



Main Line Health®
Paoli Hospital

PHARMACY PRACTICE RESIDENCY PGY-1 PROGRAM MANUAL



**PAOLI HOSPITAL
PAOLI, PENNSYLVANIA**

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ABOUT PAOLI HOSPITAL

The Community

Paoli Hospital is a 231-bed community hospital located about 15 miles outside of Philadelphia, Pennsylvania. Paoli Hospital was founded in 1913 and has been a health care leader in Chester County, Pennsylvania. Paoli Hospital is part of a larger health care system called Main Line Health. The Main Line Health system includes four acute care hospitals—Lankenau Medical Center, Bryn Mawr, Paoli and Riddle hospitals—a physical rehabilitation hospital, Bryn Mawr Rehab Hospital, a drug and alcohol rehabilitation center, Mirmont Treatment Center, outpatient centers, home care services, physician practices, a research institute and a host of other facilities and services.



Paoli Hospital is recognized regionally and nationally for outstanding medical and surgical services, sophisticated technology and a personalized approach to medical and nursing care. Paoli has many specialized services including a level II trauma center, cancer center and a neonatal ICU. There is a hospitalist group that provides care for a majority of medical patients.

Paoli Hospital has achieved The Joint Commission Gold Seal of Approval in:

- Breast cancer
- Cardiovascular services
- COPD
- Hip and knee replacement
- Sleep medicine

Most recent awards:

- Nurses Improving Care for Healthsystem Elders (NICHE) Designation
- 2018 Mission: Lifeline – GOLD for quality of care in heart attack, stroke and cardiac arrest patients
- 2005–15 Magnet Designation, American Nurses Credentialing Center
- 2018–19 Best Regional Hospital, *U.S. News and World Report*
- 2015 Best Hospitals for Common Care, *U.S. News and World Report*
- 2014, 2015, 2017 Guardian of Excellence Award for Patient Experience in Inpatient Care, Press Ganey
- 2014 Top Performer for heart attack, heart failure, pneumonia, stroke and surgical care; The Joint Commission
- 2013 Gold Seal of Approval for stroke care, hip and knee replacement, breast cancer care, sleep disorders and outpatient COPD; The Joint Commission
- Beacon Award-American Association of Critical-Care Nurses ICU-Gold, Progressive Care Unit-Silver
- Best Places to Work by *Philadelphia Business Journal*
- 2013 Excellence in Health Care Compliance Award, PA Department of Health

Visit our website at mainlinehealth.org/paoli/honors-awards for more awards and honors.

TRANSPORTATION TO PAOLI HOSPITAL

**Paoli Hospital
255 West Lancaster Avenue
Paoli, PA 19301**

General driving directions

From the North

Take the Pennsylvania Turnpike (I-476 South to I-276 West) to the Valley Forge Interchange (Exit 326). One-quarter mile beyond the toll booths, take Route 202 South two miles and exit right on Route 252 South (Paoli Exit). At Route 30, turn right (West) and proceed one mile. The hospital will be on your right.

From the South

Take I-95 North to Route 322. Follow Route 322 to Route 202 North to the Route 29 (Great Valley/ Malvern) Exit. Turn right and continue to Route 30 East (Lancaster Avenue). Turn left on Route 30, and continue traveling eastbound. The hospital will be on your left.

From the East

Take I-76 West to Route 202 (Exit 328, West Chester/Pottstown). Take Route 202 South to Route 252 South (Paoli Exit). Turn right onto Route 30 (West). The hospital will be on your right.

From the West

Take the Pennsylvania Turnpike East to the Valley Forge Interchange (Exit 326). One-quarter of a mile beyond the toll booths, take Route 202 South. Travel two miles on Route 202 to Route 252 South (Paoli Exit). Turn right onto Route 30 (West) and proceed one mile. The hospital will be on your right.

Public transportation

To map your trip or to find out about possible delays, visit the [SEPTA site](#).

From Center City Philadelphia and West to Paoli

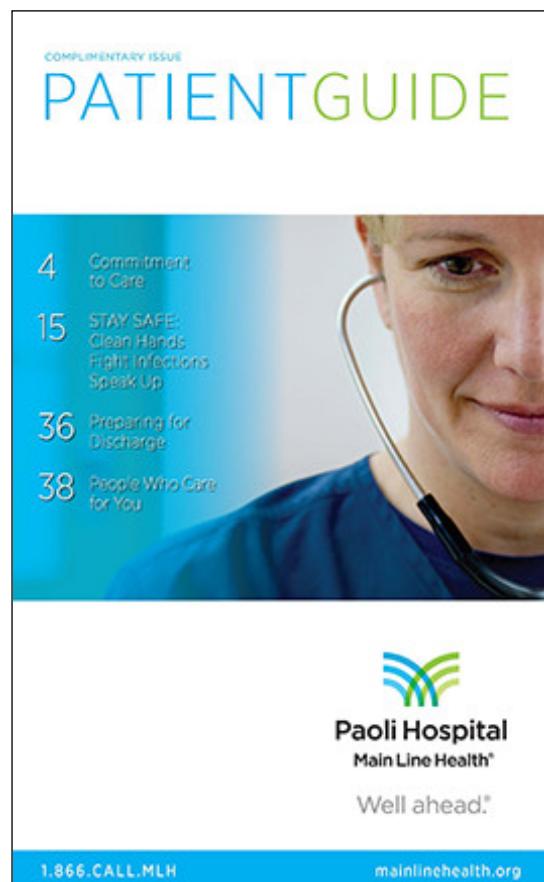
By Train: From Philadelphia's 30th Street Station, Suburban Station, or Market East Station, take SEPTA's Regional Rail **Paoli/Thorndale Line** to Paoli. Paoli Station is located approximately one mile east of Paoli Hospital on Lancaster Avenue (Route 30). Taxi service can be called from the station.

From the Airport

The SEPTA Regional Rail **Airport Line** runs from the Philadelphia International Airport to 30th Street Station, where you can take SEPTA's Regional Rail **Paoli/Thorndale Line** to Paoli.

Parking Locations

Parking at Paoli Hospital is complimentary. Please follow the signs as you enter the campus for our parking garage. Valet parking is available at the valet entrance. Handicapped persons will receive complimentary valet parking. There is a handicap lot adjacent to the valet entrance with numerous spaces as well as several handicap spaces that are located on the street level of the south garage.



Paoli Hospital campus map





GENERAL BACKGROUND

As part of the Main Line Health system, Paoli Hospital is proud to offer a comprehensive; ASHP accredited postgraduate year one (PGY-1) general pharmacy practice residency in an interdisciplinary setting. As a resident you will play a key role in the development and implementation of patient treatment plans in collaboration with a dedicated team of health care professionals. Additionally, you will play an integral part of Paoli's mission to provide a superior patient experience. The Paoli Hospital residency program offers each resident the opportunity for instruction and mentoring pharmacy students, lending advice to medical staff, as well as, other health care providers within our institution. The residency program at Paoli Hospital offers residents the opportunity to customize their learning experiences to match with personal career goals.

PURPOSE STATEMENT

The PGY-1 general pharmacy practice residency program at Paoli Hospital will provide exceptional training experiences that will develop the resident both clinically and professionally. The purpose of the residency program is to prepare pharmacists in a multitude of direct patient care experiences. Upon completion, residents will develop the necessary confidence, competence, and proficiency essential for launching a career in hospital pharmacy.

THE PHARMACY DEPARTMENT AT PAOLI HOSPITAL

The Paoli Hospital Pharmacy Department focuses on patient care services, educational opportunities and interprofessional research. The pharmacy team consists of one pharmacy director, one pharmacy manager, one clinical coordinator, seven clinical pharmacy specialists, 24 staff pharmacists, one inventory control coordinator, one technician supervisor and 20 technicians. Throughout the year, various members of the pharmacy team mentor and precept undergraduate and graduate students from Philadelphia College of Pharmacy (PCPS), Jefferson School of Pharmacy, and Temple University School of Pharmacy.

The pharmacy is decentralized, consisting of satellites. The pharmacy at Paoli Hospital services all 231 inpatients, as well as a number of outpatient sites located at the hospital or off-site:

- Ground floor pavilion pharmacy located near the emergency room, staffed 24/7 including weekends and holidays
- Ground floor main building pharmacy
- IV room in ground floor main building pharmacy, prepares bulk parenterals
- Employee prescription pick-up area ground floor main building pharmacy
- OR satellite pharmacy located on first floor pavilion building
- PYXIS pharmacy located on third floor main building
- Outpatient cancer center located in Medical Office Building 3
- Outpatient cancer center located at the Main Line Health Center at Exton Square and the Main Line Health Center in Collegeville
- Occupational health located in the Main Line Health Center at Exton Square
- Clinical pharmacy specialists (7)
 - Critical care/trauma
 - Infectious disease
 - Internal medicine
 - Surgical care
 - Emergency medicine
 - Hematology/oncology

Each patient care area is equipped with automated dispensing cabinets (PYXIS), allowing ease of access to medications. Beginning in March 2017, Paoli Hospital embarked on a new medication distribution model, a decentralized PYXIS model. This is a collaborative effort between nursing and pharmacy leaders.

This new model is exciting for many reasons:

- 1) It will place medications at the point of care
- 2) Eliminate the delays associated with dispensing medications from the pharmacy
- 3) Reduce and in some cases eliminate time spent filling routine medications, checking the medications, and delivering them to floors
- 4) Nursing will no longer have to wait for new orders or missing medications
- 5) Safe administration of medications is enhanced by using profile dispense on PYXIS and MAK at the bedside.

To strive for continual patient safety, computerized prescriber order entry for electronic medication ordering is integrated with electronic health records and the pharmacy information systems. Bedside medication bar code scanning and “smart” infusion pump technology is utilized by nursing when administering medications. Pharmacists utilize integrated medication surveillance applications for medication and adverse event reporting, identification of medication-related problems and monitoring of drug therapies.

PAOLI HOSPITAL PGY1 REQUIRED COMPETANCY AREAS AND EDUCATIONAL GOALS



Upon successful completion of the program's curriculum and experiential training, the resident will demonstrate that he/she is competent and proficient in his/her ability to:

Competency area R1: Patient care

- Goal R1.1: In collaboration with the health care team, provide safe and effective patient care to a diverse range of patients, including those with multiple co-morbidities, high-risk medication regimens, and multiple medications following a consistent patient care process.
- Goal R1.2: Ensure continuity of care during patient transitions between care settings.
- Goal R1.3: Prepare, dispense, and manage medications to support safe and effective drug therapy for patients.

Competency area R2: Advancing practice and improving patient care

- Goal R2.1: Demonstrate ability to manage formulary and medication-use processes, as applicable to the organization.
- Goal R2.2: Demonstrate ability to evaluate and investigate practice, review data, and assimilate scientific evidence to improve patient care and/or the medication use system.

Competency area R3: Leadership and management

- Goal R3.1: Demonstrate leadership skills.
- Goal R3.2: Demonstrate management skills.

Competency area R4: Teaching, education, dissemination of knowledge

- Goal R4.1: Provide effective medication and practice-related education to patients, caregivers, health care professionals, students, and the public.
- Goal R4.2: Effectively employs appropriate preceptors' roles when engaged in teaching.

PGY1 RESIDENCY PROGRAM ROTATIONS

The residency program at Paoli Hospital begins on July 1st and finishes June 30th of the following calendar year. If July 1st falls on a weekend the residency will begin on the following Monday.

Each pharmacy resident will be scheduled to complete all required rotations and two elective rotations of their choice.

Required rotations (five weeks each)

[General pharmacy practice and orientation](#) (seven weeks)

[Internal medicine](#)

[Adult critical care/trauma](#)

[Infectious disease](#)

[Practice management](#)

[Emergency medicine](#)

[Cardiology](#)

Elective rotations (four weeks each)

[Medication safety](#)

[Outpatient hematology/oncology](#)

[Pharmacy informatics](#)

[Pain and palliative care](#)

[General pediatrics/NICU Nemours Alfred I. duPont Hospital for Children](#)

Required longitudinal experiences

[Senior oncology program ambulatory care](#)

[Drug information](#)

[Project Red: Readmission prevention initiative](#)

[Pharmacy and Therapeutics Committee](#)

[Nursing-Pharmacy Medication Safety Committee](#)

[Pharmacy services-staffing*](#)

[Pharmacy Residency Research Project](#)

*Pharmacy services-staffing requirement: Every other weekend, one summer and one winter holiday

APPLICATION PROCESS

All candidates for the PGY1 residency program at Paoli Hospital will participate in the ASHP Residency Matching Program.

The following materials must be submitted by the second Friday in January:

- Letter of intent
- Current curriculum vitae
- Preference to applicants with hospital pharmacy experience
- College transcript(s)
- Three letters of recommendation



Preferred application process:

PhORCAS-Pharmacy Online Residency Centralized Applicant Service

- Completed application packets will be reviewed by members of the Residency Advisory Committee (RAC) to determine candidates that most closely match the Paoli Hospital program goals and opportunities.
- Selected candidates will be invited to an onsite interview with members of the RAC.
- Following the interview process, residency candidates will be ranked based upon the collaborative input from the RAC with regard the interviews and qualifications of the candidate.
- A rank list will be submitted to the Residency Matching Program.
- Applicants invited for an interview will be provided information on program policies including leave of absence, resident expectations and requirements for successful completion of the program.

CANDIDATE QUALIFICATIONS

All candidates must:

- Be highly motivated
- Have strong desire to work as part of a collaborative team of health care professionals
- Have hospital pharmacy work experience
- Have completed a program in pharmacy leading to a Doctor of Pharmacy degree from a pharmacy program accredited by the Accreditation Council for Pharmacy Education (ACPE)
- Be of good moral character
- Be at least 21 years of age
- Be a citizen of the United States or have a Green Card
- Be eligible for Pennsylvania State licensure, with all examinations for Pennsylvania State licensure successfully completed by September 30th of the residency year

Licensure verification

The resident will provide the department a copy of their pharmacy licensure certificate to remain on file during the resident's year at Paoli Hospital. Failure to obtain appropriate licensure within 90 days of starting the residency, i.e., employment (September 30th), will result in termination of employment. See associated policy on page 32.

PAOLI HOSPITAL RESIDENCY ADVISORY COMMITTEE

The Residency Advisory Committee (RAC) governs the residency program. The committee is comprised of Paoli Hospital residency preceptors and current residents. The committee is chaired by the residency program director and meets from 12:00 pm to 1:00 pm on the second Friday of each month to review and discuss the progress of the residents, as well as, provide preceptor development opportunities. The preceptors meet during the first half of the meeting and the residents attend the second half of the meeting. Interactive feedback within the committee is utilized to direct the resident in his/her current and upcoming residency activities and to provide mentoring and guidance in the resident's pharmacy practice. The committee will recommend modifications to the residents' schedule as necessary. Meeting minutes will be dispersed to all members including residents in a newsletter format. Each member of the RAC is expected to:

- Act as an advocate for the resident
- Provide expertise for the residency projects (when possible) or identify other appropriate resources
- Provide feedback and suggestions on improving current rotation sites, as well as identifying future potential rotation sites
- Provide feedback and suggestions on the current structure of the residency program, and offer possibilities for future direction and quality improvement
- Participate in opportunities for preceptor development
- Be involved in new resident recruitment process
- Participate in resident evaluation and ranking
- Take part in a quarterly review of resident progress (customized plans)
- Discuss competency of our residents in terms of designating ACHR status of ASHP required goals and objectives for the residency
- Promote resident and preceptor wellness through activities and discussions

PAOLI HOSPITAL RESIDENCY PROGRAM STRUCTURE

Core rotations (five weeks)	Preceptor(s)
General pharmacy practice and orientation (seven weeks)	Liz Ferrigno, RPh Steve Breslin, PharmD Andrea Lordan, PharmD
Internal medicine	Kelly Butler, PharmD
Adult critical care/trauma	Kiyo Yoda, PharmD, Clinical Coordinator Ryan Reber, MD
Infectious disease	Andrea Weeks, PharmD Young S. Kim, MD
Practice management	Al Celidonio, RPh, Director of Pharmacy Daniel O'Loughlin, PharmD, Pharmacy Manager
Emergency medicine	Deena Rojek, PharmD Sean Young, PharmD
Cardiology	Andrea Weeks, PharmD Kelly Butler, PharmD Matthew Levy, MD
Elective rotations (four weeks)	Preceptor(s)
Pharmacy informatics Information technology	Andrea Weeks, PharmD (coordinator) Heather Troup, PharmD, Pharmacy IT Staff
Medication safety	Liz Ferrigno, RPh
Outpatient hematology/oncology	Joe Stuccio, RPh, MS Michael B. Dabrow, DO, FACOI, FACP
Pain and palliative care	Kiyo Yoda, PharmD, Clinical Coordinator
General pediatrics/NICU Nemours Alfred I. duPont Hospital for Children	Elora Hilmas, PharmD (at DuPont) Andrea Weeks, PharmD (coordinator)
Longitudinal learning experiences	Preceptor(s)
Pharmacy services-staffing	Liz Ferrigno, RPh, designated staff pharmacist mentors
Drug information	Kiyo Yoda, PharmD, Clinical Coordinator
Project Red: Readmission prevention initiative	Kelly Butler, PharmD
Pharmacy and Therapeutics Committee	Al Celidonio, RPh, Director of Pharmacy Kelly Butler, PharmD
Pharmacy Residency Research Project	Al Celidonio, RPh, Director of Pharmacy Preceptor Advisors (TBD)
Senior Oncology Program–ambulatory care	Andrea Weeks, PharmD
Nursing-pharmacy Medication Safety Committee	Al Celidonio, RPh, Director of Pharmacy

PAOLI HOSPITAL PGY1 RESIDENCY REQUIREMENTS

Successful completion of the Paoli Hospital PGY1 Residency Program requires the achievement of the required ASHP Residency Program Residency Learning System Outcomes, Goals and Objectives (outlined in detail at the beginning of the residency manual). Each resident is required to achieve an 80 percent or better, 20 percent satisfactory and no needs improvement on all required and selected elective residency goals by the end of the residency year. The resident's progress towards achieving all RLS goals will be monitored and shared with RAC members at least quarterly by the residency program director or co-director. At the midpoint of the program each resident is expected to be receiving 75 percent of evaluations with scores of 3s–5s and 25 percent of 1s and 2s. Residents will sign off during orientation that they have been made aware of stipulations to graduate.

The following are detailed descriptions of required activities

1. Participation in residency orientation program: Start of residency

A formal orientation program for all residents is scheduled in late June/early July of each year. All new residents are expected to attend these sessions. This orientation period is to introduce the incoming residents to the Paoli Hospital Department of Pharmacy, the Paoli Hospital and the Main Line Health system; and to outline the expectations for the residency year.

2. Department of pharmacy practice-service component: July 1st–June 30th

- Each resident is required to complete a pharmacy practice component of the residency program. Often referred to as "staffing," the service component of the residency is crucial to the development of professional practice and distribution skills to provide safe and effective pharmaceutical care.
- The resident also will develop insight into the operations, policies and procedures of acute care facilities.

3. Rotations – required and elective: July 1st–June 30th

- Each resident is responsible to complete a defined number of core clinical and management rotations as well as a determined number of elective rotations. Rotations will be evaluated using PharmAcademic.
- It is the responsibility of the incoming preceptor to read over the rotation handoff from the prior rotation preceptor to try and target their rotation towards fulfilling resident learning needs and to home in on any areas where the resident has excelled. On the first day of each rotation, the resident and preceptor will discuss the resident's rotation goals to provide an opportunity for the preceptor to evaluate and if possible, to design specific activities to meet the resident's goals. At the beginning of each rotation, the preceptor will provide the resident with the rotation goals and objectives, rotation activities and method of evaluation.
- Residents are responsible for coordinating their evaluations with the rotation preceptor.

- Rotation final evaluations should be scheduled during the last week of rotation and are to be completed no later than one week following the conclusion of the rotation.
 - Elective rotations choices require approval eight weeks in advance except for the General pediatrics/NICU Nemours Alfred I. duPont Hospital for Children which requires approval at the beginning of the residency in order to coordinate with the facility.
- 4. Residency project: See project timeline ([Appendix A](#))**
- Each resident is responsible for the completion of residency project. The project may be in the form of original research, a problem-solving exercise, or development, enhancement or evaluation of some aspect of pharmacy operations or patient care services.
 - As a component of the project, the resident will submit the project as a work in progress for poster presentation at the ASHP Midyear Meeting.
- 5. Participation in Resident Advisory Council (RAC) meetings: Longitudinal**
- Residents will attend the second half of scheduled RAC meetings to discuss topics such as upcoming resident events, other issues pertaining to the residency program, and actions/recommendations made at residency committee meetings.
 - Meetings will be scheduled by the director of the residency program on the second Friday of each month from 12:00–1:00 pm.
- 6. Active participation in and completion of a Medication Use Evaluation: TBD**
- Each resident is required to participate in a Medication Use Evaluation (MUE). Many of these MUEs will be conducted in support of patient care at the Paoli Hospital or Main Line Health in general.
 - Satisfactory performance as determined by the residency program director or his/her designee is required for successful completion of the program. The MUE will be fulfilled as part of the Pharmacy and Therapeutics Committee rotation.
- 7. Active participation in and completion of a Formulary Drug Review: TBD**
- Each resident is required to participate in a Formulary Drug Review/Drug Class Review/Drug Monograph.
 - The drug monograph will be presented to Pharmacy and Therapeutics Committee as part of an addition or therapeutic change to the current Main Line Health Formulary.
 - All necessary formulary paperwork will also be completed as part of the review.
 - Satisfactory performance as determined by the residency program director or his/her designee is required for successful completion of the program. The formulary drug review will be fulfilled as part of the Pharmacy and Therapeutics Committee rotation.

8. Active participation in and completion of a Quality Improvement/Medication Safety (QI/med safety) Project: TBD

- The objective of the QI/med safety project is to provide residents with the opportunity to better understand the QI process and how it impacts the functioning of the pharmacy and patient care at Paoli Hospital.
- The resident will meet with the Nursing-Pharmacy Medication Safety Committee rotation preceptor/s to develop the project. A more substantial QI project may also serve as the primary residency project. The goal would be two projects per resident.

9. Participation in Drug Information Services: Longitudinal

- Each resident will participate in several venues to provide drug information, which include but are not limited to drug information questions, contributions to Pharmacy Newsletter, Pharmacy and Therapeutics Committee formulary reviews, Journal Club, staff in-services/education, Drug Information On-call services to medical staff, nursing and pharmacists.
- The goal of these activities is to provide the resident with experience in the provision of pertinent drug information in several venues.

10. Participation in the teaching activities: TBD per student calendar

- Resident involvement in the teaching activities fosters development and refinement of the resident's communication. In coordination with the University of the Sciences, Temple University School of Pharmacy, and Jefferson Pharmacy School the residents will serve as preceptors to students during their Introductory, Intermediate and Advanced Pharmacy Practice Experiences.
- The residents will be responsible for developing the rotation goals and objectives for the students as well as coordinating all on-site activities and evaluations.
- Additional teaching activities may be assigned at the discretion of the Clinical Pharmacy Supervisor.

11. Participation in Grand Rounds Medical Education and Schwartz Rounds: Fall through June of each year

- Each resident will attend weekly Medicine Grand Rounds held on Wednesdays at 12:00 pm in the Potter Room. Topics TBA {short summary should be put in PharmAcademic as part of Nursing-Pharmacy Medication Safety Committee rotation}
- Each resident will attend Oncology Conference/Tumor Board held every other Thursday at 12:00 pm in the Potter Room. Topics TBA
- Each resident will attend Schwartz Rounds schedule TBA on periodic Wednesdays at 12:00 pm in the Potter Room. Topics TBA {short summary should be put in PharmAcademic as part of Nursing-Pharmacy Medication Safety Committee rotation}
- Each resident will attend Cardiology Grand Rounds held on the third Tuesday of the month at 12:00 pm in the Potter Room. Topics TBA

12. Participation in Recruitment Efforts: Fall to March of each year

- Each resident will assist with the new resident recruitment efforts of the department. This will occur as part of their Pharmacy Administration Rotation and their RAC requirements.
- Because each resident is an important source of information and advice for potential candidates, there will be scheduled time within the interview process for interviewees to interact with current residents.
- Additionally, each resident is required to spend time providing information to interested parties during the ASHP Midyear Clinical Meeting and the yearly Residency Showcase in Philadelphia, Pennsylvania.

13. Participation in Recruitment Efforts: Fall to March of each year

- Each resident will assist with the new resident recruitment efforts of the department. This will occur as part of their Pharmacy Administration Rotation and their RAC requirements.
- Because each resident is an important source of information and advice for potential candidates, there will be scheduled time within the interview process for interviewees to interact with current residents.
- Additionally, each resident is required to spend time providing information to interested parties during the ASHP Midyear Clinical Meeting and the yearly Residency Showcase in Philadelphia, Pennsylvania.

14. Participation Resident Wellness and Resilience Activities

- Quarterly Balint Group Discussions – location TBA
- Quarterly group wellness activities/outings – TBA
- Chief Resident of Wellness opportunity

PAOLI HOSPITAL PGY1 RESIDENCY OBLIGATIONS OF THE PROGRAM TO THE RESIDENT

The PGY-1 pharmacy practice residency at Paoli Hospital provides a 12-month advanced education and training experience for the pharmacy resident. The program is designed to provide the best possible environment to resident learning.

The program competency areas, goals and objectives are in line with ASHP Residency Learning System required goals. These goals will be taught and evaluated throughout the program to assure that each resident achieves the desired outcomes. Structured learning activities are in place in each rotation to assure that residents have multiple opportunities to achieve the desired outcomes.

Each resident will have a customized residency learning plan built upon identified areas of interest throughout the program by utilizing an entering interests' questionnaire, skills survey and learning style inventory. Flexibility has been built into the program to allow the resident to adapt to the program and preceptors will be reviewing each resident's needs and areas of improvement to customize each rotation for the individual resident. The residency program director or residency program co-director will assess the residents' progress and update the resident's customized training plans each quarter.

Each resident will be provided adequate opportunities to interact with their preceptors with teaching, modeling, facilitating and coaching direct patient care roles as well as other roles in the pharmacy department such as leadership, time management, professionalism, compassion and organization.

Each resident will be provided adequate feedback on their progress and encouragement throughout the residency.

The program will ensure resident well-being and reduce stress by focusing on strategies to improve nutrition, fitness, emotional health, preventative care, financial health and adaptability. During orientation the residents will have the opportunity to choose a former resident as a mentor for the year. Additionally, a golden weekend will be provided after Midyear when the residents will be off from any residency duties. Time off from learning experiences will take place prior to Midyear and Eastern States. Preceptors and mentors will provide ongoing support to residents to instill a sense of accomplishment, satisfaction and belonging by encouraging self-awareness through healthy choices and a balanced lifestyle.

PAOLI HOSPITAL PGY-1 RESIDENCY PRECEPTOR DEVELOPMENT PROGRAM

The Paoli Hospital residency program will provide activities, opportunities and resources for preceptor development and improvement:

- Facilitate informal preceptor development discussions at scheduled RAC meetings including journal article reviews, web-based presentations.
- Attendance at local, state and national programs bringing back information to share with other preceptors.
- Encourage participation in training offered by affiliated colleges of pharmacy on preceptor development issues.
- Support preceptors in pursuing scholarship activities in a variety of areas such as formal presentations, participating as a journal reviewer, writing and submitting publications and performing research.
- Preceptors will be provided compensation to pursue board certification or specialized coursework in their area of expertise.
- Preceptors will be provided travel expenses and compensation to attend conferences including ASHP midyear, Eastern States Conference and ASHP National Pharmacy Preceptors Conference.
- Encourage preceptors who participate in conferences to offer their time to moderate and/or evaluate resident presentations.

All preceptors are required to:

- Maintain ACPE accredited C.E. units sufficient to satisfy Pennsylvania State licensure.
- Attend RAC meetings regularly
- Actively seek out training for self-improvement in their precepting skills
- Document their preceptor development training on an annual basis
- Address any deficiencies in preceptor performance based on resident, residency program director feedback and self-evaluation
- Keep up with current literature topics relevant to improving precepting, mentoring and teaching skills
- Work towards board certification or other advanced degrees.
- Complete a minimum of three credits each for preceptor development clinical core and preceptor development core activities based on the approved Preceptor Development Policy.
- Complete a Preceptor Needs Assessment/Gap Analysis yearly due by August 31

PAOLI HOSPITAL PGY-1 RESIDENT AND PRECEPTOR EVALUATIONS

Guidelines for performance evaluations

An essential component of developing the skills of a resident and continuous improvement to the residency program is frequent two-way feedback between residents and preceptors. The goal of such discussion and interaction is to:



- Discuss the resident's achievements in terms of learning objectives established for the rotation
- Provide feedback that may assist the resident with future rotations or practice
- Provide feedback to the preceptors for continuous improvement of preceptor skills, that may strengthen mentoring during future rotations
- Provide feedback to the coordinator, in order to improve the residency program, and coordinator skills

The preceptors, program director, and residents will frequently provide feedback to one another during individual rotations and in general throughout the residency program. Specific program and rotation feedback may be given via different formats depending upon the learning experience. This will include both oral and written feedback and evaluation. See specific rotations for evaluation strategies. Learning objectives and level of achievement may vary somewhat with each resident depending upon baseline previous experience and knowledge and personal interests.

Frequency of evaluations

The resident's entering knowledge and skills will be assessed in relation to the program's educational goals and objectives. This initial assessment will be documented into the resident's customized development plan by the end of the orientation period and will be utilized to determine each resident's learning experiences, learning activities, evaluations and overall plan for the program.

1. Rotation summative evaluations

Due by the last day of the rotation period; this evaluation of the resident's performances will document progress and attainment in meeting the educational goals and objectives assigned to each rotation. PharmAcademic will be utilized to complete all summative evaluations. The resident and preceptor(s) will review these evaluations together. For rotations with more than one preceptor, a primary preceptor will be designated who will collaborate with secondary/co-preceptors to provide one summative evaluation in PharmAcademic. In some rotations, co-preceptors may choose to complete their own summative evaluation of the resident and will complete only areas of the evaluation they were directly responsible for instruction.

To be completed by the preceptor:

- End of Rotation Summative Evaluation

- **Remember that this is not a grade, but rather it is an evaluation on whether the resident has achieved the residency educational goals and objectives for the residency program. Once the resident has a goal “Achieved for the Residency” that means the resident has fully accomplished the educational goal and no further instruction or evaluation is required.** This is important to understand, as it would be very difficult to achieve residency required goals and objectives after only completing a few weeks or month of the residency. Residents and preceptors should state in the comments-examples of how they have met the or not met the objective and why they have achieved if that is going to be the evaluation of that learning objective. Please be candid and offer constructive feedback. This is for learning purposes. The RAC Members will vote on whether a Resident has achieved an objective and/or goal for the residency (ACHR status) based on reports demonstrating resident progress and preceptor discussions at RAC Meetings. Residents will be informed in person of decisions.

To be completed by the resident:

- **Preceptor Evaluation**—The resident will complete this at the end of the rotation. If more than one preceptor is working with a resident on a rotation, please give feedback on both preceptors. This is an area to comment for areas of strength and improvement. Please provide examples.
- **Evaluation of an Experience**—The resident will complete this at the end of the experience. This again is the time for feedback on what was good, ok, great etc about a rotation. This enables the preceptors to improve the rotation. Please provide examples.

To be completed by the preceptor:

- **Rotation Hand-off**—The preceptor(s) will complete this at the end of five-to-eight-week block rotations. This is to be used by the next preceptor to determine any areas to focus on with the resident. The preceptor will provide valuable information for future preceptors on various skills, knowledge, projects, attendance, problem-solving, professionalism, communication, initiative and progress towards achieving individual and residency goals and objectives for the residency program.
- Please provide examples of for each area evaluated. If more than one preceptor is working with a resident, then collaboration would be needed to complete this evaluation.

2. Quarterly summative evaluations

These are provided for longitudinal rotations and are performed in PharmAcademic and are utilized to provide an evaluation of the resident’s progress within the residency program. The quarterly evaluation will address progress towards the resident’s individual residency goals and objectives as well as the required and longitudinal activities of the program.

To be completed by the resident:

- A quarterly self-assessment snapshot in PharmAcademic will be required on some rotations to be completed in PharmAcademic and is due one week before the end of each quarter. See section 4 below for more on self-assessments.

To be completed by the preceptor:

- Quarterly rotation-specific evaluations are done the same as a summative evaluation. See page 23. See list of longitudinal rotations which require quarterly evaluations. See pages 12 and 16.

3. Criteria-based assessments

Feedback and evaluations of selected activities will be conducted throughout the residency.

To be completed by the preceptor—these will include but are not limited to:

- Formative (on-ongoing) formerly known as “Snapshots” of resident progress on individual instructional objectives for each rotation. These are performed in PharmAcademic. Choose the resident and click on the “provide feedback to the resident button” You can use this to document verbal feedback or choose to give written feedback. You will need to choose the option that describes your relationship to the resident.
- It can apply to Learner Goals and Objectives, Learning Experiences, Activities for Learning Experiences, Portfolio Evidence, or Not Applicable. Provide detailed examples of how the resident met the objectives in terms of specific activities. The preceptor should discuss these with the resident and make necessary adjustments to the rotation activities to assist in helping the resident learn.
- Formative feedback is a means for preceptors to tell residents how they are progressing and how they can improve. They should be frequent, immediate, specific (measurable-describe the observed behavior), accurate and constructive.
- Projects, case presentations, class reviews, journal clubs, DUEs, policy reviews, participation in rounds or meetings, meeting minutes, problem solving, communication strategies or any other assignments which offer an opportunity to provide feedback to the resident either verbally or in written format such as a written evaluation.

4. Self-assessments

These will be required as part of several of the longitudinal and block rotations and as part of the resident’s customized training/learning plan. This will also comply with the residency objective R3.1.2.

- The resident will be required to complete an “Entering Interests Form” at the start of the residency. Each quarter the resident will meet with the RPD or designee to discuss progress towards attainment of the resident’s personal career goals, goals of the residency, strengths and weaknesses and areas of interest. Since this is completed at the start of the residency, its intent is to allow the resident to determine self-progress and to assist them in determining their attainment of their own goals both professionally and personally. This should be done in PharmAcademic initially by the resident and then the RPD or Designee will meet the resident in person to complete quarterly as part of the resident’s customized training/learning plan.

- A resident quarterly self-assessment (snapshot) will be incorporated into some of the longitudinal rotations. The self-assessment will provide the preceptor with information to base quarterly summative evaluations on progress towards achievement of educational goals and objectives. It will assist in providing the preceptor with a means to modify activities to offer learning opportunities to help residents get the most out of these longitudinal rotations. These will be due one week prior to the end of the quarter.
- A notes function or resident self-assessment will be generated in PharmAcademic for some of the block rotations. These will offer the resident an opportunity to keep track of activities they are participating in as a means of self-reflection and documentation of their hard work. Preceptors will be able to view these in PharmAcademic and are not evaluable, merely informational purpose only and are created by preceptors to home in on specific areas of the rotation they want the resident to self-reflect or gain more opportunities.

PharmAcademic link:

pharmacademic.com/Login.aspx

For assistance, contact Andrea Weeks at 484.565.1144; if further resolution is needed:

Scott McCreadie PharmD, MBA (staff) at support@mccreadiegroup.com

Evaluation scales

Summative scale to be used for all learning experiences by preceptors and pharmacy residents when performing summative evaluations.

