

University of Utah Health: PGY1 Residency Program Salt Lake City, Utah

Rotation Name: Cardiovascular Medicine - Transitions of Care

Rotation Preceptors:

Teshia Sorensen, PharmD, BCPS, AACC - Preceptor
Joshua Sessions, PharmD - Preceptor
Adam Smith, PharmD - Preceptor
Jessica Carey, PharmD
John Dechand, PharmD
Irene Pan, PharmD - Preceptor in Training
Joshua Jacobs, PharmD - Preceptor in Training (starting Sept 2018)

Rotation Duration: 4 weeks

Site Description:

The Cardiovascular Medicine inpatient pharmacists at University of Utah Health provide comprehensive pharmaceutical care to patients on five inpatient services and one ambulatory service:

CV1 Pharmacist: General Cardiology (acute care)
CV2 Pharmacist: Heart Failure and Transplant (acute care and intensive care)
CV3 Pharmacist: Cardiothoracic Surgery, Interventional Cardiology, Electrophysiology (acute care)
CV4 Pharmacist: Pulmonary Arterial Hypertension (outpatient clinic)

The Cardiovascular Medicine outpatient pharmacist provides comprehensive pharmaceutical care to patients in the General Cardiology and Heart Failure clinics.

Each pharmacist provides care to approximately 12-18 patients per day. Residents on the Transitions of Care rotation may select to round with General Cardiology or Heart Failure and Transplant in at least 2 settings (i.e., ICU, acute care, or clinic). Inpatients are typically bedded on the Cardiovascular Medicine Unit (CVMU) or the Cardiovascular Intensive Care Unit (CVICU), but may also be bedded on other acute care floors or intensive care units. CVMU is a 35 bed unit and CVICU is a 20 bed unit. Outpatients are seen in the Cardiovascular Center.

Common medical conditions encountered include acute coronary syndromes (unstable angina, myocardial infarction), heart failure, arrhythmias, infections (endocarditis, LVAD infections, etc.), valvular heart disease, congenital heart disease, and pulmonary hypertension.

Role of the Pharmacist:

The pharmacist works collaboratively with members of the multidisciplinary teams, including providers (attending cardiologists and subspecialists, fellows, residents, interns, nurse practitioners, and physician's assistants), nurses and medical assistants, case managers, social workers, and more. The pharmacist contributes to improved patient care by providing an array of clinical pharmacy services including individual and group patient education, medication review and optimization, drug information, provider education, and assistance with transitions of care with respect to drug therapy. Each inpatient pharmacist is responsible for patient care from admission through discharge, including medication reconciliation at both points, as well as delivery of discharge medications to the bedside coupled with extensive, personalized counseling on outpatient medication therapies.

Rotation Description and Expectations of the Resident:

The Cardiovascular Medicine Transitions of Care rotation provides learning experiences for the resident in acute care, intensive care, and clinic settings. The resident's specific rotation structure (see options below) will be determined prior to the first day of the rotation based on resident interest and preceptor availability.

Rotation Structure Options:

Option	Week 1	Week 2	Week 3	Week 4
A	HF Acute Care	HF Acute Care	HF Intensive Care	HF Intensive Care
B	HF Acute Care	HF Acute Care	HF Clinic	HF Clinic
C	GC Acute Care	GC Acute Care	GC Clinic	GC Clinic

The resident is expected to provide comprehensive pharmaceutical care to all patients on their service. Daily activities will include completing accurate and complete medication histories, analyzing all appropriate patient-specific data, developing comprehensive therapeutic and monitoring plans, rounding with the multidisciplinary team, resolving all medication-related issues, and providing patient education and counseling. The resident will also complete topic and patient presentations, landmark clinical trial discussions, a journal club presentation, an in-service presentation, and observational learning experiences.

The resident will strive to develop excellent written and verbal communication skills. The resident is expected to supplement knowledge gaps by researching those topics via primary literature and/or clinical guidelines.

Project Description:

Note: Preceptors reserve the right to reduce required projects based on patient census/acuity. Residents should be fully prepared by each due date unless instructed otherwise in advance by preceptor.

1) Landmark Clinical Trials Discussion (3)

- Read each trial in preparation for an informal, resident led discussion with preceptor.
- Verbally describe each trial and discuss the trial's impact on current practice.
- The resident is not required to prepare a handout.

2) Journal Club (1)

- Topic must be related to cardiology.
- Article must be published within the last 6 months.
- Study should be likely to have an impact on patient care.
- The resident is required to prepare a handout and formally present on the article.

