PGY1 – Intensive Care Unit Learning Experiences 1 & 2

Preceptor(s)*

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*Primary preceptors and preceptors will be assigned dependent on pharmacist schedule during rotation

General Description

This rotation takes place in the Intensive Care unit at Asante Rogue Regional Medical center between the hours of 0700 to 1730. Intensive Care Experiences are split into two separate rotations; Intensive Care 1 provides initial exposure to critical care and Intensive Care 2 provides additional practice time in the ICU. Intensive Care 1 will usually occur in the first part of the year, while Intensive Care 2 will occur in the second half of the residency year. In total, the resident will have the opportunity to spend approximately 8 weeks in intensive care practice. The clinical pharmacist is responsible for all aspect of medication therapy management for all patients in the intensive care units. Responsibilities include working with other members of the intensive care team including intensivists, hospitalists, surgeons, and other specialists, nurses, respiratory therapists, dietary and social services. The clinical pharmacist comprehensively monitors medication use and proactively intervenes to improve patient outcomes. The clinical pharmacist is a resource to other health care professionals on the team for drug information related to patient care. The critical care team is responsible for approximately 20 to 26 patients.

Expectation of the Resident

The resident will actively participate in daily multi-disciplinary rounds. The pharmacist is an established member of the team, and over the course of the rotation the resident is expected to establish themselves as a member of the team as well. The resident will participate in all codes utilizing BLS/ACLS protocols. The resident will serve as a co-preceptor for the PharmD students on the critical care rotation. A self-assessment test will be given to the resident on the first day of rotation during orientation for Intensive Care 1. The resident will research and complete the self-assessment test throughout the rotation. The preceptor and resident will have reviewed and discussed all the answers by the last day of Intensive Care 1 rotation. Topic discussions and reading key articles will be used to help develop the resident's patient care skills for common disease states or acquiring knowledge about disease seen infrequently on the service. During these learning experiences the resident will focus on the goals and objectives outlined below by performing the activities that are associated with each objective. The resident will gradually assume responsibility for all patients within the assigned unit. The PGY1 resident must devise efficient strategies for accomplishing the required activities in a limited time frame.

General Responsibilities

- Work collaboratively with other members of the critical care team including physicians (intensivists, hospitalists, surgeons, and other specialists), nurses, respiratory therapists, dietary and social services
- Become an established member of the team over the course of the rotation
- Comprehensively monitor medication use and proactively intervene to improve patient outcomes.
- Become a resource to other health care professionals on the team for drug information related to patient care.
- Actively participate on all codes utilizing BLS/ACLS protocols.

- Serve as a co-preceptor for the pharmacy students, if available.
- Be prepared for and actively participate in topic discussions and verbal/written assessment

Staffing/Meeting Attendance

- Rotation Attendance: Required five days per week.
- Staffing: Residents are required to notify the primary preceptor/preceptor of any scheduled staffing or requested project days. The primary preceptor reserves the right to shift these days to optimize days working together.
- Case Conference or Journal Clubs: The resident may attend any case conference or journal clubs for students.
- Pharmacy & Therapeutics Committee: Residents are required to notify the primary preceptor/preceptor is they are attending a P&T committee meeting. This meeting usually occurs on the last Tuesday once a month.
- Absences: Scheduled time off is not allowed when resident is scheduled with the primary preceptor.
- Others: As deemed necessary by the Residency Director, residency program, and/or preceptor.

Disease States

Common disease states in which the resident will be exposed to through direct patient care experience for common diseases including, but not limited to:

