

**University of Utah Health Care Hospitals and Clinics**  
**PGY1 Residency**  
**Salt Lake City, Utah**

**Rotation Name:** Cardiology, Ambulatory Care

**Rotation Preceptor:** Adam Smith, PharmD

**Site Description:**

The University of Utah Cardiovascular Center provides comprehensive cardiac care with the latest innovations and clinical therapies. The clinic is composed of general, interventional, and congenital cardiology, heart failure and transplant, electrophysiology, cardiothoracic surgery, and vascular surgery. The pharmacist provides clinical pharmacy services including patient education, medication review and adjustments, drug information, and provider education to all subspecialties. The interprofessional team includes attending cardiologists and subspecialists, cardiology fellows, nurse practitioners, physician assistants, nurses, study coordinators, and medical assistants.

**Rotation Description:**

The clinical pharmacist is responsible for providing drug information to both patients and the practitioners working the cardiovascular clinic. The pharmacist will complete medication reconciliation on selected patients, identify and resolve problems, and provide recommendations through communication with the interprofessional team. You will have extensive one-on-one interaction with patients, providers, and ancillary staff. You will also have the opportunity to attend cardiology grand rounds and cardiology clinical conferences and view diagnostic and/or interventional studies related to cardiology.

Case presentations, journal clubs, drug therapy updates, in-service presentations, facilitating the heart failure education class, and precepting pharmacy students may all be a part of the rotation. The resident will discuss with the preceptor a variety of cardiology related topics.

Upon completion of the rotation, the resident will have increased knowledge of the pathophysiology, diagnosis, and pharmacological treatment of cardiovascular disease states including heart failure, hypertension, dyslipidemia, coronary artery disease, vascular disease, pulmonary hypertension, arrhythmias, and anticoagulation.

**Rotation Progression:**

Day 1: Preceptor will orient resident to the clinic, health care professionals, and workflow. Preceptor will review learning activities and expectations with resident.

- Resident should have reviewed articles/guidelines that were provided by the preceptor prior to rotation.
- Resident should come ready to discuss resident progress to date, areas of excellence and areas of improvement needed, and three goals for rotation.
- Resident is expected to be punctual, professional, prioritize daily activities with a focus on exceptional patient care, and have willingness to go above and beyond for the team.

Week 1:

- Resident will staff the clinic with the pharmacist during the first week and progress to functioning independently during this rotation.
- Resident will work up all assigned patients in detail, especially focusing on cardiology issues.
- Resident will present all patients to the preceptor for the first few days of rotation.

- By day three, resident will be interviewing patients independently.
  - o Interactions with patients and family members will be professional and efficient, balancing need for important information with time management/redirection skills.
- Resident should be reviewing/interviewing at least 5 patients per day towards the end of the first week.
- Patient interactions should include medication reconciliation, identifying and resolving patient/medication issues, assessment of medication therapy for cardiology and other disease states, and providing recommendations/plans to optimize care.
- Resident is expected to use appropriate resources to fill knowledge gaps and provide evidence based recommendations.
- Demonstrate knowledge of current immunization practices and recommendations.
- Resident will document all patient interactions in the chart.
  - o Goal will be for resident's assessment and plan to contain an appropriate heading/context, supported recommendations, explanations for non-standard therapy, and reasons why a patient is not on recommended therapy.
- Resident is expected to engage with the cardiology teams such that they know the resident's name by Friday.
- Resident, with assistance from the preceptor, will select an appropriate project for the rotation by Friday.

#### Week 2:

- Resident should be reviewing/interviewing at least 6 patients per day towards the end of the second week.
- Resident will communicate with pharmacies, health care facilities, and other providers when needed with little prompting from the preceptor.
- Resident will catch common interventions and document important notes on most patients.
  - o Important notes include explanations for non-standard therapy and reasons why a patient is not on recommended therapy.
- Resident will demonstrate ability to incorporate prior feedback and increase ability to recognize medication problems from the prior week.
- Resident will start spending some time in the provider room without the preceptor by the end of the week.
- Resident will respond to any drug information requests from the providers with help from the preceptor if needed.
  - o The team should start asking resident therapy questions independent of the preceptor.
- Resident will begin selecting general cardiology patients to see on own by the end of the week.

#### Week 3:

- Resident should be reviewing/interviewing at least 7 patients per day towards the end of the third week.
- Resident will catch common interventions and document important notes on almost all patients.
  - o Important notes include explanations for non-standard therapy and reasons why a patient is not on recommended therapy.
- Resident should be able to use knowledge of the literature, risk stratification techniques, and patient factors to provide recommendations for some complex patients.
- Resident will demonstrate ability to incorporate prior feedback and increase ability to recognize medication problems from the prior week.
- Notes should be clear, concise, and contain minimal errors.

