PGY1 - Cardiac Critical Care I & II Rotation

Primary Preceptor: Ruthie Nguyen, Pharm.D., BCPS
Secondary Preceptor: Jim Krick, Pharm.D.
Preceptor Hours: Varies, but can be contacted anytime via E-mail
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E-mail: Ruthie.Nguyen@asante.org or James.Krick@asante.org

General Description
CCU I is a mandatory rotation while CCU II is an optional elective. Both rotations are four weeks each. During these rotations, the clinical pharmacist is responsible for all aspects of medication therapy management for patients in the cardiac critical care unit and the intermediate critical care units from 1100 to 1730 and of all critical care units during 1730 to 2130.

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 assessments

Staffing/Meeting Attendance
• Rotation Attendance: Required 11:00 to 21:30 for five days per week, which includes mandatory attendance with primary preceptor.
• 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 for whom they are co-preceptor.
• Pharmacy & Therapeutics Committee: Once a month. It will not interfere with this particular rotation.
• Absences:
  o Will not be scheduled when resident is working with primary preceptor
  o If a resident has an unexcused absence, he or she will present a one-hour Oregon Board of Pharmacy approved CME pertaining to a critical care topic
• Others: As deemed necessary by the Residency Director, Residency Program, and/or preceptor
Disease States
Common disease states in which the resident will be expected to gain exposure 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
  - Post-op nausea and vomiting
  - Pain control
  - Anticoagulation
  - Parenteral Nutrition

- **CNS**
  - Acute drug overdose
  - Coma
  - Traumatic brain injury
  - Spinal cord injury
  - Stroke

- **Cardiovascular**
  - Shock (all forms)
  - Acute Coronary Syndromes (UA/STEMI/NSTEMI)
  - Acute decompensate heart failure
  - Arrhythmias
  - Atrial fibrillation
  - Hypertensive crisis/emergency

- **Metabolic and Endocrine**
  - DKA
  - Diabetes
  - Hypoadrenal crisis
  - 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

Goals and Objectives
During this learning experience, 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 of the patients within the assigned unit. The goal is to devise efficient strategies for accomplishing the required activities in a limited time frame.

Objectives to be TAUGHT and FORMALLY EVALUATED
Your achievement of the goals of the residency is determined through assessment of your 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.
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<tr>
<th>Objective Number</th>
<th>Objective</th>
<th>Activities</th>
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| 1.1.1 CCU I & II = Train & Evaluate | (Applying) Interact effectively with health care teams to manage patients’ medication therapy. | • Effectively communicate with AM ICU pharmacist about any shift handoffs that needs follow-up every day at 1100 and 1730.  
• Actively identifies the potential for significant medication-related problems, takes initiative to solve the problem, and actively follow-up with identified issues until satisfactory resolution is obtained.  
• Provide recommendations, answer drug information questions, and other pharmacy consults in a timely and respectable manner to all healthcare professionals.  
• Communicate with nurses and phlebotomists throughout the day to ensure timely and accurate medication administration and lab collection.  
• Contact prescribing physician, after discussing recommendations with preceptor, to resolve medication related issues via face to face interaction, paging the provider via Doc Halo or Zip it, telephone conversation, written communication for non-critical medication issues via progress notes and sticky note. |
| 1.1.2 CCU I & II = Train & Evaluate | (Applying) Interact effectively with patients, family members, and caregivers. | • Assess daily for and provide any needed counseling for patients, their families, and/or care-givers, including but not limited to: sotalol, dofetilide, enoxaparin, heart failure, pneumonia, warfarin, and U-500.  
• Utilize AIDET (acknowledge, introduce, duration, explanation and thank you) when communicating with patients, family members and caregivers.  
• Perform medication history follow-up on assigned patients by interviewing patients, family members and/or caregivers.  
• Assess information and skill comprehension throughout counseling session and adjust instruction to appropriately accommodate the patients’ or caregivers’ responses.  
• Answer all appropriate medication related questions and refer non-medication related questions to healthcare providers more appropriate to discuss with patient. |
| 1.1.3 | CCU I & II = Train & Evaluate | (Applying) Collect information on which to base safe and effective medication therapy. | • Utilize the best research evidence into the decision making process for patient care.  
• Accurately obtain and evaluate the complete medication therapy regimen and identify inappropriate such as dose, dosage form, schedule, duration, route of administration, method of administration, duration of therapy, therapeutic duplications, presence or potential clinically significant drug interactions, allergies to medications, interference with medical therapy by social, recreational, immunizations, nonprescription or nontraditional medication use.  
• Obtain information about why the patient is not receiving full benefit of prescribed medication therapy (e.g., system failure, clinical failure), problems arising from the financial impact of medication therapy on the patient, lack of patient or caregiver understanding of the medication therapy, lack of adherence to medication regimen.  
• If medication-use problems are found, chart documentation exhibits the following characteristics: concise, clear, written in time to be useful, follows Asante’s policies and procedures, and are signed, dated, and timed. |
| 1.1.4 | CCU I = Train  
CCU II = Train & Evaluate | (Analyzing) Analyze and assess information on which to base safe and effective medication therapy. | • Triage all patients at the beginning of the shift and discuss with preceptor about which patients will be the most critical to evaluate first before working.  
• Accurately assess of patient’s health and functional status, risk factors, cultural factors, health literacy, access to medications  
• Identify medication therapy problems including: lack of indication for medication, improper indication for medication, medical conditions for which there is no medication prescribed, patient noncompliance to medication regimen and root cause (e.g., knowledge, recall, motivation, financial, system), laboratory monitoring needed and reliability of the results, discrepancy between prescribed medications and established care plan for the patient.  
• Analyze benefits and risks of therapy and provide credible evidence to support or justify written or oral recommendations. |
| 1.1.5 | CCU I & II = Train & Evaluate | (Creating) Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans (care plans). | • Discuss with preceptor prior to making recommendations to the healthcare treatment team or making any changes in medication.  
• Utilize best evidence-based, measurable, achievable therapeutic goals that include consideration of relevant patient-specific information, the goals of other inter-professional team members, |
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<tr>
<th>1.1.6 CCU I &amp; II</th>
<th>(Applying) Ensure implementation of therapeutic regimens and monitoring plans (care plans) by taking appropriate follow-up actions.</th>
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| **= Train & Evaluate** | • Effectively recommend or communicates medication therapy regimens and associated monitoring plans to all relevant members of the healthcare team after discussion with preceptor.  
• If the healthcare team or patient declines treatment plan, resident will exhibit responsible professional behavior, skillfully defuse negative reactions, communicate with expertise and assertiveness, and reference best research evidence.  
• Order appropriate medications (dose, dosage form, route, frequency start time, etc.), drug levels, labs, nursing communications, and give clear and concise administration instructions.  
• Respond appropriately to notifications and alerts in electronic medical records and other information systems which support medication ordering processes to prevent adverse drug reactions.  
• Report adverse drug reactions in the Midas RER reporting program. |