- General
  - VTE prophylaxis and treatment
  - Stress ulcer prophylaxis
  - ICU sedation, analgesia, and neuromuscular blockade
  - Pharmacokinetics
  - Pain control
  - Anticoagulation
  - Parenteral Nutrition
- CNS
  - Acute drug overdose
  - Coma
  - Traumatic brain injury
  - Stroke
- Cardiovascular
  - Shock (all forms)
  - Post MI management
  - Acute decompensate heart failure
  - Arrhythmias
  - Atrial fibrillation
  - Hypertensive crisis/emergency
- Metabolic and Endocrine
  - DKA
  - Diabetes
  - Fluid and electrolyte balance
- Respiratory
  - ARDS
  - Acute and chronic respiratory failure
  - Arterial blood gas analysis
- Infectious Disease
  - Sepsis
  - Hospital acquired and opportunistic infections
  - Principles of antibiotic selection and dosing
- Renal
  - Fluid and electrolyte disturbances
  - Acute renal failure
  - Acid/base disorders
  - Drug dosing in renal failure
  - Dialysis
- Gastrointestinal
  - GI bleeding
  - Hepatic Failure

Educational Goals/Objectives

The achievement of the goals of the residency is determined through assessment of the resident's ability to perform the associated objectives. The table below demonstrates the relationship between the activities you will perform on the learning experience and the goals/objectives assigned to the learning experience.

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…following a consistent patient care process.		
Objective Number	**Objective**	**Associated Activities**
1.1.1	(Applying) Interact effectively with health care teams to manage patients' medication therapy.	• Prepare for and actively participate in daily ICU rounds with assigned team and provide recommendations on assigned patients and answer drug information questions in a timely manner. • While on rounds, be prepared to identify medication-related problems and make evidence-based recommendations for solutions to the team in a cooperative, collaborative and respectful manner. • Work with the medical team to resolve issues found when reconciling patients' medications prescribed on admission with medications taken as outpatient. • Contact prescribing physician to resolve issues found when verifying medication orders.
1.1.2	(Applying) Interact effectively with patients, family members, and caregivers.	• In speaking with a patient or family member, introduce yourself appropriately, tell them how long the interaction will take, explain to them your role in their care, and thank them for speaking with you. • Assess patients' and/or caregivers' understanding of medication therapy and address educational needs through counseling. • Perform medication histories on assigned patients. • Provide medication education to patients, their families, and/or care-givers for all patients on assigned floor to be discharged on warfarin, heart failure medications, U500, or antibiotics. • Discuss medication plans and answer questions of patients and/or family members with respect, empathy and cultural competence.
1.1.3	(Applying) Collect information on which to base safe and	• Collect pertinent information on each assigned patient from medical record, patient, and patient's nurse, (as applicable) every morning prior to rounds. Collection must be efficient. • Maintain patient information confidentiality.

	effective medication therapy.	• Apply knowledge regarding the mechanism of action, pharmacokinetics, usual regimen (dose, schedule, route), indications, contraindications, interactions, adverse reactions, and therapeutics of medications used in the treatment of diseases. • Provide pharmacokinetic (vancomycin, aminoglycosides, fosphenytoin/phenytoin) drug monitoring. • Gather all pertinent patient-specific information in an organized manner and be prepared to discuss recommendations with preceptor prior to rounds.
R1.1.4	(Analyzing) Analyze and assess information on which to base safe and effective medication therapy.	• Analyze assigned patient-specific profiles, medication administration records, and pertinent clinical data / documentation records daily. • Design, evaluate, recommend, implement and monitor patient-specific pharmacotherapy (stress ulcer prophylaxis, anti-hyperglycemic agents, pain therapy, sedation, vasopressors, kinetics and other therapies frequently encountered in critical care. • Apply knowledge regarding the mechanism of action, pharmacokinetics, usual regimen (dose, schedule, route), indications, contraindications, interactions, adverse reactions, and therapeutics of medications used in the treatment of diseases commonly encountered. • Make appropriate recommendations for antimicrobial therapy optimization based on cultures, sensitivities, renal and hepatic function, and patient clinical condition. • Properly judge the reliability of data (e.g., collection timing or site, or differences in test sites)
1.1.5	(Creating) Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans (care plans).	• Design, evaluate, recommend, implement and monitor patient-specific pharmacotherapy (i.e., kinetically dosed medications, TPN, warfarin, renal dosing, anti-infectives, IV to PO, anticoagulants, etc.). • Start patient on a dosing regimen designed to achieve target levels. • Determine when levels or other appropriate labs need to be ordered then, revise drug regimen as necessary. • Discuss recommendations for addressing medication therapy issues with preceptor prior to rounds with the interdisciplinary team using evidence-based, measurable, achievable therapeutic goals.
1.1.6	(Applying) Ensure implementation of	• Recommend or communicate patients' regimens and associated monitoring plans to members of the healthcare