- Resident will start spending most of the time in the provider room without the preceptor by the end of the week and be fully engaged with the team.
- Resident will respond to any drug information requests from the providers independent of the preceptor.
- If referred a patient for HTN, dyslipidemia, or smoking cessation. The resident, with guidance from the preceptor, will function within the scope of the collaborative drug therapy management protocols approved by the Pharmacy and Therapeutics Committee.
- Rough draft of the project will be provided to the preceptor.

Week 4:

- Resident should be reviewing/interviewing at least 8 patients per day towards the end of the final week.
- Resident will catch common and complex interventions and document important notes on almost all patients.
  - o Important notes include explanations for non-standard therapy and reasons why a patient is not on recommended therapy.
- Resident should be able to use knowledge of the literature, risk stratification techniques, and patient factors to provide recommendations for almost all complex patients.
- Resident will demonstrate ability to incorporate prior feedback and increase ability to recognize medication problems from the prior week.
- Resident will document independently and without errors by the final week.
- Resident will be able to independently staff the general cardiology and heart failure clinics during this week.
- Resident will be proactive and anticipate needs of the patients and providers.
- If referred a patient for HTN, dyslipidemia, or smoking cessation. The resident will independently function within the scope of the collaborative drug therapy management protocols approved by the Pharmacy and Therapeutics Committee.
- Resident will present or complete final project.

\*\*\*If the resident is in their second ambulatory care or transitions rotation, expectations are moved up 1 week for most clinical activities. Expectations for projects and presentations will be that they will need fewer edits and will have better accuracy and focus for the stated audience.

**Activities Evaluated and Taught:**

Goals and Objectives	Teaching Method(s)	Related Rotation Activities
<b>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.</b>		
OBJ R1.1.1: Interact effectively with health care teams to manage patients' medication therapy. (Am Care I)	Modeling Coaching Facilitation	<ul style="list-style-type: none"> <li>• Learner will effectively collaborate with the various cardiology subspecialty teams to provide patient care.</li> </ul>
OBJ R1.1.2: Interact effectively with patients, family members, and caregivers. (Am Care I and II)	<i>Customized based on resident's baseline skills and progression</i>  Direct instruction Modeling	<ul style="list-style-type: none"> <li>• Learner will conduct at least 5 patient interviews daily to determine adherence to and issues with current medication therapy.</li> <li>• Learner will communicate (face-to-face, by phone, or written) with patients, providers, health care facilities, and pharmacies as needed to facilitate therapeutic plans.</li> <li>• Learner will assist in teaching the Heart Failure Education Class if it occurs during the course of the rotation.</li> </ul>

Goals and Objectives	Teaching Method(s)	Related Rotation Activities
	Coaching Facilitation	
OBJ R1.1.3: Collect information on which to base safe and effective medication therapy. <b>(Am Care I)</b>	<i>Customized based on resident's baseline skills and progression</i>  Direct instruction Modeling Coaching Facilitation	<ul style="list-style-type: none"> <li>• Learner will review at least 5 patient charts prior to daily visit.</li> <li>• Learner will conduct at least 5 patient interviews daily to determine adherence to and issues with current medication therapy.</li> <li>• Learner will review charts and the medical literature as needed to answer medication therapy questions.</li> </ul>
OBJ R1.1.4: Analyze and assess information on which to base safe and effective medication therapy. <b>(Am Care II)</b>	<i>Customized based on resident's baseline skills and progression</i>  Direct instruction Modeling Coaching Facilitation	<ul style="list-style-type: none"> <li>• Learner will analyze and assess information collected during chart review, patient interviews, and literature review to guide medication therapy.</li> </ul>
OBJ R1.1.5: Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans (care plans). <b>(Am Care I and II)</b>	<i>Customized based on resident's baseline skills and progression</i>  Direct instruction Modeling Coaching Facilitation	<ul style="list-style-type: none"> <li>• Learner will formulate therapeutic plans for patients seen in clinic and as needed in response to questions by the patients or providers.</li> <li>• Learner will discuss plans with the preceptor as needed.</li> <li>• Learner will appropriately document patient encounters in the electronic health record.</li> </ul>
OBJ R1.1.6: Ensure implementation of therapeutic regimens and monitoring plans (care plans) by taking appropriate follow-up actions. <b>(Am Care II)</b>	Modeling Coaching Facilitation	<ul style="list-style-type: none"> <li>• Learner will communicate (face-to-face, by phone, or written) with patients, providers, health care facilities, and pharmacies as needed to facilitate therapeutic plans.</li> <li>• If all needs cannot be met for a patient, learner will take initiative to pass along information needed to take care of the patient.</li> <li>• Learner will appropriately document patient encounters in the electronic health record.</li> </ul>
OBJ R1.1.7: Document direct patient care activities appropriately in the medical record or where appropriate. <b>(Am Care I)</b>	Direct instruction Modeling Coaching Facilitation	<ul style="list-style-type: none"> <li>• Learner will appropriately document patient encounters in the electronic health record which may include writing notes and updating patient information.</li> </ul>