1–5 point rating scale:

- **NA = Not applicable**
- **NE =Not evaluated at this time**
- **1 = Resident is not competent in this area.** Multiple deficits exist, extensive intervention needed, preceptor may need to complete task(s), unable to work independently. (i.e., needs improvement)
 - Example: Quality of product, work skills and professionalism requires much improvement, requires considerable assistance to achieve competency, may need to repeat assignments
- **2 = Resident is not fully competent in this area.** Below expected, marginal, limited deficiencies, needs consistent preceptor intervention, unable to work independently (i.e., minimally acceptable, needs improvement)
- **3 = Resident is competent in this area.** No deficiencies, progressing satisfactorily, good, expected level, requires only occasional intervention. (i.e., meets standards, satisfactory progress)
- **4 = Resident excels in this area.** No deficiencies, fulfilling objectives, fully competent, works independently. (i.e., exceeds standards, achieved)

- Ex: Demonstrates independent competency, superior work skills, and high level of professionalism.
- **5 = Resident excels in this area.** No deficiencies, surpasses expectations and objectives, exceptional, works independently. Resident brings new insight into clinical situations based on experience and/or critical evaluation of the literature. (i.e., outstanding, achieved)
- **Achieved for the residency** = Demonstrates independent competency, superior work skills, and high level of professionalism on an expert, mastery level on a consistent basis. *ACHR status is voted on during RAC meetings after careful review of resident progress reports and preceptor discussions. ACHR status is based on residents being exposed to several patient populations and if they are performing in a consistent and competent manner based on our rating scale. RAC meeting minutes will reflect ACHR status discussions and residents will be notified in person when they receive ACHR status for any goals or objectives for the residency.*

<u>Resident snapshots self-evaluations during longitudinal or block rotations</u> Needs more opportunities, satisfactory progress, exceptional progress	<u>Preceptor evaluation scale</u> Always, frequently, sometimes, never
<u>Rotation handoff scale</u> Needs improvement, satisfactory progress, exceeds expectations, not applicable	<u>Evaluation of rotation experience scale</u> Consistently true, partially true

PAOLI HOSPITAL PGY1 PHARMACY RESIDENCY GENERAL INFORMATION

Salary

The residents will receive a stipend of \$48,000.

Benefits

- 10 vacation days during 52-week period (excluding weekends)/sick time
- Health benefits including medical, dental, vision, and life insurance
- 403B Tax Shelter Annuity with Employer Match
- Travel and accommodations for ASHP Midyear Conference and the Eastern States Conference
- ACLS certification

Staffing

Each resident will be scheduled to work every other weekend during the residency as part of the longitudinal rotation pharmacy services-staffing beginning in August around the time of licensure and ending June 30th of the following calendar year.

Residency academic year

The residency program at Paoli Hospital begins on July 1st and finishes June 30th of the following calendar year. If July 1st falls on a weekend the residency will begin on the following Monday.

Holiday staffing requirements

Each resident will be required to work a one winter and one summer holiday which will be in addition to the every-other-weekend staffing requirement. These include: July 4th, Labor Day, Thanksgiving Day, Christmas Day, New Year's Day, and Memorial Day. Residents are entitled to time off on legal holidays unless scheduled to staff.

Additional staffing hours

Additional staffing hours beyond the required every-other-weekend shift are permissible but may not occur during the weekday dayshift operating hours as they would correspond the assigned resident learning experience activities. Any additional shifts chosen to be picked up by the resident need to occur on second shift or on weekends and should have at least 10½ hours between the end of the shift and the next scheduled residency learning experience start time. For example: the resident puts in a staffing shift from 2:00 pm to 10:00 pm. The earliest they can come in the next day is 8:30 am. Residents should be mindful of their residency learning experience expected hours on site and should choose staffing shifts which do not interfere with rotation

requirements, as in the example above. If the resident was expected to be on site for a rotation that begins with rounds at 8:00 am they would only be able to work until 9:30 pm at the latest the night prior.

Moonlighting

As a Paoli Hospital Pharmacy Practice resident, you are a paid-employee of the Main Line Health system. Resident obligations as part of their employment and job descriptions are crucial to successfully completing the residency. Residents who choose to work outside of either staffing for any of the Main Line Health hospitals or their daily residency obligations will need to clear this employment with the RAC including the residency director. The RAC members may ask to review the outside employment contract or job description and hours of employment before making a decision. Patient-care rotations, teaching and service requirements take precedence over scheduling for external employment and thus, the residency program is considered the primary priority of each resident.

Residents should NOT swipe their badges in the Kronos timekeeping machines. Any additional shifts worked by the resident need to be emailed to Al Celidonio, residency program director, with the date and times in and out.

Maximum hours of work per week and duty-free times

Duty hours include all scheduled clinical and academic activities related to the pharmacy residency program as well as all additional staffing hours and moonlighting hours. These hours are limited to a maximum of 80 hours per week averaged over a four-week period.

Residents must have a minimum of one day in seven days free of duty when averaged over four weeks. For example, from January 1st to January 28th, residents must have at least four days off free of duty hours during that time period although there may be periods where the resident may have worked seven days in a row. Tracking of duty hours occurs via the resident schedule, which is distributed to the residents. Additional staffing hours beyond activities related to the residency learning experiences must be approved via an Edit Authorization Form by the RPD/pharmacy manager. Duty free hours are taken into consideration before granting approval.

For more information, visit ashp.org/-/media/assets/professional-development/residencies/docs/duty-hour-requirements.pdf.

Sick days

Sick time is accrued and requires notification as soon as possible to the current preceptor for sick days during rotations or Al Celidonio, director of pharmacy, for scheduled staffing assignments. If the resident is sick beyond three days and is unable to fulfill residency obligations a physician note will be required. Rotation assignments will also be made up at the discretion of the preceptor(s).

Personal days/vacation time

Residents are provided a total of 10 personal/vacation days. These cannot be used during assigned staffing weekend shifts or in place of assigned holidays. Residents will need to utilize these days in order to attend job interviews, exams, conferences, etc. Advance notification and approval with Al Celidonio, residency program director, is required before taking a personal or vacation day.

Bereavement days

All residents are entitled to receive time off with pay for a period of up to three days if a death occurs within the immediate family. Immediate family is considered a spouse, parent, brother, sister or child. Residents are entitled to one day of absence with pay if there is a loss of grandparent, grandchild or parent-in-law. For additional days off the resident will be required to use personal days. The resident would need approval from Al Celidonio, residency program director.

Call outs

The resident is responsible to attempt to work assigned staffing shifts. If the resident is not able to make it into work for staffing shift, they are to call Al Celidonio, residency program director, to find coverage. For residency rotations the resident is expected to be fully present on site, times may vary at the discretion of the preceptor(s) and the actual rotation requirements. If the resident is unable to make it in for a scheduled meeting or rotation, they are expected to call their preceptor(s) in advance or to send an email. Weather related call-outs need to be cleared with Al Celidonio.

Leave of absence/medical leave

Any leave of absence including medical leaves will need approval from Al Celidonio, residency program director. All requests for leave must be submitted in writing to the residency program director. If the leave of absence results in the inability of the resident to complete the required residency goals and objectives, the RAC members will put together an action plan. The action plan will require the resident to make up missed time and all rotation requirements. In some cases, depending upon the length of the leave of absence this may extend the residency year beyond June 30th of the residency academic year.

PAOLI HOSPITAL PGY1 PHARMACY RESIDENCY EXPECTATIONS AND RESPONSIBILITIES OF RESIDENTS

Professional Practice

Professional conduct

It is the responsibility and expectation of all residents participating in the Paoli Hospital Residency to maintain the highest degree of professional conduct at all times. The resident will display an attitude of professionalism in all aspects of his/her daily practice.

Professional dress

All residents are expected to dress in an appropriate professional manner whenever they are within the hospital or participating in or attending any function as a representative of Paoli Hospital or the Main Line Health system. It is the expectation that the resident will wear a clean, pressed white lab coat at all times in patient care areas.

Employee badges

Paoli Hospital requires all personnel, including residents, to wear his/her badge at all times when they are within the hospital. Badges will be obtained during orientation from the Paoli Hospital security office located in the emergency room. If the employee badge is lost the resident must report the loss immediately to security and render a fee for replacement.

Communication

The resident is responsible for promoting good communication between the pharmacists, patients, physicians and other health care professionals. The resident shall abide by the Paoli Hospital policies regarding the use of hospital and cellular phone within the hospital and in patient care areas.

As part of communication, constructive criticism and feedback will be provided to residents in a professional manner and is meant as a form of learning and is not meant to embarrass. Any conflicts which may arise between the resident and a preceptor should first be handled by face to face discussion. If the resident or preceptor has a disagreement or concern and the situation cannot be handled together the next step would be to contact the residency program director. Both the resident and the preceptor should send an email together to the residency program director requesting an appointment to speak together to discuss each point of view to come to a resolution.

Patient confidentiality

Patient confidentiality will be strictly maintained by all residents. Time for completion of HIPPA training will be scheduled during the pharmacy practice rotation training. It is the expectation that residents will not discuss patient-specific information with other patients, family members or other person not directly involved in the care of the patient. Similarly, residents will not discuss patients in front of other patients or in areas where people may overhear. Residents will not leave confidential documents (e.g., profiles, charts, prescriptions) in public places. Residents should understand that inappropriate conduct (e.g., breach of confidentiality) may result in disciplinary action.

Attendance

Residents are expected to attend all functions as required by the Residency Advisory Committee, the residency program director and rotation preceptors. The residents are solely responsible for meeting the obligations of their assigned service commitments (staffing). Specific hours of attendance will be delineated by each preceptor in accordance to the individual rotation requirements. Successful completion of the residency program is directly related to fulfilling all the program's requirements, which determine the primary schedule of the resident. It must be understood that the responsibilities of the resident may not correspond to a consistent day to day schedule and at times, extra hours of overage may be necessary to complete residency requirements.

Licensure

In order to achieve the required goals and objectives for the Pharmacy Practice Residency Program and for the resident to gain the full value of residency training, residents are expected to be fully licensed to practice pharmacy in the State of Pennsylvania by September 30th. This complies with 90 days from the start of the residency and their employment with Paoli Hospital/Main Line Heath. Residents are encouraged to be licensed before their first weekend of staffing. Any resident who fails to obtain appropriate pharmacist licensure by September 30th of the residency year will be subject to termination of employment.

Resident disciplinary action

Residents are expected to conduct themselves in a professional manner at all times and to follow all relevant departmental and hospital policies and procedures.

Disciplinary action will be initiated if a resident

- Does not follow policies and procedures of Paoli Hospital pharmacy services, or residency program
- Does not present him/herself in a professional manner
- Does not make satisfactory progress on any of the residency goals or objectives

- Does not make adequate progress towards the completion of residency requirements (e.g. residency project, rotation requirements, longitudinal activities service requirements)

Disciplinary action policy and procedure

In the event of the identification of need for disciplinary action of a resident or if a resident fails to make satisfactory advancement in any aspect of the residency program, the following disciplinary steps shall be taken:

1. The resident will meet with the residency program director (RPD) and/or involved preceptor to discuss the identified issue(s). If the RPD is not involved in the initial discussion, he will be notified of the meeting and of the events that transpired. Action steps that will follow include: [in conjunction with the resident] an appropriate solution to rectify the behavior, deficiency or action will be determined. A corrective action plan and specific goals for monitoring progress must be determined and outlined. These suggestions will be documented in the resident's personnel file by the RPD. Corrective actions will be in progress before the next scheduled quarterly evaluation.
2. The resident will be given a **second warning** if the resident has not improved within the determined time period set forth by the RPD.
3. If the preceptor/RPD determines that the resident may not complete the residency program in the designated time frame, a plan to adequately complete the requirements shall be worked on by the member of RAC and presented and reviewed with the resident. The action plan will be clear in its recommendations for completing the desired residency requirements and the desired time frame for completion. The resident will have up to 18 months from July 1st of the calendar year from the start of their residency to complete the residency. Action plans may include remedial work or termination.
4. When and if dismissal is recommended by the RPD, a meeting with the resident to discuss the final decision will occur.

Completion of program requirements

- Each resident will receive a copy of the Paoli Hospital PGY1 Residency Manual at orientation and will be expected to review its contents and be aware of graduation requirements.
- Each resident is required to achieve an 80 percent or better, 20 percent satisfactory and no needs improvement on all required and selected elective residency goals by the end of the residency year.
- Each resident must complete at least one MUE, one drug monograph for P and T, one newsletter article, one staff in-service, and two Nursing Pharmacy Medication Safety Committee projects.
- Each resident must complete all required evaluations in PharmAcademic.
- Each resident is required to fulfill their staffing requirements.

- Each resident will have up to 18 months from July 1st of the calendar year from the start of their residency to complete the residency.
- Each resident is responsible for the completion of a residency project including a poster for ASHP midyear (which can be submitted as a work in progress) and an Eastern States Residency Platform Presentation.
- Each resident will hand in a summary of their residency project in manuscript style.

Upon successful completion of all requirements of the residency program, the resident will be awarded a certificate of completion. This certificate will attest that the resident has achieved competencies consistent with and in accordance with accreditation standards as set forth by ASHP and/or other accrediting bodies.

ROTATIONS

Required rotations

General pharmacy practice and orientation rotation learning experience

Preceptor(s): Liz Ferrigno, RPh
Pavilion Pharmacy (located in the ER wing)
255 West Lancaster Avenue, Paoli, PA 19301
484.565.2550 • Fax: 484.565.42560
ferrignol@mlhs.org

Steve Breslin, PharmD
OR Pharmacy (located in 1st floor pavilion building)
255 West Lancaster Avenue • Paoli, PA 19301
484.565.1860 • Fax: 484.565.1865
breslins@mlhs.org

Andrea Lordan, PharmD
Pavilion Pharmacy
484.565.2550
lordana@mlhs.org



1) General description

Pharmacy practice and orientation is a required seven-week rotation beginning the date of hire. This rotation will allow for the resident to become familiar not only with the layout of Paoli, but also with the staff, each satellite's intricacies, and the pharmacy system. During this rotation, the resident will observe and participate in technician responsibilities, such as IV admixture, medication filling/deliver, restocking Pyxis process, ordering, pre-packing unit dose medications, and compounding. The resident will also observe and participate in pharmacist duties, as this will encompass the majority of their responsibilities. These include, but not limited to, learning policy/procedures of Main Line Health, Epic Clinical system, non-formulary drug reviews, therapeutic substitutions, daily reports and chemotherapy. Also, included during this time is two-day Main Line Health orientation as well Main Line Health Culture of Safety training. Good communication and interpersonal skills are vital to success in this experience. The resident must devise efficient strategies for accomplishing the required activities in a limited time frame.

2) Goals and objectives

During the learning experience the resident will focus on the goals and objectives outlined below by performing activities that are associated with each objective. Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to this learning experience.

3) Activities

Goals and objectives	Description	Activity detail
Goal R1.1	In collaboration with the health care team, provide safe and effective patient care to a diverse range of patient...following a consistent patient care process.	
OBJ R1.1.1	(Applying) Interact effectively with health care teams to manage patients' medication therapy.	<ol style="list-style-type: none">1. Communicates information across the continuum of care. Utilizes comments, messages, sticky notes to communicate pertinent patient information.2. Illustrates in daily practice an understanding of the importance of contacting appropriate parties when a problem is identified.
OBJ R1.1.2	(Applying) Interact effectively with patients, family members and caregivers.	<ol style="list-style-type: none">1. Articulates and explains information or modifications to the therapeutic plan to the patient or members of the health care team.2. Acts respectfully and collaboratively.
OBJ R1.1.3	(Applying) Collect information on which to base safe and effective medication therapy.	<ol style="list-style-type: none">1. Demonstrate the ability to use the Internet and Intranet (department policies and procedures, SDS resource, drug info resources), Epic Pharmacy (Willow) and navigate the EMR. Understand the type of data collected, transmitted and stored by the system, in order to, access the most appropriate resource when performing required tasks.2. Access various technology databases within the department (automated dispensing cabinet, carousel, electronic medical record) and understands the limitations of information in health records and which sources of information are the most reliable (electronic, face to face).3. Complete Epic Willow training.4. Follow all security and HIPAA privacy regulations when using information technology.
OBJ R1.1.4	(Analyzing) Analyze and assess information on which to base safe and effective medication	<ol style="list-style-type: none">1. Demonstrates ability to identify medication therapy problems, including: therapeutic duplications, adverse drug events or potential for such events, clinically significant drug-drug, drug-disease interactions or potential for interactions.

OBJ R1.1.4 (continued)	therapy.	2. Demonstrates ability to evaluate laboratory values and make modifications to therapy according to hospital policy (Dose adjustment by Pharmacist policy, Targeted Drug Monitoring Policy and Pharmacy Protocol for IV Vancomycin Dosing).
OBJ R1.1.7	(Applying) Document direct patient care activities appropriately in the medical record or where appropriate.	<ol style="list-style-type: none"> 1. Chooses appropriate direct patient-care activities for documentation. 2. Completes documentation of interventions (I-Vents) and understands the importance of documentation and all relevant criteria involved in documentation. 3. Employs hospital's policies and procedures for electronic and written documentation. All entries are signed, dated, timed, legible, and concise. 4. Utilizes safety surveillance tools in Epic. (Warfarin monitoring) and documents IV to PO conversions and Dose Adjustments by Pharmacist appropriately. 5. Document progress notes, I-Vents and handoffs related to Pharmacy Protocol for IV Vancomycin Dosing.
Goal R1.3	Prepare, dispense and manage medications to support safe and effective drug therapy for patients.	
OBJ R1.3.1	(Applying) Prepare and dispense medications following best practices and organization's policies and procedures.	<ol style="list-style-type: none"> 1. Complete the new Pharmacist Orientation Checklist. 2. Complete department competencies: Computer Skills Assessment, Aseptic Technique and Rare Yet Emergent –Practical Competency. 3. Assess the elements of a complete medication order. 4. Document modifications to a medication order appropriately. 5. Evaluate PACU orders to determine if medication and dose are age appropriate. 6. Prepare medication using appropriate techniques and following the organization's policies and procedures and applicable professional standards. 7. Apply policies and procedures to ensure solutions are appropriately concentrated, without incompatibilities, stable and appropriately labeled and stored according to organization's policies. 8. Apply hospital's procedures to check the accuracy of medications dispensed, including correct patient, correct medication, correct dosage form, correct dose, correct number of doses, expiration date. 9. Document in Epic Compounding and Repackaging all batched medications. Ensure final products are appropriately labeled with correct expiration dates, and auxiliary labels. 10. 1Applies policies and procedures to ensure home medications are reconciled when profiling orders for

OBJ R1.1.4 (continued)		<p>new admissions.</p> <ol style="list-style-type: none"> 11. Demonstrate ability to perform home medication reconciliation (Med SPU/PACU). 12. Demonstrate ability to prioritize responsibilities and ensure that patients receive medications on time.
OBJ R1.3.2	(Applying) Manage aspects of the medication-use process related to formulary management.	<ol style="list-style-type: none"> 1. Employ appropriate procedures regarding exceptions to the formulary such as restricted medications and antimicrobials. 2. Employ policies and procedures in dispensing non-formulary medications to ensure medications are dispensed, administered and monitored in a manner that ensures patient safety.
OBJ R1.3.3	(Applying) Manage aspects of the medication-use process related to oversight of dispensing.	<ol style="list-style-type: none"> 1. Pass the aseptic technique competency. 2. Explain USP 800 guidelines. 3. Ensure IV products are prepared using appropriate aseptic technique. 4. Employ appropriate policies and procedures to ensure that medications are stored appropriately according to the hospital's safety measures for storage, disposal, monitoring of refrigerated and scheduled products. (Temp-trak, PharmEcology Waste Management, CII safe)
Goal R2.1	Demonstrate ability to manage formulary and medication-use processes, as applicable to the organization.	
OBJ R2.1.4	(Applying) Participate in medication event reporting and monitoring.	<ol style="list-style-type: none"> 1. Illustrate ability to utilize STAR reporting system. 2. Explains and participates in the utilization of MLH's 5 safety behaviors and the Error Prevention Tools associated with each. 3. Illustrates ability to recognize Great Catches and submit via online reporting system. 4. Explain the potential for error by use of various automated technology within the department. 5. Participate in Safety Coach meeting (August).
Goal R3.1	Demonstrate leadership skills.	
OBJ R3.1.2	(Applying) Apply a process of on-going self-evaluation and personal performance improvement.	<ol style="list-style-type: none"> 1. Complete four two-week self-evaluations as part of the Pharmacist Orientation Checklist. 2. Articulate and address with preceptor weaknesses and develop plan for personal performance improvement. 3. Seeks counsel of others (e.g. mentor, preceptor, employee assistance program) if needed. 4. Explains the relationship between operational tasks and clinical activities and demonstrate the ability perform tasks related to both.
OBJ R3.2.4	(Applying) Manage one's own practice	<ol style="list-style-type: none"> 1. Articulates and candidly assesses successes and areas for improvement in managing one's own

OBJ R3.2.4 (continued)	effectively.	<p>practice. (Pharmacist Orientation Checklist self-assessment)</p> <ol style="list-style-type: none"> 2. Routinely seeks applicable new learning opportunities when performance does not meet expectations. 3. Demonstrates pride in, and commitment to, the profession through appearance, personal conduct, planning to pursue board certification and pharmacy association activities. 4. Demonstrates personal commitment to and adheres to organizational and departmental policies and procedures. (Red Rules and Main Line Health Safety Behaviors)
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4) Preceptor interaction

Daily: 8:00 am–4:30 pm, may vary based on activities of the day.

Day 1: Preceptor to review learning activities and expectations with the resident.

Each week the resident will perform various activities outlined on a checklist with direct supervision and guidance by their preceptor or mentors. Progression towards achieving the necessary skills required to become a competent staff pharmacist will also depend upon the resident's previous skill set/knowledge upon entering the residency.

Preceptors will assess incoming knowledge and tailor the activities based on resident performance. Preceptors and residents will have open communication to discuss progress and offer added opportunities to aid in the learning process. (See evaluation strategy for more information)

(The length of the time the preceptor spends in each of the phases of learning will depend on BOTH the resident's progression in the current rotation and where the rotation occurs in the residency program.)

5) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Rotation notes/resident self-assessments**—These will be used to document in PharmAcademic the weekly activities completed by the resident along with their self-reflection of the learning experience and their own performance.
- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be

included to provide the resident with information they can use to improve their performance in subsequent learning experiences.

- **Preceptor and Learning Experience evaluation**—This evaluation must be completed by the last day of the learning experience.
- **Formative assessments** (see below)—These will be ongoing, constructive, focus on activities and be measurable in order to strengthen the resident's skills regarding their role in preparing, dispensing and managing safe and effective drug therapy for patients.

Type of evaluation	Who is responsible to complete	When it should be completed
Rotation notes/resident self-assessment	Resident	End of each week
Summative	Preceptor	End of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience
Rotation handoff	Preceptor	End of the learning experience

Formative evaluations will be performed by verbal feedback and criteria-based performance on assigned tasks listed on the Pharmacy Department Weekly Checklist for Pharmacist Orientation and the Computer Skills Assessment. The Pharmacy Department Weekly Checklist will serve as a guide for the resident to familiarize themselves with the health system, pharmacy department including administrative, policies, procedures, manuals and safety. The checklist serves as a tool to assist in training the resident in all aspects of dispensing medications throughout the hospital including specialized departments such as preparing chemotherapy, neonatal and cath lab medications. The tool will be used initially at baseline for the preceptor to determine the knowledge level of the resident in the various dispensing areas and then to tailor the teaching to the needs of the resident. Every two weeks the resident will do a self-assessment using the items listed in V through VII on the checklist. Any areas the resident feels they need reinforcement; the preceptor will provide more instruction. Another formative tool utilized by the preceptor will be the Computer Skills Assessment. This will be used as an ongoing instrument to assist in knowledge recall as the resident will be required to complete assessment question(s) after exposure to these computer-based skills are taught or as they come up in day to day practice. This will give both the resident and preceptor the ability to go back and reteach where there is a deficiency.

Internal medicine rotation learning experience

Preceptor: Kelly Butler, PharmD, Clinical Pharmacist

Designated rotations: Internal medicine, Project Red

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Preceptor office hours: Monday–Friday 7:00 am–3:30 pm

1) General description

The internal medicine rotation is a five-week required rotation in the PGY1-pharmacy residency program. This rotation will give the resident a basic understanding of disease states encountered in adult internal medicine. This rotation will stress the application of therapeutics in patient care and require the resident to develop skills in proper drug therapy selection, patient monitoring, pharmacokinetics, patient education, drug administration and delivery of pharmaceutical care to hospitalized patients.

Core content which will be covered via patient experiences, discussion of reading materials, and/or case presentations.

Good communication and interpersonal skills are vital to success in this experience. The resident must devise efficient strategies for accomplishing the required activities in a limited time frame.

2) Disease states

During this internal medicine rotation, the resident will round on the telemetry floor, medical/surgical floor, and the trauma step-down unit. Common disease states in which the resident will be expected to gain proficiency through literature review, topic discussion and/or direct patient care experience include but are not limited to:

- Cardiovascular topics: heart failure, stroke, acute myocardial infarction, atrial fibrillation
- General medical/surgical topics: Common infectious diseases (community acquired pneumonia, hospital acquired pneumonia, skin and soft tissue infections, urinary tract infections, bacteremia), chronic/acute renal failure, COPD, thromboembolic disease, diverticulitis, ulcerative colitis; DVT/VTE prophylaxis; acute pain management, post-op nausea and vomiting

3) Interdisciplinary rounding

Interdisciplinary rounds for internal medicine rotation include:

- 3 Main (telemetry/oncology/heart failure) – Mondays and Thursdays, 10:00 am
- 3A (telemetry) – Tuesdays 10:00 am
- 4B (med/surg) – Wednesdays 10:00 am

- 4A (ortho/trauma step down) – Fridays 10:00 am
- HMS physician as assigned

4) Activities

- Daily activities include: patient profile review and identification of and resolution of any medication related issues (i.e., IV to PO, duplicate therapy, home med reconciliation); laboratory data monitoring for appropriated dosing of drug therapy (i.e., renal dosing, antimicrobial cultures and sensitivities); and evaluation of medication regimens for appropriateness. Counsel any Project Red patients consulted.
- Documentation of interventions – document all interventions through Epic I-vents.
- Project Red (longitudinal experience) – counseling patients on their medications to prevent re-admissions in CHF, AMI and Pneumonia (refer to Project Red syllabus).
- Topic discussions (with a patient case) – weekly on Thursdays or Fridays at 2:00 pm.
- Discussions of other pertinent literature or readings at the discretion of the preceptor throughout the week.
- RN-in-service – One per rotation completed during second half of rotation.
- ADR reporting – utilize on-line reporting system (STARS) to document any ADRs. Assist preceptor in quarterly summary of ADRs for the Main Line Health system. Fulfills objective R2.1.4 from the pharmacy and therapeutics rotation and will be evaluated as part of that rotation.

5) Preceptor interaction

- Pre-rounds – 30 minutes prior to rounds
- Post-rounds – 30 minutes after rounds to discuss follow-ups
- Thursday or Friday 2:00 pm – topic discussion
- Additional meetings as needed

6) Expected progression

- Day One – 8:00 am: Orientation to rotation; meet with preceptor to review learning activities and expectations.
- Week 1
 - Complete all daily activities as described above on patient care units assigned and document all interventions
 - Attend rounds with preceptor; observe pharmacist's role in interdisciplinary rounds
 - Topic discussion/Patient Case

- Week 2
 - Complete all daily activities as described above on patient care units assigned and document all interventions
 - Attend and participate in rounds with preceptor (resident 25 percent, preceptor 75 percent)
 - Topic discussion/Patient Case
- Week 3
 - Complete all daily activities as described above on patient care units assigned and document all interventions
 - Attend and participate in rounds with preceptor (resident 50 percent, preceptor 50 percent)
 - Begin discussing and select topic for RN in-service
 - Topic discussion/Patient Case
- Week 4
 - Complete all daily activities as described above on patient care units assigned and document all interventions
 - Attend and participate in rounds with preceptor (resident 75 percent, preceptor 25 percent)
 - Finalize topic for RN in-service. Submit draft to preceptor.
 - Topic discussion/Patient Case
- Week 5
 - Complete all daily activities as described above on patient care units assigned and document all interventions
 - Attend and participate in rounds with preceptor (resident 100 percent, preceptor observe)
 - Complete RN in-service
 - Topic discussion/Patient Case
- Mid – Second half of rotation (to be determined)
 - Spend one full week with an HMS physician and a medical student from PCOM
 - 7:00 am – Review assigned patients for the day and be prepared to discuss in rounds
 - 9:00 am – meet with HMS/medical student to round on assigned patients. Be prepared to discuss patient and make interventions/drug therapy recommendations.
 - Afternoon – Be prepared to discuss any drug info assignments given by HMS (topic discussion/Patient Case with preceptor will not be required the week spent with HMS if assigned other topics by physician)

7) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation. The resident and the preceptor will meet to discuss the evaluations. The discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- Formative assessments—The preceptor will provide the resident with ongoing, activity focused, measurable, and constructive feedback in order to enhance learning.
- Summative evaluations—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences.
- Preceptor and Learning Experience evaluations must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Summative	Preceptor	End of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience
Rotation handoff	Preceptor	End of the learning experience

8) Objectives

Goals and objectives	Description	Activity detail
R1.1.1	(Applying) Interact effectively with health care teams to manage patients' medication therapy	<ul style="list-style-type: none">• Participating in care progression rounds rounds on telemetry (3A), med/surg (4B) telemetry/oncology (3 Main) and Ortho/trauma (4A).• Participate in hospitalist rounds.• Interactions are cooperative, collaborative, communicative and respectful. Foster relationships with nursing, physicians and other clinicians to support safe and effective medication therapy to manage acute and chronic health conditions.• The resident should respond to team requests for drug information in a timely manner.
R1.1.3	(Analyzing) Collect information on which to base safe and effective medication therapy	<ul style="list-style-type: none">• Collects and distinguishes patient data efficiently and effectively.• Collects relevant information in preparation for rounds (e.g., HPI, home meds/compliance, pertinent lab values) utilizing patient EMR in Epic. Be prepared to

R1.1.3 (continued)		discuss recommendations with preceptor and interdisciplinary team during rounds and daily preceptor meetings.
R1.1.4	(Analyzing) Analyze and assess information on which to base safe and effective medication therapy.	<ul style="list-style-type: none"> Identifies and prioritizes patients with medication therapy problems (including but not limited to lack of indication, suboptimal medication regimen, therapeutic duplication, laboratory monitoring) and can make verbal recommendations to preceptor and/or team to improve patient's care. Actively question orders in real time to determine the appropriateness of drug orders (e.g., Indication, dose, route, frequency, rate of administration, drug interactions, compliance, cost).
R1.1.5	(Creating) Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans	<ul style="list-style-type: none"> Can collaborate with interdisciplinary team during rounds or follow-up and make verbal recommendations to the physician to improve patient care. Manages all daily activities for the assigned nursing unit by end of shift and can discuss interventions made. Prepare and present topic discussions and patient cases to preceptor as designated to discuss improvement in care using evidence-based medicine.
R1.1.6	(Applying) Ensure implementation of therapeutic regimens and monitoring plan by taking appropriate follow-up actions	<ul style="list-style-type: none"> Ensures recommended plan has been implemented by examining electronic medical records and is prepared to discuss with prescriber when a situation may require more immediate means of communication. Establishes pertinent follow-up data required (i.e., labs, vitals) to monitor plan for therapeutic recommendations to determine if evidence-based goals are met. Appropriately initiates, modifies, discontinues medication therapy as authorized (i.e., IV to PO, dose adjustment). Develops a plan to follow assigned patients daily.
R1.1.7	(Applying) Document direct patient care activities appropriately in the medical record or where appropriate	<ul style="list-style-type: none"> Completes all documentation of interventions/ recommendations/ patient care notes as Epic I-Vents. Documentation is articulate and written in time to be useful.
R1.1.8	(Applying) Demonstrate responsibility to patients	<ul style="list-style-type: none"> Gives priority to patient care activities. Actively pursues all significant existing and potential medication-related problems until satisfactory resolution is obtained. Completes all daily activities for the assigned nursing unit by end of shift.

R4.1.1	(Applying) Design effective educational activities	<ul style="list-style-type: none"> • Complete one nursing in-service on assigned floors. • Accurately defines educational needs with regard to the target audience.
R4.1.2	(Applying) Use effective presentation and teaching skills to deliver education	<ul style="list-style-type: none"> • Complete one nursing in-service on assigned floors. • Maintains audience interest; presents at appropriate rate and volume; summarizes important points; transitions are smooth; effectively uses handouts to support learning activity.
R4.1.3	(Applying) Use effective written communication to disseminate knowledge	<ul style="list-style-type: none"> • Complete one nursing in-service on assigned floors and include handout. • Writes in a manner that is easily understandable and free of errors; uses tables and graphs to enhance audience understanding; demonstrates understanding of topic.

During the learning experience the resident will focus on the goals and objectives outlined in section 8 above by performing the activities that are associated with each objective. The resident will gradually assume responsibility for all the patients within the assigned unit. The PGY1 resident must devise efficient strategies for accomplishing required activities in a limited time frame.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table above demonstrates the relationship between the activities and the goals/objectives assigned to the internal medicine learning experience.

Expected progression of resident responsibilities on this learning experience: (length of time preceptor spends in each of these phases will be personalized based upon resident's abilities and timing of the learning experience during the residency year).

Adult critical care/trauma rotation learning experience

Learning experience type: Acute care, required

Primary preceptor: Kim Yoda, PharmD

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1) General description

The intensive care unit (ICU) is a 16-bed unit comprised of medical and surgical intensive care patients. This is a five-week rotation that provides experience in a variety of disease states and pharmacotherapy management. The daily ICU interdisciplinary rounds focusing on medical or cardiac patients are typically led by a critical care/pulmonary specialist—Dr. Ryan Reber or Dr. Melissa Calder and a nurse practitioner. The trauma interdisciplinary rounds are led by Jefferson Health System trauma surgeons twice a week on trauma patients including patients in the progressive care unit (PCU). The interdisciplinary team generally consists of the following members: physician (intensivist/surgeon), the primary nurse caring for the patient, nurse manager/educator, pharmacist, dietitian, respiratory therapist, infection preventionist nurse, case manager/social worker, and chaplain.

2) Goals of the rotation

- a. To develop the resident's clinical knowledge and skills through literature reviews, topic discussions and direct patient care experience in order to gain confidence in recommending and promoting appropriate drug therapy in the critical care setting.
- b. To gain an understanding and be able to effectively discuss common critical care disease states and pharmacotherapy.
- c. To provide the opportunity for the resident to become an integral member of the critical care and trauma multidisciplinary teams through collaboration.
- d. To identify and resolve any medication therapy problems based on laboratory data, cultures, drug levels, side effects, potential for adverse drug events, patient functional and health status, quality of life and cost-effectiveness.

Interdisciplinary rounds: Medical rounds ~10:00 am/11:00 am when Trauma rounds
Trauma rounds twice weekly (ex. Mon/Fri 10:00 am)

Week 1–2: Preceptor will attend rounds with residents to model pharmacist's role in multidisciplinary team

Week 3–5: Resident to work up patients and round on own by the end of fourth week. Most interventions should be initiated by the resident during the last two weeks.