3) In-service Presentation (1)

- Present a medication related topic to the Cardiology or Heart Failure and Transplant team, clinical pharmacists, or nurses.
- The resident is required to prepare a handout and formally present on the topic.
- Presentation length is approximately 15 minutes.

4) Patient Presentation and/or Topic Discussion (2)

- Present the patient in SOAP format.
- Topic discussions should focus on disease state(s) relevant to the patient presented.
- The resident is required to prepare a handout and formally present on the patient and/or topic.

5) Observational Experiences (3)

- Experiences may include observing cardiac stress tests, cardiac catheterizations, and cardioversions.
- The resident must prepare in advance to gain the most benefit from each observational experience. Review articles or other material may be assigned.

6) MUE/System Improvement Project (1)

- a) Optional. May complete in place of (1) formal patient presentation/topic discussion.
- b) The MUE or project must be completed by the end of the rotation.
- c) A list of potential projects will be provided during orientation.

Typical Daily/Weekly/Monthly Activities:

The resident is expected to be punctual and to prioritize daily activities. A typical day will be from 0630 to 1600 on inpatient days or 0800 to 1700 on clinic days. Residents must arrive earlier than suggested below if needed to fully prepare for rounds or clinic appointments. Additional time is usually necessary to complete daily responsibilities and ensure the best outcomes for the patient.

Inpatient Schedule:

Heart Failure and Transplant Service:

- 0630 - 0730 Daily - Patient monitoring and rounds preparation
- 0730 - 0800 Daily - Patient presentations (brief) with preceptor
- 0800 - 1200 Daily - Multidisciplinary team rounds (active participation is required)

General Cardiology Service:

- 0700 - 0830 Daily - Patient monitoring and rounds preparation
- 0830 - 0900 Daily - Patient presentations (brief) with preceptor
- 0900 - 1200 Daily - Cardiology team rounds (active participation is required)

Heart Failure and Transplant AND General Cardiology Services:

- 1200 - 1230 Daily - Patient presentations (in-depth) with preceptor, resolve remaining issues
- 1300 - 1400 Daily - Core topic discussions and presentations with preceptor
- 1400 - 1600 Daily - Patient education on high risk medications, medication histories
- 1600 + Daily - The resident is expected to complete all patient care activities prior to leaving each day. Additional time outside of regular rotation hours will be required for reading, project research, and presentation preparation.

Clinic Schedule:

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 0830-1200, General Cardiology 1300-1700

Monthly meetings - attend meetings with preceptor as needed

**Residency Conference is every Wednesday from 1400-1530. Residents are required to attend.

Expected Progression:

Cardiovascular Medicine - Transitions of Care:

Time Frame	Resident Progression
Pre-Rotation and Day 1	<p><u>Inpatient and Clinic:</u></p> <ul style="list-style-type: none"> - The resident should email the preceptor 2 weeks prior to rotation with the rotation structure preference, requested time off, and any meeting dates and times that may interrupt regular rotation hours.

	<ul style="list-style-type: none"> - The resident should come ready to discuss resident progress to date, areas of excellence, areas of improvement needed, and three goals for the rotation. - The preceptor will orient the resident to the unit, health care professionals, and workflow. - The preceptor will review the rotation description, calendar, learning activities, projects, required and recommending reading material, and expectations with the resident. - The resident is expected to be punctual and to prioritize daily activities with a focus on providing exceptional patient care. - The 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. <p><u>Inpatient:</u></p> <ul style="list-style-type: none"> - The resident will read required primary literature and guidelines daily in order to finish by the end of the rotation. <p><u>Clinic:</u></p> <ul style="list-style-type: none"> - The resident should have reviewed articles/guidelines that were provided by the preceptor prior to the rotation.
Week 1	<p><u>Inpatient:</u></p> <ul style="list-style-type: none"> - The preceptor will stay in unit and participate in patient work up, multidisciplinary team rounds, and patient interactions with the resident, modeling the pharmacist's role on the health care team. - The preceptor will prompt other health care professionals to direct questions and needs to the resident, but will intervene if emergent care is needed. - The resident will thoroughly work up approximately 1/3 of the team's patients (Acute Care I) or approximately 1/2 of the team's patients (Acute Care II) by the end of the week. - The resident will present patients to the preceptor twice per day (briefly at 0830 and thoroughly after rounds each day). - The resident will discuss all interventions and reasoning with the preceptor prior to making recommendations to the team. - The resident will take into account each patient's comorbidities, allergies, weight, laboratory values, vitals, renal function, hepatic function, and current medications prior to recommending changes to drug therapy. - The resident will prioritize patient care based on acuity. - The resident will interview patients and accurately document admission medication histories for at least 5 patients (Acute Care I) or for at least 3 patients (Acute Care II). - The resident will review discharge medications and work with the team to correct errors for at least 5 patients. - The resident will provide and document anticoagulation education for at least 2 patients, one on warfarin and one on a DOAC, with the preceptor present.