<b>Goals and Objectives</b>	<b>Teaching Method(s)</b>	<b>Related Rotation Activities</b>
OBJ R1.1.8: Demonstrate responsibility to patients. (Am Care II)	Modeling Coaching Facilitation	<ul style="list-style-type: none"> <li>Learner will ensure all activities are performed with patient-centered values.</li> <li>If all needs cannot be met for a patient, learner will take initiative to pass along information needed to take care of the patient.</li> <li>Learner will appropriately document patient encounters in the electronic health record.</li> </ul>
<b>Goal R1.2: Ensure continuity of care during patient transitions between care settings</b>		
OBJ R1.2.1: Manage transitions of care effectively. (Am Care I)	Modeling Coaching Facilitation	<ul style="list-style-type: none"> <li>When selecting patients to interview, learner will make those with a recent transition a priority.</li> <li>Learner will contact patients, providers, health care facilities, and pharmacies as needed to manage transitions.</li> <li>Learner will appropriately document patient encounters in the electronic health record.</li> </ul>
<b>Goal R3.1: Demonstrate leadership skills.</b>		
OBJ R3.1.2: Apply a process of on-going self-evaluation and personal performance improvement. (Am Care I and II)	Coaching Facilitation	<ul style="list-style-type: none"> <li>Learner will self-assess baseline cardiology knowledge and ambulatory care experience prior to beginning rotation and communicate gaps to the preceptor.</li> <li>Learner will apply feedback to future patient and provider encounters.</li> <li>Learner will self-assess progress at the end of the rotation experience.</li> </ul>
<b>Goal R3.2: Demonstrate management skills.</b>		
OBJ R3.2.4: Manages one's own practice effectively. (Am Care II)	Modeling Coaching Facilitation	<ul style="list-style-type: none"> <li>Goal will be for learner to independently run the Heart Failure, General Cardiology, and/or Dyspnea Clinic by the last week of rotation.</li> </ul>
<b>Goal R4.1: Provide effective medication and practice-related education to patients, caregivers, health care professionals, students, and the public.</b>		
OBJ R4.1.2: Use effective presentation and teaching skills to deliver education. (Am Care I and II)	Coaching Facilitation	<ul style="list-style-type: none"> <li>Learner will prepare and present a journal club, case, or in-service as needed to health care professionals.</li> <li>Learner will provide medication or other education as needed to patients and providers.</li> <li>Learner will assist in teaching the Heart Failure Education Class if it occurs during the course of the rotation.</li> </ul>

**Possible Readings/Topics/References:**

- [American Heart Association/American College of Cardiology Guidelines:](#)
  - Management of Heart Failure and Focused Update
  - Diagnosis and Management of Patients With Stable Ischemic Heart Disease
  - Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults
  - Duration of Dual Antiplatelet Therapy in Patients With Coronary Artery Disease
  - Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults
  - Management of Patients With Atrial Fibrillation
  - Management of Patients With Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death
  - Management of Patients With Valvular Heart Disease

- Landmark Trials for Treatment of Heart Failure:
  - V-HeFT, V-HeFT II, A-HeFT, CONSENSUS, SOLVD, CHARM (Added, Alternative), Val-HeFT, ELITE II, ATLAS Study, ANZ, U.S. Carvedilol Trials, COPERNICUS, MERIT-HF, COMET, CIBIS II, RALES, EPHEBUS, EMPHASIS, TOPCAT, DIG, PARADIGM-HF, SHIFT

**Project or Presentation Description:**

The resident will complete one journal club, in-service presentation, case presentation, or other assignment depending on resident and/or preceptor preference.

**Typical Daily, Weekly, and Monthly Activities (Subject to Change):**

*Monday* – General Cardiology 0800-1200, Heart Failure 1230-1700

*Tuesday* – General Cardiology 0800-1200, Heart Failure 1230-1700

*Wednesday* – General Cardiology 0800-1200, Heart Failure 1230-1700

*Thursday* – General Cardiology 0800-1200, Heart Failure 1230-1700

*Friday* – Heart Failure 0800-1200, General Cardiology 1300-1700

*Monthly meetings* – attend meetings with preceptor as needed

**Evaluation:**

The resident will receive regular formative feedback related to patient care activities, patient education, and other activities. A midpoint evaluation will be scheduled after 2 weeks of rotation and a final summative evaluation will be completed at the end of the rotation in PharmAcademic.