<u>Patient review discussions:</u>	Pre-rounds daily Post-rounds daily
<u>Topic discussions:</u>	Twice weekly or two topics once weekly
<u>In-service for ICU nurses:</u>	At least one
<u>Mini-MUE project:</u>	At least one; choose topic by end of 1 st week
<u>ADR reporting (if available):</u>	1
<u>Clinical student precepting:</u>	Available upon request and school availability
<u>Documentation of interventions:</u>	Residents will document interventions through Epic I-Vents

3) Core content will be covered via patient experiences, discussions of reading materials, case presentations

Topics that may be reviewed during the rotation could be as follows:

- ✓ ICU analgesia, sedation and neuromuscular blockade
- ✓ Sepsis/septic shock/systemic inflammatory response syndrome (SIRS)
- ✓ Multiple organ failure and oxygen delivery in critically ill patients
- ✓ Management of common infectious diseases: Community acquired pneumonia, hospital acquired pneumonia, skin and soft tissue infections, UTIs, bacteremia, meningitis, osteomyelitis, post-op infectious complications
- ✓ Acute alcohol withdrawal
- ✓ Acute GI bleeding
- ✓ Traumatic brain injury
- ✓ Spinal cord injury
- ✓ Anticoagulation reversal
- ✓ Acute overdoses (opioid, benzodiazepine, acetaminophen, miscellaneous)
- ✓ Diabetic ketoacidosis (DKA)
- ✓ Glycemic control in the ICU
- ✓ Hypertensive emergency
- ✓ Post PCI management
- ✓ Fluid and electrolyte balance/replacement in critically ill patients
- ✓ Hemodynamic support using inotropic/vasoactive agents
- ✓ Acute renal failure/uremic bleeding/acid-base disturbances
- ✓ Pharmacokinetics in critically ill patients
- ✓ ICU prophylaxis issues: GI stress ulcer prophylaxis, venous thrombosis prophylaxis

During the learning experience the resident will focus on the goals and objectives outlined in section 4 below by performing the activities that are associated with each objective. The resident will gradually assume responsibility for all the patients within the

assigned unit. The PGY1 resident must devise efficient strategies for accomplishing required activities in a limited time frame.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the critical care learning experience.

Expected progression of resident responsibilities on this learning experience: (length of time preceptor spends in each of these phases will be personalized based upon resident's abilities and timing of the learning experience during the residency year).

4) Activities

Activity detail	Corresponding objective with description
Accurately gather, organize, and analyze patient specific information on patients prior to rounds. Also, able to review profiles to identify medication related problems to discuss with preceptor or team. Meet with preceptor pre-rounds to discuss patients (weeks 1–2 mandatory).	R 1.1.3 (Analyzing) Collect information on which to base safe and effective medication therapy R 1.1.4 (Analyzing) Analyze and assess information on which to base safe and effective medication therapy
Actively participate in ICU and trauma rounds and/or communicate recommendations to prescribers in a cooperative, collaborative and respectful manner demonstrating skill in negotiation and advocacy for the patient.	R 1.1.1 (Applying) Interact effectively with health care teams to manage patients' medication therapy
Provide and document therapeutic drug monitoring services for patients receiving drugs requiring monitoring including, but not limited to aminoglycosides and vancomycin with therapeutic goals established for the patient. Redesign/devise monitoring plans after goals have been evaluated based on established parameters. Take appropriate follow up action with prescriber using skillful communication and ensure recommended plan is implemented. Document patient care activities into intervention system daily following health system policies and procedures.	R 1.1.5 (Creating) Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans R 1.1.6 (Applying) Ensure implementation of therapeutic regimens and monitoring plans (care plans) by taking appropriate follow-up actions R 1.1.7 (Applying) Document direct patient care activities appropriately in the medical record or where appropriate
Manage time each day to meet with preceptor post-rounds to discuss topics (~twice weekly) and discuss/address patient specific monitoring and propose therapeutic recommendations.	R 1.1.5 (Creating) Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans
Participate in MUE or other outcomes measures for patients on service.	R 2.1.2 (Applying) Participate in a medication-use evaluation

Prepare and provide “mini” in-service to ICU or other in-service opportunities (ex. drug information on rounds). Accurately define educational needs regarding target audience and selects content that is relevant, is evidence based, summarizes the topic being taught, employs handouts/audio visual aids and writes in a manner that is free from grammatical errors.	R 4.1.1 (Applying) Design effective educational activities R 4.1.2 (Applying) Use effective presentation and teaching skills to deliver education R 4.1.3 (Applying) Use effective written communication to disseminate knowledge
Identify and report any medication events (ADR or medication errors) via electronic event reporting.	R 2.1.4 (Applying) Participate in medication event reporting and monitoring

5) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident’s self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Formative assessments**—The preceptor will provide the resident with ongoing, activity focused, measurable, and constructive feedback in order to enhance learning.
- **Summative evaluations**—This evaluation summarizes the resident’s performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Summative	Preceptor	End of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience
Rotation handoff	Preceptor	End of the learning experience

Infectious disease rotation learning experience

Preceptor: Andrea Weeks PharmD, Clinical Pharmacist
Infectious Disease

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1) General description

The infectious diseases rotation is a five-week required rotation in the PGY-1 residency program at Paoli Hospital.

2) Goals of the rotation

- a) To develop the resident's clinical knowledge and skills in recommending and promoting the appropriate use of antimicrobials in the hospital setting and to incorporate evidence-based pharmaceutical care to improve patient outcomes.
- b) Provide the opportunity for the resident to become an integral member of the infectious disease multidisciplinary team through collaboration.
- c) To promote the Paoli Hospital antimicrobial stewardship program by utilizing stewardship strategies.

Description

The Paoli Hospital Antimicrobial Stewardship Program incorporates an infectious disease clinical pharmacist and Dr. Young S. Kim and Dr. Shirish Jagga board-certified infectious disease physicians located at Paoli Hospital. Additional members of the antimicrobial stewardship team include the infection preventionist nurses Kathleen Francis and Victoria Kunsch at Paoli Hospital. The antimicrobial stewardship program was devised out of a need to optimize patient clinical outcomes while minimizing unintended consequences of antimicrobial use such as adverse events, risk of development of antimicrobial resistance and inappropriate treatment-related costs. Stewardship guidelines are based upon the 2014 CDC Core Elements of Hospital Antibiotic Stewardship Program publication, the Joint Commission 2017 Antimicrobial Stewardship Standard for Acute Care Hospitals and the Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America Guidelines for Developing and Institutional Program to Enhance Antimicrobial Stewardship. The focus of the rotation is for the resident to gain clinical pharmacy experience while working with the Infectious Disease service. The resident will design, recommend, monitor and evaluate patient-specific therapeutic regimens which will concentrate on proper antimicrobial selection based on knowledge gained during actual rounds, physical exams, progress notes and laboratory values as well as utilizing the pharmacology, pharmacokinetics, pharmacodynamics and therapeutics of the drugs.

On days when the resident is not attending bedside rounds on the infectious disease service, they will be expected to follow patients in the hospital who are receiving antimicrobial therapy using our surveillance technology software called Epic. As part of the Antimicrobial Stewardship team the resident will gain insight into the utilization of antimicrobials within the acute care hospital setting and in all age populations. They will develop problem solving skills and participate in antimicrobial stewardship activities which include appropriate selection, dosing, route and duration of antimicrobial therapy. The PGY1 resident will utilize the following stewardship strategies including formulary restrictions and pre-authorizations, streamlining or de-escalation of therapy, dose optimization, parenteral to oral conversions, prospective audit with intervention and feedback and education based on clinical guidelines and pathways. Both electronic data and chart review will be utilized to assess concurrent antimicrobial orders. Weekly antimicrobial stewardship (AMS) rounds with Dr. Young Kim will occur on non-bedside rounding days to focus on non-ID consulted patients. The resident will be expected to present a brief synopsis of identified patients during AMS rounds, gain insight into the case and if recommended by the AMS ID physician, the resident will contact non-ID prescribers on a case by case basis for recommendations in dose based on renal/hepatic function, therapy recommendations based on culture results, treatment guidelines, hospital based antibiograms and hospital policies (de-escalation/escalation). Pharmacokinetic recommendations will be made for vancomycin using our Pharmacy and Therapeutics approved dosing protocol. Aminoglycoside dosing recommendations will be on an as needed basis. Documentation must occur on the day service provided in Epic I-Vent. The resident is expected to be available from 7:30 am to 4:30 pm or longer days on days when attending bedside rounds. 7:00 am arrival time is preferred on Wednesdays and Thursdays (days may change) to prepare for rounds.

Good communication and interpersonal skills are vital to the success of this experience. The resident must devise efficient strategies for accomplishing the required activities in a limited time frame. *Project and meeting time for longitudinal rotations will be worked into the schedule for the resident and on an as needed basis and must be approved by the preceptor.*

3) Conference and meeting attendance

In addition to the learning activities, the resident is expected to attend the following conferences and meetings.

- a. System Infection Control Committee meetings on the Thursday of the first full week of the month, quarterly from 3:00-4:00pm in the Board Room at Bryn Mawr Hospital
- b. Paoli Clinical Operations Committee Meetings, last Thursday of the month, 7:00–8:00 am in the Board Room at Paoli Hospital (dates of attendance TBA)
- c. Case conference/topic discussion every Friday with attending ID physician
- d. Antimicrobial class review presented to preceptor and pharmacy students every Monday afternoon

4) Disease states

Common disease states in which the resident is expected to gain proficiency through literature review, topic discussion and /or direct patient care experience including but not limited to:

- Basic microbiology
- Optimal antimicrobial selection
- Dosing vancomycin following approved pharmacy protocol
- Antimicrobial resistance and infection control
- Principles of antimicrobial stewardship
- Infectious diseases (in both immuno-competent and immuno-compromised hosts) *
 - Pneumonia (community-acquired, health care-associated, hospital-acquired, ventilator-associated)
 - Urinary tract infections
 - Skin and soft tissue infections
 - Bone and joint infections
 - Endocarditis
 - Intra-abdominal infections
 - Catheter-related infections
 - Invasive fungal infections
 - Bacteremia/sepsis
 - Surgical prophylaxis
 - Peritonitis
 - Meningitis
 - Clostridium difficile
 - Febrile neutropenia
 - Infections due to multidrug resistant organisms, MRSA, VRE, CRE, etc.
- HIV
- Immunization recommendations

* Individual antimicrobial classes-antibiotics, antifungals, antivirals, antiretrovirals, etc. will be addressed in conjunction with disease-state discussions and it is expected that the resident will independently review relevant antimicrobial pharmacology in addition to assigned readings

During the learning experience the resident will focus on the goals and objectives outlined in section 4 below by performing the activities that are associated with each objective. The resident will gradually assume responsibility at least half of all the Epic dashboard patients and bedside rounding patients.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the critical care learning experience.

Expected progression of resident responsibilities on this learning experience: (length of time preceptor spends in each of these phases will be personalized based upon resident's abilities and timing of the learning experience during the residency year).

5) Activities

Goals and objectives	Description	Activity detail
Goal R1.1	In collaboration with the health care team, provide safe and effective patient care to a diverse range of patients, including those with multiple co-morbidities, high-risk medication regimens, and multiple medications following a consistent patient care process.	
OBJ R1.1.1	(Applying) Interact effectively with health care teams to manage patients' medication therapy	<ol style="list-style-type: none"> 1. Residents will actively participate in infectious disease rounds on Wednesdays and Thursdays. Interactions should be cooperative, communicative and respectful. 2. Demonstrates skill in negotiation and advocates for the patient to support safe and effective medication therapy to manage a patient's infection. 3. The resident will receive drug and disease state questions from the ID physicians on a weekly basis during and after round and are expected to review literature or other references suggested by their preceptor and have answers prepared at the requested date/time by the ID physician. 4. Spend a half day working with Microbiology Lab Director, Infection Control Preventionists and wound care specialist. <ol style="list-style-type: none"> a. Foster relationships with the microbiology lab, nursing, IFC person, and the ID pharmacists at the other Main Line Health sites to support our health system's antimicrobial stewardship efforts to improve patient outcomes.
OBJ R1.1.3	(Applying) Collect information on which to base safe and effective medication therapy	<ol style="list-style-type: none"> 1. Accurately gather by discovering/examining patient specific information on assigned patients prior to rounds with preceptor in order to base safe and effective medication therapy. This should occur on non-rounding days as well when utilizing our surveillance software to make medication therapy recommendations. <ol style="list-style-type: none"> a. Collecting pertinent information from the EMR which includes HPI, health/social history, medications, labs previous ADRs, clarifies information as needed. b. Discover new information on rounds based on physician exams, radiology and new labs and incorporate into existing data collected from EMR. 2. In addition to rounds, during the weekly patient case the resident should explain which information is

OBJ R1.1.3 (continued)		important to collect for the specific disease states which will be presented in the case. e.g. If presenting a patient case on endocarditis, the resident displays the information they collected to determine appropriate therapy such microbiology data, labs, current history, current treatment and drug levels.
OBJ R1.1.4	(Analyzing) Analyze and assess information on which to base safe and effective medication therapy	<ol style="list-style-type: none"> 1. The resident will analyze each patient's health records to identify medication-related problems to discuss with preceptor and ID physicians. 2. Examples may include: <ol style="list-style-type: none"> a. Lack of indication, unmet medical needs, suboptimal therapy, therapeutic duplication, ADR or potential for and ADR, drug-disease, nutrient, and lab interactions. b. Harmful social, non-prescription, or other medication therapy. c. Lack of understanding of medication, non-adherence and the cause, medication discrepancies in care plans, and financial impact. d. Any new information collected on rounds should be analyzed to identify medication-related problems. 3. In addition to rounds, during the weekly patient case the resident should include how they analyzed and assessed the patient's health records and medication therapy to determine if it was optimal e.g.: If a patient has osteomyelitis, they should display therapeutic vancomycin levels, whether there are any drug interactions present, is the patient's vancomycin dose appropriate to receive optimal benefit from therapy? What is the target vancomycin trough?
OBJ R1.1.5	(Creating) Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans	<ol style="list-style-type: none"> 1. The resident will be responsible to provide and document therapeutic drug monitoring services for patients receiving antibiotics requiring monitoring including: <ol style="list-style-type: none"> a. IV to PO conversions, renal dose adjustments, restricted antibiotics, pharmacokinetic consults and de-escalating antibiotics based on microbiology data and patient laboratory data. 2. The resident should determine appropriate and achievable therapeutic goals for each patient using best evidence, patient factors, adherence to the health systems' policies, address medication related problems and optimize therapy by making recommendations for modifications in existing regimens or recommend new regimens. E.g., recommend de-escalating an antibiotic when cultures have finalized or renally adjusting a medication. 3. For the weekly patient case, the resident will be responsible for assessing the appropriateness of the

OBJ R1.1.5 (continued)		<p>medical therapy, making suggestions for alternative or adjusting therapies and stating therapeutic goals. E.g., eradication of infection, vancomycin trough before the 4th dose, checking WBC, temperature and improvement of pain or wound for example.</p> <p>4. If the patient was being discharged, how will the patient transition to home therapy, what type of monitoring plan needs to be in place? What patient counseling points will be required? Cases should focus on medication treatments, microbiology, and touch on disease states.</p>
OBJ R1.1.6	(Applying) Ensure implementation of therapeutic regimens and monitoring plans (care plans) by taking appropriate follow-up actions	<p>1. Ensure prescribers have implemented recommendations using skillful communication and appropriate assertiveness.</p> <p>2. Follows up on recommendations and monitors labs.</p> <p>3. During rounds the resident will be responsible to ensure that patients receiving antibiotics requiring monitoring such as vancomycin, aminoglycosides, pending microbiology results, have appropriate drug levels such as peak or troughs (or any other therapeutic parameters) ordered and reviewed and offer dose modifications to ensure that the patient reaches therapeutic goals, prevents potential adverse events, or drug interactions.</p> <p>4. When the resident presents their weekly patient case they should include a) rationale on why the infectious disease physician chose a certain regimen for the patient's infection(s); b) how it fits into the current evidence-based guidelines; c) information from the hospital admission on how the patient was monitored for their medications; d) what follow up would be needed once the patient was discharged if there were changes in doses or new medications e.g., labs; e) how was the medication plan communicated to the patient; f) what steps were put in place and by whom to ensure the patient could obtain their medications and follow up with their physician to ensure the best outcomes?</p>
OBJ R1.1.7	(Applying) Document direct patient care activities appropriately in the medical record or where appropriate	<p>1. The resident will prepare an accurate, concise progress note in Epic using an I-vent on any direct patient care activities they were involved in during rounds or general surveillance.</p> <p>2. The resident will be evaluated on the quality of the progress notes they write in terms of being clear, including pertinent information so that other clinical pharmacists can review in time to be useful. E.g., a note which describes an interesting patient case the resident was part of during rounds in which they learned information only available if one were in rounds.</p>

OBJ R1.1.7 (continued)		<ol style="list-style-type: none"> Learn to perform an allergy assessment and write a note of outcome in the patient's medical chart. The resident should follow all hospital policies and procedures for documentation. The resident will be responsible to log a minimum number of interventions each day based on the week of the rotation. This is a responsibility of a clinical pharmacist in a hospital.
Goal R2.1	Demonstrate ability to manage formulary and medication-use processes, as applicable to the organization.	
OBJ R2.1.4	(Applying) Participate in medication event reporting and monitoring	<ol style="list-style-type: none"> Identify and report at least one medication events (ADE or medication errors) via STARS Event Reporting System on the desktop. May be initiated by pharmacy personnel or by other health care professionals. csstars.com/Enterprise/default.cmdx Many times, reactions to antibiotics are not reported and can be identified during rounds when patients are being examined. Reporting adverse drug events is important bring attention to risks involved in using antibiotics. Additionally, the resident should update the patient's profile in the EMR to identify the allergy and the reaction that occurred.
OBJ R2.1.2	(Applying) Participate in a medication-use evaluation	<ol style="list-style-type: none"> Prepare a drug utilization evaluation or other outcomes measures for process improvement. The resident will learn a systematic, evidenced-based approach to gathering and interpreting data on an antibiotic which may have pharmacy concerns such as cost, dosing, inappropriate use, safety concerns, etc. Antimicrobial stewardship programs are required by the Joint Commission and CMS to track antibiotic usage following the Core Elements which provide best practices specified by the CDC. (<i>see required readings</i>)
GOAL R4.1	Provide effective medication and practice-related education to patients, caregivers, health care professionals, students, and the public (individuals and groups).	
OBJ R4.1.1	(Applying) Design effective educational activities	<ol style="list-style-type: none"> The resident will be responsible to provide a final PowerPoint presentation to the physicians and other clinical staff on an infectious disease topic and should include educational objectives. The resident will select a patient from rounds and construct a weekly infectious disease patient case to be presented to the infectious disease physicians. Prepare and articulate a weekly anti-infective class review to clinical staff and pharmacy students. In all presentations, the resident should select content that is relevant and at a level that is appropriate to the learners needs, i.e., physicians, pharmacists, students.

OBJ R4.1.1 (continued)		<ol style="list-style-type: none"> 5. The resident should employ teaching strategies which include active learning such as polling questions. 6. Content should be evidence-based, timely, reflect best practices and include cited references. 7. The final presentation must be approved by both the preceptor and physicians at least one week prior to the date of presentation.
OBJ R4.1.2	(Applying) Use effective presentation and teaching skills to deliver education	<ol style="list-style-type: none"> 1. The resident should be prepared to discuss more in depth at the request of the infectious disease physician or preceptor a daily or weekly drug information request and at least one patient case presentation. Drug information questions are at the discretion of the infectious disease doctor/preceptor. 2. The resident should use their weekly antibiotic class reviews with their preceptors, pharmacists and students, as well as, the final Power Point presentation for physicians to build relationships with their learners. 3. This can be accomplished by using techniques to capture and maintain their audience using planned teaching strategies engaging the audience through active participation such as including an interesting patient. 4. The resident should provide background on the disease state(s), medications and monitoring parameters on their presentations as the focus should always be pharmacy related. 5. The resident will be evaluated on speaking skills, body language, smooth transitions between concepts, using effective handouts/visual aids which help support learning and summarize important points throughout the presentation.
OBJ R4.1.3	(Applying) Use effective written communication to disseminate knowledge	<ol style="list-style-type: none"> 1. All written work should be free from grammatical errors and demonstrate that the resident prepared in advance and knows the subject matter. Handouts should be well-designed, summarize information and help enhance oral presentations. 2. The resident should cite references in their written work. 3. The written communication that the resident disseminates should use various graphics such as tables, figures and graphs to help enhance the audience's understanding of a topic, i.e., visual learning. 4. The resident should utilize a variety of literature including guidelines, studies and other credible references to help expose the audience to the most current information on a topic. E.g., If you are asked to talk about diabetic foot infections, what do the current

OBJ R4.1.3 (continued)		<p>guidelines state on the most effective treatments?</p> <p>5. The resident should know their audience and direct the content and level of their written communication appropriately. (E.g., physicians, nurses, pharmacists, patients vs. the public).</p>
OBJ R4.1.4	(Applying) Appropriately assess effectiveness of education	<p>1. When providing drug information in the form of a presentation such as the patient case, topic discussions, antibiotic class review or final Power Point presentation, the resident should determine the learning objectives/focus ahead of time to help prepare activities that will enhance the learning experience.</p> <p>2. For the weekly antibiotic class reviews, the resident should include written, verbal or audience self-assessment questions to help determine how well the audience of preceptors, resident, students grasped the concepts taught.</p> <p>3. For the case presentations or other information provided to the infectious disease physicians, the resident should summarize and ask if anyone has questions at the end or follow-up with any questions that need further clarification or research.</p> <p>4. For the final PowerPoint presentation, the resident should follow up with the physicians to obtain feedback to improve as an effective educator.</p>
GOAL R4.2	Effectively employ appropriate preceptor roles when engaged in teaching students, pharmacy technicians, or fellow health care professionals.	
OBJ R4.2.1	(Analyzing) When engaged in teaching, select a preceptor role that meets learners' educational needs	<p>1. The resident should familiarize themselves with the four preceptor roles (direct instruction, modeling, coaching, facilitating) and when to utilize these techniques for instruction. (<i>see required readings</i>)</p> <p>2. The effectiveness of the resident first identifying then applying these educational objectives will be evaluated when the resident is providing their weekly drug class reviews but would fit with any presentation. The resident needs to identify which role is applicable to their particular presentation and audience.</p> <p>3. Direct instruction is needed when the audience requires background possibly on a disease state or an antibiotic mechanism of action. The resident should explore ways to provide teaching that is interesting and motivating to the audience.</p> <p>4. Modeling could be employed once the audience understands a topic or has some existing knowledge to present a more difficult topic such as determining based on mechanism what class an antibiotic would belong to for example.</p> <p>5. Coaching during teaching could occur when you want the audience to perform a task with your supervision</p>

OBJ R4.2.1 (continued)		<p>such as working on finding lab values which help identify that a patient has a particular type of infection. The resident is there to assist and provide verbal ques.</p> <p>6. Lastly, determining when to allow the learners during your presentation to work alone (facilitate) such as some quiz questions or fill in blanks or potentially a mini-patient case.</p> <p>7. The resident should be able to determine based on how well the audience is able to work alone whether they need to go back to more direct instruction or possibly modeling such as using “think out loud” strategies or clues.</p>
OBJ R4.2.2	(Applying) Effectively employ preceptor roles, as appropriate	<p>1. This objective relates to actually applying appropriate preceptor roles.</p> <p>2. The resident will be evaluated on how well they match the audience’s needs to the appropriate preceptor role.</p> <p>3. What strategies were applied to help teach? Were the strategies effective?</p> <p>4. For the antibiotic class review, did the resident provide adequate background on the mechanism of action of the drugs, spectrum of activity, dosing, drug structure first (direct instruction)?</p> <p>5. Did the resident use strategies to employ critical thinking such as “think out loud” to help teach the audience how to walk through a problem?</p> <p>6. Did the resident coach the audience with verbal queues, feedback, questions?</p> <p>7. Lastly, did the resident facilitate when appropriate, such as using case-based questions? If this was employed and the audience did not know the answers, the resident would be expected to go back to direct instruction or modeling to help the audience solve the problems.</p> <p>8. Once the learners can perform unsupervised is there anything that could be provided to allow the audience to work alone such as giving them a calculation to work out or case questions to complete?</p>

6) Preceptor interaction

Day 1: Meet at 8:00 am to orient resident to the rotation requirements, assign readings and explain evaluation strategy. Additionally, orient resident to Epic Antimicrobial Monitoring and setting up Patient Lists to monitor patients on antimicrobials. Set up infectious disease census in Epic.

Week 1: Resident to work up assigned patients on infectious disease service and present to preceptor prior to bedside rounds. Preceptor to provide direct instruction on the role of the ID pharmacist. Preceptor will attend and participate in rounds with the resident (modeling pharmacist’s role on the

health care team). This will occur on Wednesdays (with Dr. Kim) and Thursdays (with Dr. Trevino). Resident to log in any interventions made on any direct patient care activities such as rounds or general surveillance using an Epic i-Vent (minimum three per day). On AMS rounds days, resident will work with preceptor to monitor and review select cases for therapy recommendations to Dr. Kim (AMS ID physician) on non-ID consulted patients throughout the hospital as part of the antimicrobial stewardship program. Case based-topic discussion to be held on Fridays with ID attending.

Week 2: Resident to work up assigned patients on infectious disease service and present to preceptor prior to bedside rounds. Preceptor will attend and participate in rounds with the Resident (coaching the resident to take on more responsibility on the health care team). Resident to log in any interventions made on any direct patient care activities such as rounds or general surveillance using an Epic i-Vent (minimum four per day) On AMS rounds days, resident will work with preceptor to monitor and review select cases for therapy recommendations to Dr. Kim (AMS ID physician) on non-ID consulted patients throughout the hospital as part of the antimicrobial stewardship program. Begin vancomycin and aminoglycoside pharmacokinetics when applicable. Antimicrobial class review to be presented Monday 2:30–3:30 pm. Case based-topic discussion to be held on Fridays with ID attending.

Weeks 3–4: In addition to week 2 activities the resident should exhibit more independence in following and monitoring assigned patients and take more leadership role in rounds in terms of recommendations and logging interventions in Epic using i-Vents (minimum five per day). Preceptor will take on role of facilitator and provide feedback to resident on the role in bedside rounds and recommendations on AMS rounding days. Work on any assigned projects including DUE, final presentation, etc.

Weeks 5: Same as week 3–4. Resident to attend bedside rounds and assume full independence, with preceptor feedback and guidance on patient cases. Epic i-Vents should be used with a (minimum of six interventions logged per day). Resident will need to get preceptor final approval for power point presentation to physicians. DUE is due by the Wednesday of Week 5 in order to provide time for the ID physicians to offer feedback. The preceptor will model and coach the resident on how to put together the final presentatio.

Daily rounds time varies by attending schedule.

Preceptor meeting after completion of rounds to review patients and answer questions time permitting, as this may need to occur the following day if rounds run long.

7) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Formative assessments**—The preceptor will provide the resident with ongoing, activity focused, measurable, and constructive feedback in order to enhance learning.
- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Summative	Preceptor	End of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience
Rotation handoff	Preceptor	End of the learning experience

Required reading:

1. CDC Core Elements of Hospital Antibiotic Stewardship Programs. Atlanta, GA: US Department of Health and Human Services, CDC; 2014. Available at cdc.gov/getsmart/healthcare/implementation/core-elements.html.
2. Barlam TF. Cosgrove SE. Abbo LM. et al. Implementing an antibiotic stewardship program: Guidelines by the Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America. Clinical Infectious Diseases. 2016;62(10):e51-e77.
3. Dellit TH. Owens RC. McGowan JE et al. Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America Guidelines for Developing and Institutional Program to Enhance Antimicrobial Stewardship. Clinical Infectious Diseases. 2007; 44:15-177.
4. Barlam TF. Cosgrove SE. Abbo LM. et al. Implementing an Antibiotic Stewardship Program: Guidelines by the Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America. 2016; 62(10):1197-1202.

5. The Joint Commission R3 Supplemental Report January 2017. Antimicrobial Stewardship Requirements for Hospitals.
6. R³ Report New antimicrobial stewardship standard. Requirement effective January 1, 2017. R³ Report | Requirement, Rationale, Reference A complimentary publication of The Joint Commission Issue 8, October 19, 2016.
7. Weitzel, KW. Walters EA. Taylor J. Teaching clinical problem solving: a preceptor's guide. American Journal of Health-System Pharmacists.2012; 69:1588-1599.

Additional readings:

1. Rybak MJ. Antimicrobial Stewardship. Pharmacotherapy. 2007; 27(10 Pt 2):131S-135S.
2. Antibiotic Stewardship in Acute Care: A Practical Playbook. National Quality Forum, National Quality Partners, Antibiotic Stewardship Action Team. National Quality Forum, 1030 15th Street, NW Suite 800, Washington Dc. qualityforum.org.
3. California Department of Public Health Antimicrobial Stewardship Program Toolkit. Examples for Program Implementation. 2015.
4. A Hospital Pharmacist's Guide to Antimicrobial Stewardship Programs. Developed by the American Society of Health-System Pharmacists and sponsored by Ortho-McNeil, Division of Ortho-McNeil-Janssen Pharmaceuticals, Inc. Available at: website at ashpadvantage.com/stewardship.
5. Report to the President on Combating Antibiotic Resistance: Executive Office of the President. President's Council of Advisors on Science and Technology. September 2014. Available at: whitehouse.gov/ostp/pcast.
6. Greater New York Hospital Association United Hospital Fund Antimicrobial Stewardship Toolkit. Best Practices from the GNYHA/UHF Antimicrobial Stewardship Collaborative. Published 2011. Available at: gnyha.org/antimicrobial.
7. IDSA Public Policy Supplemental Article: Combating Antimicrobial Resistance: Policy recommendations to save lives: Executive Summary. Clinical Infectious Diseases. 2011; 52 (Suppl 5):S397-S428.
8. Paterson DL. The role of antimicrobial management programs in optimizing antibiotic prescribing within hospitals. Clinical Infectious Diseases. 2006; 42:S90-S95.
9. MacDougall C. Polk RE. Antimicrobial stewardship programs in health care systems. Clinical Microbiology Reviews. 2005; 18(4):638-656.
10. Moehring RW. Anderson DJ. Antimicrobial stewardship as part of the infection prevention effort. Current Infectious Disease Reports. Published online September 8, 2012.

11. Goff DA. Bauer KA. Reed EE. Et al. Is the “Low-hanging fruit” worth picking for antimicrobial stewardship programs? *Clinical Infectious Diseases*. 2012; 55(4):587-592.
12. Schultz LT. Fox BC. Polk RE. Can the antibiogram be used to assess microbiologic outcomes after antimicrobial stewardship interventions? A critical review of the literature. *Pharmacotherapy*. 2012; 32(8):668-676.

Required references:

1. Johns Hopkins ABX Guide Diagnosis and Treatment of Infectious Diseases/and Antibiotic Guidelines 2015–2016 Treatment Recommendations for Adult Inpatients (on desktop)
2. The Sanford Guide to Antimicrobial Therapy web edition
3. Infectious Disease Society of America Practice Guidelines (on desktop)
4. Surviving Sepsis Campaign: International Guidelines for Management of Severe Sepsis and Septic Shock: 2012 (on desktop)
5. Nebraska Medicine Antimicrobial Stewardship Program
nebraskamed.com/careers/education-programs/asp
6. Main Line Health Pharmacy Department Policy and Procedures Restricted Antibiotic Policy on MLH intranet.
7. Bailey & Scott’s Diagnostic Microbiology 13th Edition by Patricia M. Tille. Copyright 2014 by Mosby, Inc., an affiliate of Elsevier. (this reference will be provided to the Resident)
8. Antibiotic Basics for Clinicians. The ABCs of Choosing the Right Antibacterial Agent. 2nd Edition by Alan R. Hauser. Copyright 2013 by Lippincott Williams & Wilkins, a Wolters Kluwer Health. (this reference will be provided to the Resident)
9. Paoli Hospital 2016 Antibiogram on MLH intranet.

Pharmacy practice management learning experience

Primary preceptor: Al Celidonia, RPh, Director of Pharmacy,
Paoli Hospital

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1) General description

The pharmacy practice management is a required five-week rotation that places emphasis on issues of planning, structure, organization, leadership and philosophy of practice in an integrated health care system. The program helps build the resident's maturity, creativity, judgment, and problem-solving skills necessary in the development and management of progressive pharmacy programs. The pharmacy practice management rotation is designed to ensure that the pharmacy resident receives proper training and guidance regarding the myriad of pharmacy services and leadership skills necessary to be successful in today's multidisciplinary health care environment. The resident will work with the director during this rotation. The resident will at times function as a supervisor in the various areas of the pharmacy.

2) Goals and objectives will be met through observation or direct involvement in the following activities

- a) Medication use management
- b) Departmental operations management
- c) Interdepartmental activities/committees
- d) Proposal development
- e) New program implementation
- f) Training / teaching
- g) Purchasing and inventory management
- h) Development/maintenance of policies and procedures
- i) Human resources management
- j) Participation in the administrative aspects of the pharmacy resident recruitment process including interviews, evaluation, selection and planning activities and orientation for new residents
- k) Reviewing STARS Event Reporting System for medication errors, adverse drug events and patient falls
- l) Reviewing narcotic surveillance reports and medication administration (MAK) reports
- m) Attend meetings as scheduled
- n) Continued professional development (CPD)



During the learning experience the resident will focus on the goals and objectives outlined in section 3 below by performing the activities that are associated with each objective.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the Practice Management rotation.

Expected progression of resident responsibilities on this learning experience: (length of time preceptor spends in each of these phases will be personalized based upon resident's abilities and timing of the learning experience during the residency year).

3) Activities

Goals and objectives	Description	Activity detail
Goal R1.3	Prepare, dispense, and manage medications to support safe and effective drug therapy for patients.	
OBJ R1.3.3	(Applying) Manage aspects of the medication-use process related to oversight of dispensing	<ol style="list-style-type: none"> 1. Discover the organization's medication distribution process, which includes automation on nursing units, operating room and emergency room. 2. The resident will examine the Main Line Health Medication Use System through daily operational tasks with the director of pharmacy. 3. The resident will be able to explain areas where adverse drug events can occur in terms of automation and information technology. 4. Promotes safe and effective drug use on a day to day basis by being familiar with applicable laws and Main Line Health policies and ensuring medications are dispensed safely in the workflow.
Goal R2.1	Demonstrate ability to manage formulary and medication-use processes, as applicable to the organization.	
OBJ R2.1.3	(Analyzing) Identify opportunities for improvement of the medication-use system	1. Utilize STARS Event Reporting System on the desktop reports—organization's reporting system for medication errors, adverse drug events, patient falls, order entry errors, etc. csstars.com/Enterprise/default.cmdx
OBJ R2.1.4	(Applying) Participate in medication event reporting and monitoring	<ol style="list-style-type: none"> 2. The resident will experiment with processes within a medication-use system (e.g., root cause analysis, failure mode and effect analysis). 3. Choose best practices to identify opportunities for improvement as well as analyze relevant background using health information technology or automated systems to assist in the evaluation of data.
Goal R3.1	Demonstrate leadership skills	
OBJ R3.1.1	(Applying)	1. Provide effective communication, both verbal and

OBJ R3.1.1 (continued)	Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership	<p>written, to the members of the department, to other departments within the hospital as necessary throughout the rotation. Example: pharmacy department meetings, pharmacy huddles.</p> <ol style="list-style-type: none"> 2. Demonstrate effective time management, negotiation, and ability to lead interprofessional teams by participating in various meetings and work groups. 3. Express benefits of professional leadership and advocacy by working with various hospital departments who work closely with pharmacy.
OBJ R3.1.2	(Applying) Apply a process of ongoing self-evaluation and personal performance improvement	<ol style="list-style-type: none"> 1. The resident will use self-reflection and skills taught by their preceptor to improve the quality of their own performance through professional development, organizational skills, improving expertise using literature. 2. The resident will compile a leadership and management portfolio during this rotation and upload into PharmAcademic. The portfolio will use the process of Continued Professional Development (CPD) to track and record one's own personal goals for becoming a better leader and manager. CPD uses the principles of (reflect, plan, act/learn, evaluate, record/review: a) Where am I now? b) Where do I want to be? c) What do I have to do to get there? d) Record my activities/learning e) Review and evaluate my progress after five weeks to see my growth.
Goal R3.2	Demonstrate management skills	
OBJ R3.2.1	(Understanding) Explain factors that influence departmental planning	<ol style="list-style-type: none"> 1. Explain the effects of accreditation, legal, regulatory, and safety requirements for pharmacy practice. Review MLH policy and procedures—Corporate Compliance, Joint Commission Standards, HIPAA, etc. Be familiar with the process by which regulatory and safety requirements are implemented and the agencies responsible for accreditation in various departments including state agencies. 2. Understand the process of managing the practice area of human resources. 3. Discuss the importance of orientation and training for pharmacy team members. 4. Participate in the administrative aspects of the Pharmacy Resident recruitment process including interviews, evaluation, selection and planning activities and orientation for new residents. 5. Review and update designated sections of the department's policy and procedure manual as needed. Also, participate in the pharmacy department's planning process. Required policy reviews/revisions due by the end of the rotation. (Written formative feedback in PharmAcademic will be provided.)