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<th>1.1.7 CCU I &amp;II</th>
<th>(Applying) Document direct patient care activities appropriately in the medical record or where appropriate.</th>
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| **= Train & Evaluate** | • Document appropriate direct patient-care activities after reviewing with preceptor.  
• Documentation is clear, pertinent, precise, accurate, valuable, and follows Asante’ pharmacy documentation policies.  
• Follow the Asante’s policies and procedures.  
• Appropriately communicate to the next shift pharmacist when needed, which includes relaying appropriate information required for follow-up. |
### Goal R1.2 Ensure continuity of care during patient transitions between care settings.

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<tr>
<th>Objective Number</th>
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<tr>
<td>1.2.1 CCU I &amp; II</td>
<td>(Applying) Manage transitions of care effectively.</td>
<td>• Manage all existing and new ICU in addition to CCU and IMCU patients after 1730.</td>
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<td>• Provides accurate and timely follow-up information when patients transfer to another facility, level of care, pharmacist, or provider, as appropriate.</td>
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<td>• Ensure continuity of care during patient transitions between floor by appropriately communicating pertinent information with the receiving floor pharmacist and/or nurse, if applicable.</td>
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<td>• Effectively participates in obtaining or validating thorough and accurate medication history and medication reconciliation when necessary as well as updating patient’s medication list in EPIC.</td>
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### Competency Area R4: Teaching, Education, Dissemination of Knowledge

**GOAL R4.2 Effectively employs appropriate preceptors’ roles when engaged in teaching.**

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<tr>
<td>R4.2.1 CCU I</td>
<td>(Analyzing) When engaged in teaching, select a preceptors’ role that meets learners’ educational needs.</td>
<td>• Precept student who are schedule on the rotation.</td>
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<td>• Identify which preceptor role is applicable for the situation (direct instruction, modeling, coaching, facilitating).</td>
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<td>• Select direct instruction when learners need background content, modeling when learners have sufficient background knowledge to understand skill being modeled, coaching when learners are prepared to perform a skill under supervision, or facilitating when learners have performed a skill satisfactorily under supervision.</td>
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<tr>
<td>R4.2.2 CCU I</td>
<td>(Applying) Effectively employ preceptor roles, as appropriate.</td>
<td>• Instruct students, technicians, or others, as appropriate.</td>
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<td>• Model skills including “thinking out loud” so learners can “observe” critical thinking skills.</td>
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<td>• Coach by effective use of verbal guidance, feedback, and questioning, as needed.</td>
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<td>• Facilitates when appropriate by allowing learner independence when ready and using indirect monitoring of performance.</td>
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<td>• Exhibit characteristics of a role model, such as being encouraging, calm, professional, and showing interest in the education needs of the student.</td>
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Communication
- Meet daily with preceptor to discuss patient care
- 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.
- Cell: Appropriate for urgent questions pertaining to patient care.
- Pager: Residents to page preceptor for urgent/emergency situations pertaining to patient care

Topic Discussions and Key Articles
There will be up to six Topic Discussions and/or Key Articles assigned throughout the rotation. They are used to help develop the resident’s patient care skills for common disease states and acquire knowledge about diseases seen on the service. All topics will be assigned prior discussion. The resident is responsible for presenting pathophysiology, monitoring parameters, and all aspects of medication therapy management (i.e. guideline recommendations, mechanism of action, dosing, etc).