	<ul style="list-style-type: none"> - The resident will provide personalized education on discharge medications to at least 5 patients with the preceptor present. - The resident will review and utilize cardiovascular policies and procedures that apply to each patient. - The resident will complete all Week 1 rotation assignments by the end of the week. <p><u>Clinic:</u></p> <ul style="list-style-type: none"> - The resident will staff the clinic with the pharmacist during the first week and progress to functioning independently during this rotation. - The resident will work up all assigned patients in detail, especially focusing on cardiology issues. - The resident will present all patients to the preceptor for the first few days of the rotation. - The resident will be interviewing patients independently by day three of the rotation. - Interactions with patients and family members will be professional and efficient, balancing the need for important information with time management/redirection skills. - The 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. - The resident is expected to use appropriate resources to fill knowledge gaps and provide evidence based recommendations. - The resident will demonstrate knowledge of current immunization practices and recommendations. - The resident will document all patient interactions in the chart. - The goal will be for the 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. - The resident is expected to engage with the cardiology teams such that they know the resident's name by the end of the week. - The resident, with assistance from the preceptor, will select an appropriate project for the rotation by the end of the week.
Week 2	<p><u>Inpatient:</u></p> <ul style="list-style-type: none"> - The preceptor will be on the unit or available at all times through pager and/or personal phone. - The resident will demonstrate that information learned in the first week can be incorporated readily into their patient care. - The resident will thoroughly work up all patients on the team in a proactive and efficient manner. - The resident will design complete therapeutic and monitoring plans for each patient.

	<ul style="list-style-type: none"> - The resident will complete or co-sign admission medication histories for all patients on the team without error. - The resident will review discharge medications and work with the team to correct errors for all patients on the team. - The resident will provide and document anticoagulation education for all patients on the team. - The resident will provide personalized education on discharge medications for all patients on the team. - The resident will demonstrate basic competency to the preceptor in order to participate in preceptor supervised RRTs and codes. - The resident will complete all Week 2 rotation assignments by the end of the week. <p><u>Clinic:</u></p> <ul style="list-style-type: none"> - The resident should be reviewing/interviewing at least 6 patients per day towards the end of the second week. - The resident will communicate with pharmacies, health care facilities, and other providers when needed with little prompting from the preceptor. - The resident will catch common interventions and document important notes on most patients. - Important notes include explanations for non-standard therapy and reasons why a patient is not on recommended therapy. - The resident will demonstrate ability to incorporate prior feedback and increase ability to recognize medication problems from the prior week. - The resident will start spending some time in the provider room without the preceptor by the end of the week. - The resident will respond to any drug information requests from the providers with help from the preceptor if needed. - The team should start asking resident therapy questions independent of the preceptor. - The resident will begin selecting general cardiology patients to see on own by the end of the week.
Week 3	<p><u>Inpatient:</u></p> <ul style="list-style-type: none"> - The preceptor will be on the unit or available at all times through pager and/or personal phone. - The resident will demonstrate that information learned in the first 2 weeks can be incorporated readily into their patient care. - The resident will strive to develop excellent written and verbal communication skills. - The resident will independently identify interventions and make recommendations to the team in a proactive and efficient manner, reserving preceptor confirmation for new or challenging therapeutic issues. - The resident will demonstrate effective delivery of evidence-based recommendations to the team taking into account patient-specific characteristics.

	<ul style="list-style-type: none"> - The resident will demonstrate efficiency at, and dedication to, completing patient care activities, rotation projects, and residency responsibilities. - The resident will identify and address all common therapy issues and begin to identify and address more complex therapy issues. - The team should be reaching out primarily to the resident to answer questions. - The resident will complete all Week 3 rotation assignments by the end of the week. <p><u>Clinic:</u></p> <ul style="list-style-type: none"> - The resident should be reviewing/interviewing at least 7 patients per day towards the end of the third week. - The resident will catch common interventions and document important notes on almost all patients. - Important notes include explanations for non-standard therapy and reasons why a patient is not on recommended therapy. - The resident should be able to use knowledge of the literature, risk stratification techniques, and patient factors to provide recommendations for some complex patients. - The resident will demonstrate the ability to incorporate prior feedback and increase the ability to recognize medication problems from the prior week. - Notes should be clear, concise, and contain minimal errors. - The 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. - The resident will respond to any drug information requests from the providers independent of the preceptor. - If referred a patient for hypertension, 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. - The resident will provide a rough draft of the project to the preceptor.
Week 4	<p><u>Inpatient:</u></p> <ul style="list-style-type: none"> - The preceptor will be on the unit or available at all times through pager and/or personal phone. - The resident will demonstrate that information learned in the first 3 weeks can be incorporated readily into their patient care. - The resident is expected to provide comprehensive pharmaceutical care to all patients on their service. - The resident should be independent at the practice site by the last day of rotation. - The resident will demonstrate understanding of all required cardiovascular policies and procedures.