OBJ R3.2.2	(Understanding) Explain the elements of the pharmacy enterprise and their relationship to the health care system	<ol style="list-style-type: none"> 1. Explain the principles of financial management of a pharmacy department by assisting in preparing budgets, discussing sources for revenue and dealing with reimbursement from payers in current health care environment. 2. Monitor Controlled substance usage and identify potential Drug Diversion through Discrepancy report and Narcotic Surveillance Reports.
OBJ R3.2.3	(Applying) Contribute to departmental management	<ol style="list-style-type: none"> 1. Examine the pharmacy department's current goals and status and the development of these goals in conjunction with the budget. 2. The resident will be actively involved in developing/assessing short- and long-range goals for the department. 3. The resident will relate the strategy and supportive documentation underlying these goals. Resident will participate in implementing a practice area goal including implementation through informal work groups. 4. Participate in the numerous meetings held within the department and with other departments. This participation shall provide the resident with the exposure to the multitude of relationships necessary for the functioning of the department with other departments. <ul style="list-style-type: none"> a. Pharmacy and Therapeutics Committee b. Nursing-Pharmacy Medication Safety Committee c. Paoli Quality Committee d. Paoli Patient Safety Committee e. Paoli Culture of Safety Embedding Committee f. Pharmacy Team Committee's-Leadership Team, Director's Mtg, Clinical Team, and Purchasing Committee g. Pharmacy-MAK Advisory Committee h. Main Line Health Accreditation Team i. CPOE Order-set Committee j. Project Red Committee
OBJ R3.2.4	(Applying) Manage one's own practice effectively	<ol style="list-style-type: none"> 1. Act ethically in the conduct of all job-related activities. Read over Main Line Health code of conduct policies and procedures. 2. The resident will be provided information on professional organizations at the state, local and national level which promote pharmacy practice. The resident will demonstrate commitment to the profession of pharmacy through their personal conduct. 3. Assumes responsibility for personal work quality and improvement. 4. Sets realistic goals and timelines and strives to

OBJ R3.2.4 (continued)		maintain a healthy work-life balance. 5. Comes prepared for meetings and project deadlines and integrates new learning into performance. 6. Employ enthusiasm, motivation and a “can do” approach.
OBJ R3.2.3	(Applying) Contribute to departmental management	1. Develop a proposal for a new pharmacy service or program including budget, human resources, effective promotion of the service or program and identify stakeholders. 2. Be creative. Use your imagination to determine a need for our hospital or department. E.g., acute care for the elderly unit, new pharmacy location, new clinical position, new technology. How would you get this approved, paid for and implemented? 3. The resident will be required to turn in the proposal in writing by the end of the rotation and prepare a presentation to their preceptor on their proposal including department approvals needed, etc. <i>(Written formative feedback in PharmAcademic will be provided.)</i>
OBJ R3.2.4	(Applying) Manage one’s own practice effectively	
OBJ R4.1.3	(Applying) Use effective written communication to disseminate knowledge	
Goal E2.2	Contribute to the management and development of pharmacy staff	
OBJ E2.2.3	(Understanding) Explain the components of an employee performance evaluation system	1. The resident differentiates clerical personnel/support personnel and gives examples of how to delegate work. 2. The resident will be provided an opportunity to review the employee performance evaluation process. 3. Learn techniques for offering suggestions to personnel on improving performance. 4. Observe and discuss how to praise superior performance and how to work with various documentation tools. 5. Learn about the performance standards for various positions and effective ways to measure work against objective and subjective standards.
OBJ E2.2.4	(Understanding) Explain the principles and application of a progressive discipline process	1. Discuss the policy and procedure of the discipline process. 2. Identify ways to resolve conflicts through negotiation.

4) Preceptor interaction

Daily: 8:30 am–5:00 pm, may vary based on activities of the day. Attend meetings as scheduled.

[The length of the time the preceptor spends in each of the phases of learning will depend on BOTH the resident’s progression in the current rotation and where the rotation occurs in the residency program.]

5) Expected progression of resident responsibility on this learning experience

Day 1: 9:00 am – Meet with preceptor in office to review Practice Management learning activities and expectations with resident including reviewing policies and procedures, operations chart, adding meetings to calendar, etc.

Week 1–5: Shadow preceptor at meetings and day to day operational tasks. Preceptor to model administrative role of a pharmacist in a health care organization. Resident to take on more responsibility each week with the final goal of being able to work independently in a supervisory role in the pharmacy department. By the end of the rotation the resident should be able to:

- Design and discuss a hospital-wide organization chart for professional and administrative services
- Discuss the mission of the hospital and its relationship to the goals and objectives of Main Line Health
- Describe an organizational chart for the pharmacy department and defend or critique its organizational structure
- Interpret departmental financial and benchmarking reports
- Use financial and benchmarking reports to justify a new project
- Have a formal understanding of the policies and procedures of the pharmacy department and assist in the required review process
- List the functions of various hospital committees and their relationship to the overall hospital organization
- Describe and assist in the recruitment process for pharmacy practice residents
- Describe the day-to-day workings of the pharmacy department including medication procurement and distribution
- Assist in scheduling of staff
- Assist in the management and development of staff
- Manage select areas of the pharmacy
- Run a pharmacy staff meeting and/or pharmacy huddle by the end of the rotation

6) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Formative assessments**—The preceptor will provide the resident with ongoing, activity focused, measurable, and constructive feedback in order to enhance learning.

- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Continued professional development exercise	Resident	First day of learning experience, throughout and end of experience
Written formative	Preceptor	During the following activities: <ul style="list-style-type: none"> - Proposal for a new service - Policy review
Summative	Preceptor	End of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience
Rotation handoff	Preceptor	End of the learning experience

Required readings:

1. jobs.ac.uk/careers-advice/managing-your-career/1318/what-is-continuing-professional-development-cpd
2. Rouse MJ. Continuing professional development in pharmacy. American Journal of Health-System Pharmacy.2004; 61:2069-2076.
3. Rouse MJ. Continuing professional development in pharmacy. Journal of the American Pharmaceutical Association. 2004; 44:517-520.
4. Accreditation Council for Pharmacy Education Guidance on Continuing Professional Development (CPD) for the Profession of Pharmacy. Pages 1-5.
5. Ivey MF. Farber MS. Pharmacy residency training and pharmacy leadership: an important relationship. American Journal of Health-System Pharmacy.2011; 68:73-76.
6. Maddox RR. The essence of leadership. American Journal of Health-System Pharmacy.2014; 71:662-668.
7. Viewing, Adding and Sharing Portfolio Information. PharmAcademic.McCreadie Group. March 2016. Page 9.

Emergency department rotation learning experience

Learning experience: Emergency medicine and transitions in care

Learning experience type: Core rotation

Preceptor: Deena Rojek, Clinical Pharmacist Emergency Medicine
(primary preceptor)

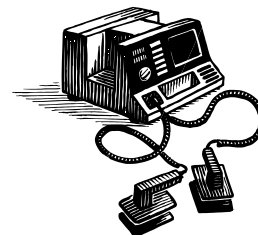
rojekd@mlhs.org

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Emergency Room, Paoli Hospital

ED pharmacist phone: 484.565.2558



1) General description

Paoli is a 222-bed community hospital that serves a mix of medical, surgical, and trauma patients. The ED averages over 30,000 patient visits annually and is comprised of three rapid evaluation rooms, 27 acute beds, and two trauma bays. Paoli is a level II trauma center and is the only trauma accredited hospital in Chester County.

This rotation is a five-week learning experience that focuses on emergency medicine and transitions in care. The hours are 8:00 am to 4:30 pm for most days but the resident is expected to be open to some flexibility in the schedule (such as potential for working second shift). During these hours the resident is expected to be present in the ED and actively involved in patient care activities. All projects for this rotation and other resident responsibility are to be completed during off hours—unless otherwise approved by the preceptor. This rotation will provide an opportunity to work with a variety of prescribers including physicians, medical residents, nurse practitioners, and physician assistants. The preceptor for this rotation works directly in the ED and will be available for questions and consultation via phone and in person anytime during the rotation hours.

Pre-requisites for this rotation include Advanced Cardiac Life Support (ACLS) certification. Also, good communication skills and ability to multi-task will be vital to the success of this learning experience.

During this rotation, the pharmacy resident will be responsible for establishing a relationship and working with the ED personnel to identify, prevent, and resolve many different types of medication issues. The resident will provide both cognitive and dispensing services to the ED. The dispensing functions will include review of medication orders generated for ED patients and fulfillment of medication orders as needed. The cognitive functions will include medication list management, patient counseling/education, decisions about patient care, assisting with traumas/codes, developing educational materials, and providing drug information as needed. The resident and preceptor will meet daily to discuss patients and topics. All recommendations and information provided will be documented via electronic interventions.

Topics that may be reviewed during this rotation include (but are not limited to):

- Cardiovascular emergencies (chest pain, ACS/MI, CHF, HTN, arrhythmias, blood clot)
- Pulmonary emergencies (respiratory failure, PE, asthma, COPD, allergic reactions)
- Gastrointestinal emergencies (GI bleed, nausea, diarrhea, constipation)
- Neurologic emergencies (seizures, stroke, TIA)
- Infectious disease emergencies (sepsis, meningitis, pneumonia, STD, tetanus, rabies)
- Toxicology emergencies (overdose, accidental ingestion)
- Endocrine/metabolic emergencies (DKA, electrolyte disturbances)
- OB/GYN emergencies (vaginal bleeding, ectopic/other pregnancy concerns)
- Trauma/code emergencies (car accidents, falls, gun shots, assaults)
- Kits used in ED (RSI, STEMI, adult code cart, pediatric code cart, trauma kit, HIV exposure)

2) Timeline

Week 1:

- Tour the ED and learn where all necessary things are kept
- Introduce yourself to appropriate ED staff (different people work each day)
- Review learning activities and expectations for this rotation
- Become familiar with computer program used to manage ED patients
- Shadow a nurse and prescriber to gain an understanding of the complexity of patient care within the emergency department
- Observe ED pharmacist and begin to take on responsibilities as appropriate
- Prepare a handout and present one topic discussion (ED kit / disease state)

Ongoing ED activities:

- Provide drug information as requested
- Report any ADR's (via STARS) or Great Catch's (via intranet) that arise
- Observe/participate in traumas and codes whenever possible
- Counsel patients as requested by ED staff

Week 2:

- Obtain a medication history on at least three patients per day
- Review and profile at least 10 percent of medication orders generated for emergency department patients during scheduled shift
- Prepare a handout and present one topic discussion (ED kit / disease state)
- Perform chart review for at least two patients
- Choose most interesting patient from this week and present a brief patient case
- Brainstorm ideas for educational in-service

Week 3:

- Obtain a medication history on at least four patients per day
- Review and profile at least 15 percent of medication orders generated for emergency department patients between during scheduled shift
- Prepare a handout and present one topic discussion (ED kit / disease state)
- Perform chart review for at least three patients
- Choose most interesting patient from this week and present a brief patient case
- Finalize topic for education in-service

Week 4:

- Obtain a medication history on at least five patients per day
- Review and profile at least 20 percent of medication orders generated for emergency department patients during scheduled shift
- Prepare a handout and present one topic discussion (ED kit / disease state)
- Perform chart review for at least four patients
- Choose most interesting patient from this week and present a brief patient case
- Prepare slides, poster, handout, and/or pocket-card for educational in-service

Week 5:

- Obtain a medication history on at least six patients per day
- Review and profile at least 25 percent of medication during scheduled shift.
- Perform chart review for at least five patients
- Choose most interesting patient from this week and present a brief patient case
- Present educational in-service to pharmacy, nursing, and/or medical staff

During the learning experience the resident will focus on the goals and objectives outlined in section 3 below by performing the activities that are associated with each objective. The resident will gradually assume responsibility for all the patients within the assigned unit. The PGY-1 resident must devise efficient strategies for accomplishing required activities in a limited time frame.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the critical care learning experience.

Expected progression of resident responsibilities on this learning experience: (length of time preceptor spends in each of these phases will be personalized based upon resident's abilities and timing of the learning experience during the residency year).

3) Activities

Objective	Description	Activity detail
OBJ R1.1.1	(Applying) Interact effectively with health care teams to manage patients' medication therapy	<ol style="list-style-type: none"> 1. (Medication histories) Obtain and record assigned number of daily medication histories including current prescription therapies, over the counter products, compliance, and medication/food allergies. Communicate relevant on-going information to health care team. 2. (Patient care) Work with an interdisciplinary team to achieve optimum care for ED patients by establishing good working relationships. Exhibit a professional, caring attitude toward patients and their families, while prioritizing the pharmaceutical needs of patients. 3. (Codes and traumas) Participate in management of medical emergencies and traumas in the ED. Be able to explain the different types of medical emergencies and prepare accordingly.
OBJ R1.1.2	(Applying) Interact effectively with patients, family members, and caregivers	<ol style="list-style-type: none"> 1. (Patient interactions) Interact with patients, families, and caregivers to collect pertinent information and provide medication education when needed. 2. (Patient interactions) Show empathy for patients, families, and caregivers.
OBJ R1.1.3	(Analyzing) Collect information on which to base safe and effective medication therapy	<ol style="list-style-type: none"> 1. (Medication management) Assume responsibility for providing pharmaceutical care to ED patients in collaboration with preceptor. Plan to complete an in-depth review of the charts and medications for a set number of patients each week. 2. (Medication management) Assume responsibility for collecting, evaluating and organizing pertinent past medical history, allergies, and medication history while attending traumas and codes.
OBJ R1.1.4	(Analyzing) Analyze and assess information on which to base safe and effective medication therapy	<ol style="list-style-type: none"> 1. (Medication management) Check appropriateness of all medication regimens in these patients and make recommendations for modifications as indicated. 2. (Medication management) Identify non-compliant patients, analyze the root cause and make recommendations to patients, family, caregivers, or physicians in order to improve medication adherence.
OBJ R1.1.5	(Creating) Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans (care plans)	(Drug information) Devise strategies to retrieve, review, and interpret medical literature in a timely manner to prepare and provide patient-specific drug information as appropriate.

OBJ R1.1.6	(Applying) Ensure implementation of therapeutic regimens and monitoring plans (care plans) by taking appropriate follow-up actions	<ol style="list-style-type: none"> 1. (Drug information) Articulate prepared drug information responses after collecting information from necessary references. Information collected should include modifications to medications based on best practices and patient specific factors. 2. (Medication monitoring) Follow-up on dose adjustment recommendations based on patients' renal or hepatic impairment.
OBJ R1.1.7	(Applying) Document direct patient care activities appropriately in the medical record or where appropriate	(Documentation of activities) Document all interventions, recommendations, and direct patient care activities in the hospital's electronic clinical database employing the health system policy and procedures.
OBJ R1.1.8	(Applying) Demonstrate responsibility to patients	(Patient care) Work with an interdisciplinary team to achieve optimum care for ED patients through collaborative and mutual respect. Exhibit a professional, caring attitude toward patients and their families, while prioritizing the pharmaceutical needs of patients.
OBJ R1.2.1	(Applying) Manage transitions of care effectively	<ol style="list-style-type: none"> 1. (Medication histories) Obtain and record assigned number of daily medication histories including current prescription therapies, over the counter products, compliance, and medication/food allergies. Communicate relevant on-going information to health care team. 2. (Order entry) Reconcile medications and follow up on recommendations made to physicians in a timely manner.
OBJ R1.3.1	(Applying) Prepare and dispense medications following best practices and the organization's policies and procedures	<ol style="list-style-type: none"> 1. (Order entry) Profile medication orders and review for both accuracy and safety by reviewing patient specific information; clarifying in some cases with prescribers before a medication is verified, if a medication related problem is identified. 2. (Medication preparation) Prepare medications needed during traumas and codes by using appropriate technique ensuring the drug labeled and the patient receives the medication promptly following our health system's policies and procedures. 3. (Policies and procedures) Review policies and procedures for the emergency department and apply them during medical emergencies, based on best practices according to ACLS.
OBJ R1.3.2	(Applying) Manage aspects of the medication-use process related to formulary management	(Order entry) Profile medication orders and review for both accuracy and safety. Make formulary appropriate conversions and provide recommendations for medication modifications as needed.

OBJ R2.1.4	(Applying) Participate in medication event reporting and monitoring	(Event reporting) Report and document any med events (ADR or errors) via STARS online and all Main Line Health Great Catches via submission form on intranet.
OBJ R3.1.2	(Applying) Apply a process of ongoing self-evaluation and personal performance improvement	<ol style="list-style-type: none"> 1. (Self-assessments) The resident will reflect upon their weekly performance in the ED to identify what they did well and how they can improve on specified activities and skills as well as incorporating constructive feedback. 2. Areas of focus will be: learning from other disciplines in the ED, patient interactions, trauma/code participation, interventions, drug information, and presentations. 3. The goal should be to work on self-improvement throughout the rotation to facilitate independence.
OBJ R4.1.1	(Applying) Design effective educational activities	(Educational in-service) Prepare and deliver one educational in-service to pharmacy, nursing, and/or medical staff on a topic agreed upon with preceptor. In-service should address audience needs, be relevant and reflect best practices.
OBJ R4.1.2	(Applying) Use effective presentation and teaching skills to deliver education	(Topic discussions) Prepare a weekly handout that is developed to review one emergency disease state, guideline, protocol, and/or kit used in the ED. List of suggested topics can be found in the rotation description—resident may suggest other topics, but they must be approved by the preceptor. Resident should capture audience interest, have smooth transitions and summarize major points with appropriate rate, eye contact and body language.
OBJ R4.1.3	(Applying) Use effective written communication to disseminate knowledge	(Educational in-service) Prepare accompanying slides, poster, handout, and/or pocket card for education in-service and topic discussions. Should be free from errors, demonstrate understanding of the topic, is at level of audience, use appropriate references and utilize graphics to enhance understanding.

4) Feedback and evaluations

The first day of this rotation will include an introduction to the objectives and expectation as well as a discussion of the residents' personal goals. Throughout the rotation, the resident will be provided with day-to-day verbal feedback.

PharmAcademic will be used to document written feedback and evaluations (see chart below). The resident and the preceptor will independently complete their assignments and save them as a draft. The resident and preceptor will discuss all written feedback and evaluations commenting on both the residents' performance of the activities and the accuracy of their self-assessment skills. After the discussion all items will be signed in PharmAcademic.

- **Self-assessments**—These will be used to document in PharmAcademic the weekly activities completed by the resident along with their reflection of the learning experience. (fulfills OBJ R3.1.2)
- **Formative assessments**—These will be used to provide the resident with ongoing, activity focused, measurable, and constructive feedback.
- **Summative evaluation**—This will summarize the resident's performance throughout the learning experience while providing them with specific comments and examples which they can use to improve their performance in subsequent learning experiences.
- **Preceptor/learning experience evaluation**—This will be used to provide the preceptor with constructive feedback about their teaching style and the overall rotation which can be used to improve the learning experience in the future.

Type of evaluation	Who is responsible to complete	When it should be completed
Self-assessments	Resident	End of each week
Formative assessment	Preceptor	Once per week
Summative evaluation	Preceptor	End of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience
Rotation handoff	Preceptor	End of the learning experience

5) Rotation self-assessments

Week 1

1. Which prescriber and nurse did you shadow and what was something you learned from each of these experiences?
2. What was your most memorable/interesting patient from this week? What did you learn from your interaction with this patient? What would you do differently?
3. What traumas/codes did you participate in this week? How did you contribute to the health care team? What areas do you feel you need to improve upon?
4. What interventions did you make this week? Please categorize: patient safety, medication reconciliation, and medication related problem such as duplicate medication.
5. What drug information questions were you asked? What was challenging about the questions? Did any of them require immediate answers vs. time to review references?

Weeks 2–4

1. Which disease state/protocol/kit/guideline did you choose to present this week? Why did you choose this topic? What resources did you need to review before presenting? What did you learn?
2. What was your most memorable/interesting patient from this week? What did you learn from your interaction with this patient? Do you feel you learned from last weeks' interactions anything that you are now doing differently?

3. What traumas/codes did you participate in this week? How did you contribute to the health care team? What areas do you feel you need to improve upon? What are some ways you can improve?
4. What interventions did you make this week? Please categorize: patient safety, medication reconciliation, and medication related problem such as duplicate medication.
5. What drug information questions were you asked? What was challenging about the questions? Did any of them require immediate answers vs. time to review references?

Week 5

1. What topic did you chose for your education in-service? What format did you chose to present the material? How did you feel your presentation went? Did you get feedback from the audience?
2. What was your most memorable/interesting patient from this week? What did you learn from your interaction with this patient? Do you feel you learned from last weeks' interactions anything that you are now doing differently?
3. What traumas/codes did you participate in this week? How did you contribute to the health care team? Would you be able to function independently? Why or Why Not?
4. Provide one example of an intervention you made and one example of drug information you were asked for this week. Do you feel your interventions have improved over the past five weeks? How so? Do you feel more secure answering questions requiring immediate answers?

Cardiology rotation learning experience

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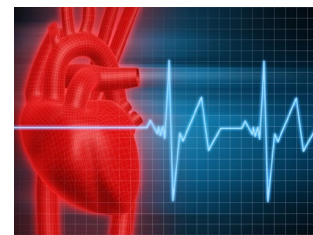
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1) General description

The cardiology rotation is a five-week required rotation in the PGY-1 residency program at Paoli Hospital.

2) Goals of the rotation

The resident will have the opportunity to explore the various practice areas within the field of cardiology and will:

- Review the physiology of the normal cardiovascular system and its relationship to disease
- Acquire a better understanding of the various cardiovascular disorders (e.g., CHF, HTN, angina, arrhythmias)
- Learn the basics of the ECG and its role in diagnosis and therapeutic intervention of cardiac disease
- Gain an understanding of the basic pharmacology and pharmacokinetics of cardiac drugs
- Become familiar with physical assessment of the cardiovascular system as it applies to diagnosis and the monitoring of drug therapy interventions
- Acquire a better understanding of the various commonly used cardiovascular diagnostic and interventional procedures

Description

The Paoli Hospital cardiology rotation has teamed up with the Cardiology Consultants of Philadelphia-Main Line Division. The physician practice is located conveniently at Paoli Hospital consists of eight physicians and two nurse practitioners. There is one non-invasive cardiologist and one interventionalist rounding in the hospital each day. The resident will divide their time between each of the cardiologists who are on site each day. Additionally, the resident will provide pharmaceutical care to patients in the cardiology office as part of the rotation requirements. Paoli Hospital is recognized nationally for quality in cardiac care and offers the following services: electrocardiograms, stress echocardiograms, nuclear imaging services, carotid and peripheral vascular ultrasound, cardiac catheterizations, cardiac rehabilitation, arrhythmia management (ICD and pacemaker device implants and monitoring), echocardiograms, stress testing, interventional procedures, noninvasive procedures, catheter ablation procedures, stroke prevention and screening, monitoring and management of therapeutic anticoagulation and cardiovascular risk factor management including lipids, smoke cessation and exercise prescription. The resident will design, recommend, monitor and evaluate patient-specific therapeutic regimens which will concentrate on cardiac medications based on knowledge gained during actual rounds, physical exams, progress notes and laboratory values as well as utilizing the pharmacology, pharmacokinetics, pharmacodynamics and therapeutics of the drugs.

Good communication and interpersonal skills are vital to the success of this experience. The resident must devise efficient strategies for accomplishing the required activities in a limited time frame.

Conference and meeting attendance

In addition to the learning activities, the resident is expected to attend the following conferences and meetings.

- a. Cardiology Grand Rounds on the third Tuesday of the of the month, 12:00–1:00 pm in the Potter Room

- b. Case Conference/topic discussion weekly in cardiologist office (preceptors present)
- c. Morning report/huddle in Board Room at 7:00 am Mondays to discuss patients and prepare for day
- d. Patient case presentation every Monday afternoon with preceptors and students
- e. Cardiothoracic case reviews on the fourth Tuesday of the month, 7:00–8:00 am in the Board Room

3) Disease states

Common disease states in which the resident will be expected to gain proficiency through literature review, topic discussion and/or direct patient care experience including but not limited to:

- Anatomy and physiology of the cardiovascular system
- Arrhythmias (e.g. atrial fibrillation, heart block, ventricular tachycardia)
- Hypertension
- Mechanical valves / annuloplasty
- Mechanical assist devices (e.g. ECMO, LVAD)
- Heart failure
- Coronary artery disease (e.g. MI, CABG, stents, thrombolytics)
- Hyperlipidemia
- Endocarditis
- Cardiogenic shock
- Anticoagulation

*Consensus treatment guidelines, drug class reviews will be addressed in conjunction with disease-state discussions and it is expected that the resident will independently review relevant pharmacology in addition to assigned readings.

During the learning experience the resident will focus on the goals and objectives outlined in section 3 below by performing the activities that are associated with each objective. The resident will gradually assume responsibility for all the patients within the assigned unit. The PGY-1 resident must devise efficient strategies for accomplishing required activities in a limited time frame.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the critical care learning experience.

4) Activities

Goals and objectives	Description	Activity detail
Goal R1.1	In collaboration with the health care team, provide safe and effective patient care to a diverse range of patients, including those with multiple co-morbidities, high-risk medication regimens, and multiple medications following a consistent patient care process.	
OBJ R1.1.1	(Applying) Interact effectively with health care teams to manage patients' medication therapy	<ol style="list-style-type: none"> 1. Residents will actively participate in cardiology rounds weekly. Resident should check cardiologist/NP schedules to make arrangements to work with various clinicians, specialties (e.g., electrophysiologists, interventionalist, inpatient and outpatient cardiology rounds). 2. During rounds, the resident should display respectful and cooperative communication with the various physicians and nurse practitioners. 3. The resident should choose safe and effective medication therapy to manage a patient's cardiac health. 4. The resident should respond to team requests for drug information in a timely manner.
OBJ R1.1.3	(Applying) Collect information on which to base safe and effective medication therapy	<ol style="list-style-type: none"> 1. The resident will be required to accurately gather and organize patient specific information on assigned patients either before or during rounds with the cardiology team. 2. The resident may be expected to present patients they have worked up to the cardiologists during rounds. 3. The resident should review each patient's current history, health records, prescription/OTC medication usage, lab results, cost, previous medication adherence and lifestyle to help establish suitable and effective medications used for a variety of cardiac indications such as anticoagulation, antiplatelet therapy, heart rate/rhythm, blood pressure, heart failure, etc. 4. Data may be collected through the EMR, face to face interviews or other reliable sources of information such as the patient's pharmacy or nursing home MAR. 5. In addition to rounds, during the weekly patient case the resident should explain which information is important to collect for the specific disease states which will be presented in the case. E.g., If presenting a patient case on heart failure, the resident displays the information they collected to determine appropriate therapy such as stage of heart failure, labs, current history, lifestyle, socioeconomic factors, access to medications or need for preventative care.

OBJ R1.1.4	(Analyzing) Analyze and assess information on which to base safe and effective medication therapy	<ol style="list-style-type: none"> 1. The resident will analyze each patient's health records to identify medication-related problems to discuss with preceptors and cardiology team members. 2. Examples may include: <ol style="list-style-type: none"> a. Lack of indication, unmet medical needs, suboptimal therapy, therapeutic duplication, ADR or potential for and ADR, drug-disease, nutrient, and lab interactions b. Harmful social, non-prescription, or other medication therapy c. Lack of understanding of medication, non-adherence and the cause, medication discrepancies in care plans, and financial impact 3. In addition to rounds, during the weekly patient case the resident should include how they analyzed and assessed the patient's health records and medication therapy to determine if it was optimal. E.g., If a patient has AFib, they should display therapeutic warfarin levels, whether there are any drug interactions present, is the patient 's warfarin dose appropriate to receive full benefit of therapy? What is a therapeutic INR?
OBJ R1.1.6	(Applying) Ensure implementation of therapeutic regimens and monitoring plans (care plans) by taking appropriate follow-up actions	<ol style="list-style-type: none"> 1. During rounds the resident will be responsible to ensure that patients receiving cardiac drugs requiring monitoring such as anticoagulants, anti-arrhythmics, lipid lowering therapies, anti-platelets, beta-blockers, pressors, etc., have appropriate drug levels and labs such as PT/INR, PTT (or any other therapeutic parameters) ordered and reviewed and offer dose modifications to ensure that the patient reaches therapeutic goals, prevents potential adverse events, or drug interactions. 2. The resident should follow up on all recommendations with physicians, nurse practitioners, patients and caregivers. 3. The resident should work with patients and their caregivers to make sure they can follow up after discharge with their required monitoring such as with an INR or checking blood pressures. 4. When the resident presents their weekly patient case they should include a) rationale on why the cardiologist chose a certain regimen for the patient's cardiac problem(s); b) how it fits into the current evidence-based guidelines; c) information from the hospital admission on how the patient was monitored for their medications; d) what follow up would be needed once the patients was discharged if there were changes in doses or new medications, e.g., labs; e) how was the medication plan communicated to the patient; f) what steps were put in place and by whom to ensure the

OBJ R1.1.6 (continued)		patient could obtain their medications and follow up with their physician to ensure the best outcomes?
OBJ R1.1.7	(Applying) Document direct patient care activities appropriately in the medical record or where appropriate	<ol style="list-style-type: none"> 1. The resident will prepare an accurate, concise progress note using an Epic I-Vent on any direct patient care activities they were involved in during rounds, working in the physicians' office, cath lab, EKG reading or additional activities they had involvement in with the team. 2. The resident will be evaluated on the quality of the progress notes they write in terms of being clear, including pertinent information so that other clinical pharmacists can review in time to be useful. A minimum of two to three notes per day should be documented. E.g., A note which describes an interesting patient case the resident was part of during rounds in which they learned information only available if one were in rounds. 3. The resident will be evaluated on the standard duties of a clinical pharmacist including logging in all interventions made into Epic. 4. Epic I-Vent entries should follow all hospital policies and procedures for documentation.
OBJ R1.2.1	(Applying) Manage transitions of care effectively	<ol style="list-style-type: none"> 1. The resident should obtain or validate each patient's medication history for newly admitted patients to determine if any discrepancies exist. The resident should communicate findings to cardiologist/NP. 2. Provide patient discharge medication reconciliation service for patients on cardiology census when applicable. Provides accurate and timely follow-up with physicians on drug related problems. 3. If needed, the resident should follow-up with the patient/family/caregiver to make sure steps are in place to assure the patient can obtain and know how to administer medications on discharge. E.g., high cost anti-coagulants or injectable medications.
Goal R4.1	Provide effective medication and practice-related education to patients, caregivers, health care professionals, students, and the public (individuals and groups)	
OBJ R4.1.1	(Applying) Design effective educational activities	<ol style="list-style-type: none"> 1. The resident will be responsible to prepare and articulate a final PowerPoint presentation to the physicians and other clinical staff on a cardiology topic and should include educational objectives. 2. The resident will select a patient from rounds and present a weekly cardiology patient case presented to residents, preceptors and pharmacy students. 3. In all presentations, the resident should choose content that is relevant and at a level that is appropriate to the learners needs i.e. (Physicians/NP's, Pharmacists,

OBJ R4.1.1 (continued)		<p>Students).</p> <ol style="list-style-type: none"> 4. The resident should employ teaching strategies which include active learning such as polling questions. 5. Content should be evidence-based, timely, reflect best practices and report cited references.
OBJ R4.1.3	(Applying) Use effective written communication to disseminate knowledge	<ol style="list-style-type: none"> 1. All written work should be free from grammatical errors and demonstrate that the resident prepared in advance and knows the subject matter. 2. The resident should produce credible references in their written work. 3. The written communication that the resident disseminates should use various graphics such as tables, figures and graphs to help enhance the audience's understanding of a topic, i.e., visual learning. 4. The resident should utilize a variety of literature including guidelines, studies and other credible references to help expose the audience to the most current information on a topic. E.g., If you are asked to talk about beta blockers in heart failure, what do the current guidelines state on their efficacy? 5. The resident should know their audience and direct the content and level of their written communication appropriately. (E.g., physicians, nurses, pharmacists, patients vs. the public).
OBJ R4.1.4	(Applying) Appropriately assess effectiveness of education	<ol style="list-style-type: none"> 1. When providing drug information in the form of a presentation such as the patient case, topic discussions or final Power Point presentation, the resident should determine the learning objectives/focus ahead of time to help prepare activities that will enhance the learning experience. 2. For the weekly case presentation, the resident should include written, verbal or audience self-assessment questions to help determine how well the audience of preceptors, resident, students grasped the concepts taught. 3. For the topic discussions or other information provided to the cardiology group, the resident should summarize and ask if anyone has questions at the end or follow-up with any questions that need further clarification or research. 4. For the final PowerPoint presentation, the resident will get written feedback from attendees to help improve their effectiveness for future presentations.
Goal R4.2	Effectively employ appropriate preceptor roles when engaged in teaching students, pharmacy technicians, or fellow health care professionals.	
OBJ R4.2.1	(Analyzing) When engaged in teaching,	<ol style="list-style-type: none"> 1. If not already acquainted, the resident should differentiate the four preceptor roles which assist in the

OBJ R4.2.1 (continued)	select a preceptor role that meets learners' educational needs	<p>effectiveness of teaching.</p> <ol style="list-style-type: none"> 2. Mainly for the patient case presentations, but this would fit in any presentation. The resident identifies which role is applicable to their particular presentation and audience. 3. Select and provide direct instruction if the learner needs background. 4. Modeling can be selected when learners have an understanding of the topic and you are now going over a skill such as how to calculate the conversion from IV diltiazem to oral diltiazem. Modeling would be that you could show the conversion to an audience that already knows the meaning of IV to PO. 5. Once the audience has sufficient modeling and direct instruction the resident should focus on coaching which is giving the audience a chance to perform with supervision. E.g., You present a case on heart failure and explain the four stages. Then you ask the audience to determine what stage a hypothetical patient would be after you give them some symptoms or other information that you had already taught. 6. Last-once the learners can perform under supervision is there anything that could be devised to allow the audience to work alone such as giving them a calculation to work out or case questions to complete?
OBJ R4.2.2	(Applying) Effectively employ preceptor roles, as appropriate	<ol style="list-style-type: none"> 1. This objective relates to actually applying appropriate preceptor roles. 2. The resident will be evaluated on how well they match the audience's needs to the appropriate preceptor role. 3. What strategies were applied to help teach? Were the strategies effective? 4. For the patient case, did the resident provide adequate background on the disease, drugs and monitoring first (direct instruction)? 5. Did the resident use strategies to employ critical thinking such as "think out loud" to help teach the audience how to walk through a problem? 6. Did the resident coach the audience with verbal queues, feedback, questions? 7. Lastly, did the resident facilitate when appropriate, such as using case-based questions? If this was employed and the audience did not know the answers, the resident would be expected to go back to direct instruction or modeling to help the audience solve the problems.