	therapeutic regimens and monitoring plans (care plans) by taking appropriate follow-up actions.	team via face-to-face, Doc Halo, Zip It, or telephone. The recommendation should convey expertise, be persuasive but not aggressive and based on studies to back up your point. • Ensures recommended regimens are implemented effectively for the patient. The therapy should be clear, concise and timely, complies with the Asante policies and procedures, and any lab tests needed reflect on the recommended therapy. • Appropriately initiates, modifies, discontinues, or administers medication therapy as authorized. • Respond appropriately to notifications and alerts in electronic medical records and other information systems which support medication ordering processes (based on patient weight, age, gender, co-morbid conditions, drug interactions, renal function, hepatic function, etc.). • Provide written or verbal education to patients, and caregivers including information on medication therapy, adverse effects, compliance, appropriate use, handling, and medication administration. • Identify and resolve medication related problems then implement a plan for solving those problems. Report and prevent adverse drug reactions. • Apply IV to PO protocols and renal dosing protocols. Complete physician consultations for patient specific medication therapy management. • Provide antimicrobial stewardship (72-hour time out, de-escalation, drug shortage, drug-bug mismatch, drug-indication mismatch, drug-lab mismatch, duplicate therapy, days of therapy, protected antibiotics, etc). • Initiate parenteral nutrition regimens and monitoring plans for patients upon consult. • Design, evaluate, recommend then implement pharmacokinetic drug monitoring and regimen adjustments based on evidence for disease states being treated and patient clinical condition.
1.1.7	(Applying) Document direct patient care activities appropriately in the medical record or where appropriate.	• Documentation for direct care patient activities will be clear, concise and written in time to be useful. it will follow Asante policies and procedures, will include pertinent subjective and objective data and will reflect an accurate interpretation of that data. • Open relevant iVents that includes appropriate information required for follow-up. • Chart all clinical interventions, therapeutic recommendations, patient-specific pharmacotherapy and progress notes.

1.1.8	(Applying) Demonstrate responsibility to patients.	• Daily activities consistently show a priority placed on the delivery of patient centered care (i.e., arranges work activities so that priority needs of patients are met first and subsequently all other pharmacotherapy acuity issues are addressed, or communicated appropriately to the next shift prior to leaving for the day). • Ensure that accurate and timely medication specific information regarding a specific patient reaches those who need it at the appropriate time (i.e., patient education is completed and timely; provides timely drug-information responses to other healthcare professionals). • Reports medication-related problems (e.g., ADRs, medication errors, drug interactions).

GOAL R1.2 Ensure continuity of care during patient transitions between care settings.		
Objective Number	**Objective**	**Associated Activities**
1.2.1	(Applying) Manage transitions of care effectively.	• Participate in obtaining or validating an accurate medication history. • Participate in medication reconciliation. • Follow up on all identified drug-related problems. • Participate in medication education. • Provide accurate and timely follow-up information when patients transfer to another facility, level of care, pharmacist, or provider.
Competency Area R3: Leadership and Management		
GOAL R3.2 Demonstrate management skills		
Objective Number	**Objective**	**Associated Activities**
3.2.4	(Applying) Manages one's own practice effectively	• Demonstrates effective time management. • Demonstrates ability to triage workload consistently throughout the shift despite interruptions.

Communication

- Daily as necessary with preceptor
- E-mail: Residents are expected to read e-mails at the beginning, middle and end of each day at a minimum for ongoing communication. This is appropriate for routine, non-urgent questions and problems.
- Halo: Appropriate for urgent questions pertaining to patient care
- Personal phone number: Provided to resident at time of learning experience for emergency issues

Expected Progression of Resident Responsibility on ICU 1 Learning Experience

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

Week 1: Resident to work up approximately 1/4 of the team's patients and discuss their care with preceptor prior to making recommendations. Preceptor to attend and coach in team rounds with resident, modeling pharmacist's role on the health care team.

