ROTATION DESCRIPTION

ROTATION TITLE
Cardiology/CCU& Heart Failure (PGY2)

PURPOSE
The purpose of this rotation is to allow the resident to develop strong clinical skills in the area of cardiovascular medicine. To that end, the resident will refine advanced pharmacotherapeutic skills in the identification and resolution of drug therapy problems in a critically ill patient population. In doing so, the resident must assume complete responsibility for patient care and assure positive drug therapy outcomes.

LEARNING EXPERIENCE DESCRIPTION
The Cardiology/CCU rotation should serve as a foundation for future hospital and ambulatory experiences in that it encompasses a wide variety of therapeutic issues and demands in treating the critically ill patient. The PGY2 resident will be expected to work more as an advanced independent practitioner and develop as an expert in their area by utilizing evidence-based medicine principles in practice.

The typical day begins with preparation for attending rounds which commence promptly at 10:00. The service is typically intense with a census of approximately 10-15 patients. The patient problem lists and work up of new admissions, along with literature retrieval/evaluation occurs commonly between 11 am - 3 pm daily. Then the resident meets with the preceptor for afternoon rounds discussing either all patients or 1-2 major problem patients. This if then followed by topic discussions or a primary literature journal article review on topics pertinent to direct patient care. The PGY2 resident will be expected to participate in precepting of students or PGY1 residents as well as facilitate discussions. The resident should provide prompt feedback to the preceptor of topics not being properly explained to them, and areas of improvement for the preceptor/team.

LEARNING EXPERIENCE ACTIVITIES
- Display professional characteristics when interacting with interdisciplinary team members and patients to enhance pharmacotherapy. Take responsibility for pharmacy-related aspects of care
  (CC: R1.1.3; R1.2.1; R1.3.1; R1.3.3; E3.1.1; E3.1.2; E3.1.3; E3.1.4; PCT: R1.1.1; R1.1.4; R1.3.1; R1.3.2; TX R2.2.1; R4.1.1; R4.1.2; R4.1.4; R4.1.5; R4.2.1; R4.2.2)

- Identify, interpret, and apply medical literature to enhance direct patient care activities
  (CC: R2.4.1; R2.4.2; R2.4.3; R2.5.1; R2.5.2; PCT: R2.4.1; R2.4.2; R2.4.3; R2.6.1; R2.6.2; R2.7.1; IM: R2.4.2; R2.4.3; TX: R2.2.1; R2.5.1; R2.5.2; R2.5.3; R2.7.1; R2.8.1; R3.2.2; R3.2.3)

- Develop and utilize a data collection method appropriate for the cardiology patient population to assist in making therapeutic recommendations
  (CC: R2.7.1; PCT: R2.7.1; R2.8.1; IM: R2.8.1; TX: R2.8.1)

- Review and assess each patient's pharmacologic regimen for appropriate indication, dose, and route. Identify and resolve any therapeutic duplications, unintended drug interactions, or adverse events
  (CC: R2.4.1; R2.4.2; R2.4.3; PCT: R2.4.1; R2.4.2; R2.4.3; IM: R2.4.2; R2.4.3; TX: R2.5.1; R2.5.2; R2.5.3)

- Consider patient-specific factors when determining therapeutic goals
  (CC: R2.5.1; R2.8.1; R2.8.2; R2.9.1; PCT: R2.8.1; R2.10.1; IM: R2.8.1; TX: R2.7.1; R2.7.2; R2.8.1)

- Once pharmacotherapeutic goals are established, incorporate evidence and patient-specific factors to design a therapeutic regimen likely to result in the desired outcome
  (CC: R2.5.2; R2.7.1; R2.8.1; R2.9.2; R2.9.3; PCT: R2.7.1; R2.8.1; R2.10.1; IM: R2.8.1; R4.3.2; TX: R2.8.1)

- Communicate effectively and efficiently, both verbally and in writing, with interdisciplinary team members to secure consensus and implement a drug therapy regimen and monitoring plan
  (CC: R2.1.1; R2.7.1; PCT: R2.1.1; R2.8.1; E1.3.1; E1.3.2; IM: R2.8.1; TX: R2.10.1)