5) Preceptor interaction

Prior to Day 1: Meet to orient resident to the rotation requirements, assign readings and explain evaluation strategy. Additionally, orient resident to Epic i-Vent and set up dashboard to monitor patients on anti-arrhythmics. Set up cardiology census in Epic.

Day 1: Meet at 7:00 am at Physician Office Conference Room, MOB 3, Suite 234. Introductions to cardiologists, etc. Attend morning report/huddle. Round with physicians.

Week 1: Monday attend morning huddle at 7:00 am in Board Room and then round with assigned inpatient cardiologist or nurse practitioner. Resident may need to work up patients on Mondays during rounds (on the fly). Wednesday and Fridays make arrangements to round with assigned hospital-based cardiologist, PA, or NP. Come prepared to discuss recommendations or concerns with preceptor and physicians prior to rounds. Preceptor will be available to attend and participate in morning huddle and time permitting round with the resident (modeling pharmacist's role on the health care team). Resident may also be asked to provide pharmaceutical care in cardiologists' office at the discretion of the attending physician.

Tuesday and Thursday: Work with electrophysiologists in EP lab and interventionalists in Cath Lab until 3:00 pm, then spend the rest of the day following up with cardiologists on any recommendations, logging in any interventions made during rounds using an Epic i-Vent, reviewing discharge medication lists and monitoring patient profiles for follow-up with physicians. If possible, pre-round on any patients for the next day's rounds. Preceptors will be available to discuss patients with resident after pre-rounds. Resident should be prepared to respond to drug information queries by cardiologists in the practice. Cardiology patient case presentation to be held weekly on Mondays from 2:30–3:30 pm with pharmacist preceptors and pharmacy students as audience. Resident should be prepared to present a topic of interest to the cardiologists on Mondays as a drug information request or patient case (topic will be assigned by cardiologists).

Week 2: Monday attend morning huddle at 7:00 am in Board Room. Resident should be prepared to present a topic of interest to the cardiologists as a drug information request or patient case (topic will be assigned by cardiologists). Then round with assigned inpatient cardiologist, PA or NP. Resident may need to work up patients on Mondays during rounds (on the fly). Wednesday and Fridays make arrangements to round with assigned hospital-based cardiologist, NP, or PA. Come prepared to discuss recommendations or concerns with preceptor and physicians prior to rounds. Preceptor will be available to attend and participate in morning huddle and time permitting round with the resident (coaching

the resident to take on more responsibility on the health care team). Resident may also be asked to provide pharmaceutical care in cardiologists' office at the discretion of the attending physician.

Tuesday and Thursday mornings with electrophysiologists, interventionalists and afternoon in warfarin clinic until 3:00 pm then spend the rest of the day following up with cardiologists on any recommendations, logging in any interventions made during rounds using an Epic i-Vent and reviewing discharge medication lists and monitoring patient profiles for follow-up with cardiologists on any recommendations. If possible, pre-round on any patients for the next day's rounds. Preceptors will be available to discuss patients with resident after pre-rounds. Resident should be prepared to respond to drug information queries by cardiologists in the practice. Cardiology patient case presentation to be held weekly on Mondays from 2:30–3:30 pm with pharmacist preceptors and pharmacy students as audience.

Week 3: Monday through Friday round with inpatient cardiologists until 3:00 pm. Attend 7:00 am Monday Morning Huddle in Board Room. Resident should be prepared to present a topic of interest to the cardiologists on Monday, such as a drug information request or patient case (topic will be assigned by cardiologists). Then afternoon same as Week 1 with resident exhibiting more independence in following and monitoring assigned patients.

Week 4: Monday, Wednesday and Fridays same as Week 3, the resident should exhibit more independence in following and monitoring assigned patients and take more leadership role in rounds in terms of recommendations. Tuesday and Thursday work with nurse practitioners until 3:00 pm (Thursday with Gloria observing pacer appointments) then spend the rest of the day the same as Week 2 and Week 3 afternoon activities. Work on any assigned projects including final presentation. Resident will need to get preceptor final approval for Power Point presentation to physicians.

Weeks 5: Attend Morning huddle Monday as before at 7:00 am in Board Room. Final topic discussion at huddle Monday. Monday and Tuesday work in cardiologist office half day. Then work on afternoon activities the same as previous weeks, prepare for any patients on census for the next day. Wednesday your choice in am such as EP lab, cath lab, hospital rounds. Final presentation at lunchtime. Thursday and Friday mornings round with inpatient cardiologist and afternoon in warfarin clinic. Work on Epic dashboard surveillance, communication with doctors for follow ups and checking medications before discharge on patient profiles. Final evaluation Friday afternoon.

Daily rounds time varies by attending schedule. Resident is responsible to complete rounds daily with cardiologist. Morning report/huddle occurs Monday mornings at 7:00 am. Resident is responsible to be on time and prepared. The resident will be assigned their rounding schedule on Mondays. The resident may spend some time with several doctors or nurse practitioners from the practice and will be expected to be available to help counsel patients in the physician office, assist nurses with following PT/INR results for outpatient warfarin patients.

Preceptor meeting will need to be scheduled after completion of rounds to review patients and answer questions and go over census patient for the following day, time permitting, as this may need to occur the following day if rounds run long.

[Expected progression of resident responsibilities on this learning experience: (length of time preceptor spends in each of these phases) will be personalized based upon resident's abilities and timing of the learning experience during the residency year.]

6) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Formative assessments**—The preceptors will provide the resident with ongoing, activity focused, measurable, and constructive feedback in order to enhance learning.
- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences. Feedback from the cardiologist will be provided to the resident based on verbal discussions with the doctors as well as an evaluation form that will be distributed to the doctors on the last day of the rotation.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Summative	Preceptors will collaborate	End of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience
Rotation handoff	Preceptors	End of the learning experience

Required reading:

1. Weitzel, KW. Walters EA. Taylor J. Teaching clinical problem solving: a preceptor's guide. American Journal of Health-System Pharmacists.2012; 69:1588-1599. (In residency folder)

Required references (located in residency folder):

1. JNC 8 guidelines
2. ATP IV guidelines
3. Main Line Health Pharmacy Department Policy and Procedures Restricted Medication Policy
4. MLH Recommendations for Antithrombotic Therapy
5. MLH Protocol for Dabigatran and Rivoroxaban/Apixiban REVERSAL
6. MLH Policy 10:10: Thrombolytic Agents-Cardiac and Stroke Applications
7. MLH Anticoagulation Reversal References (Summary Table)
8. American Heart Association Periprocedural Bridging Management of Anticoagulation. Circulation. 2012; 126:486-490.
9. CHEST Executive Summary: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines
10. CHEST Prevention of VTE in Orthopaedic Surgery Patients
11. CHEST Prevention of VTE in Nonorthopedic Surgical Patients
12. CHEST Perioperative Management of Antithrombotic Therapy
13. 2013 ACCF/AHA Guideline for the Management of Heart Failure
14. 2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines
15. 2014 AHA/ACC Guideline for the Management of Patients with non-ST-Elevation Acute Coronary Syndromes: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines
16. 2014 AHA/ACC/HRS Guideline for the Management of Patients with Atrial Fibrillation: Executive Summary
17. 2011 ACCF/AHA/SCAI Guideline for Percutaneous Coronary Intervention. Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines and the Society for Cardiovascular Angiography and Interventions

Elective rotations

Medication safety rotation learning experience

Primary preceptor: Liz Ferrigno, RPh. Clinical Pharmacist
Office: Pavilion Pharmacy (located in the ER wing)
255 West Lancaster Avenue, Paoli, PA 19301
484.565.2550 • Fax: 484.565.4256
ferrignol@mlhs.org

Patient Safety *Hotline*

1-484-337-8888



Main Line Health values all ideas and uses this information to improve employee and patient safety across the health system.

1) General description

The medication safety rotation is a four-week elective rotation in the PGY1 residency program at Paoli Hospital.

“Main Line Health is focused on creating a reliable culture of safety. Our Mission is to provide a superior patient experience. Our goal at Main Line Health is to be well ahead in patient safety by eliminating preventable harm.”

All employees of Main Line Health have an important role in ensuring a culture of safety, in error prevention, and in achieving Main Line Health’s mission and goal. Our Safety Behaviors at Main Line Health and the Error Prevention Tools associated with each are:

Attention to detail	Self-checking using STAR (Stop, Think, Act, Review)
	Three-way repeat back and read back
Communicate clearly	Phonetic and numeric clarifications
	Clarifying questions
Handoff effectively	Use SBAR to handoff (SBAR: Situation, Background, Assessment, Recommendation)
	Question and confirm
Speak up for safety	Use ARCC to escalate safety concerns (ARCC: Ask a question, make a Request, voice a Concern, use Chain of command)
	Stop the line
	Crucial conversations
Got your back	Peer checking
	Peer coaching

2) Goals of the rotation

- To assist the resident in identifying ways to improve the medication use system and to minimize the risk of adverse drug events.
- To provide the opportunity for the resident to develop and participate in various initiatives designed with the goal of making a positive impact toward medication safety in a community hospital setting.

- c) To increase the resident's knowledge of various strategies utilized in medication safety through attendance at hospital meetings and participation in daily tasks associated with medication safety including surveillance tools, reports and communication tools.

Required meetings:

- Pharmacy safety huddles (daily in Pavilion Pharmacy)
- Hospital safety coach meeting (monthly on fourth Wednesday of the month from 3:45–5:00 pm)
- Nursing-Pharmacy Patient Safety Committee (formerly CQI Committee) meeting (monthly on third Wednesday of the month from 10:00–11:00 am)
- Pharmacy staff meeting (monthly on third Thursday of the month 8:00 am and 1:30 pm)
- One day field trip to ISMP which will be arranged for Resident to occur early in rotation.

During the learning experience the resident will focus on the goals and objectives outlined in section 3 below by performing the activities that are associated with each objective.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the Medication Safety Rotation.

3) Activities

Goals and objectives	Description	Activity detail
OBJ R2.1.4	(Applying) Participate in medication event reporting and monitoring	Work with pharmacy staff and review PYXIS ADR trigger reports / pharmacy reports on a daily basis to identify medication related adverse events. Submit all events via STARS Event Reporting System on desktop. csstars.com/Enterprise/default.cmdx Update allergy information as appropriate in Epic.
OBJ R2.2.1	(Analyzing) Identify changes needed to improve patient care and/or the medication-use system	Manage and improve the medication-use process by evaluating areas of need related to medication safety and quality improvement. Select a medication distribution/safety project.
OBJ R2.2.2	(Creating) Develop a plan to improve patient care and/or the medication-use system	Design and implement quality improvement changes to the organizations medication use system with the objective of improving overall medication safety. This will be in the form of a quality improvement project.

OBJ R2.2.3	(Applying) Implement changes to improve patient care and/or the medication-use system	Design and implement quality improvement changes to the organizations medication use system with the objective of improving overall medication safety. This will be in the form of a quality improvement project.
OBJ R3.1.1	(Applying) Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership	Exercise leadership and time management skills to achieve departmental goals and fulfill practice responsibilities during this highly independent rotation.
OBJ R2.2.5	(Creating) Effectively develop and present, orally and in writing a final project report.	Educate staff on medication safety initiatives and integrate audio/visual aids to enhance the effectiveness of communications.
OBJ R4.1.3	(Applying) Use effective written communication to disseminate knowledge	Educate staff on ISMP visit by preparing a written handout and report what you have learned so others can identify medication safety practices to use in their daily work.
OBJ R3.2.4	(Applying) Manage one's own practice effectively	Error prevention tool assignment which includes assessing successes and areas for improvement in one's performance. Employ the use of safety tool to demonstrate awareness and practice improvement.
OBJ R4.1.1 OBJ R4.1.2 OBJ R4.1.4	(Applying) Design effective educational activities. (Applying) Use effective presentation and teaching skills to deliver education. (Applying) Appropriately assess effectiveness of education.	Judge/moderate the "Safety Jeopardy" Game to staff which includes an educational PowerPoint which addresses Main Line Health Safety Behaviors. Teach the audience by choosing learning objectives, interactive learning and teaching strategies that show rapport with audience and effective presentation skills. Interpret learning by including learner participation in question and answers and feedback on the success of the program.

4) Preceptor interaction

Progression of resident responsibility:

Prior to starting on day 1 of rotation: Meet with preceptor to review customized medication safety plan and what project initiative(s) will be undertaken by the resident during the rotation. Go over schedule and due dates of assignments, meetings and ISMP visit.

By the rotation midpoint: The resident will have a complete draft for the implementation of a change to the medication use system. Have a list of ideas for staff education. Obtain necessary management/committee approvals. Begin working on Rx newsletter article. Resident will provide education to their preceptors and staff on visit to the ISMP and any interesting initiatives they may be able to apply to our institution.

By the end of the rotation: The resident will complete an implementation in policy or procedures related to the medication use system, educate the staff via a presentation on a medication safety related issue (at the Nursing-Pharmacy Patient Safety Committee meeting, pharmacy staff meeting(s) and in person if needed). Set up, schedule and run the “Safety Jeopardy Game” with pharmacy staff. Complete and submit Error Prevention Tool Quarterly Report with at least one example of how one of these tools was utilized at work.

The resident is expected to be available daily from 8:00 am to 4:30 pm or longer depending upon meetings, deadlines, emergencies, etc.

[The length of time the preceptor spends in each of the phases of learning will depend on BOTH the resident's progression in the current rotation and where the rotation occurs in the residency program.]

5) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Formative assessments**—The preceptor will provide the resident with ongoing, activity focused, measurable, and constructive feedback in order to enhance learning.
- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Summative	Preceptor	End of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience
Rotation handoff	Preceptor	End of the learning experience

Recommended reading and websites:

1. The Joint Commission. Hospital: 2017 National Patient Safety Goals. [Internet]. jointcommission.org/standards_information/npsqs.aspx
2. Institute for Safe Medication Practice (ISMP) [Internet]. ismmp.org
3. American Society of Health-System Pharmacists. ASHP guidelines on the safe use of automated dispensing devices. Am J Health-Syst Pharm. 2010; 67:483-90

4. Proceedings from the ISMP Summit on the Use of Smart Infusion Pumps: Guidelines for Safe Implementation and Use. 2009. [Internet]. ismp.org/tools/guidelines/smartpumps
5. Guidelines for the Safe Use of Automated Dispensing Cabinets. Available online from ISMP at ismp.org/resources/guidelines-safe-use-automated-dispensing-cabinets

Potential medication distribution projects (must be approved by preceptors):

- Choose one of the 2016-17 Targeted Medication Safety Best Practices for Hospital from ISMP as a quality improvement project at Paoli Hospital [PDF also located in residency folder] ismp.org/Tools/BestPractices/default.aspx
- ISMP visit inspired quality improvement project
- Staffing request for a medication safety project
- Allergy assessment tool in the ER

Tentative schedule for 2019–20 resident:

- Week 1: Review ISMP target best practices for 2018–19
Identify drug distribution improvement project
Develop formalized recommendation for improvement and implementation of project
ISMP visit date to be determined
Provide feedback on ISMP visit with preceptors and staff on quality initiatives at ISMP
- Begin week 1 and continue throughout rotation:
Work with pharmacy staff to review various reporting tools to identify ADRs and report using STARS Event Reporting System on desktop. Update allergies in Epic.
- Week 2: Obtain necessary approvals from management/committees for project
Educate Staff on targeted medication distribution/workflow improvement project
- Week 3: Continue staff education
Attend required meetings
- Week 4: Set up, schedule and run the “Safety Jeopardy Game” with pharmacy staff.
Turn in Error Prevention Tool Quality Report to preceptors

Outpatient hematology/oncology rotation learning activities

Primary preceptor: Joseph Stuccio RPh, MS
stuccioj@mlhs.org

Cancer Center of Paoli Hospital office:

Medical Oncology and Hematology, MOB 3
255 West Lancaster Avenue, Paoli, PA 19301
484.565.1600

Radiation oncology: 484.565.1601



Physician champion: Michael Dabrow, DO, FACOI, FACP

Additional physicians: Sandra Urtishak, MD

Pallavi M. Rastogi, MD

Christine E. Szarka, MD

Won S. Chang, MD

Karen L. Strauss, MD

Gregory J. Ochsner, MD

Director of oncology: Sue Zuk, RN, MSN, AOCN

Assistant Nurse Manager: Rebecca Yeager, RN, BSN, OCN

Nurse Manager 3 Main: Jennifer Forster, RN, BSN, OCN, PCCN

1) General description

The Hematology/Oncology rotation is a four-week elective rotation in the PGY-1 Pharmacy Residency Program.

Goals:

- To develop the Pharmacy Resident's knowledge base and skill set in providing care for the ambulatory hematology/oncology patient.
- To provide an opportunity for the Pharmacy Resident to practice clinical pharmacy in both the chemotherapy and medical oncology clinic settings and interact with a multidisciplinary team in the provision of evidence-based treatment and supportive care.

Description:

The Cancer Center of Paoli Hospital offers an award winning comprehensive and innovative oncology program in the fight against breast, prostate, colorectal, lung and other cancers. The Cancer Center of Paoli Hospital is an ambulatory outpatient oncology site that is recognized by the American College of Surgeons as one of the nation's best in cancer care and includes a well-respected Radiation Oncology Center accredited by the American College of Radiology. The Cancer Center at Paoli Hospital is the only institution in Chester County that offers a comprehensive Senior Oncology Program designed to address the specialized health and social needs of the elderly cancer patient. This program provides these patients with

effective therapies yet aims to minimize side effects via medication therapy management and counselling support. Main Line Health has additional sites which are also ambulatory, outpatient, oncology satellites that are serviced by Paoli Hospital pharmacists.

These are located at:

- Main Line Health Center in Collegeville, 599 Arcola Road, Collegeville, PA 19426
- Main Line Health Center at Exton Square, 154 Exton Square Parkway, Exton, PA 19341

The role of the pharmacist within the cancer center pharmacy is specialized and involves review of patient laboratory values and chemotherapy dosing/regimens to ensure accurate chemotherapy administration. The pharmacy also assists in reducing or preventing chemo-associated side effects such as nausea and vomiting, anemia, and neutropenia. This pharmacist works closely with physicians, infusion nurses and nurse practitioners to ensure that chemotherapy may be administered safely and effectively.

The cancer center pharmacist collaborates with physicians, nurses, social workers and other ancillary personnel in decisions involving chemotherapy selection and dosing. This pharmacist assists in the evaluation of off-label use(s) for chemotherapeutic agents, provides supportive care when necessary, and acts as an educator/liaison between nursing, pharmacy, and the medical oncology departments even when new disease or medication-specific standards of care emerge.

The pharmacy resident, under the coaching and facilitation of the preceptors, will learn the operation of the Cancer Center of Paoli Hospital Pharmacy and provide care for outpatient oncology patients.

The pharmacy resident will be offered the opportunity to make inpatient rounds with attending physicians from the cancer center when consults are obtained. Additionally, the Nursing Supervisor from 3 Main will notify the pharmacy resident when a patient is being admitted for chemotherapy administration. The nurses on 3 Main are chemotherapy-certified and are responsible for verifying orders and administering chemotherapy during a patient's inpatient admission to this unit. Occasionally, patients on other units may require chemotherapy and may require a 3 Main chemo-certified nurse to administer the therapy. In anticipation of the start of care for a newly diagnosed patient, nursing will notify the pharmacy resident so that he/she may take part in the review of chemotherapy orders that are based on established practice guidelines. The pharmacy resident will be responsible for following these patients during their hospitalization and for contacting the ordering physician if clinical issues arise.

Potential discussion topics:

- Chemotherapy-induced nausea/vomiting
- Anemia and neutropenia

- Constitutional symptom management (diarrhea/constipation) – Additional supportive care topics relevant to cancer patients (pain, neuropathy, depression, mouth care, infection in immunocompromised host, malnutrition/wasting)
- Hypercalcemia of malignancy
- Tumor lysis syndrome
- Malignant effusions
- Oncologic emergencies
- Off-label use and chemotherapeutic regimen evaluation
- Clinical trials or new drugs in the pipeline
- Breast and ovarian cancers
- Gastrointestinal cancers (colorectal, pancreatic, esophageal/gastric, biliary/hepatic)
- Genitourinary cancers (prostate, bladder, renal cell, germ cell, cervical, endometrial, testicular)
- Lung cancer
- Lymphomas/leukemias/multiple myeloma
- Sarcomas
- Growth kinetics of solid tumors and the implications of cell-cycle kinetics and resistance to chemotherapy
- Rationale of combination chemotherapy; including the way chemotherapy regimens affect cell kinetics
- Purpose and major complications of radiation therapy
- Resources for the pharmacist in a cancer center

2) Conference and meeting attendance

In addition to the learning activities, the pharmacy resident is expected to attend the following conferences and meetings.

- a) Chart Rounds on active patients on chemotherapy on the Thursdays from 8:00–9:00 am in the Malvern Room
- b) Tumor Board every Thursday from 12:00–1:00 pm in the Potter Room

During the learning experience, the pharmacy resident will focus on the goals and objectives outlined in section 3 below by performing the activities that are associated with each objective.

Achievement of the goals of the residency is determined through assessment of the ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the Hematology/Oncology learning experience.

3) Learning activities

Goals and objectives	Description	Activity detail
Goal R1.3	Prepare, dispense, and manage medications to support safe and effective drug therapy for patients.	
OBJ R1.1.2	(Applying) Interact effectively with patients, family members, and caregivers	<ol style="list-style-type: none"> 1. Assume responsibility for providing pharmaceutical care to patients in the oncology clinic in collaboration with preceptor. 2. Resident will assume responsibility for Senior Oncology Patients due for counseling during this time frame in addition to other patients who need counseling. 3. Choose effective communication skills, show empathy, respectful, collaborative, cultural competence. 4. Identify medication therapy problems taking into account patient health status, risk factors, access to medications and health data. 5. Devise therapeutic regimens taking into account goals, disease state, best evidence, patient/caregiver needs as well as account physical, mental, emotional and financial factors.
OBJ R1.1.4	(Analyzing) Analyze and assess information on which to base safe and effective medication therapy	
OBJ R1.1.5	(Creating) Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans	
OBJ R1.1.8	(Applying) Demonstrate responsibility to patients	
OBJ R1.3.1	(Applying) Prepare and dispense medications following best practices and organization's policies and procedures	<ol style="list-style-type: none"> 1. Given a chemotherapy order or prescription, the resident will be responsible for reviewing the patient's medication profile and medical chart to determine appropriateness of drug therapy. 2. The resident will collaborate with members of the interdisciplinary team to clarify the treatment plan or to make recommendations when applicable. 3. The resident will examine established therapeutic endpoints in order to evaluate achievement of patient-specific goals.
OBJ R1.1.6	(Applying) Ensure implementation of therapeutic regimens and monitoring plan by taking appropriate follow-up actions	
OBJ R1.3.3	(Applying) Manage aspects of the medication-use process related to oversight of dispensing	<ol style="list-style-type: none"> 1. Learn and practice the process for reviewing, processing, preparing and dispensing chemotherapy in an ambulatory based cancer center. 2. Demonstrates commitment to medication safety, establishes time efficient workflow, checks accuracy of dispensed medications and technician's work.
OBJ R1.1.1	(Applying) Interact effectively with health care teams to manage patients' medication therapy	<ol style="list-style-type: none"> 1. The resident will be a visible, integral member of the interdisciplinary team by articulating pharmaceutical recommendations, drug information and pharmacy support upon request while conducting themselves in a professional, cooperative manner. 2. In addition, be prepared to explain/examine off-label indications for chemotherapeutic agents and
OBJ R1.1.6	(Applying) Ensure implementation of	

	therapeutic regimens and monitoring plan by taking appropriate follow-up actions	regimens, both for safety and efficacy parameters.
OBJ R1.1.3	(Analyzing) Collect information on which to base safe and effective medication therapy	Explain/discriminate between pharmacodynamics and pharmacokinetic principles when analyzing patients' medication profiles to determine if any therapeutic recommendations are necessary for clinically significant drug interactions, dosing, and monitoring of drug therapy (example; anemia management, nausea and vomiting, chemotherapy dose changes based on toxicity).
OBJ R1.1.4	(Analyzing) Analyze and assess information on which to base safe and effective medication therapy	
OBJ R1.1.7	(Applying) Document direct patient care activities appropriately in the medical record or where appropriate	Document patient care activities where applicable as an Epic i-Vent. Include name of medication, patient, prescriber, outcome and a short description of the patient care activity that you impacted either as an informational or actual intervention.
Goal R3.1	Demonstrate leadership skills.	
OBJ R3.1.1	(Applying) Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership	Schedule time to attend cancer center interdisciplinary meetings. Employ respectful interactions and establish working rapport with cancer center team members. If asked, must be capable of answering questions on patients you may have come in contact with.
Goal 4.1	Provide effective medication and practice-related education to patients, caregivers, health care professionals, students and the public (individuals and groups).	
OBJ R4.1.2	(Applying) Use effective presentation and teaching skills to deliver education	<ol style="list-style-type: none"> 1. Read necessary/assigned materials and be prepared to discuss with the preceptor, the management of selected disease states as it pertains to the ambulatory oncology population. 2. Topic discussions will occur once a week on Wednesday afternoons (subject to change) with attending physician and preceptors.
OBJ R4.1.3	(Applying) Use effective written communication to disseminate knowledge	
OBJ R4.1.1	(Applying) Design effective educational activities	<ol style="list-style-type: none"> 1. Prepare and deliver an in-service to Nursing, Pharmacy and Medical Staff. This will occur on the last week of the rotation. 2. In-service should take into account target audience, define educational objectives, use effective teaching strategies to engage audience and include relevant, evidence-based content with references. 3. The resident should demonstrate rapport with audience using effective speaking skills and body language and summarize important points during presentation. 4. Written handouts should be error-free and use effective strategies to enhance understanding such
OBJ R4.1.2	(Applying) Use effective presentation and teaching skills to deliver education.	
OBJ R4.1.3	(Applying) Use effective written communication to disseminate knowledge	
OBJ R4.1.4	(Applying) Appropriately assess effectiveness of education	

		as tables, figures, etc. 5. The resident should obtain feedback from learners to improve effectiveness as educator using assessment or case-based questions.
Goal 4.2	Effectively employ appropriate preceptor roles when engaged in teaching students, pharmacy technicians, or fellow health care professionals.	
OBJ R4.1.1	(Applying) Design effective educational activities	<ol style="list-style-type: none"> 1. When applicable, assist in precepting Pharmacy students on rotation, by constructing, writing and presenting hematology/oncology drug class reviews and one patient case presentation. 2. Resident should identify and choose applicable preceptor roles for the presentation which may include direct instruction, modeling, coaching and facilitating. 3. Resident should determine and provide adequate background to assess knowledge and understanding of learners and use think aloud strategies, verbal feedback and questions to facilitate learner independence. Ex. Provide fill-in-blanks on a handout to assess learning.
OBJ R4.1.2	(Applying) Use effective presentation and teaching skills to deliver education.	
OBJ R4.1.3	(Applying) Use effective written communication to disseminate knowledge	
OBJ R4.1.4	(Applying) Appropriately assess effectiveness of education	
OBJ R4.2.1	(Analyzing) When engaged in teaching, select a preceptor role that meets learners' educational needs.	
OBJ R4.2.2	(Applying) Effectively employs preceptor roles, as appropriate.	

Required references:

1. Resources for pharmacists in a cancer center such as:
2. National Comprehensive Cancer Network (NCCN)
nccn.org/professionals/physician_gls/f_guidelines.asp
3. American Society of Clinical Oncology (ASCO)
asco.org/quality-guidelines/guidelines
4. European Society for Medical Oncology (ESMO)
esmo.org/Guidelines-Practice/Clinical-Practice-Guidelines
5. DiPiro Pharmacotherapy, recent edition. Any oncology chapters.
6. Paoli Residency Oncology Binder
7. Physician's Cancer Chemotherapy Drug Manual 2013-on pharmacist's desktop in cancer center

4) Preceptor responsibilities

- Day one orients pharmacy resident to the cancer center. Have the pharmacy resident review terminology. Calculate an ANC and a BSA.
- Serve as a role model for the provision of pharmaceutical care.

- Enhance pharmacy resident's current understanding of commonly encountered rotation disease states and pharmacology.
- Help establish an evidence-based approach to the provision of pharmacotherapy to patients on the current rotation.
- Show pharmacy resident how to double check and enter chemotherapy orders in computer.
- After instruction allow pharmacy resident to prepare chemotherapy using aseptic technique.
- Teach pharmacy resident to review chemotherapy orders for the following day.
- Assist in topic discussions.
- Provide prompt and effective feedback to ensure a valuable learning experience.

[The length of time the preceptor spends in each of the phases of learning will depend on BOTH the resident's progression in the current rotation and where the rotation occurs in the residency program.]

5) Evaluation strategy

PharmAcademic software will be used for documentation of scheduled evaluations (see chart below). The pharmacy resident and the preceptor will independently complete the assigned evaluation and save as a Draft. The pharmacy resident and the preceptor will then compare and discuss the evaluation. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Formative assessments**—The preceptor will provide the resident with ongoing, activity focused, measurable, and constructive feedback in order to enhance learning.
- **Summative evaluation**—This evaluation summarizes the pharmacy resident's performance throughout the learning experience. Specific comments should be included to provide the pharmacy resident with information useful in improving performance in subsequent learning experiences. Preceptors will collaborate and provide one evaluation of the resident based on the activities each was directly involved with teaching and/or observing.
- **Rotation handoff**—The preceptor will provide valuable information for future preceptors with regards to on various skills, knowledge, projects, attendance, problem-solving, professionalism, communication, initiative and progress towards achieving individual and residency goals and objectives for the residency program.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Summative	Preceptor	End of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience
Rotation handoff	Preceptor	End of the learning experience

Information technology/pharmacy informatics rotation learning experience

Paoli preceptor/coordinator: Andrea Weeks, PharmD, Clinical Pharmacist

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<p>Office for IT staff:</p> <p>Bryn Mawr Hospital Basement Level-B-C Wing 130 South Bryn Mawr Avenue Bryn Mawr, PA 19010</p>	<p>Office for PIVOT staff:</p> <p>52 East Swedesford Road Suite 200 Malvern, PA 19355</p>

1) General description

The information technology rotation is a four-week elective rotation in the PGY-1 residency program at Paoli Hospital. The resident will be required to work in the

Pharmacy Information Technology Department of Main Line Health and with the PIVOT team.

Goals of the rotation include:

- a) To expose the resident to the evolution of Main Line Health's medication-use system by applying pharmacy informatics principles, standards, and best practices.
- b) To provide the opportunity for the resident to gain basic understanding of the language and concepts of information technology (IT) thereby equipping the resident to function in the interdisciplinary environment of informatics project teams.
- c) To promote and advance the professional duties and responsibilities of a pharmacy informatics specialist.

Meeting attendance

In addition to the learning activities, the resident is expected to attend the following meetings:

- a) Pharmacy and therapeutics meetings on the fourth Wednesday every other month on site at Bryn Mawr Hospital.
- b) Pharmacy Leadership meetings on the second Wednesday of each month from 2:30–4:00 pm in Malvern Room, Paoli Hospital.
- c) IT workgroup meetings/conference calls/project – meeting dates and times are based on projects.
- d) Pharmacy Change Approval Board (PCAB) Meetings twice week – Epic tickets regarding medication changes, descriptions, barcodes, technical issues are discussed and standardized across the system.

2) Pharmacy informatics topics

The resident will have the opportunity to explore the following practice areas within the field of pharmacy informatics:

- Clinical decision support tools that bring best practice information and guidelines to clinicians at the time it is needed and rules-based systems for monitoring, evaluating, responding, and reconciling medication-related events and information.
- Pharmacy information systems that allow electronic validation of medication orders in real time, provide the data flows needed to update both the medication administration record (MAR) and order-driven medication dispensing systems, and support such operational activities as supply chain management and revenue compliance.
- Automated dispensing cabinets and robotics integrated and/or interfaced with pharmacy information systems.

- Integrated medication administration management systems that enable bar code medication administration and use of “smart” infusion pumps.
- Integrated medication surveillance applications for medication incident and adverse event reporting.

During the learning experience the resident will focus on the goals and objectives outlined in section 3 below by performing the activities that are associated with each objective.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the Medication Safety Rotation.

3) Activities

Goals and objectives	Description	Activity detail
Goal R1.1	In collaboration with the health care team, provide safe and effective patient care to a diverse range of patients, including those with multiple co-morbidities, high risk medication regimens, and multiple medications following a consistent patient care process.	
Goal R3.2	Demonstrate management skills	
OBJ R1.1.1	(Applying) Interact effectively with health care teams to manage patients' medication therapy	1. Work closely with information systems and pharmacy staff to develop system programming requirements while understanding system capabilities and limitations.
OBJ R1.3.3	(Applying) Manage aspects of the medication-use process related to oversight of dispensing	2. Review and work on Epic's options for clinical decision support.
OBJ R3.2.3	(Applying) Contribute to department management	3. Review and work on Epic's options for clinical monitoring.
		4. Participate effectively in committees or informal work groups to complete group projects, tasks or goals.
		5. Use best practices and tools consistent with team, department and organization.
OBJ R1.1.4	(Analyzing) Analyze and assess information on which to base safe and effective medication therapy	1. Develop and oversee medication management-related systems' databases which analyze patient-specific information.
		2. Detect medication related problems as they relate to technology and information systems.
		3. Identify, suggest solutions to, and resolve system or application problems
OBJ R1.1.3	(Analyzing) Collects information on which to base safe and effective medication therapy	1. Assess medication-use systems for vulnerabilities to medication errors and implement medication-error prevention strategies.
OBJ R2.1.4	(Applying) Participate in	2. Clarify information. Illustrate understanding of limitations of information in health records.

	medication event reporting and monitoring	<ol style="list-style-type: none"> 3. Collect relevant info about medication therapy using reliable sources when building decision support tools. 4. Effectively employs current available technology and automation to support safe medication use processes.
Goal R1.3	Prepare, dispense, and manage medications to support safe and effective drug therapy for patients.	
OBJ R1.3.1	(Applying) Prepare and dispense medications following best practices and the organization's policies and procedures	<ol style="list-style-type: none"> 1. Practice and direct safe and appropriate use of medications, drug distribution, and administration. 2. Review how CPOE systems and pharmacy information systems are set up including "smart" infusion pumps. Adhere to proper safety and quality assurance practices. 3. Maintain accuracy and confidentiality of patients' protected health information. 4. Follow appropriate procedures regarding formulary and non-formulary medications.
OBJ R1.3.2	(Applying) Manage aspects of the medication-use process related to formulary management	
OBJ R1.3.3	(Applying) Manage aspects of the medication-use process related to oversight of dispensing	<ol style="list-style-type: none"> 1. Review pertinent safety issues that are associated with the implementation of new technologies into existing medication use systems. 2. Check accuracy of work of others and promote safe and effective drug use on a day to day basis. 3. Make effective use of relevant technology to aid in decision making to increase safety.
Goal R2.1	Demonstrate ability to manage formulary and medication-use processes, as applicable to the organization.	
OBJ R2.1.3	(Analyzing) Identify opportunities for improvement of the medication use system	<ol style="list-style-type: none"> 1. Be involved in the development and implementation of standards for medication-related vocabularies and terminologies to ensure safety and optimize deployment of clinical decision support-related activities. 2. Select invalid scan strategy and disseminate information to the inventory control coordinator at each Main Line Health site for follow-up. 3. Focus on mining, aggregating, analyzing, and interpreting data from clinical information systems to improve patient outcomes using practice standards and other evidence such as National Quality Measures, ISMP alerts, and Joint Commission sentinel alerts for example.
Goal R4.1	Provide effective medication and practice-related education to patients, caregivers, health care professionals, students, and the public (individuals and groups).	
OBJ R4.1.2	(Applying) Use effective presentation and teaching skills to deliver education	<ol style="list-style-type: none"> 1. Completion of assigned project which will improve the overall quality of some aspect of the current medication-use system/clinical decision support system using a best-practices model.

