, and Methylprednisolone Sodium Succinate with Secondary Intravenous Agents via Simulated Y-Site Injection

Appendix L. General Residency Calendar

Every month:
-Send standard rotation introduction email 2 weeks before each new rotation using template
-Attend program RAC and rotation pass-offs
-Attend rotation daily as scheduled
-Complete PharmAcademic evaluations by deadlines
-Attend required residency meetings
-Update e-portfolio with additional documents and hyperlinks
-Submit staff exception forms and sign Kronos twice monthly (by 4 work days before end of pay period)
-Update staffing/PTO log monthly
-Submit med error RL reports
-Self reflect on residency progress & spend time planning upcoming month

Month	Activities
June	- PGY1 class starts residency (last full week of June) -New employee orientation -PGY1 specific orientation & Epic training
July	-Combined PGY1 & PGY2 orientation -PGY2 Epic training -Staffing training -Wellness event #1 -Finalize rotation schedules -Attend mentor/advocate event – select advocate if required (PGY1/IM) or desired -Discuss available projects – reach out to project preceptors -Create baseline customized development plan (CDP) with RPD and set quarterly meeting times for the year -Select project and mentor from project list -Submit C.E. topic for approval by USHP followed by title and objectives (PGY2 except SoTx)
August	-Turn in travel request if attending Vizient/Midyear -Quality Improvement & Research Training (5 sessions-evenings) -Begin drafting project proposal -Develop plan for seminar requirement with timeline -Midyear flight, hotel, registration set if travel funds allow -Set quarterly meeting/evaluation dates and times with all longitudinal preceptors -Sign up for fall recitations or OSCEs -Schedule lecture at College of Pharmacy (if required) -Optional – attend O-RAC -Meet all C.E. deadlines set by USHP (PGY2 except SoTx)
September	-Present project proposal for approval prior to sending to IRB -Complete IRB application for approval or exempt status -Submit data requests as appropriate for project -Attend department picnic to meet additional members of staff

October	-Vizient poster abstract due -Seminar presentation (if not planned for a specific rotation) -Longitudinal evals #1 -Pull author's instructions for journal selected for project manuscript & review similar articles -Work with preceptor to request data and/or finalize QI implementation planning -CDP Quarter 1 update w/RPD -Set appointments & meet with longitudinal preceptors for planning and evaluations
November	-Early commit interest notification – November 15th (PGY1s) -Attend PGY2 CE presentations (at least 2 for PGY1s) -Select spring USHP CE topic and mentor – reserve topic with USHP liaison & RPD (PGY1) -Preceptor-vetted poster draft due to printers prior to Thanksgiving for Vizient -Wellness event #2 -Write project background for manuscript -QI implementation/data collection -Participate in virtual open houses to recruit -optional -attend O-RAC
December	-USHP deadlines begin for CE -Attend Vizient and ASHP MCM if travel funds allow – recruit, earn CE, present posters, network, camaraderie, etc. -Resident retreat for program feedback -Participate in PGY1 application reviews -White Elephant Party -Food bank night -QI implementation/data collection -If no fall lecture, schedule spring lecture -Sign up for College of Pharmacy recitations or OSCEs – notify preceptors
January	-Submit PGY1 application rubric scores (Required for PGY1s, optional for PGY2s) -Update resident interviewing plan and interview question rubric (PGY1) -Meet Spring CE deadlines set by USHP (PGY1) -Practice final CE slides prior to submission with TC coach and topic mentor (PGY1) -Longitudinal Evals #2 -CDP Q2 update – finalize any rotation change requests -Data collection/QI implementation
February	-Practice CE (PGY1) -Participate in resident candidate interviews as requested by RPD -Wellness activity #3 -Data collection/analysis -Write methods section of manuscript -Optional – attend O-RAC

March	-PGY1 and Transplant resident CEs -Finalize data collection/data analysis -Longitudinal Evals #3 -CDP Q3 update -Mountain States Conference (MSC) abstract and registration due March 20th
April	-Verify data analysis with preceptor -Write results section with appropriate tables and figures -Write slides for MSC conference -Practice MSC presentation twice with feedback -MSC slides due April 30th
May	-Present at MSC -Serve as host for MSC -Write discussion section of manuscript -Precept IPPE student (Optional but recommended) -Service event (Wellness #4) -Optional – attend O-RAC -Precept IPPE student (Optional but recommended)
June	-Precept IPPE student (Optional but recommended) -Write conclusions for manuscript by the beginning of June -Submit final manuscript to project preceptor for edits – make edits until manuscript is considered publishable. -Submit manuscript as required by program -Longitudinal Evals #4 -CDP Q4 final checklist review and signatures for graduation -Graduate!