- Appropriately monitor safety and effectiveness of drug therapy
  (CC: R2.7.1; R2.8.1; PCT: 2.8.1; R2.10.1; R2.11.1; R2.11.2; IM: R2.8.1; TX: R2.8.1; R2.10.1; R2.11.1; R2.11.2)

- Communicate with other members of the healthcare team to ensure continuity of care when the patient transfers to another healthcare setting
  (CC: R2.10.1; PCT: R2.12.1; IM: R2.5.2; R2.11.1; TX: R2.12.1)

- Evaluate the available literature and guidelines as well as the patient's response to therapy to determine if a patient's chronic medications are appropriate
  (CC: R2.4.1; R2.4.2; R2.4.3; PCT: R2.4.1; R2.4.2; R2.4.3; IM: R2.4.2; R2.4.3; TX: R2.5.2; R2.5.3)

- Document all clinical activities appropriately, including a minimum of 25 interventions per week in eMeds and 2 ADRs per month in PSN
  (CC: R2.11.1; PCT: R2.13.2; R3.2.6; IM: R2.12.1; R2.12.2; TX: R2.13.1; R2.13.2; R3.2.1)

- Review and institute MUSC policies and procedures into daily activities, including supervising the appropriate use of non-formulary and restricted medications
  (CC: R2.9.1; E1.3.1; E1.3.2; PCT: R2.10.1; R2.13.1; R3.2.6; IM: R6.1.3; TX: R3.1.1)

- Review patient medication profiles daily to identify and rectify any potential drug-drug or drug-food interactions. Report adverse events (actual or potential) in PSN, and include any ideas to improve system processes
  (CC: R2.4.3; R2.9.1; PCT: R2.4.2; R3.2.6; IM: R1.3.1; R2.4.2; R2.4.3; TX: R2.5.1; R2.10.1)

- Provide efficient and appropriate drug information responses to the medical team; appropriately evaluate the time sensitivity of each request
  (CC: R2.1.1; R3.1.1; R3.1.5; E2.1.1; E2.1.2; E2.1.3; E2.1.4; E2.1.5; E2.1.6; E2.1.7; PCT: R3.1.1; R3.1.9; R3.1.11; IM: R1.4.1; R2.1.1; TX: R1.3.1; R1.3.2; R1.3.3; R1.3.4; R1.3.5; R1.3.6; R1.3.7; R1.3.8)

- Choose and create an in-service on a medication therapy related topic to be presented to the physicians and/or nurses on your team
  (CC: R3.1.1; R3.1.2; R3.1.3; R3.1.4; R.3.1.5; IM: R2.1.1; PCT: R3.1, R4.1; TX: R1.3.1; R1.3.2; R1.3.3; R1.3.4; R1.3.5; R1.3.6; R1.3.7; R1.3.8)

- Utilize effective time-management strategies to complete all rotation-related activities on time and make expected progress on longitudinal projects
  (CC: R2.2.1; R2.4.4; PCT: R2.2.1; IM: R2.2.1; TX: R2.3.1; R4.1.3)

- Provide drug therapy recommendations and assist in medication preparation during medical emergencies (maydays)
  (CC: R5.1.1; IM: E3.1.1)

- Lead or facilitate topic discussions throughout the month as decided up by the preceptor and resident at rotation orientation and the beginning of each week
  (CC: R.3.1.1; IM: 3.1.3)

Rotation Goals

1. To increase the resident's knowledge of commonly encountered cardiovascular disease states and their appropriate pharmacotherapy.
2. To develop the clinical skills necessary to promote optimal and rational drug therapy of both cardiovascular and non-cardiovascular diseases through a close working relationship with the cardiology service.
3. To optimize communication skills to facilitate effective dialogue with patients and other health care professionals.

Skills Objectives

By the end of rotation, the resident should be able to:

1. Obtain from the patient a working database which should include the patient's significant past medical and medication history and an assessment of current problems.
2. Develop a reasonable therapeutic and monitoring plan for each patient.
3. Prepare and maintain a monitoring system for each patient.
4. Transmit pertinent patient and therapeutic information to other health care providers.
5. Discuss the patient's drug therapy with the patient and assess understanding of the

therapies.
6. Independently initiate clinical pharmacy services with patients and health care providers.