		2. Develop and articulate staff education to PIVOT team on an assigned topic.
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4) Preceptor interaction and resident responsibilities

Week 1–2: @PIVOT office

- On the first day, meet preceptor at 8:00 am for orientation. Review rotation requirements and evaluation strategy. Assign readings, e-learning, and weekly meeting schedule.
- Learn about Epic EHR implementation at MLH. Work with preceptor and other PIVOT staff members to explore the Epic platform. Attend meetings and work groups as assigned by preceptor. Participate in discussions related to information technology as they come up during the work day. Develop educational program for staff (PIVOT or Pharmacy).

Weeks 3–4: @ Bryn Mawr Hospital

- On the first day, meet with preceptor at 9:00 am for orientation. Review rotation requirements and evaluation strategy. Assign meeting schedule and potential project ideas.
- Learn about current state within Epic EHR. Work with preceptor and other IT staff members to explore the pharmacy systems. Resident should be cognizant of practice standards and other evidence such as National Quality Measures, ISMP alerts, and Joint Commission sentinel alerts when making recommendations.
- Resident will be assigned a project which will improve the overall quality of some aspect of the current medication-use system using a best-practices model. This may be in response to or reconciling of a medication-related event.

[The length of time the preceptor spends in each of the phases of learning will depend on BOTH the resident's progression in the current rotation and where the rotation occurs in the residency program.]

5) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Formative assessments**—The preceptor will provide the resident with ongoing, activity focused, measurable, and constructive feedback in order to enhance learning.

- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences. The preceptors will collaborate and provide a joint evaluation of the resident at the based on the activities they were directly involved with teaching and/or observing.
- **Rotation handoff**—Rotation Handoff: The preceptor will provide valuable information for future preceptors on various skills, knowledge, projects, attendance, problem-solving, professionalism, communication, initiative and progress towards achieving individual and residency goals and objectives for the residency program.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Summative	Preceptor coordinator with feedback from co-preceptors	End of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience
Rotation handoff	Preceptor	End of the learning experience

References (required reading):

1. Classen DC. A sociotechnical model for pharmacy; Siska MH. Technology and automation in hospital pharmacies: current and future states; Calloway S. Implementation of a clinical decision support system. Hospital Pharmacy March 2013. Volume 48 (3) Suppl 2:S1-S15.

Pain and palliative care rotation learning experience

Primary preceptor: Kiyo Yoda, PharmD, Pharmacy Clinical Coordinator

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Office for Pain and Palliative Care Paoli Team Members Room 425 Main Building

Evan S Schneidmesser, MD, Palliative Care Physician

Sandra Urtishak, MD, Hematology/Oncology/Palliative Care Physician

1) General description

Pain and palliative care is a four-week elective learning experience at Paoli Hospital. This program is designed to provide the resident with training in understanding how to assess and manage pain and symptoms in a variety of patient populations in an inpatient setting.

The pharmacy resident is responsible for participation in gathering a pain and symptom assessment, making recommendations for both pain and adjunctive medications, and following up with patients and their caregivers to assess medication therapy to make necessary modifications to the care plan. Education to patients, their caregivers and clinical staff including physicians are crucial elements of the rotation as pain management may have a direct impact on a patient's overall outcome. Perception of pain, definitions of types of pain, patient safety and hospital performance as they relate to patient outcomes will be an integral theme of the rotation.

Good communication and interpersonal skills are vital to success in this experience. The resident must devise efficient strategies for accomplishing the required activities in a limited time frame.

2) Disease states

Common therapeutic areas in which the resident will be expected to gain proficiency through literature review, topic discussion and/or direct patient care experience including but not limited to:

- End of life care
- Cancer
- Trauma
- Post-operative setting
- Pain management in patients with substance abuse
- Geriatrics

- Acute pain
- Chronic pain
- Acute on chronic pain
- Critical care
- Non-verbal patients
- Palliative vs. hospice patients

During the learning experience the resident will focus on the goals and objectives outlined in section 3 below by performing the activities that are associated with each objective. The resident will gradually assume responsibility for all the patients within the assigned unit. The PGY-1 resident must devise efficient strategies for accomplishing required activities in a limited time frame.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the critical care learning experience.

3) Activities

Goals and objectives	Description	Activity detail
Goal R1.1	In collaboration with the health care team, provide safe and effective patient care to a diverse range of patients, including those with multiple co-morbidities, high-risk medication regimens, and multiple medications following a consistent patient care process.	
OBJ R1.1.1	(Applying) Interact effectively with health care teams to manage patients' medication therapy	<ol style="list-style-type: none"> 1. Residents will actively participate in pain and palliative care interdisciplinary rounds weekly. 2. During rounds, the resident should display respectful and cooperative communication with the palliative care team. 3. The resident should support safe and effective medication therapy to help manage patient's pain.
OBJ R1.1.2	(Applying) Interact effectively with patients, family members, and caregivers	<ol style="list-style-type: none"> 1. Residents will be responsible for providing effective counseling to patients and their caregivers/family related to new or existing pain management therapy- this may include hospice, palliative, acute or chronic pain patients. 2. Residents should show empathy, cultural competence and help empower patients and their caregivers to take charge of their health related to pain.
OBJ R1.1.3	(Applying) Collect information on which to base safe and effective medication therapy.	<ol style="list-style-type: none"> 1. The resident will be required to accurately gather and interpret patient specific information on assigned patients prior to formal consult with the pain and palliative care team. 2. The resident should examine each patient's current

OBJ R1.1.3 (continued)		<p>history, health records, prescription/OTC medication usage, lab results, cost, previous medication adherence and lifestyle to determine suitable and effective pain and adjunctive therapy.</p> <p>3. Data may be collection through the EMR, face to face interviews or other reliable sources of information.</p>
OBJ R1.1.4	(Analyzing) Analyze and assess information on which to base safe and effective medication therapy	<p>1. The resident will analyze each patient's health records to identify medication-related problems to evaluate with preceptor and the pain and palliative care team.</p> <p>2. Examples may include:</p> <ul style="list-style-type: none"> a. Lack of indication, unmet medical needs, suboptimal therapy, therapeutic duplication, ADR or potential for and ADR, drug-disease, nutrient and lab interactions. b. Harmful social, non-prescription, or other medication therapy. c. Lack of understanding of medication, non-adherence, medication discrepancies in care plans, and financial impact.
OBJ R1.1.5 OBJ R1.1.6	<p>(Creating) Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans (care plans)</p> <p>(Applying) Ensure implementation of therapeutic regimens and monitoring plans (care plans) by taking appropriate follow-up actions.</p>	<p>1. The resident will formulate recommendations for initiation of pain medications and adjunctive therapies to manage nausea, constipation, anxiety, insomnia, etc. to preceptor/pain and palliative care team that optimize medication therapy, are ethical, incorporate patient specific factors/needs, promote wellness, and are achievable goals.</p> <p>2. Develop and integrate a working knowledge of current literature, terminology and best practices in the treatment of pain and palliative care such as the multi-modal therapy approach.</p> <p>3. Develop a clear interpretation of hospital outcomes on pain management including Press-Ganey and HCAHPS scores and online sources comparing hospitals across the nation such as hospitalcompare.hhs.gov</p> <p>4. Recommendations should be persuasive yet respectful and convey expertise.</p> <p>5. The resident should formulate strategies to ensure recommendations are communicated to the patient/caregiver and include monitoring plans, address health related problems, expectations for pain control, handling and administration of the medication regimen.</p> <p>6. Patient/caregiver should be provided an explanation on when to follow up with their provider/pharmacist to achieve therapy goals.</p>

OBJ R1.1.7	(Applying) Document direct patient care activities appropriately in the medical record or where appropriate	The resident will assist in composing pain and palliative care consult note with preceptor/pain and palliative team member in the patient's electronic medical record.
Goal R1.3	Prepare, dispense, and manage medications to support safe and effective drug therapy for patients.	
OBJ R1.3.2	(Applying) Manage aspects of the medication-use process related to formulary management	<ol style="list-style-type: none"> 1. The resident will practice appropriate procedures regarding exceptions to the formulary such as restricted medications. Relate the importance that non-formulary medications are dispensed, administered and monitored in a manner that ensures patient safety. 2. Discover and apply the process of entering orders in CPOE for the purposes of understanding the prescriber's perspective on viewing order sets etc. Expected drug classes covered include: non-narcotic and narcotic pain medications, benzodiazepines, sedative hypnotics, non-prescription sleep aids, anticonvulsants, antiemetics, laxatives. 3. Make conscious formulary decisions based on cost and patient financial burden once in the community setting.
GOAL R2.1	Demonstrate ability to manage formulary and medication-use processes, as applicable to the organization.	
OBJ R2.1.3	(Analyzing) Identify opportunities for improvement of the medication-use system	<ol style="list-style-type: none"> 1. The resident will be required to devise a process improvement project which will be related to the area of pain and/or palliative care. 2. The resident may select an opportunity for improvement or be assigned a project. 3. The resident should utilize best practices such as National Quality Measures, ISMP, etc. 4. The resident should explain pharmacy concerns, solutions and interests to the pain and palliative care team using health information technology or automated systems to assist in improvements.
GOAL R4.1	Provide effective medication and practice-related education to patients, caregivers, health care professionals, students, and the public (individuals and groups).	
OBJ R4.1.1	(Applying) Design effective educational activities	<ol style="list-style-type: none"> 1. Prepare a final PowerPoint presentation on a topic of interest to the palliative care/pain management team members. 2. The resident should choose educational objectives which address the audience learning needs. 3. The residents should incorporate teaching methods which match the learner and should be evidence based and timely reflecting best practices.

OBJ R4.1.1 (continued)		References should be cited using appropriate practices.
OBJ R4.1.2	(Applying) Use effective presentation and teaching skills to deliver education	<ol style="list-style-type: none"> 1. The final PowerPoint presentation should capture the audience's interest throughout and should include active audience participation. 2. The resident will be evaluated on speaking skills, body language, smooth transitions between concepts, using effective handouts/visual aids which help support learning and summarize important points throughout the presentation.

4) Preceptor interaction

Pre-rounds with resident and assignment of patients

Daily consults completed

Project management (typically afternoons)

Expect daily hours to be 8:30 am to 5:30–6:00 pm

Interdisciplinary team members (not all inclusive)

Susan McAndrew, RN Coordinator

Mary O'Hare, CRNP

Teresa Holman, CRNP

Sandy O'Haire, CRNP

Dawn Bonella, CRNP

Sandra Urtishak, MD (One day week: Wednesday)

Karl Ahlswede, MD (Director/Bryn Mawr Hospital)

Adam Tyson, MD (Lankenau Medical Center)

Jennifer Burke, DO (Riddle Hospital)

Evan Schneidmesser, MD (Paoli Hospital)

Kiyo Yoda, PharmD

Barbara Emery, Chaplain

Barbara Jordan, Volunteer

Expected progression of resident responsibility on this learning experience:

Prior to day 1: Assigned reading will be in "Shared Drive Paoli Residency Program" under Rotations: Pain and Palliative Folder (Z:\Rotations\Pain-Palliative) to prepare for rotation

Prior to day 1: Primary preceptor to review Pain and Palliative learning activities and expectations with resident and Pain management team roles and scope of practice

Week 1: Resident to work up assigned patients prior to team rounds or consults. Resident to round with preceptor and work on any assigned projects. Preceptor will allow resident to observe and

participate more actively in rounds or meetings as the week progresses.

Week 2: Resident to work up assigned patients and ask questions for clarification to preceptor prior to team rounds or consults. Preceptor will be present and participate in rounds or problem resolution (coaching the resident to take on more responsibility on health care team).

Week 3–4: Patient and caregiver education will also be provided by the resident after modeling by preceptor. In addition, week 2 activities will continue with more independence of resident in following and monitoring assigned patients. Work on any assigned projects including final presentation.

[The length of time the preceptor spends in each of the phases of learning will depend on BOTH the resident's progression in the current rotation and where the rotation occurs in the residency program.]

5) Evaluation Strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Formative assessments**—The preceptor will provide the resident with ongoing, activity focused, measurable, and constructive feedback in order to enhance learning.
- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Summative	Primary preceptor with feedback from co-preceptors	End of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience
Rotation handoff	Preceptor	End of the learning experience

Suggested readings:

1. Barr J. Fraser GL. Puntillo K. et al. Clinical practice guidelines for the management of pain, agitation, and delirium in adult patients in the intensive care unit. *Critical Care Medicine*.2013; 41:263-306.
2. Jarzyna D. Jungquist CR. Pasero C. et al. American society for pain management nursing guidelines on monitoring for opioid-induced sedation and respiratory depression. *Pain Management Nursing*.2011; 12(3):118-145.
3. Herr K. Coyne PJ. McCaffery M. et al. Pain assessment in the patient unable to self-report: position statement with clinical practice recommendations. *Pain Management Nursing*.2011; 2(4):230-250.
4. Reynolds J. Drew D. Dunwoody C. American society for pain management nursing position statement: pain management at the end of life. *Pain Management Nursing*.2013; 14(3):172-175.
5. Oliver J. Coggins C. Compton P. et al. American society for pain management nursing position statement: pain management in patients with substance use disorders. *Pain Management Nursing*.2012; 13(3):169-183.

General pediatrics and NICU rotation learning experience

Primary preceptor: Elora Hilmas, PharmD, BCPS, Pharmacy Residency Coordinator

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Additional preceptors: Sarah Kelly, PharmD
Andrea DiPietro, PharmD
Stacey Collings, PharmD
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1) General description

The general pediatrics/NICU rotation is a four-week elective rotation in the PGY-1 residency program at Paoli Hospital.

Goals of the rotation include:

- a) To expand the resident's basic understanding of disease states encountered in pediatric medicine.
- b) To provide the resident with clinical knowledge and skills in the application of therapeutics which will include proper drug therapy selection, patient monitoring, pharmacokinetics, patient education, drug administration and delivery of pharmaceutical care in the pediatric hospitalized patient.
- c) To provide the opportunity for the resident to become an integral member of the medical team through collaboration and rounds.
- d) To assist the resident in developing a variety of skills including decision-making, teaching, and communication skills in the specialized pediatric environment.
- e) To provide the resident with the opportunity to develop treatment plans in the pediatric population.

Description:

The Paoli Hospital PGY-1 Pharmacy Practice Residency Program has teamed up with Nemours/Alfred I. DuPont Hospital for Children. The hospital is located on a 300-acre estate in Wilmington, Delaware, which is one of the nation's largest pediatric health systems. Nemours/Alfred I. duPont Hospital for Children is a 190-bed multi-specialty, tertiary care teaching institution. The health system offers advanced inpatient and outpatient pediatric care in more than 30 specialties. Nemours/Alfred I. duPont Hospital for Children has an established PGY-1 Pharmacy Residency Program exclusively in pediatric medicine which is designed to develop compassionate, clinically superior pharmacists who are seeking a career in hospital practice or further specialize in pediatric care. The rotation will expose the resident to direct patient care for a variety of pediatric disease states. The resident will participate in services provided to the patients located on the general pediatrics units of the hospital. A variety of disease states are managed in the general pediatrics unit including respiratory illness, gastrointestinal illness, etc. The resident will work with medical residents, nurses, aides, attending physicians and the precepting pharmacist to implement pharmaceutical care plans, and to prevent and solve medication therapy issues. The resident will also be provided with experiences in the NICU as well as working in the area of antimicrobial stewardship in pediatrics.

Conference and meeting attendance:

In addition to the learning activities, the resident is expected to attend the following conferences and meetings.

- a) Pediatric Grand Rounds every Wednesday at 8:00 am

2) Disease states

Core Content that resident should be familiar with

- Asthma
- RSV bronchiolitis
- Cystic Fibrosis
- Kawasaki's Disease
- MRSA
- Gastroesophageal reflux disease
- Seizures
- Neonatal sepsis
- Pneumonia

During the learning experience the resident will focus on the goals and objectives outlined in section 3 below by performing the activities that are associated with each objective. The resident will gradually assume responsibility for all the patients within the assigned unit. The PGY-1 resident must devise efficient strategies for accomplishing required activities in a limited time frame.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the critical care learning experience.

3) Activities

Goals and objectives	Description	Activity detail
Goal R1.1	In collaboration with the health care team, provide safe and effective patient care to a diverse range of patients, including those with multiple co-morbidities, high-risk medication regimens, and multiple medications following a consistent patient care process.	
OBJ R1.1.1	(Applying) Interact effectively with health care teams to manage patients' medication therapy	<ol style="list-style-type: none"> 1. The resident will be prepared to attend patient care rounds daily with either the blue team or the gold team around 9:30–10:00 am. 2. During rounds, the resident should display respectful and cooperative communication with the interdisciplinary team. 3. The resident should support the use safe and effective medication therapy for the pediatric patient. 4. Respond in a timely manner to requests for drug information or literature searches from other health care professionals/ preceptor.
OBJ R1.1.2	(Applying) Interact effectively with patients, family members, and caregivers	<ol style="list-style-type: none"> 1. The resident will provide patient/family/caregiver counseling when needed. 2. The resident should display appropriate language for pediatric patients, show empathy, and cultural competence. 3. The resident should help pediatric patients and their families/caregivers feel empowered to take responsibility for their health. <ol style="list-style-type: none"> a. For example: demonstrate proper inhaler or insulin injection technique, blood sugar, peak flow meter use or other self-monitoring.
OBJ R1.1.3	(Applying) Collect information on which to base safe and effective medication therapy	<ol style="list-style-type: none"> 1. The resident will examine patient medication profiles every morning. 2. Collect and review daily pertinent laboratory data and information on the MAR, EMR. 3. The resident should ensure patient height/weight, age, gender, renal, hepatic function and vaccine records are accurately collected. 4. Record, clarify and review medical and social history, medication adherence, lifestyle preferences, socioeconomic factors and any previous adverse reactions to medications. 5. The resident should determine the most reliable

OBJ R1.1.3 (continued)		information requiring in some cases face to face discussions with patient's family/caregivers.
OBJ R1.1.4	(Analyzing) Analyze and assess information on which to base safe and effective medication therapy	<ol style="list-style-type: none"> 1. The resident should take all collected information to discriminate any medication related problems. Data may be collected during rounds to help clarify information collected by EMR. 2. Illustrate and explain all drug-related questions or problems that are identified on rounds. 3. Analyze drug level and therapeutic monitoring on Vancomycin, Aminoglycosides, and Anticonvulsants. 4. Distinguish patients for potential conversion from IV to PO therapy when appropriate. 5. Differentiate pediatric patients who have a lack of indication for a medication, unmet medication need such as pain, constipation, diarrhea, fever, nausea, etc. 6. Select pediatric patients with suboptimal medications in terms of dose, dosage form, duration, route and method of administration. (Ex. Unable to swallow tablet convert to liquid formulation); therapeutic duplications, potential for ADR or actual ADR, drug-drug, lab, disease, nutrient interactions/potential for these interactions. 7. Appraising for financial impact to a patient's family due to medications should be considered, lab monitoring needed, lack of understanding of therapy and non-adherence.
OBJ R1.1.5	(Creating) Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans (care plans)	<ol style="list-style-type: none"> 1. The resident will design/redesign a therapeutic regimens and monitoring plans for all age pediatric patients and communicate recommendations with the medical team which use best evidence, address specific patient needs, and address quality of life, patient disease states and goals of therapy. 2. Recommendations for initiation of medications and adjunctive therapies should infer an understanding of an array of pediatric conditions, should optimize medication therapy. 3. Monitoring plans should integrate therapeutic goals, ensure appropriate/timely follow up, include safety and adherence parameters, be cost-effective and measure potential for any side effects/adverse events. <ol style="list-style-type: none"> a. Ex: Monitor patients on TPN for adequate fluid and calorie intake 4. Develop a working knowledge of current literature, terminology and best practices in the treatment of pediatric conditions and apply this during rounds with the medical team.
OBJ R1.1.6	(Applying) Ensure implementation of therapeutic regimens	<ol style="list-style-type: none"> 1. The resident should communicate therapeutic decisions or changes with the pharmacy staff, preceptor and/or medical team.

OBJ R1.1.6 (continued)	and monitoring plans (care plans) by taking appropriate follow-up actions	<ol style="list-style-type: none"> 2. The resident should ensure recommendations are communicated clearly to the patient/caregiver and include monitoring plans, address health related problems, expectations for resolution of symptoms, handling and administration of the medication regimen. Ex. Include written directions if necessary. 3. The resident should exhibit responsible, professional behavior when a patient refuses treatment and offer solutions, skillfully diffuse negative reactions, and work collaboratively with the medical team and patient/caregiver/family. 4. Patient/caregiver/family should be instructed on when to follow up with their provider/pharmacist to achieve therapy goals. 5. Recommendations should be persuasive yet respectful and convey expertise.
OBJ R1.1.7	(Applying) Document direct patient care activities appropriately in the medical record or where appropriate.	<ol style="list-style-type: none"> 1. 1. The resident should document interventions after consultation with preceptor using health system's policies/procedures. 2. 2. Documentation should be written clearly and in time to be useful.
GOAL R1.3	Prepare, dispense, and manage medications to support safe and effective drug therapy for patients.	
OBJ R1.3.1	(Applying) Prepare and dispense medications following best practices and organization's policies and procedures	<ol style="list-style-type: none"> 1. The resident will be responsible to assist preceptor with verification of pharmacy orders and TPN's by: <ol style="list-style-type: none"> a. Correctly interpreting appropriateness of medication before preparing/distributing the first dose this includes contacting prescribers to clarify/verify dosages or other medication related issues. 2. The resident may prepare medications after orientation to organization's policies, procedures, standards, equipment ensuring quality and safety. 3. The resident should maintain accuracy and confidentiality of patient's protected health information.
GOAL R2.1	Demonstrate ability to manage formulary and medication-use processes, as applicable to the organization.	
OBJ R2.1.4	(Applying) Participate in medication event reporting and monitoring	Report and document medication errors and/or adverse drug events when identified using institution's available technology, policies and procedures.
GOAL R4.1	Provide effective medication and practice-related education to patients, caregivers, health care professionals, students, and the public (individuals and groups).	
OBJ R4.1.1	(Applying) Design effective educational activities	<ol style="list-style-type: none"> 1. The resident will be required to prepare and present weekly topic discussions with preceptor once a week. 2. The resident will develop and provide an in-service to the medical team or nursing staff, as well as, to the

OBJ R4.1.1 (continued)		<p>pharmacy staff on a relevant topic of interest in pediatrics.</p> <ol style="list-style-type: none"> 3. The resident should define educational objectives which address the target audience learning needs. 4. The residents should incorporate teaching methods which match the learner and should be evidence based and timely reflecting best practices. References should be cited.
OBJ R4.1.2	(Applying) Use effective presentation and teaching skills to deliver education	<ol style="list-style-type: none"> 1. The in-service should capture the audience's interest throughout and should include active audience participation possibly using a patient case. 2. The resident will be evaluated on speaking skills, body language, smooth transitions between concepts, using effective handouts/visual aids which help support learning and summarize important points throughout when giving presentation. 3. Presentations should incorporate evidence-based medicine in pediatrics, summarize important points at appropriate times during presentation and facilitate active learning and engage the audience using appropriate speaking rate/volume.
OBJ R4.1.3	(Applying) Use effective written communication to disseminate knowledge	<ol style="list-style-type: none"> 1. The resident should always write in a manner that is easy to understand and be free of errors. 2. Written presentations should include a critical evaluation of the literature, advancements in pediatric practice/medicine and summarize what the resident has learned from their research. 3. The resident should adjust content for the audience level of knowledge and incorporate tables, graphs; figures to enhance audience understanding of the topics presented. Ex: Is the intended audience the public, a pediatric patient, parent, pharmacist, student, physician?) 4. Appropriate reference citations will be required.

4) Preceptor responsibilities/interaction

- Serve as a role model for the provision of pharmaceutical care.
- Enhance resident's current understanding of commonly encountered rotation disease states and pharmacology.
- Help establish an evidence-based approach to the provision of pharmacotherapy to patients on the current rotation.
- Assist in topic discussions
- Provide prompt and effective feedback to ensure a valuable learning experience.
- Expected progression of resident responsibilities on this learning experience:
(length of time preceptor spends in each of these phases will be personalized)

based upon resident's abilities and timing of the learning experience during the residency year).

Prior to day one, resident responsible to review required readings.

Expected progression of resident responsibility on this learning experience:

- Day 1: Meet at assigned time to orient resident to the rotation requirements, assign readings, explain evaluation strategy, as well as, a discussion of the residents' personal goals. Throughout the rotation, the resident will be provided with day-to-day verbal feedback.
- Week 1: Resident to work up patients for assigned patient care areas and present to preceptor prior to rounds. Preceptor will attend and participate in rounds with the resident (modeling pharmacist's role on the health care team). Resident will work with preceptor to monitor and make therapy recommendations on patients throughout the hospital. Weekly topic discussion.
- Week 2: Resident to work up patients for assigned patient care areas and present to preceptor prior to rounds. Preceptor will attend and participate in rounds with the Resident (coaching the resident to take on more responsibility on the health care team). Resident will work with preceptor to monitor and make therapy recommendations on patients throughout the hospital. Begin vancomycin and aminoglycoside pharmacokinetics when applicable. Weekly topic discussion. Work on final in-service presentation.
- Weeks 3–4: In addition to week 2 activities the resident should exhibit more independence in following and monitoring assigned patients and take more leadership role in rounds in terms of recommendations. Work on any assigned projects. Present final in-service presentation.

5) Evaluation strategy

PharmAcademic will be used to document written feedback and evaluations (see chart below). The resident and the preceptor will independently complete their assignments and save them as a draft. The resident and preceptor will discuss all written feedback and evaluations commenting on both the residents' performance of the activities and the accuracy of their self-assessment skills. After the discussion all items will be signed in PharmAcademic.

- **Formative assessments**—these will be used to provide the resident with ongoing, activity focused, measurable, and constructive feedback.
- **Summative evaluation**—this will summarize the resident's performance throughout the learning experience while providing them with specific comments and examples which they can use to improve their performance in subsequent learning experiences.

- **Preceptor/learning experience evaluation**—this will be used to provide the preceptor with constructive feedback about their teaching style and the overall rotation which can be used to improve the learning experience in the future.

Type of evaluation	Who is responsible to complete	When it should be completed
Formative assessment	Preceptor	End of week 2
Summative evaluation	Primary preceptor in collaboration with co-preceptors	End of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience
Rotation handoff	Preceptors	End of the learning experience

Required readings:

1. Leff, Richard and Roberts, Robert: Problems in drug therapy for pediatric patients. American Journal of Hospital Pharmacy. 1987;44:865-70
2. Zenk, Karin: Challenges in providing pharmaceutical care to pediatric patients. American Journal of Hospital Pharmacy. 1994; 51:688-94
3. Corneli, et al. A Multicenter, Randomized, Controlled Trial of Dexamethasone for Bronchiolitis. The New England Journal of Medicine; 2007; 357:331-339
4. England, Ann: Fever in the Young Infant. Emedicine.com; April 24, 2006
5. Piedra, Pedro and Stark, Ann: Treatment; outcome; and prevention of bronchiolitis in infants and children. 2007; uptodate.com
6. Fanta, Christopher and Fletcher, Suzanne: An overview of asthma management. 2007; uptodate.com
7. Sundel, Robert. Initial treatment and prognosis of Kawasaki disease. 2007; uptodate.com

Supplied papers:

Pediatric Dosing Considerations – Jill Morgan, PharmD

Pediatric Dosing Basics – Elora Hilmas, PharmD

Additional articles as necessary

Required longitudinal rotations

Senior oncology rotation learning experience – ambulatory care

Preceptor: Andrea Weeks, PharmD, Clinical Pharmacist (primary preceptor)

Office: Third Floor Pharmacy – Main Building
255 West Lancaster Avenue, Paoli, PA 19301
484.565.1144 • Fax: 484.565.3388
weeksa@mlhs.org

Paoli Hospital Cancer Center
Medical Oncology and Hematology, MOB III
484.565.1600 – main number, Kathy contact
484.565.1635 – pharmacy in cancer center
Main Line Health Center in Collegeville
599 Arcola Road, Collegeville, PA 19426
484.565.8400 – main number
484.565.8437 – pharmacy in cancer center
Main Line Health Center at Exton Square
154 Exton Square Parkway, Exton, PA 19341
484.565.8600 – main number
484.565.8624 – pharmacy in cancer center



Dr. Michael Dabrow (left) meets with patient Mary Jane McCrystal (center) of West Chester and oncology nurse Joann Moore (right). Dabrow is the medical director of the Cancer Center of Paoli Hospital.

1) General description

The Senior Oncology Program rotation is a longitudinal rotation in the PGY-1 pharmacy residency program. The Cancer Center at Paoli Hospital under the direction of the Medical Director Dr. Michael Dabrow has developed a Senior Oncology Program to address the unique health needs and social services of elderly cancer patients. All patients 70 years and older with a diagnosis of cancer are evaluated. These patients receive a comprehensive geriatric assessment prior to starting treatment to help tailor therapy to meet their needs and improve their quality of life and outcomes.

Goals of the Senior Oncology Program are to provide the most effective therapies, minimize side effects with other co morbidities and to maintain their ability to perform activities of daily living. The Senior Oncology Program using screening tools to assess for dementia, depression, risk of falls and social support. The program includes social work; geriatric oncology trained nurses, dieticians, physical therapists as well as pharmacists.

The role of the pharmacist in the Senior Oncology Program is to provide support using medication therapy management strategies. This occurs every three months when patients have their comprehensive multidisciplinary review. Initial written medication lists are performed by nursing. The pharmacist then meets with the patient during their chemotherapy treatment to answer questions about medications,

ensure medications are safe and effective and provide recommendations. The pharmacist makes necessary updates in the electronic medical record, marks the medications as reviewed and enters a Senior Oncology consult note. If the pharmacist finds any medication issues, they can contact the oncologist, oncology nurse or patient's primary care physician (PCP). All patients enrolled in the program have letters send to their PCP to make them aware of the medication review and potential phone calls from pharmacists. Patients are provided with a medication related action plan with any follow up suggestions from the pharmacist.

2) Goals of rotation

This rotation will give the resident exposure to ambulatory care in a busy hospital-based cancer center. Additionally, residents will utilize their counseling skills and develop rapport with seniors from the local community. This rotation will require the resident to familiarize themselves with chemotherapy regimens and supportive care treatments and to develop skills in patient counseling and detecting and correcting medication related problems with a focus on the senior/geriatric population ultimately with the goal of improving patient outcomes.

Core Content which will be covered via patient experiences, discussion of reading materials and resident research.

Good communication and interpersonal skills are vital to success in this experience.

3) Disease states

The resident will counsel patients on their medications in all disease states as they relate to the patient's maintenance medications, pain medications, supportive medications used for nausea, vomiting, diarrhea, nutrition, sleep, depression, anxiety, anemia or neutropenia. Additionally, the resident is expected to review the current chemotherapy agents in their treatment regimen as it pertains to that patient's cancer.

4) Key contacts

a) Susan Zuk RN, MSN, AOCN, Director Oncology, Cancer Center at Paoli Hospital
zuks@mlhs.org, 484.565.1608, fax 610.647.2006

b) Vicki Hughes MSW, Social Worker, Cancer Center at Paoli Hospital

c) Katie Elizabeth Gallagher, RN, Oncology Nurse, Cancer Center at Paoli Hospital

d) Linda Cellucci, Administrative Assistant, Cancer Center at Paoli Hospital,
celluccil@mlhs.org, 484.565.1497

Hematology/Oncology providers:

e) Michael B. Dabrow, DO, FACP, FACOI (Medical Director), Cancer Center at Paoli Hospital

f) Pallavi M. Rastogi, MD

g) Christine. E Szarka, MD

h) Sandra Urtishak, MD

5) Activities/expectation of residents

- Pharmacist/Resident will be notified via and Epic In-Basket Staff Message from Sue Zuk RN or her administrative assistant Linda Cellucci in advance of a Senior Oncology patient who is need of medication counseling. This should be checked daily.
- The counseling should occur on a chemotherapy treatment day. Collegeville and Exton patients can be seen by the pharmacist working in those centers on that date and will need to be contacted ahead of time to let them know they are to see a Senior Oncology patient.
- The pharmacist/Resident who can see the consulted patient will need to send Staff Message in Epic confirming they will be responsible to see the patient on the scheduled date of treatment.
- Resident will attempt to call patient prior to visit to ask them to bring medication bottles including the patients for Collegeville and Exton.
 - On the day of treatment, the resident may need to call Paoli Cancer Center Pharmacy to speak to either pharmacist Joe George or Joe Stuccio to get patient start time for chemotherapy.
 - The expectation is that the resident has prepared prior to meeting the patient on any discussion points or areas of concern.
 - That the resident has done a thorough review using a reputable reference including drug interaction screen.
 - Patients are counseled, and the resident should try to have the patient speak freely about areas for concern including gait disturbances, depression, sleep, nutrition, anxiety, nausea, vomiting, diarrhea, pain, adherence, social/economic etc. so that the patient can be referred for appropriate care.
 - That the resident has reviewed potential inappropriate or necessary medications in the elderly using the current Beers criteria and/or STOPP/START tools.
- After counseling
 - The resident should update the medication list accordingly in Epic using the medication review function. Any changes to the medication list should be documented appropriately following the Cancer Center Policies and click medications reviewed so that others will have a record of who updated the list.
 - The Resident will need to write a consult note using the appropriate Senior Oncology Program Epic Smart Note template. The template is designed to assess the patient's knowledge about their medications, determine if they can open bottles without assistance, detect and address missed doses, read prescription labels, self-administer medication and whether a pill box would be useful.
 - The goal of the medication review is to detect polypharmacy and any medication related problems such as unsafe drugs in the elderly, drug-drug interactions, potential medication related adverse drug reactions or preventable events such as the need for renal dosing, suboptimal or duplicate

- therapies, and as mentioned earlier in previous bullet, any social concerns should be noted. The resident should always address problems detected and a solution. This should be discussed with the patient and their oncologist at the center before leaving the patient.
- If the doctor is unavailable, follow up with the physician and determine the best approach to communicating the information with the patient if they have left the center. If the patient is doing well that should be noted also.
 - If any follow up instructions are communicated to the patient the resident should provide the patient with a written Medication Related Action Plan with additional communication sent in Epic to patient's medical team,
 - The signed consult note will include your name, title, contact information and time you spent on the entire medication review process.
- Resident will make every effort to see patient while they are getting chemotherapy. If the patient leaves before the resident can get to the center, the resident should find out when the next treatment is due and come on that date/time.
 - If a Staff Message arrives for a Collegeville and Exton patient, the Resident will need to check the staff pharmacist schedule to determine which pharmacist is working at that site on the date of the Senior Oncology patient's scheduled treatment. The pharmacist should be contacted via an email to alert them and ask if they are able to see the patient.
 - If there are any medication issues the resident should use clinical judgment in terms of urgency. The patient's oncologist is located on site at the cancer center. The patient's oncology nurse is also available at the cancer center. Follow up calls regarding non-oncology issues should be done with the patient's PCP or other consulting physician depending upon the medication problem. Any discussions with physicians, nurses etc. should be noted in the progress note.
 - If a problem cannot be resolved with a medication the progress note should indicate that you are following up with the patient's physician and you will write another note in the chart if necessary, to make the cancer center clinicians aware of your resolution of the problem(s).
 - If the resident cannot resolve the medication issue or needs assistance, they should consult their preceptors.
 - The consult/progress note should be copied to an Epic I-Vent. Please try and do this in a timely manner after seeing the patient.
 - Residents are responsible to maintain pharmacy internal Master Senior Oncology patient excel list with active patients enrolled in senior oncology program and who they have counseled. This is stored in the Pharmacy share drive, folder marked: Senior Oncology.
 - Residents are responsible for completing the Senior Oncology Medication Bottles spreadsheet in the same folder which is designed to keep statistics on our impact on discrepancies found by patients bringing in their medication bottles.
 - Attend Senior Oncology Program Meetings once a month or when scheduled.
 - Additional assignments as requested by preceptor or Senior Oncology Staff

6) Preceptor interaction

- More frequently during training as pharmacy is consulted to see patients. Direct instruction and modeling of strategies to perform medication therapy reviews and ice breakers with patients.
- As needed throughout longitudinal experience.
- Formative, ongoing feedback will be provided to the resident regularly on how they are progressing and how they can improve after resident performs tasks and interviews patients.
- Adjustments to the resident's learning activities will be made, if necessary, in response to information obtained through day to day informal observations, interactions and assessments and each resident's abilities and performance.