	<ul style="list-style-type: none"> - The resident will complete all Week 4 rotation assignments by the next to the last day of the week. <p><u>Clinic:</u></p> <ul style="list-style-type: none"> - The resident should be reviewing/interviewing at least 8 patients per day towards the end of the final week. - The resident will catch common and complex interventions and document important notes on almost all patients. - Important notes include explanations for non-standard therapy and reasons why a patient is not on recommended therapy. - The resident should be able to use knowledge of the literature, risk stratification techniques, and patient factors to provide recommendations for almost all complex patients. - The resident will demonstrate the ability to incorporate prior feedback and increase the ability to recognize medication problems from the prior week. - The resident will document independently and without errors by the final week. - The resident will be able to independently staff the general cardiology and heart failure clinics during the final week. - The resident will be proactive and anticipate needs of the patients and providers. - If referred a patient for hypertension, 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. - The resident will present or complete final project.
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*** IF the resident is on the second Transitions of Care rotation, expectations for projects and presentations will be that they contain a higher level of detail, require fewer edits and have better accuracy and focus for the stated audience.

RLS Goals and Objectives:

Transitions of Care Rotation:

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 Interact effectively with health care teams to manage patients' medication therapy.
- OBJ R1.1.2 Interact effectively with patients, family members, and caregivers.
- OBJ R1.1.3 Collect information on which to base safe and effective medication therapy.
- OBJ R1.1.7 Document direct patient care activities appropriately in the medical record or where appropriate.

R1.2 Ensure continuity of care during patient transitions between care settings.

- OBJ R1.2.1 Manage transitions of care effectively.

R3.1 Demonstrate leadership skills.

- OBJ R3.1.1 Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership.

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 Use effective presentation and teaching skills to deliver education.

Rotation Activities and Teaching Methods Linked to Objectives:

Rotation Activities	Teaching Methods	Objectives
<p><u>Inpatient:</u></p> <ul style="list-style-type: none"> ▪ Be responsible for discussion/integration of all patient data during daily pre-round and post-round discussions with the preceptor and during multidisciplinary rounds with the team. Initially, the resident will perform these functions with the close supervision of the preceptor, but as comfort and competency improve, the resident will be expected to take on more and more of the direct patient care activities and ultimately assume care of the patients. ▪ Recommend evidence-based, patient-specific modifications to medication therapy. ▪ Recommend appropriate monitoring plans for each medication. ▪ Identify and address patient needs, nurse needs, and physician needs where pharmacists can contribute. ▪ Determine patient-specific affordability for each new medication and communicate findings to the team. ▪ Contact home infusion, case management, etc. when needed to ensure patient access to medications. <p><u>Clinic:</u></p> <ul style="list-style-type: none"> ▪ Interview patients along with the cardiology and HF teams daily, and other subspecialty teams as needed. ▪ Communicate (face-to-face, by phone, or written) with patients, providers, health care facilities, and pharmacies as needed to facilitate therapeutic plans. 	<p>Direct Instruction Modeling Coaching Facilitation</p>	<p>OBJ R1.1.1 Interact effectively with health care teams to manage patients' medication therapy.</p>
<p><u>Inpatient:</u></p> <ul style="list-style-type: none"> ▪ Interview patients and/or family members and contact pharmacies to complete accurate medication histories. ▪ Provide education on medications to patients and/or caregivers that includes indications, expected effects, possible adverse effects, appropriate monitoring, access, and affordability. 	<p>Direct instruction Modeling Coaching Facilitation</p>	<p>OBJ R1.1.2 Interact effectively with patients, family members, and caregivers.</p>