Rotation Activities

Provide comprehensive clinical monitoring for all patients on the Cardiology Service. This includes, but is not limited to:

1. Pharmacokinetic monitoring of appropriate medications
2. Identify and managing drug-drug and drug-disease interactions.
3. Ensure appropriate dosing (for age, renal and hepatic function, and patient response) of all medications.
4. Promote patient specific drug therapy for all patient problems. Provide alternative therapies or plans in case of patient failure or intolerance.
5. Apply the medical literature as a means of providing patient-specific drug information to health care providers.
6. Provide both formal and informal education to patients, nurses, and physicians regarding drug therapy.
7. Provide appropriate discharge counseling to all patients followed while on service.

Other obligations include:

1. Meet with preceptor every morning/afternoon (schedule permitting) for pharmacy rounds in the CCU
2. Provide at least one team in-service per month
3. Complete an assigned project/Power-Point presentation.
4. Lead topic discussions with preceptor.

Potential Topics	
Ischemic Heart Disease	Congestive Heart Failure
Hyperlipidemia	Acute Decompensated Heart Failure
Chronic Stable Angina	Chronic Heart Failure
Acute Coronary Syndromes – Unstable Angina/NSTEMI	Transplantation
STEMI	Devices
Acute MI/Post MI Therapy	Pulmonary Arterial Hypertension
Arrhythmias	Miscellaneous
Atrial Fibrillation/Flutter	Hemodynamics/Blood Gases/Shock
Antiarrhythmics	Diagnostic Tests/Scans in Cardiology
Ventricular Arrhythmias	Aortic Dissection/Aneurysm
Electrocardiograms	ACLS/Cardiac Resuscitation
Hypertension	Infectious Disease
Hypertensive Urgency/Emergency	Endocarditis
Essential Hypertension	Myocarditis/Pericarditis

REQUIREMENTS OF LEARNING EXPERIENCE

Required hours
6:00 AM to 6:00 PM
As patient care requires, the above listed times may vary.

Required meetings
Daily cardiology attending rounds: 10 AM CCU
Daily meetings with preceptor in am and pm
Cardiology Grand Rounds 07:30 Thursday mornings
Medicine Journal Club 1st and 2nd Wednesday of the month
Resident Seminar 13:00 Monday afternoons
RITE 12:00 Friday afternoons
SCCP Grand Rounds: Wednesday afternoons 12-14:00
Medicine Student Presentations: Friday afternoons 14-16:00 COP Faculty Conference Room

Required presentations
1-2 short presentations to the Cardiology services on a topic to be decided by the resident and the preceptor.

Required readings
Please see the preceptor for suggested readings to be shared with the resident during the rotation on a case-by-case/topic discussion basis.

ROTATION PRECEPTOR
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METHOD OF EVALUATION
Evaluation of residents will be based on the learning experience objectives outlined by the Residency Program Director (RPD). The RPD will identify the specific goals and objectives on which the resident will be evaluated (available in E-Value). The preceptor and resident will review the resident's customized plan and the learning experience introduction document on the first day of rotation. Feedback will include, but not be limited to, verbal and written mid-point and end of rotation evaluations.
Evaluation of residents will be based on the learning experience objectives outlined by the Residency Program Director (RPD).

The preceptor will provide feedback during the course of the rotation. An evaluation of the preceptor and rotation site is to be completed at the end of the rotation. It is the responsibility of the resident to seek clarification from the preceptor if any aspect of the rotation is not clear.

Miscellaneous

If you have questions at any time, you should call or page Dr. Schuler in her office or at home on evenings and weekends.

You are expected to be able to provide clinical pharmacy services independently by the end of the rotation. If you have any questions, please ask, but I will assume you understand basic internal medicine concepts unless you ask questions indicating otherwise. I encourage informal discussions of pathophysiology, diagnosis, and pharmacotherapy as needed. This is largely a self-directed learning experience, so it is your responsibility to let me know what you need to learn and what you want to focus on.