7) Expected progression

- Residents will shadow preceptor before, during and after patient counseling sessions.
- Pharmacist will observe residents before, during and after patient counseling sessions until preceptor feels resident has progressed enough to complete consults on their own.
- Residents will complete most of the senior oncology patient counseling sessions and documentation independently, but both preceptors will still be assisting with the counseling to remain active in the program.
- Preceptor will shadow resident at least once per quarter to assess longitudinal progress.

8) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.
- Residents will complete **formative self-assessments** in PharmAcademic at the end of the first three quarters. This will be utilized by the preceptor during their quarterly summative evaluations and to assist in adjusting the resident's activities on the rotation.

Type of evaluation	Who is responsible to complete	When it should be completed
Summative	Preceptor	End of each quarter and at the end of the learning experience
Resident self-assessment snapshot OBJ R1.1.8 (Applying) Demonstrate responsibility to patients	Resident	End of each quarter (first, second and third)
Preceptor/learning experience evaluation	Resident	End of the learning experience

Main Line Health cancer center resources: intranet/radonc/page101.aspx

Patient education references available on MLH intranet: Go to Clinical Departments>MLH Rad/Med Oncology>PH Cancer Center>Patient Education. There are links to oral chemotherapy handouts as well as symptom management sheets on: anxiety, bone loss, constipation, depression, diarrhea, fatigue, mucositis, neuropathy, pain. These can be provided to patients at the time of counseling as well as mailed to patients.

References/recommended readings:

1. National Comprehensive Cancer Network (NCCN) Guidelines available online at NCCN.org. Including antiemesis and survivorship guidelines.
2. NCCN Guidelines for Older Adult Oncology available online at nccn.org/professionals/physician_gls/pdf/senior.pdf
3. [Beers Criteria available online on the American Geriatric Society \(also available on the residency share drive\)](#)
4. STOP/START criteria (available in the residency share drive)
5. Fall prevention handout (available in the residency share drive)
6. [Morisky Medication Adherence Scales: MMAS-4 and MMAS-8 \(available in the residency share drive\)](#)
7. Nightingale G. Hajjar E. Swartz K. et al. Evaluation of a pharmacist-led medication assessment used to identify prevalence of and associations with polypharmacy and potentially inappropriate medication use among ambulatory senior adults with cancer. Journal of Clinical Oncology. 2015; 33:1-7. (available in the residency share drive)
8. Roth MT. Ivey JL. Esserman DA. Et al. Individualized medication assessment and planning: optimizing medication use in older adults in the primary care setting. Pharmacotherapy. 2013; 33 (8):787-797. (available in the residency share drive)

During the learning experience the resident will focus on the goals and objectives outlined in section 9 below by performing the activities that are associated with each objective.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the senior oncology learning experience.

9) Activities

Taught and evaluated objectives	Description	Activity used to meet this objective
OBJ R1.1.1	(Applying) Interact effectively with health care teams to manage patients' medication therapy	<ol style="list-style-type: none"> 1. During counseling session, if a patient need arises that pharmacist cannot aid, it is expected that they contact/communicate with oncologist, RN, PCP to resolve problem. 2. Provide any recommendations to medications to patient's medical team via Communication Management Medication Action Plan. 3. Attend and contribute at Senior Oncology Meetings to various process improvement ideas or provide input on status of program. 4. Complete project or additional assignments at the discretion of the preceptor or senior oncology staff.
OBJ R1.1.2	(Applying) Interact effectively with patients, family members, and caregivers	<ol style="list-style-type: none"> 1. Build patient-pharmacist relationship while counseling patient. Provide patient education including new medication teaching, disease state teaching, maintenance medication or drug interactions. 2. Use effective patient education techniques to provide counseling to patients and caregivers, including information on medication therapy, adverse effects, compliance, appropriate use, handling, and medication administration. 3. Provide patient/caregiver a Medication Related Action Plan on any medication related recommendations, then follow up with communication in Epic to patient's medical team
OBJ R1.1.3	(Analyzing) Collect information on which to base safe and effective medication therapy	<ol style="list-style-type: none"> 1. Request that patients bring their medication bottles with them to collect information regarding their current medication list. 2. Utilize EMR to review pertinent labs, patient weight, and BSA. 3. Discuss with patient and/or caregiver any other information that can be collected on their current medications, if there are any unmet needs or potential side effects occurring.
OBJ R1.1.4	(Analyzing) Analyze and assess information on which to base safe and effective medication	<ol style="list-style-type: none"> 1. Review patient's medications for inappropriateness in the elderly, drug interactions, side effects and adherence and suggest alternative therapies if

OBJ R1.1.4 (continued)	therapy	<p>possible.</p> <ol style="list-style-type: none"> 2. Review prescription bottle labels for expired medications and last fill date. 3. Review disease states to ensure they correspond to all prescribed home medications and cancer center medications. 4. Review current literature/guidelines in senior oncology using NCCN, Beers Criteria, STOPP criteria, fall prevention strategies, etc. to evaluate appropriateness of medication therapy; consider patient's quality of life issues and economic issues if they need assistance finding a pharmacy that offers less expensive drug prices.
OBJ R1.1.6 OBJ R1.1.7	<p>(Applying) Ensure implementation of therapeutic regimens and monitoring plans (care plans) by taking appropriate follow-up actions</p> <p>(Applying) Document direct patient care activities appropriately in the medical record or where appropriate</p>	<ol style="list-style-type: none"> 1. If the resident needs to contact/communicate with another health care professional regarding medications/discrepancies/drug interactions, etc. The resident follows up to make sure the situation is resolved, or the issues are taken care of properly. 2. Documentation that the issue was taken care of in the patient's chart by preparing a consult note using Epic Senior Oncology Smart Phrase Template. 3. Articulate patient care issues at monthly senior oncology meetings. 4. Send communication through Epic to patient's medical team on any recommendations you have made to the patient's medications using Medication Action Plan.
OBJ R1.1.7	(Applying) Document direct patient care activities appropriately in the medical record or where appropriate	<ol style="list-style-type: none"> 1. Complete Senior Oncology Pharmacist Evaluation form as a smart note in Epic and save as a consult note in EMR. The evaluation form should indicate what was discussed with patient and any medication or patient care issues that were addressed or need follow up including the number of interventions. 2. Update medication list in Epic and click reviewed. 3. Copy consult note to an Epic I-Vent. 4. Note on the master senior oncology spreadsheet that patient was counseled, date and your initials. 5. Complete the senior oncology medication bottles spreadsheet.
OBJ R1.1.8	(Applying) Demonstrate responsibility to patients	<ol style="list-style-type: none"> 1. Patients are counseled while in the cancer center receiving treatment and as close to their quarterly medication and multidisciplinary assessment as possible. 2. Determine urgency for communication of any medication issues. Make sure internal patient list is maintained and updated when patients are counseled. Ensure that accurate and timely medication specific information regarding a specific patient reaches those who need it in an appropriate time.

OBJ R1.1.8 (continued)		<ol style="list-style-type: none"> 3. Choose and manage daily activities so that they reflect a priority on delivery of appropriate patient-centered care to each patient. Show enthusiasm and team approach to seeing patients and offering assistance when have availability to see patients based on resident's schedule. 4. Check Epic Staff Messages in the Pharmacy In-Basket regularly to determine if any new patient consults or other communication needs to be addressed
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Drug information rotation learning experience

Learning experience: Drug information
Learning experience type: Drug information
Preceptor(s): (Primary) Kiyo Yoda, PharmD;
(secondary) Andrea Weeks,
PharmD, Kelly Butler, PharmD,
Steve Breslin, PharmD, Liz
Ferrigno, RPh, Al Celidonio,
RPh



1) General description

The drug information rotation is a required longitudinal rotation where residents will be responsible for providing comprehensive, evidenced-based medication information. The residents are expected to respond to drug information requests in a timely manner and document all details of the interventions. Inquiries will not be limited to health care professionals and may include requests from patients and their caregivers. Responses should be tailored to the appropriate language level dependent on the background of the requestor. As part of the longitudinal experience, residents will be responsible for reviewing and evaluating journal and final presentations of APPE students and will also be required to prepare and present two formal journal clubs per resident. A minimum of one newsletter article must be submitted to be included in the Main Line Health Pharmacy Newsletter and one formal staff development in-service must be completed.

2) Activities/task

Drug info service:	Residents will document questions and answers into the appropriate data base in the shared drive. Residents will be assigned a drug information phone so that requesters can reach them throughout the hospital. Drug information hours are generally 7:00 am to 4:00 pm. From 4:00 pm to 10:00 pm, residents will provide after-hours drug information service and will be provided laptop access to the network. Each resident beginning the Saturday they are staffing to the following Friday night until 10:00 pm will alternative the after-hours drug information service. Each call will be triaged for urgency.
Community outreach:	Residents will participate in outreach events such as Senior Supper talk, brown bag etc. as coordinated by the hospital community coordinator (At least two occurrences).
Staff education:	Residents will provide staff in-services on various topics throughout the year. In-services will be provided in person as needed and at least twice a month via email summaries

(i.e., PPRM-Paoli Pharmacy Resident Memo). Within PPRM, residents will summarize recent DI questions and answers as well as short summaries of recent student presentations. One formal staff development in-service will be required and can be scheduled during any rotation.

- Journal review: Present two journal clubs per resident (i.e., one resident run journal club per quarter); review and evaluate journal presentations by APPE students.
- Newsletter article: At least one article must be submitted by April 1.
- Teaching: Oversight of APPE/IPPE students. Residents will share the responsibility of scheduling and evaluating students' journal clubs and final presentations. This also includes sending out email reminders to staff. Opportunities for teaching students will be assigned during the year.

During the learning experience the resident will focus on the goals and objectives outlined in section 3 below by performing the activities that are associated with each objective.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the drug information learning experience.

3) Goals and objectives

Goals and objectives	Description	Activity detail
R1.1.2	(Applying) Interact effectively with patients, family members, and caregivers	Construct and provide effective medication and practice-related education, training or counseling to patients, caregivers, health care professionals and the public in the form of written information/handouts. Targets audience's needs. Complete at least one formal staff development in-service. Demonstrates rapport with learners and captures interest and facilitates audience participation. Summarizes important points, uses visual aids and handouts to support learning activities. Includes self-assessment questions and to determine if objectives met. Provide concise, applicable, comprehensive, and timely responses to requests for drug information from patients and health care providers. In-services are provided when applicable. Includes accurate citations. Uses critical thinking skills, effective verbal guidance and facilitates learning using indirect monitoring of performance.
R4.1.1	(Applying) Design effective educational activities	
R4.1.2	(Applying) Use effective presentation and teaching skills to deliver education	
R4.1.3	(Applying) Use effective written communication to disseminate knowledge	
R4.1.4	(Applying) Appropriately assess effectiveness of education	
R4.2.1	(Analyzing) When engaged in teaching, select a	

R4.2.2	preceptor role that meets learners' educational needs (Applying) Effectively employ preceptor roles, as appropriate	[same as above]
R4.1.3	(Applying) Use effective written communication to disseminate knowledge	Articulates in writing PPRM-Paoli Pharmacy Resident Memo every other week via email. Writes in a manner that is easily understandable and free of errors. Demonstrates thorough understanding of the topic. Notes appropriate citations and references.
R1.1.7	(Applying) Document direct patient care activities appropriately in the medical record or where appropriate	Maintain the drug information database in the shared drive. Record requests with summary of drug information questions/responses.
R1.1.2	(Applying) Interact effectively with patients, family members, and caregivers	Participate in community outreach events (ex. Senior Supper, brown bag). Build patient-pharmacist relationship while counseling. Employs effective patient education techniques including information on medication therapy, adverse events, compliance, appropriate use, handling, and medication administration.
R4.1.1 R4.1.2 R4.1.3	(Applying) Design effective educational activities (Applying) Use effective presentation and teaching skills to deliver education (Applying) Use effective written communication to disseminate knowledge	Appropriately review journals via journal club by choosing educational needs of audience and learning level. Defines objectives, selects content that is relevant, and evidence based. Demonstrates rapport and maintains audience interest. Presents at appropriate volume and rate uses handouts to support presentation. Writing free from grammatical errors and demonstrates knowledge of topic and cites appropriate references.
R4.1.3	(Applying) Use effective written communication to disseminate knowledge	Submit at least one Main Line Health newsletter article. Writes in a manner that is easily understandable and free of errors. Demonstrates thorough understanding of the topic. Notes appropriate citations and references.
R4.2.1 R4.2.2	(Analyzing) When engaged in teaching, select a preceptor role that meets learners' educational needs (Applying) Effectively employ preceptor roles, as appropriate	Oversight of APPE/IPPE students. Residents will have multiple opportunities to work and teach students in varying capacities such as the responsibility of scheduling and evaluating students' journal clubs and final presentations. This also includes sending out email reminders to staff. Provides direct instruction, models for learners, coaches/supervises while skills are being performed. Allows learners to perform independently and provides effective feedback.

4) Preceptor interaction

- More frequently during initial training
- Bi-monthly meetings to discuss drug information projects and responses and provide verbal constructive feedback
- As needed throughout longitudinal experience

5) Expected progression

Week 1 timeline:

- Send introduction email(s) to pharmacy department staff and any other appropriate parties (i.e., introduction of resident names, contact number(s), contact emails)
- Become familiar with the shared drive drug information database and look into further improvements on usability for other pharmacy staff
- Set up drug information phone after hours schedule for the year and send to staff

Weeks 2–52:

- Staff in-services as needed (minimum one formal staff development in-service)
- Answer drug information questions via drug information phone
- Maintain drug information database
- Provide patient counseling
- Attend scheduled community outreach events
- Respond to drug shortages
- Complete two journal clubs
- Complete one newsletter article for the Main Line Health Pharmacy newsletter
- Work with students—schedule, attend and evaluate student presentations
- Write every other week Paoli Pharmacy Resident Memo (PPRM) newsletter email to staff which includes brief synopsis of the following: 1) answers to drug information questions 2) journal clubs 3) presentations all of which occurred during the prior two-week time frame

6) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Formative assessments**—The preceptor will provide the resident with ongoing, activity focused, measurable, and constructive feedback in order to enhance learning.
- Residents will complete **self-assessments** in PharmAcademic at the end of each quarter. This will be utilized by the preceptor during their quarterly summative evaluations and to assist in making adjustments to the resident's activities on the rotation.
- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Summative	Primary preceptor with feedback from secondary preceptors	End of each quarter and at the end of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience
Resident self-assessment	Resident	End of each quarter

Resident self-assessment questions in PharmAcademic:

1. Please describe an unusually challenging drug information question you had this month and how you approached finding the answer?
2. How do you assess the effectiveness of the education you provide? How well were your learning objectives met?

Project Red rotation learning experience

Preceptor: Kelly Butler, PharmD, Clinical Pharmacist

Designated rotations: Internal medicine, Project Red

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butlerk@mlhs.org



1) General description

The Project RED (re-engineered discharge) is a longitudinal rotation. This rotation focuses on improving processes that occur during a patient's transition from hospital to home. One-in-five elderly patients are readmitted to the hospital within 30 days after discharge and approximately 40 percent may be avoidable. Patients who have congestive heart failure, acute myocardial infarction or pneumonia are screened on admission for eligibility. The "Teach Back" method is utilized to assess a patient's understanding of skills required to avoid readmission including knowledge about medications and most importantly, on the day of discharge, a review of written discharge instructions. This rotation will require the resident to develop skills in patient counseling with a focus on preventing readmissions due to heart failure and improving patient outcomes.

Core content which will be covered via patient experiences, discussion of reading materials.

Good communication and interpersonal skills are vital to success in this experience.

2) Disease states

During this Project Red rotation, the resident will counsel patient on their medications in the following disease states: congestive heart failure, acute myocardial infarction and pneumonia.

3) Key contacts

Project Red is led by the patient care facilitators (PCF) on each floor. The Project Red team is a multidisciplinary team of physicians, cardiologists, pharmacists, PCFs, care managers, and social workers.

- 3A (Telemetry) – Lisa Springer, RN, MSN and Joyce Kish, RN, MSN
- 4B (Med/Surg) – Deb Tagland, NP
- 3 Main (Oncology/Tele) – Tim O'Brien, RN

4) Activities

- Pharmacy will be notified via email by a PCF when a patient is enrolled in Project Red.

- Resident will review patient profile, compare home meds to current inpatient medications.
- Resident will make every effort to see patient while inpatient.
- Resident will document consult in progress notes in Epic.
- Resident will contact patient via phone call within 72 hours after discharge.
- Resident will document phone call in Excel file kept on pharmacy shared drive.

5) Preceptor interaction

- More frequently during training as pharmacy is consulted to see patients.
- As needed throughout longitudinal experience.

6) Expected progression

- Resident will shadow preceptor for inpatient visits as well as follow-up phone calls.
- Pharmacist will observe resident during inpatient visits and follow-up phone calls until preceptor feels resident has progressed enough to complete consults on their own.
- Resident will complete all Project Red inpatient consults and follow-up phone calls on own.
- Preceptor will shadow resident quarterly or as often as needed at the discretion of the preceptor.

7) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Formative assessments**—The preceptor will provide the resident with ongoing, activity focused, measurable, and constructive feedback in order to enhance learning.
- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Summative	Preceptor	End of each quarter and at the end of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience

During the learning experience the resident will focus on the goals and objectives outlined in section 8 below by performing the activities that are associated with each objective.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the drug information learning experience.

8) Objectives

Objective	Description	Activity detail
R1.1.2	(Applying) Interact effectively with patients, family members and caregivers	Develop patient-pharmacist relationship while counseling patients. Interactions should be respectful and show empathy.
R1.1.7	(Applying) Document direct patient care activities appropriately in the medical record	Document Pharmacy Consult in the Progress Notes of Epic. Provide preceptor summary of follow up phone call for documentation in the Excel Pharmacy Project Red log. Documentation should be clear and written in a timely manner. Documentation should follow the health system's policies and procedures, including that entries are signed, dated, timed, legible and concise.
R1.1.8	(Applying) Demonstrate responsibility to patients	Gives priority to patient care activities. Provides patient with information on medication therapy, adverse effects, compliance, appropriate use, handling and medication administration. Informs patients how to obtain their medications in a safe, efficient and cost-effective manner. Determines barriers to patient compliance and makes appropriate adjustments.
R1.2.1	(Applying) Manage transitions of care effectively	Participates in medication education. Follows up with patient in a timely and caring manner—contacts the patient within 72 hours of discharge. Takes appropriate steps to help avoid unnecessary hospital admissions and/or readmissions—during follow-up with a patient post-discharge, if a patient need arises that pharmacist cannot assist with contact/communicate with PCF, PCP, etc.

Pharmacy and therapeutics rotation learning activities

Primary preceptor: Al Celidonio RPh, Director of Pharmacy,
Paoli Hospital

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Co-preceptor: Kelly Butler, PharmD

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Pharmacy and Therapeutics meets the fourth Wednesday every other month on site at Bryn Mawr Hospital.

1) General description

The Pharmacy and Therapeutics Rotation is a longitudinal rotation in the PGY-1 pharmacy residency program at Paoli Hospital. (From the Pharmacy Manual, Policies and Procedures, Policy 9:00 P&T Committee Scope and Responsibility available online at mainlinehealth.ellucid.com/documents/view/3620): The Pharmacy and Therapeutics Committee is a committee of the medical staff responsible for the development and surveillance of all medication use policies and practices to assure optimum clinical results and a minimum potential for hazard to patients. The president of the medical staff, in consultation with the Medical Executive Committee, appoints the Pharmacy and Therapeutics Chair as well as physicians, pharmacists, nurses and other supporting membership. The Main Line Health Pharmacy and Therapeutics Committee will meet monthly, at least ten times per year, and has three primary functions: formulary maintenance, safe medication use, and medication use evaluation. The P&T Committee is also responsible for the development of all drug distribution and administration policies and procedures including all new or updated Main Line Health pre-printed/computerized physician order entry physician order forms if medications are listed.

Good written and oral communication and interpersonal skills are vital to success in this experience. The resident must devise efficient strategies for accomplishing the required activities in a limited time frame.

2) Actual task will include

- Attendance at pharmacy leadership meetings which meets the second Wednesday of each month.
- Attendance at pharmacy clinical meetings which meets the first Tuesday of each month.

- Provide support to the Pharmacy and Therapeutics Committee by completing one drug class review, monograph, treatment guideline, or protocol including a Failure Mode and Effects Analysis for a medication formulary request for presentation at P&T Committee.
- Assist in compiling data for Adverse Drug Reaction Detection and Surveillance Program (monthly monitoring) for presentation at P&T Committee.
- Attendance at Pharmacy and Therapeutics Committee meetings which meet on the fourth Wednesday of each month alternating with the fourth Tuesday of the month and transcription of the meeting minutes.

During the learning experience the resident will focus on the goals and objectives outlined in section 3 below by performing the activities that are associated with each objective.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the P&T learning experience.

3) Activities

Goals and objectives	Description	Activity detail
Goal R3.2	Demonstrate management skills	
OBJ R3.2.4	(Applying) Manage one's own practice effectively	Demonstrates effective workload and time-management skills. Assumes responsibility for personal work quality and improvement. Attends Pharmacy and Therapeutic, Leadership and Clinical Meetings and collaborates in a professional manner with others within the organization.
Goal R2.1	Demonstrate ability to manage formulary and medication-use processes, as applicable to the organization	
OBJ R2.1.1	(Creating) Prepare a drug class review, monograph, treatment guideline or protocol	Provide support to the Pharmacy and Therapeutics Committee and its subcommittees in the form of a constructing a drug class review, monograph, treatment guideline, or protocol. Interpretation of medical literature, cost analysis and budget and patient safety issues should be analyzed. Present formulary review at P&T Committee meeting. Transcription of Pharmacy and Therapeutics Committee Minutes and any other required minutes for attended meetings. Effectively communicates any changes approved to the medication formulary, medication usage, or other policies or procedures to appropriate parties.

OBJ R2.1.4	(Applying) Participate in medication event reporting and monitoring	Assist in compiling and preparing adverse drug event data as part of surveillance program for presentation at Pharmacy and Therapeutics Committee.
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4) Preceptor information

Weekly or more often as needed:

Preceptor office hours for projects and topic discussions will be arranged on a week by week basis.

5) Expected progression of resident responsibility on this learning experience

Weeks 1–4: Preceptor to review Pharmacy and Therapeutics learning activities and expectations with Resident. Resident to be assigned MUE, formulary review request and begin required research.

Weeks 4–52: Resident to attend required meetings and work on assignments including ADR data, reading required literature, gathering and compiling data and cost analysis. Resident should provide Preceptor with preliminary outlines for formulary review and MUE after they are 25 percent completed to receive verbal feedback and to make sure that they are meeting deadlines for completion.

[The length of time the preceptor spends in each of the phases of learning will depend on BOTH the resident's progression in the current rotation and what activities the resident is participating in based on meeting schedules and assignment deadlines during the residency program.]

6) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Formative assessments**—The preceptor will provide the resident with ongoing, activity focused, measurable, and constructive feedback in order to enhance learning.
- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Summative	Primary preceptor in collaboration with co-preceptor	End of each quarter and at the end of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience

Suggested readings (available also in Residency File):

1. ASHP Policy Positions: Formulary Management
2. ASHP Statement: Pharmacy and Therapeutics Committee and the Formulary System
3. ASHP Statement: Use of Medications for Unlabeled Uses
4. ASHP Guidelines: Medication Use Evaluation
5. ASHP Guidelines: Pharmacy and Therapeutics Committee and the Formulary System
6. ASHP Endorsed Document: Principles of a Sound Drug Formulary System

Available at:

ashp.org/menu/PracticePolicy/PolicyPositionsGuidelinesBestPractices/BrowsebyTopic/FormularyManagement.aspx

Nursing-Pharmacy Medication Safety Committee rotation learning experience

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The Nursing-Pharmacy Medication Safety Committee (formerly the CQI, Continuous Quality Improvement Committee) meets the third Wednesday of the month from 10:00–11:30 am.



1) General description

The Nursing-Pharmacy Medication Safety Committee rotation is a longitudinal 52-week required rotation in the PGY-1 pharmacy residency program at Paoli Hospital. The Nursing-Pharmacy Medication Safety Committee reviews all medication administration events (similarities, trends, and process issues) to ensure that patients are receiving on admission, and throughout their hospital stay, the most appropriate, safe, and effective drug therapy for their clinical condition. At each campus a pharmacist and nurse co-lead the Nursing-Pharmacy Medication Safety Committee meeting. The meeting includes risk and quality managers and meets monthly to review medication administration events/near misses. When trends are noted, process redesign is deployed. Final decision about change in practice is made by the P&T Committee.

From the administrative policy and procedure manual Main Line Health (MLH) mission statement is “To provide a comprehensive range of safe, high quality health services, complemented by related educational and research activities that meet community needs and improve the quality of life in the communities we serve.” Core values are compassion, participation, innovation, excellence, integrity and communication. The MLH definition of quality: The highest value and quality is present when the optimal outcome is attained with the most appropriate utilization of resources. Achieving quality means adding value to all tasks through a commitment to continuous improvement of services which serve our patients, physicians, staff and community. There are continuous efforts to improve performance throughout the organization using the model methodology of define, measure, analyze, improve and control. Quality improvement activities will be collaborative and interdisciplinary and are aligned with the Institute of Medicine six quality aims: safe, timely, efficient, effective, equitable and patient-centered. Activities should be centered on meeting the current external demands in terms of quality and efficiency of our services while at the same time managing and preventing patient harm. Service quality will be measured by patient satisfaction.

Meeting attendance is required, and documentation of meeting agenda topics is required. The resident must devise efficient strategies for accomplishing the required activities in a limited time frame.

2) Actual tasks will include

- Attendance at the Nursing-Pharmacy Medication Safety Committee which meets the third Wednesday of the Month from 10:00–11:30 am in the Malvern Room (meeting room may change).
- Attendance at weekly Medicine Grand Rounds held on Wednesdays from 12:00–1:00 pm in the Potter Room (meeting room may change).
- Attendance at Schwartz Rounds which meet periodically in place of Medicine Grand Rounds same time and room.
- Attendance at monthly Pharmacy Staff Meetings with transcription of minutes.
- Documentation in PharmAcademic of meeting agenda/minutes/discussions along with three take-home points from the meeting or Medicine Grand/Schwartz Rounds.
- For the Nursing-Pharmacy Medication Safety Committee quarterly process improvement ideas that are shared with the committee which can come from other meetings attended. Other ideas can be an ISMP article that can have some impact if initiated systemwide.

During the learning experience the resident will focus on the goals and objectives outlined in section 3 below by performing the activities that are associated with each objective.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the Nursing-Pharmacy Medication Safety Committee learning experience.

3) Activities

Goals and objectives	Description	Activity detail
Goal R2.1	Demonstrate ability to manage formulary and medication-use processes, as applicable to the organization.	
Goal R3.1		
Goal R3.2		
OBJ R3.2.3	(Applying) Contribute to departmental management	<ul style="list-style-type: none"> • Meet with preceptor quarterly to discuss what is going on at the various meetings that may pertain to pharmacy and to review upcoming Nursing-Pharmacy Medication Safety Committee process improvement topic prepared for presentation. • Examines significant departmental needs as they pertain to medication safety.

OBJ R3.1.1	(Applying) Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership	<ul style="list-style-type: none"> • Practices effective time management to attend scheduled meetings. • Demonstrates ability to lead and negotiate interprofessional committee members. • Effectively communicates and takes into consideration various health care professionals' perspectives. • Records and prepares pharmacy staff meeting minutes in a timely manner and uses effective communication skill.
OBJ R2.1.3	(Analyzing) Identify opportunities for improvement of the medication-use system	<ul style="list-style-type: none"> • Minimum of two process improvement ideas selected and presented at the Nursing-Pharmacy Medication Safety Committee Meetings which is taken from a prior meeting such as a Medicine Grand Rounds, article read or information from or ISMP article. • Gather and assist in analysis of data that provides relevant background information needed to make recommendations. • Ideas should be applicable systemwide and use best practices to identify opportunities for improvement in the medication use system.
OBJ R3.1.2	(Applying) Apply a process of ongoing self-evaluation and personal performance improvement	<ul style="list-style-type: none"> • On-going self-reflection in PharmAcademic in the form of a brief outline of the Nursing-Pharmacy Medication Safety Committee meeting agenda and discussion. • Three take home points should be included. This includes Medicine Grand Rounds and Schwartz Rounds. • Self-evaluation should take into consideration the development of professional goals and plans reflecting on experiences and new skills developed through meeting attendance. • Demonstrate ability to incorporate constructive feedback from others to evaluate one's own strengths and areas for improvement.

4) Preceptor interaction

Quarterly or more often as needed:

Preceptor office hours for topic discussions will be arranged quarterly or on an as needed basis

Expected progression of resident responsibility on this learning experience:

Day 1: Preceptor to review the Nursing-Pharmacy Medication Safety Committee Rotation learning activities and expectations with

Resident. Provide information to the Resident in terms of meeting/committee/rounds locations, dates and times.

Weeks 1–52: Resident to attend meetings/Medicine Grand Rounds/Schwartz Rounds as required and document in PharmAcademic required information described in the activities above.

Monthly: Pharmacy Staff Meeting Attendance with transcription of minutes.

Quarterly – Weeks 13, 26, 39 and 52: Presentation at the Nursing-Pharmacy Medication Safety Committee Meeting: Identifies a minimum of two quality improvement/safety ideas based off other meetings/ Medicine Grand Rounds/ Schwartz Rounds attended or ISMP article as described in the activities section. Topic should be discussed with preceptor prior to presentation at the Nursing-Pharmacy Medication Safety Committee Meeting.

Good communication and interpersonal skills are vital to success in this experience. The resident must devise efficient strategies for meeting attendance while still completing obligations of other rotation requirements.

[The length of time the preceptor spends in each of the phases of learning will depend on BOTH the resident's progression in the current rotation and what activities the resident is participating in based on meeting schedules during the residency program.]

5) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Resident self-evaluations**—These will be utilized by the resident using PharmAcademic on a quarterly basis to document activities performed on this rotation along with their reflection on what they have learned or contributed.
- **Formative assessments**—Preceptor will provide verbal on-going feedback to the resident which is activity focused, measurable, constructive about how they are progressing and how they can improve throughout the rotation
- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Self-evaluations	Resident	End of each quarter
Summative	Preceptor	End of each quarter and at the end of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience

Self-reflection questions

1. Briefly describe the Nursing-Pharmacy Medication Safety Committee Agenda this month. (Provide at least three take home points.) Did you learn anything unexpected? How do you plan to use this information in the future?
2. Briefly describe how you contributed to the Nursing-Pharmacy Medication Safety Committee meeting this month. Did you have any quality improvement/safety ideas? Did you find it difficult to come up with a medication safety idea? What resources did you use?
3. What Grand Rounds and/or Schwartz Rounds did you attend this month? Please describe at least three take home points you learned from each. Was this new knowledge for you? How do you plan to use this knowledge? Are there any safety events that were mentioned?
4. What were some highlights from the last Pharmacy Staff Meeting you attended? How are new policies addressed by the pharmacy director? What types of questions did staff have? What type of leadership and communication skills are needed to run a staff meeting? Based on this point in the residency, do you feel comfortable running a staff meeting? Why or why not?

Pharmacy services/staffing rotation

Primary preceptor: Liz Ferrigno, RPh

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Secondary preceptor(s): Designated pharmacy staff mentors



1) General description

The staffing/pharmacy services rotation is a longitudinal rotation in the PGY-1 pharmacy residency program. The resident will work in the Ground Floor Pavilion Pharmacy as assigned. This rotation will begin after the pharmacy orientation rotation and will end on June 30th of the residency year. The PGY-1 pharmacy resident will continue to build upon skills in pharmacy operations, utilization of computer systems (e.g., Epic, Pyxis, Kit-Check), pharmacist responsibilities, learning Policy/procedures of Main Line Health, supervision of technicians, and troubleshooting. Main Line Health Safety behaviors will continue to be emphasized and monitored for utilization. Rotation activities allow the resident to assimilate and integrate a variety of practice skills developed within the pharmacy department in order to function effectively as an acute care pharmacy practitioner. Proposed schedule for resident is every other weekend x 42 weeks/after orientation, training and licensure are completed.

2) Actual tasks will include

The pharmacy staffing experience will primarily focus on inpatients. The PGY-1 pharmacy resident will need to demonstrate competency in the areas of inpatient pharmacy, including unit dose procedures, order processing, problem resolution, IV admixture and chemotherapy preparation (when required). An understanding of the role of the pharmacist and the pharmacy technician, as well as, the systems and technology used for inpatients is further developed. The PGY-1 pharmacy resident will be involved in medication regimen review, medication order verification, dispensing, and provision of drug information. Other activities include participation in medication reconciliation at transitions of care, evaluating renal dosing, therapeutic drug monitoring (heparin, warfarin, vancomycin, etc.), reporting adverse drug events and medication events, providing patient education and counseling to patients upon request. The resident will be responsible for presenting a five-minute review of a Policy and Procedure at monthly staff meetings or via email to reinforce policies that were introduced during the Pharmacy Practice and Orientation Rotation.