<p><u>Clinic:</u></p> <ul style="list-style-type: none"> ▪ Communicate (face-to-face, by phone, or written) with patients, providers, health care facilities, and pharmacies as needed to facilitate therapeutic plans. ▪ Provide medication or other education as needed to patients and/or caregivers. 		
<p><u>Inpatient:</u></p> <ul style="list-style-type: none"> ▪ Review pertinent vitals, labs, imaging, non-invasive and invasive studies, etc. for each patient in preparation for rounds. <p><u>Clinic:</u></p> <ul style="list-style-type: none"> ▪ Review at least 5 patient charts prior to daily visit. ▪ Conduct at least 5 patient interviews daily to determine adherence to and issues with current medication therapy. ▪ Review charts and the medical literature as needed to answer medication therapy questions. 	<p>Direct instruction Modeling Coaching Facilitation</p>	<p>OBJ R1.1.3 Collect information on which to base safe and effective medication therapy.</p>
<p><u>Inpatient:</u></p> <ul style="list-style-type: none"> ▪ Interview patients and/or family members and contact pharmacies to complete medication histories and document in the patient's chart. ▪ Provide education on all discharge medications to patients and/or caregivers and document in the Discharge Activity tab. ▪ Provide anticoagulation education to patients and/or caregivers and document in the Education Activity tab. <p><u>Clinic:</u></p> <ul style="list-style-type: none"> ▪ Appropriately document patient encounters in the electronic health record. 	<p>Direct instruction Modeling Coaching Facilitation</p>	<p>OBJ R1.1.7 Document direct patient care activities appropriately in the medical record or where appropriate.</p>
<p><u>Inpatient:</u></p> <ul style="list-style-type: none"> ▪ Ensure patient-specific medication access and affordability. ▪ Review all discharge orders and work with team to reconcile issues. ▪ Provide adequate pass-off to ICU pharmacists, acute care pharmacists, clinic pharmacists, and facilities at transfer and document appropriately in the patient's chart. ▪ Ensure patient specific medication access and affordability prior to discharge ▪ Review all discharge orders and reconcile issues 	<p>Direct instruction Modeling Coaching Facilitation</p>	<p>OBJ R1.2.1 Manage transitions of care effectively.</p>

<p><u>Clinic:</u></p> <ul style="list-style-type: none"> ▪ When selecting patients to interview, learner will make those with a recent transition a priority ▪ Contact patients, providers, health care facilities, and pharmacies as needed to manage transitions ▪ If all needs cannot be met for a patient, learner will take initiative to pass along information needed to take care of the patient. 		
<p><u>Inpatient:</u></p> <ul style="list-style-type: none"> ▪ Work closely with all members of the multi-disciplinary team (e.g., physicians, nurses, case management, social work, home infusion, etc.) to identify and resolve medication related issues. <p><u>Clinic:</u></p> <ul style="list-style-type: none"> ▪ Collaborate with cardiology teams to optimize patient care. ▪ Demonstrate responsibility to patients. ▪ Goal will be for learner to independently run the Heart Failure, General Cardiology, and/or Dyspnea Clinic by the last week of rotation. 	<p>Direct instruction Modeling Coaching Facilitation</p>	<p>OBJ R3.1.1 Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership.</p>
<p><u>Inpatient:</u></p> <ul style="list-style-type: none"> ▪ Prepare and present an in-service presentation for physicians, nurses, or pharmacists. ▪ Prepare and present a journal club, patient case/topic discussions, and landmark clinical trial discussions. ▪ Provide education on medications to patients and/or caregivers. <p><u>Clinic:</u></p> <ul style="list-style-type: none"> ▪ Prepare and present a journal club, case, or in-service as needed to health care professionals. ▪ Provide medication or other education as needed to patients and providers ▪ Assist in teaching the Heart Failure Education Class if it occurs during the course of the rotation 	<p>Direct instruction Modeling Coaching Facilitation</p>	<p>OBJ R4.1.2 Use effective presentation and teaching skills to deliver education.</p>

Readings and Preparatory Work:

Residents are required to be BLS and ACLS certified or actively pursuing certification. Readings will include landmark clinical trials, as well as more recent trials that may impact patient care, clinical guidelines for core cardiovascular conditions, and relevant material from ACCP's and/or ASHP's Board

Certification products. **Current lists of required and recommended readings are available at H:\Rx Residents\Rx Residents\Cardiovascular Medicine Rotations.**

Evaluations:

Evaluations will be documented in PharmAcademic™. At the midpoint of the rotation, the preceptor will evaluate the resident. At the end of each rotation, the resident will self-evaluate, the preceptor will evaluate the resident, and the resident will evaluate both the preceptor and the learning experience. The resident's self-evaluation is due by the last Wednesday of the rotation. All evaluations must be co-signed within 2 weeks of completion of the rotation.