Assessments
There will be up to two mandatory written assessments given during this rotation. The resident will not be allowed to have any outside resources during the assessments. Questions will be determined by topics discussed and/or cases reviewed during the rotation prior to the test. Therefore, each assessment is rotation and experience specific. If two assessments are assigned, the second assessment will not cumulative unless the topic was discussed and/or reviewed again during the second half of the rotation. In addition to the written assessments, there will be informal verbal assessments daily while with the main preceptor.

Expected progression of resident responsibility on this learning experience and tentative schedule

CCU I
- Day 1:
  - Preceptor and resident to review and discuss learning activities and expectations
  - Resident may carry the critical care pharmacy pager and answer all questions from the treatment team once he/she is comfortable to do so
- Week 1:
  - Resident to work up most critical of the team’s patients and discuss problems with preceptor daily
  - Topic Discussions #1 and #2
- Week 2:
  - Resident to work up 1/4 of the team’s patients in addition to the most critical and discuss problems with preceptor daily
  - Topic Discussion #3
  - Midterm
  - Midpoint Evaluation
- Week 3:
  - Resident to work up 1/2 of the team’s patients in addition to the most critical and discuss problems with preceptor daily
  - Topic Discussion #4 & #5
- Week 4:
  - Resident to work up 3/4 of the team’s patients in addition to the most critical and discuss problems with preceptor daily
  - Topic Discussion #6
  - Final Assessment
  - Final Evaluation
**CCU II**

- **Day 1:**
  - Preceptor and resident to review and discuss learning activities and expectations
  - Resident will carry the critical care pharmacy pager and answer all questions from the treatment team

- **Week 1:**
  - Resident to work up 1/2 of the team’s patients in addition to the most critical and discuss problems with preceptor daily
  - Topic Discussion #1 & #2

- **Week 2:**
  - Resident to work up 3/4 of the team’s patients in addition to the most critical and discuss problems with preceptor daily
  - Topic Discussion #3
  - Midterm Assessment
  - Midpoint Evaluation

- **Week 3-4:**
  - Resident to work up all of the team’s patients and discuss problems with preceptor daily
  - Topic Discussions #4, #5, & #6
  - Final Assessment
  - Final Evaluation

**Evaluations**

PharmAcademic will be used for documentation of scheduled. The resident and preceptor will independently complete the final summative evaluations and save as a draft. 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 PharmAcademic. There will also be an informal mid-point evaluation with the resident and preceptor by the end of Week 2.

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<tr>
<th>What</th>
<th>Who</th>
<th>When</th>
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<tr>
<td>Mid-Point Evaluation (Informal discussion)</td>
<td>Preceptor &amp; Resident</td>
<td>End of week 2</td>
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<tr>
<td>Summative Evaluation</td>
<td>Preceptor</td>
<td>End of week 4</td>
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<tr>
<td>Preceptor Evaluation</td>
<td>Resident</td>
<td>End of week 4</td>
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<tr>
<td>Learning Experience Evaluation</td>
<td>Resident</td>
<td>End of week 4</td>
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**Content of the Evaluation**

The preceptor is expected to grade the resident on the following scale:

- **NI (Needs Improvement):**
  - Resident needs a more exposure and additional formal evaluation on the topic, likely in two separate rotations.
  - Will be accompanied by actionable feedback from the preceptor.
  - 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.
• **SP (Satisfactory Progress):**
  o 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.
  o Will be accompanied by actionable feedback from the preceptor.
  o 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.

• **Ach (Achieved):**
  o 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.
  o Does not mean that the resident cannot improve, but it means that the resident would not likely benefit much from further additional formal evaluation.

**Syllabus**
Resident specific syllabus will be sent in a separate document.

**Last, but not least, uphold the Oath of a Pharmacist to the best of your ability**
"I promise to devote myself to a lifetime of service to others through the profession of pharmacy. In fulfilling this vow:

• I will consider the welfare of humanity and relief of suffering my primary concerns.
• I will apply my knowledge, experience, and skills to the best of my ability to assure optimal outcomes for my patients.
• I will respect and protect all personal and health information entrusted to me.
• I will accept the lifelong obligation to improve my professional knowledge and competence.
• I will hold myself and my colleagues to the highest principles of our profession’s moral, ethical and legal conduct.
• I will embrace and advocate changes that improve patient care.
• I will utilize my knowledge, skills, experiences, and values to prepare the next generation of pharmacists.

I take these vows voluntarily with the full realization of the responsibility with which I am entrusted by the public.”