During the learning experience the resident will focus on the goals and objectives outlined in section 3 below by performing the activities that are associated with each objective.

Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to the Pharmacy Staffing Rotation learning experience.

3) Activities

Goals and objectives	Description	Activity detail
Goal R1.1	In collaboration with the health care team, provide safe and effective patient care to a diverse range of patients...following a consistent patient care process.	
OBJ R1.1.1	(Applying) Interact effectively with health care teams to manage patients' medication therapy	Communicates information across the continuum of care. Utilizes comments, messages, sticky notes to communicate pertinent patient information.
OBJ R1.1.2	(Applying) Interact effectively with patients, family members and caregivers	<ol style="list-style-type: none"> 1. Articulates and explains information or modifications to the therapeutic plan to the patient or members of the health care team. 2. Demonstrates ability to document interventions (I-Vents) and understands the significance of documentation and all relevant criteria involved in documentation. 3. Acts respectfully and collaboratively.
OBJ R1.1.4	(Analyzing) Analyze and assess information on which to base safe and effective medication therapy	<ol style="list-style-type: none"> 1. Demonstrates ability to identify medication therapy problems, including: therapeutic duplications, adverse drug events or potential for such events, clinically significant drug-drug, drug-disease interactions or potential for interactions. 2. Demonstrates ability to evaluate laboratory values and make modifications to therapy according to hospital policy (Dose adjustment by Pharmacist policy, Targeted Drug Monitoring Policy and Pharmacy Protocol for IV Vancomycin Dosing).
OBJ R1.1.7	(Applying) Document direct patient care activities appropriately in the medical record or where appropriate	<ol style="list-style-type: none"> 1. Chooses appropriate direct patient-care activities for documentation (verbal orders, restricted drug use, renal dose adjustments, and exceptions to formulary). 2. Employs the hospital's policies and procedures for written and electronic documentation. All entries are signed, dated, timed, legible, and concise. 3. Utilizes safety surveillance tools in EPIC (warfarin monitoring) and documents IV to PO conversions and Dose Adjustments by Pharmacist appropriately.

Goal R1.3	Prepare, dispense, and manage medications to support safe and effective drug therapy for patients.	
OBJ R1.3.1	(Applying) Prepare and dispense medications following best practices and organization's policies and procedures	<ol style="list-style-type: none"> 1. Document modifications to a medication order appropriately. 2. Prepare medication using appropriate techniques and following the organization's policies and procedures and applicable professional standards. 3. Apply policies and procedures to ensure solutions are appropriately concentrated, without incompatibilities, stable and appropriately labeled and stored according to organization's policies. 4. Apply hospital's procedures to check the accuracy of medications dispensed, including correct patient, correct medication, correct dose, correct number of doses, expiration date. 5. Document in EPIC Compounding and Re-packaging all batched medications. Ensure final products are appropriately labeled with correct expiration dates, and auxiliary labels. 6. Applies policies and procedures to ensure home medications are reconciled when profiling orders for new admissions. 7. Demonstrate ability to prioritize responsibilities and ensure that patients receive medications on time.
OBJ R1.3.2	(Applying) Manage aspects of the medication-use process related to formulary management	<ol style="list-style-type: none"> 1. Employ appropriate procedures regarding exceptions to the formulary. 2. Ensure non-formulary medications are dispensed, administered and monitored in a manner that ensures patient safety.
OBJ R1.3.3	(Applying) Manage aspects of the medication-use process related to oversight of dispensing	<ol style="list-style-type: none"> 1. Ensure IV products are prepared using appropriate aseptic technique. 2. Employ appropriate policies and procedures to ensure medications are stored appropriately according to the hospital's safety measures for storage, disposal, monitoring of refrigerated and scheduled products. (Temp-trak, PharmEcology Waste Management, CII safe)
Goal R2.1	Demonstrate ability to manage formulary and medication-use processes, as applicable to the organization.	
OBJ R2.1.4	(Applying) Participate in medication event reporting and monitoring	<ol style="list-style-type: none"> 1. Illustrate ability to utilize STAR reporting system for reporting of Adverse Drug Events and Med Events. 2. Illustrates ability to recognize Great Catches and submit via online reporting system. 3. Submit quarterly Error Prevention Tool.

Goal R3.1	Demonstrate leadership skills.	
OBJ R3.2.4	(Applying) Manage one's own practice effectively	<ol style="list-style-type: none"> 1. Routinely seeks applicable new learning opportunities when performance does not meet expectations. 2. Demonstrates pride in, and commitment to, the profession through appearance, personal conduct, planning to pursue board certification and pharmacy association activities. 3. Demonstrates personal commitment to and adheres to organizational and departmental policies and procedures. (Main Line Health Safety Behaviors and Red Rules) 4. Demonstrate knowledge in Main Line Health policies and procedures and shares pertinent information at pharmacy staff meetings or via email. Each resident will present four policies and procedures to the staff.
Goal E2.1	Apply leadership and practice management skills to contribute to management of pharmacy services.	
OBJ E2.1.3	(Applying) Contribute to the pharmacy procurement process	<ol style="list-style-type: none"> 1. Applies principles of inventory management. Notifies purchaser when supplies are needed. 2. Demonstrates ability to obtain supplies for emergent needs in absence of purchaser. 3. Appropriately addresses issues surrounding the return or disposal of medications. 4. Explain safe practices for storage, dispensing, administration and security of pharmaceuticals.

4) Preceptor interaction

- Designated pharmacy staff mentors will provide direct instruction, modeling, and coaching of various strategies to perform required staffing responsibilities.
- Designated pharmacy staff mentors and primary preceptor will provide formative, ongoing, constructive feedback while residents are staffing to improve their performance on required tasks and facilitate independence and confidence in the resident.
- Primary preceptor will meet with resident once monthly or more frequently to discuss residents' progress and identify areas for increased emphasis or need for additional training based on pharmacist mentor progress reports and resident's own request.

5) Expected progression

- Resident to acquire strategies to appropriately prioritize work load.
- Resident to eventually manage workflow independently.

- Resident will familiarize and utilize available resources to manage work effectively.
- Initiate interactions with prescribers regarding disease state management in a professional manner.
- Make solid clinical recommendations to improve patient outcomes.
- Good communication and interpersonal skills are vital to success in this experience.
- The resident must devise efficient strategies for meeting their staffing responsibilities while still completing obligations of other rotation requirements.
- Goal for resident to function independently and effectively as an acute care pharmacy practitioner in various areas of the pharmacy and in their future career in any hospital pharmacy setting.

[The length of time the preceptor spends in each of the phases of learning will depend on BOTH the resident's progression in the current rotation and what activities the resident is participating in based on the staffing schedules during the residency program.]

6) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Formative assessments** (see below) will be ongoing, constructive, focus on activities and be measurable in order to strengthen the resident's skills regarding their role in preparing, dispensing and managing safe and effective drug therapy for patients.
- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Formative assessments	Pharmacists serving as mentors for residents while staffing	Twice quarterly progress reports
Summative	Preceptor	End of each quarter and at the end of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience

Formative assessments will be made through the staff pharmacist mentors who work directly with the residents. The staff pharmacist mentors will complete the attached PGY1 Resident Progress Report twice quarterly based on direct observations, instruction, modeling and coaching in order to facilitate/assist residents in functioning independently in the role of a hospital pharmacist. Residents will receive ongoing, constructive feedback to strengthen their skills from the pharmacist mentors while they are working directly with the resident. The

Resident Progress reports will be given to the primary preceptor who will utilize these reports to discuss areas for improvement or necessary skill development and to help determine if the resident is moving towards achieving the goals and objectives assigned to this rotation and for the residency.

For more information please see Paoli Hospital PGY1 Pharmacy Residency general information on [pages 28–30](#) of the pharmacy residency manual.

PGY1 resident progress report: Longitudinal staffing rotation

PGY1 Pharmacy Resident: _____ **Date:** _____

Pharmacist Mentor Completing Report: _____

Please rate the resident on the following functions. Additional comments on back.

General functions	Needs improvement (1–2)	Satisfactory (3)	Achieved/excels (4–5)
Resident arrives on time and is available for the entire assigned shift			
Resident treats co-workers with respect			
Resident is aware of his/her responsibilities in pharmacy			
Resident effectively manages staffing duties; workload is properly prioritized			
Resident performs duties of a technician if needed			
Resident performs duties at an acceptable pace			
Resident verifies orders with minimal assistance			
Resident is comfortable with the filling and checking processes			
Resident handles patient counseling and providers' questions effectively			
Resident enjoys work/great attitude/team player			
Resident displays initiative and assists colleagues when other duties are completed			

Specific inpatient functions	Needs improvement (1–2)	Satisfactory (3)	Achieved/excels (4–5)
IV/Pyxis Fill Check			
Order verification/entry			
IV Admixture/chemotherapy preparation			
Pyxis use/Kit check use			
Medication procurement			
Medication Reconciliation			

Evaluation scales	Description
NA	Not applicable
NE	Not evaluated at this time
1	Resident is not competent in this area. Multiple deficits exist, extensive intervention needed, preceptor may need to complete task(s), unable to work independently. (i.e., Needs Improvement) *Ex: Quality of product, work skills, and professionalism requires much improvement, requires considerable assistance to achieve competency, may need to repeat assignments/skills
2	Resident is not fully competent in this area. Below expected, marginal, limited deficiencies, needs consistent preceptor intervention, unable to work independently. (i.e. Minimally Acceptable, Needs Improvement)
3	Resident is competent in this area. No deficiencies, progressing satisfactorily, good expected level, requires only occasional intervention. (i.e. Meets Standards, Satisfactory Progress)
4	Resident excels in this area. No deficiencies, fulfilling objectives, fully competent, works independently. (i.e. Exceeds Standards, Achieved)
5	Resident excels in this area. No deficiencies, surpasses expectations and objectives, exceptional, works independently. Resident brings new insight into clinical situations based on experience and/or critical evaluation of the literature. (i.e. Outstanding, Achieved)

Additional comments on next page.

Comments:

Activities the resident did well.

Areas where the resident could focus efforts to improve skills:

Educational needs and or re-training areas (deficiencies):

Residency project rotation learning activities

Residency program director: Al Celidonio RPh,
Director of Pharmacy, Paoli Hospital
Office: Ground Floor Pharmacy – Main Building
255 West Lancaster Avenue, Paoli, PA 19301
484.565.1173 • Fax: 484.565.4997
celidonioa@mlhs.org

Project advisor(s) will be assigned to assist resident in completion of residency project.



1) General description

Each resident is responsible for the completion of a residency project. The project may be in the form of original research, a problem-solving exercise, or development, enhancement or evaluation of some aspect of pharmacy operations or patient care services. As a component of the project, the resident will submit the project as a work in progress for poster presentation at the ASHP Midyear Meeting. Alternatively, the resident may have the project completed for the ASHP Midyear Meeting. Good written and oral communication and interpersonal skills are vital to success in this experience. The resident must devise efficient strategies for accomplishing the required activities in a limited time frame. Attendance/Podium Presentation at the Eastern States Residency Conference held in the spring generally in early May will also be required. The resident may complete the original work presented for the ASHP Midyear Meeting or do a new project. The Eastern States Residency Conference is a forum where residents share experiences and expertise. Each resident will make a presentation on his or her residency project, which will be evaluated by the residency director and/ or coordinating preceptor(s). Residents will also be reviewed by their peers and other preceptors attending the program.

2) Project selection/ scope of projects/ approval

A list of potential projects will be generated by the Residency Advisory Committee (RAC) and distributed to the residents for consideration. It is the aim of the committee to provide the resident with several research topics related to: current activities and/or clinical practice issues at the medical center, current issues in pharmaceutical care, medication safety, pharmacy services and/or other areas of interest of the sponsoring committee members. In addition to projects submitted by RAC members, projects may be submitted by any pharmacy staff personnel and/or others as appropriate. Alternately, the resident may independently select a project and submit this to the RAC committee for approval. The Residency Advisory Committee will approve the final list of potential projects before it is distributed to the residents.

3) Project advisor(s)

Project advisor(s)' function is as project mentors and co-principal investigators. They will work directly with the resident to oversee the initiation, development, and completion of the research project. The advisor will collaborate on the research project itself and serve as a resource for the resident, as they would with any other research undertaking. It is expected that the advisor will participate in all committee meetings, provide periodic feedback to the resident and committee, critically review the all data collection and presentations, and perform any other functions of a collaborator.

Actual tasks will include: See Appendix A

4) Goals and objectives

During the learning experience the resident will focus on the goals and objectives outlined below by performing activities that are associated with each objective. Achievement of the goals of the residency is determined through assessment of ability to perform the associated objectives. The table below demonstrates the relationship between the activities and the goals/objectives assigned to this learning experience.

5) Activities

Goals and objectives	Description	Activity detail
Goal R2.2	Demonstrate ability to evaluate and investigate practice, review data, and assimilate scientific evidence to improve patient care and/or the medication-use system.	
OBJ R2.2.1	(Analyzing) Identify changes needed to improve patient care and/or the medication-use system	Identify a residency project. Use of best practices or evidence-based principals should guide direction of project. Requests for project data generated by health information technology or automated systems should be completed. A written summary of the project's goals, methods, and anticipated impact on services signed by the project preceptor must be submitted to his/her residency director and RAC no later than August 15 th .
OBJ R2.2.2 OBJ R3.2.4	(Creating) Develop a plan to improve patient care and/or the medication-use system. (Applying) Manage one's own practice effectively	Develop a personal project timeline to be reviewed and submitted to the project advisor and/or the Residency Director by: September 15 th . The project timeline will include specific time points for data collection, data analysis and presentation preparation. Submit an application to the Main Line Health IRB for review and approval of their project. Identify research design; obtain necessary approvals required by department or organization and necessary stakeholders. Design should be practical

		to implement and utilize available resources such as internal information databases etc. Project advisors to assist resident throughout process for constructive feedback.
OBJ R4.1.1	(Applying) Design effective educational activities	Prepare an abstract, pertinent to the study, for application to the ASHP Midyear Residency Poster Session (refer to the ASHP website for specific deadline.) All abstracts must be submitted to the project coordinator and/or RAC for review at least two weeks prior to the final ASHP deadline. Prepare and present a professional poster for display at ASHP Midyear Residency Poster Session.
OBJ R4.1.2	(Applying) Use effective presentation and teaching skills to deliver education	
OBJ R4.1.3	(Applying) Use effective written communication to disseminate knowledge	
OBJ R2.2.3	(Applying) Implement changes to improve patient care and/or the medication-use system	Resident to work within his/her individual timeline to complete data collection, data analysis, and final project summaries. The resident is expected to be in communication with project advisor for assistance and input on the project design and implementation. If the project deviates from the set schedule, the resident must inform the project preceptor. Implement the project as specified in its design. Completed projects will be presented to the Paoli Hospital division/clinical area which may be most closely involved in the study or impacted by the study results to communicate any changes to current policies, practices, formularies etc. Demonstrates appropriate assertiveness in presenting project details to external stakeholders. Changes based on the project design are fully implemented.
OBJ R3.1.1	(Applying) Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership	
OBJ R3.1.2	(Applying) Apply a process of ongoing self-evaluation and personal performance improvement	
OBJ R3.2.4	(Applying) Manage one's own practice effectively	
OBJ R2.2.4	(Evaluating) Assess changes made to improve patient care or the medication-use system	Evaluate data to determine if additional modifications or changes are needed. Assess impact of project including sustainability. Use continuous quality improvement principles to assess the impact of the projects such as in-patient care, economics, operations or outcomes. Address areas for changes.
OBJ R4.1.3	(Applying) Use effective written communication to disseminate knowledge	Prepare an abstract, pertinent to the study, for application to the Eastern States Residency Conference (refer to the Eastern States website for specific deadline.) All abstracts must be submitted to the project coordinator and/or RAC for review at least two weeks prior to the final Eastern States deadline.
OBJ R2.2.5	(Creating) Effectively develop and present, orally and in writing, a	In preparation for Eastern States Platform Presentation, the resident will prepare and present a study synopsis with project results to the RAC for

	final project report	preview and comments. Prior to the Eastern States, the resident will present, in full, at least one oral presentation of their project in PowerPoint format to the RAC for final review and approval. The resident will also report outcomes of changes to Paoli Hospital division/clinical area which most closely involved in the study or impacted by the study. Final report is completed in acceptable manuscript style suitable for publication in the professional literature.
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6) Preceptor interaction

Weekly or more often as needed: Preceptor/project advisors office hours for projects and topic discussions are to be based on meeting dates and coordinated meeting times which are mutually acceptable. Preceptors will provide verbal on-going feedback to the resident which is activity focused, measurable, constructive about how they are progressing, and how they can improve throughout the rotation.

Expected progression of residency project is described in full in Appendix A and C. Appendix D includes previous residency projects titles.

[The length of time the preceptor spends in each of the phases of learning will be personalized based upon BOTH the resident's abilities and progression with the responsibilities on this learning experience.]

7) Evaluation strategy

PharmAcademic will be used for documentation of scheduled evaluations (see chart below). The resident and the preceptor will independently complete the assigned evaluation and save as draft. The resident and the preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and the accuracy of the resident's self-assessment skills. Evaluations will be signed in PharmAcademic following this discussion.

- **Summative evaluations**—This evaluation summarizes the resident's performance throughout the learning experience. Specific comments should be included to provide the resident with information they can use to improve their performance in subsequent learning experiences.
- **Preceptor and learning experience evaluation**—This evaluation must be completed by the last day of the learning experience.

Type of evaluation	Who is responsible to complete	When it should be completed
Summative	Project advisors	End of each quarter and at the end of the learning experience
Preceptor/learning experience evaluation	Resident	End of the learning experience

Resident project timeline

General project timeline:

Project management is a significant component of the residency project. The following timeline will serve as general template for the resident to prepare his/her own individual timeline and project deadlines.

July 1st–August 15th: The resident, in conjunction with his/her residency program director/coordinator, and/or potential project preceptor(s), will identify a residency project. A written summary of the project's goals, methods, and anticipated impact on services signed by the project preceptor must be submitted to his/her residency director no later than **August 15th**. (See attached form). Earlier submission is encouraged. If changes are needed, comments will be returned to the resident no later than two weeks from receipt of the proposal.

September 1st–October 1st: The resident will submit an application to the Main Line Health IRB for review and approval of their project. Pending approval, the resident will commence/continue working on their project; or should a project be denied, the resident will work with the project coordination and residency director to make the appropriate changes to attain approval or if necessary, select an alternate project. The resident is responsible for developing a **personal project timeline** to be reviewed and submitted to the project advisor and/or the residency director by **September 15th**. **The project timeline will include specific time points for data collection, data analysis and presentation preparation.** Additionally, during this time period, the resident will prepare an abstract, pertinent to the study, for application to the ASHP Midyear Residency Poster Session (refer to the ASHP website for specific deadline.) **All abstracts must be submitted to the project coordinator and/or RAC for review at least two weeks prior to the final ASHP deadline.**

October 1st–March 15th: The resident will work within his/her individual timeline to complete data collection, data analysis, and final project summaries. Status reports from the resident and the project preceptor should be completed and presented to the residency director and RAC Committee as part of the midpoint evaluation.

March 15th–April 15th: In preparation for the Eastern States Conference presentation, the resident will present a study synopsis with project results to the RAC for review. Prior to the Eastern States, the resident will present, in full, at least one oral presentation of their project to the RAC for final review and approval. During this time, consideration should be given to presenting study results to the Paoli Hospital division/clinical area which may be most closely involved in the study or impacted by the study results. **Completed projects which require recommendation for an operational change, formulary addition or deletion, implementation or medication guideline or restriction, or treatment protocol implementation) will need to be presented to the Main Line Health Pharmacy and Therapeutics Committee for final approval.**

Project completion:

The project will be considered complete when the stated objectives have been met. A residency certificate will not be awarded until the project is completed. A final summary of the residency project in manuscript style will need to be submitted to the residency program director to fulfill residency requirements.

Part I: Project approval

Resident: _____

Project title: _____

Project advisor(s): _____

**Project objective(s) including primary and secondary endpoints, if applicable:
Methods to be used to complete project including patient population and number
of subjects, if applicable:**

Signatures

Resident: _____ Date: _____

Project advisor(s): _____ Date: _____

Residency program director: _____ Date: _____

Appendix C

Resident: _____

Part II: Completion of project components

(Include updates in the Quarterly Evaluation with project advisors)

Project timeline/sign off date: Project advisor	Date	Project advisor
1. Project Submission to RAC Committee		
2. Submission to IRB		
3. Project Timeline to RPD		
4. Abstract presented to RAC for Review		
5. Abstract Submitted to ASHP for Poster Presentation		
6. Poster submitted to RAC Committee for review		
7. Data collection		
8. Completed Project submitted to RAC for review		
9. Completed Project submitted to pertinent Paoli Hospital Committee/ department for review		
10. Manuscript Submitted following Eastern States Conference		

Paoli Hospital current and past resident research projects

- ☐ Penicillin skin testing (PST) in adults prescribed non-preferred therapy based on a documented penicillin allergy: a pilot study, Ethan Englert, PharmD 2017–2018
- ☐ Gastrointestinal Prophylaxis Stewardship Program: A pharmacy-driven initiative to reduce the continuation of unnecessary long-term therapy, Leanna Usnik, PharmD 2017–2018
- ☐ Assessment of a pharmacist-driven initiative to reduce inpatient falls in a community hospital, Andrea Lordan, PharmD 2016–2017
- ☐ Evaluation of Pharmacists attending medical resuscitations in a community hospital, Marissa Cushing, PharmD 2016–2017
- ☐ Assessment of antiemetic management in patients receiving intravenous chemotherapy, Michelle Nguyen, PharmD 2015–2016
Evaluation of pharmacy involvement in a heparin infusion protocol, Ena Besic, PharmD 2015–2016
- ☐ Improving pre-operative use of vancomycin as an antimicrobial stewardship strategy. Deena Kim, PharmD 2014–2015
- ☐ Comparison of 532 mg vs. 266 mg of liposomal bupivacaine for post-operative pain control in bilateral total knee arthroplasty. Carl Gerdine, PharmD 2014–2015
- ☐ Evaluation of fidaxomicin use for *Clostridium difficile* infection in a community hospital. Grace Choi, PharmD 2013–2014
- ☐ Impact of liposomal bupivacaine on post-surgical length of stay and opioid use. Jibu Idicula, PharmD 2013–2014
- ☐ Implementation of an “automatic dose adjustment by pharmacists” in a 222-bed suburban community hospital. Meryn Sweet, PharmD 2012–2013
- ☐ Impact of pharmacy practice resident surveillance on vancomycin prescribing and monitoring in a 222-bed community hospital. Julie Chan, PharmD 2012–2013

Sample resident schedule 2019–2020

	Dates	Rotation area	Primary preceptor	Secondary	
Resident 1	7/1/2019	Pharmacy practice	Liz Ferrigno	Steven Breslin	Andrea Lordan
Resident 2	7/1/2019	Pharmacy practice	Liz Ferrigno	Steven Breslin	Andrea Lordan
Resident 1	8/19/2019	Internal medicine	Kelly Butler	Kiyo Yoda	Weekend coverage begins 8/3/2019
Resident 2	8/19/2019	ED pharmacy	Deena Rojek	Sean Young	
Resident 1	9/23/2019	Elective	TBD	TBD	
Resident 2	9/23/2019	Elective	TBD	TBD	
Resident 1	10/21/2019	Critical care	Kiyo Yoda	Kelly Butler	
Resident 2	10/21/2019	Internal medicine	Kelly Butler	Kiyo Yoda	
Resident 1	11/25–12/13/2019	ASHP Midyear and projects	TBD	TBD	ASJP Midyear Las Vegas 12/8–12-12/2019
Resident 2	11/26–12/13/2019	ASHP Midyear and projects	TBD	TBD	Golden weekend 12/14–12/15/2019
Resident 1	12/16/2019	Pharmacy management	Al Celidonio	Dan O'Loughlin	
Resident 2	12/16/2019	Critical care	Kiyo Yoda	Kelly Butler	Residents change weekends 12/21/2019
Resident 1	12/23–12/27/2019	Project week	TBD	TBD	
Resident 2	12/23–12/27/2019	Project week	TBD	TBD	
Resident 1	12/30/2019	Pharmacy management continued	Al Celidonio	Andrea Weeks	
Resident 2	12/30/2019	Critical care (continued)	Kiyo Yoda	Kelly Butler	

Resident 1	1/27/2020	ED pharmacy	Deena Rojek	Sea Yound	
Resident 2	1/27/2020	Cardiology	Kelly Butler	Andrea Weeks	
Resident 1	3/2/2020	Infectious disease	Andrea Weeks	Kiyo Yoda	
Resident 2	3/2/2020	Pharmacy management	Al Celidonio	Andrea Weeks	
Resident 1	4/6/2020	Eastern States prep	TBD	TBD	
Resident 2	4/6/2020	Eastern States prep	TBD	TBD	
Resident 1	4/13/2020	Cardiology	Kelly Butler	Andrea Weeks	
Resident 2	4/13/2020	Infectious disease	Andrea Weeks	Kiyo Yoda	Eastern States Conference, Hershey, Pa 4/26–4/29/2020
Resident 1	4/27/2020	Eastern States	TBD	TBD	
Resident 2	4/27/2020	Eastern States	TBD	TBD	
Resident 1	5/4/2020	Cardiology (continued)	Andrea Weeks	Kelly Butler	
Resident 2	5/4/2020	Infectious disease (continued)	Andrea Weeks	Kiyo Yoda	
Resident 1	5/25/2020	Elective	TBD	TBD	
Resident 2	5/25/2020	Elective	TBD	TBD	
Resident 1	6/22–6/26/2020	Finish evaluations/ overlap with new residents	All preceptors	All preceptors	
Resident 2	6/22–6/26/2020	Finish evaluations/ overlap with new residents	All preceptors	All preceptors	

Resident 1 assignment deadlines 2019–2020

Rotation 1: Pharmacy Practice (7/1/19-8/16/19)

- Resident Self-Assessments Due – 7/5, 7/12, 7/19, 7/26, 8/2, 8/9, 8/16
- Summative Evaluation – 8/16/19
- Evaluation of Preceptor and Experience – 8/16/19
- Rotation Hand-off – 8/16/19

Rotation 2: Internal Medicine (8/19/19-9/20/19)

- Summative Evaluation – 9/20
- Evaluation of Preceptor and Experience – 9/20
- Rotation Hand-off – 9/20

Rotation 3: Elective (9/23/19-10/18/19)

- Summative Evaluation – 10/18
- Evaluation of Preceptor and Experience – 10/18
- Rotation Hand-off – 10/18

Rotation 4: Critical Care (10/21/19-11/22/19)

- Summative Evaluation – 11/22
- Evaluation of Preceptor and Experience – 11/22
- Rotation Hand-off – 11/22

Rotation 5: ASHP Midyear & Projects (11/25/19-12/13/19, 12/23-12/27/19)

- Staff In-services scheduled

Rotation 6: Pharmacy Administration (12/16/19-12/20/19, Project Week, Resumes 12/30/19-1/24/20)

- Summative Evaluation – 1/24
- CPT due at end of rotation
- Evaluation of Preceptor and Experience – 1/24
- Rotation Hand-off – 1/24

Rotation 7: ED Pharmacy (1/27/20-2/28/20)

- Formative Assessments Due 1/31, 2/7, 2/14, 2/21
- Resident Self-Assessments Due 1/31, 2/7, 2/14, 2/21, 2/28
- Summative Evaluation – 2/28
- Evaluation of Preceptor and Experience – 2/28
- Rotation Hand-off – 2/28

Rotation 8: Infectious Disease (3/2/20-4/3/20)

- Summative Evaluation – 4/3
- Evaluation of Preceptor and Experience – 4/3
- Rotation Hand-off – 4/3

Rotation 9: Eastern States Prep (4/6/20-4/10/20)

Rotation 10: Cardiology (4/13/20-4/24/20, Eastern States break, Resumes 5/4/20-5/22/20)

- Summative Evaluation – 5/22
- Evaluation of Preceptor and Experience – 5/22
- Rotation Hand-off – 5/22

Rotation 11: Elective (5/25/20-6/19/20)

- Summative Evaluation – 6/19
- Evaluation of Preceptor and Experience – 6/19

Required Longitudinal Experiences

- Entering Interests Form Due – Day 1
- Skills Survey for Incoming PGY1 Residents Due – Day1
- Send Introduction Email Due – Week of 7/8/19
- Customized Training Initial Plan – 8/1/19
- Project Topic Submission Due – 8/16/19
- Project Timeline Submission Due – 9/13/19
- Staffing Rotation begins – 8/10/19
- 1st Quarter Training Plan Update Due – 9/30/19
- 1st Quarter Summative Evaluations – 9/30/19
 - o DI
 - o Senior Oncology/Resident Self-Assessment Objective R1.1.8
 - o Project Red
 - o Nursing-Pharmacy Medication Safety Committee/Resident Rotation Self-Evaluations Due
 - o P&T
 - o Residency Project
 - o Staffing (11/1/19)
- ASHP Midyear Clinical Meeting – 12/8-12/12/19
- Residents Golden Weekend – off 12/14-12/15/19
- Residents Switch Weekend Staffing – 12/21/19-12/22/19
- 2nd Quarter Training Plan Update Due – 12/31/19
- 2nd Quarter Summative Evaluations – 12/31/19
 - o DI
 - o Senior Oncology/Resident Self-Assessment Objective R1.1.8
 - o Project Red
 - o Nursing-Pharmacy Medication Safety Committee/Resident Rotation Notes Due
 - o P&T
 - o Residency Project
 - o Staffing (1/15/20)
- 3rd Quarter Training Plan Update Due – 3/31/20
- 3rd Quarter Summative Evaluations – 3/31/20
 - o DI
 - o Senior Oncology/Resident Self-Assessment Objective R1.1.8
 - o Project Red
 - o Nursing-Pharmacy Medication Safety Committee/Resident Rotation Self-Evaluations Due
 - o P&T
 - o Residency Project
 - o Staffing (4/2/20)
- News Article Submission Due – 4/1/20
- Eastern States RAC Presentation – April
- Eastern State Conference – 4/26/20-4/29/20
- Residency Project Manuscript Due-June RAC Meeting
- 4th Quarter Training Plan Update Due – 6/29/20
- 4th Quarter Summative Evaluations – 6/29/20
 - o DI
 - o Senior Oncology
 - o Project Red
 - o Nursing-Pharmacy Medication Safety Committee/Resident Rotation Self-Evaluations Due
 - o P&T
 - o Residency Project
 - o Staffing

6/22–6/26/20 – required overlap with incoming residents

Resident 2 assignment deadlines 2019-2020

Rotation 1: Pharmacy Practice (7/1/19-8/16/19)

- Resident Self-Assessments Due—757, 7/12, 7/19, 7/26, 8/2, 8/9, 8/16
- Summative Evaluation – 8/16
- Evaluation of Preceptor and Experience – 8/16
- Rotation Hand-off – 8/16

Rotation 2: ED Pharmacy (8/19/19-9/20/19)

- Formative Assessments Due – 8/23, 8/30, 9/6, 9/13
- Resident Self-Assessments Due – 8/23, 8/30, 9/6, 9/13, 9/20
- Summative Evaluation – 9/20
- Evaluation of Preceptor and Experience – 9/20
- Rotation Hand-off – 9/20

Rotation 3: Elective (9/23/19-10/18/19)

- Summative Evaluation – 10/18
- Evaluation of Preceptor and Experience – 10/18
- Rotation Hand-off – 10/18

Rotation 4: Internal Medicine (10/21/19-11/22/19)

- Summative Evaluation – 11/22
- Evaluation of Preceptor and Experience – 11/22
- Rotation Hand-off – 11/22

Rotation 5: ASHP Midyear & Projects (11/25/19-12/13/19, 12/23-12/27/19)

- Staff In-services scheduled

Rotation 6: Critical Care (12/16/19-12/20/19, Project Week, Resumes 12/30/19-1/24/20)

- Summative Evaluation – 1/24
- Evaluation of Preceptor and Experience – 1/24
- Rotation Hand-off – 1/24

Rotation 7: Cardiology (1/27/20-2/28/20)

- Summative Evaluation – 2/28
- Evaluation of Preceptor and Experience – 2/28
- Rotation Hand-off – 2/28

Rotation 8: Pharmacy Administration (3/2/20-4/3/20)

- Summative Evaluation – 4/3
- CPT due at end of rotation
- Evaluation of Preceptor and Experience – 4/3
- Rotation Hand-off – 4/3

Rotation 9: Eastern States Prep (4/6/20-4/10/20)

Rotation 10: Infectious Disease (4/13/20-4/24/20, Eastern States break, Resumes 5/4/20-5/22/20)

- Summative Evaluation – 5/22
- Evaluation of Preceptor and Experience – 5/22
- Rotation Hand-off – 5/22

Rotation 11: Elective (5/25/20-6/19/20)

- Summative Evaluation – 6/19
- Evaluation of Preceptor and Experience – 6/19

Required Longitudinal Experiences

- Entering Interests Form Due – Day 1
- Skills Survey for Incoming PGY1 Residents Due – Day1
- Send Introduction Email Due – Week of 7/8/19
- Customized Training Initial Plan – 8/1/19
- Project Topic Submission Due – 8/16/19
- Project Timeline Submission Due – 9/13/19
- Staffing Rotation begins – 8/10/19
- 1st Quarter Training Plan Update Due – 9/30/19
- 1st Quarter Summative Evaluations – 9/30/19
 - o DI
 - o Senior Oncology/Resident Self-Assessment Objective R1.1.8
 - o Project Red
 - o Nursing-Pharmacy Medication Safety Committee/Resident Rotation Self-Evaluations Due
 - o P&T
 - o Residency Project
 - o Staffing (11/1/19)
- ASHP Midyear Clinical Meeting – 12/8-12/12/19
- Residents Golden Weekend – off 12/14-12/15/19
- Residents Switch Weekend Staffing – 12/21/19-12/22/19
- 2nd Quarter Training Plan Update Due – 12/31/19
- 2nd Quarter Summative Evaluations – 12/31/19
 - o DI
 - o Senior Oncology/Resident Self-Assessment Objective R1.1.8
 - o Project Red
 - o Nursing-Pharmacy Medication Safety Committee/Resident Rotation Notes Due
 - o P&T
 - o Residency Project
 - o Staffing (1/15/19)
- 3rd Quarter Training Plan Update Due – 3/31/20
- 3rd Quarter Summative Evaluations – 3/31/20
 - o DI
 - o Senior Oncology/Resident Self-Assessment Objective R1.1.8
 - o Project Red
 - o Nursing-Pharmacy Medication Safety Committee/Resident Rotation Self-Evaluations Due
 - o P&T
 - o Residency Project
 - o Staffing (4/2/20)
- News Article Submission Due – 4/1/20
- Eastern States RAC Presentation – April
- Eastern State Conference – 4/26/20-4/29/20
- Residency Project Manuscript Due-June RAC Meeting
- 4th Quarter Training Plan Update Due – 6/29/20
- 4th Quarter Summative Evaluations – 6/29/20
 - o DI
 - o Senior Oncology
 - o Project Red
 - o Nursing-Pharmacy Medication Safety Committee/Resident Rotation Self-Evaluations Due
 - o P&T
 - o Residency Project
 - o Staffing

6/22–6/26/20 – required overlap with incoming residents