Week 2: Resident to work up 1/3 of the team's patients and discuss problems with preceptor daily. Preceptor to attend team rounds with resident, coaching the resident to take on more responsibilities as the pharmacist on the team.

Week 3: Resident to work up ½ of the team's patients and discuss problems with preceptor daily. Resident to present all their patients at rounds.

Week 4: Each week the resident is expected to take over the responsibility of working up more of the team's patients, continuing to discuss problems with preceptor daily.

Expected Progression of Resident Responsibility on ICU 2 Learning Experience

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

Week 1-2: Resident to work up approximately 1/2 of the team's patients and discuss their care with preceptor prior to making recommendations. Preceptor to attend and coach in team rounds with resident, modeling pharmacist's role on the health care team.

Week 3-4: Resident to work up 3/4 to all of the team's patients and discuss problems with preceptor daily. Preceptor to attend team rounds with resident, coaching the resident to take on more responsibilities as the pharmacist on the team. The resident is expected to take over the responsibility of the critical care pharmacist with minimal coaching.

Evaluation Strategy

The preceptor will provide verbal formative feedback during the course of the rotation. Written feedback will be provided at the end of the 4-week rotation.

Pharm Academic will be used for documentation of scheduled evaluations (both formative and summative per the chart below). The resident and preceptor will independently complete the evaluations. The resident and preceptor will then compare and discuss the evaluations. This discussion will provide feedback both on performance of the activities and resident self-assessment skills. Following discussion, preceptor will provide documentation of the discussion and correlation of resident self-assessment on the preceptor evaluation prior to submitting evaluation in Pharm Academic. Evaluations will be completed no later than due date specified below.

What	Who	When
Summative	Preceptor	End of week 4
Summative Self-evaluation	Resident	End of week 4
Preceptor/Learning Experience Evaluation	Resident	End of week 4

Content of the Evaluation

The preceptor is expected to grade the resident on the following scale: NI (Needs Improvement), SP (Satisfactory Progress) and Ach (Achieved) depending on the performance of the resident.

A grade of "NI" means that the resident needs a more exposure and additional formal evaluation on the topic, likely in two separate rotations. Any grade of NI must be accompanied by actionable feedback (what must the resident to do improve) for every objective graded NI. Example: The resident's therapeutic plans are not appropriately evidence based; more guideline or primary literature consultation is recommended to improve the recommendations for patients with MRSA pneumonia

A grade of "SP" means that the resident is doing what they need to be doing, considering the place they are in the program, but the preceptor does not yet feel that they have achieved the goal. Any goal graded with an "SP" should have actionable feedback (what must the resident to do improve) provided to the resident about what they must do to "achieve" that particular goal. This may also be provided at the objective level if the preceptor wishes to. An objective graded "SP" should receive additional formal evaluation, possibly for as little as a single rotation. Example: The resident's analysis of the patient problem list is insufficient; the resident does not actively question the presence of each order to determine its appropriateness.

A grade of "Ach" means that the resident is doing what would be expected of a resident at or near the end of his or her program or comparable to a pharmacist with a year of time spent working. "Achieved" does not mean that the resident cannot improve, but it means that the resident would not likely benefit much from further additional formal evaluation. Examples of why the resident deserves the "Ach" are necessary for every goal marked "Ach." Example: The resident counseled 4 patients on warfarin and 3 on enoxaparin during the last week; the resident explained the medication well and assured the patient's understanding of the new medication.

Timing of the Evaluation

On the last day of the learning experience, no later than 7 days after the end of the rotation, a member of the preceptor team will be expected to discuss the evaluation – with a copy of the evaluation in hand – of the learning experience with the resident to help clarify any potential misunderstandings and to ensure that residents get the most out of the feedback provided. Preceptor and/or resident are to document in the comment box at the end of evaluation, a statement that indicates a discussion has taken place. For example: "discussed with preceptor.