



Resident Orientation to the Cardiology Inpatient Service

Welcome to the cardiology inpatient service! The following are some guidelines to help you get the most from your time with us and to help the service run smoothly.

Rotation Director

Srini Mukundan, MD (mukundan@ohsu.edu)

Rotation Preceptors

Trisha Thoms, PA-C (thoms@ohsu.edu)

General cardiology attendings – rotate weekly

Chief Fellows

Ahmed Altibi MD (altibi@ohsu.edu), Katie Lutz MD (lutzka@ohsu.edu)

The chief fellows will be your main contact person before the rotation.

Education Manager

Ana Martin (plesiaa@ohsu.edu)

If there are any last-minute changes that will affect your schedule, please email the education manager

Education Coordinator

Kindell Adams (adamkind@ohsu.edu)

Please email to receive the weekly cardiology conferences.

Rotation Overview

This rotation will provide internal medicine residents with the opportunity to provide care for patients with a broad mix of cardiovascular pathology. The residents will be supervised by the cardiology attending. Historically this has been an advanced practice provider (APP)-run service which means that the APPs have a wealth of cardiology experience and also serve to teach and guide the rotating residents. Cardiology patients are admitted to the inpatient cardiology service either through the Emergency Department, through transfer from a cardiology or non-cardiology inpatient service (including the intensive care unit), or direct admission from an outside hospital, cardiology clinic or home.

Cardiology patients on this service have a broad range of diseases including but not limited to: (a) acute coronary syndrome (b) ischemic heart disease (c) heart failure (d) valvular heart disease (e) atrial and ventricular arrhythmias (f) pericardial or myocardial infiltrative disease (g) pulmonary hypertension (h) hypertrophic cardiomyopathy (i) adult congenital heart disease (j) peri-procedural care of patients undergoing coronary or structural interventions



Learning Objectives:

1. Learn to take a cardiovascular history and physical exam.
2. Understand the indications, contraindications, interpretation, and integration of key cardiac tests such as ECG, stress test modalities, Chest X-Ray, transthoracic or transesophageal echocardiogram, right heart catheterization, and coronary angiography.
3. Analyze and integrate cardiovascular diagnostics with historical and physical exam findings to develop a focused differential diagnosis.
4. Develop and implement inpatient treatment plans for the acute cardiovascular conditions.
5. Develop and implement treatment plans for chronic cardiovascular conditions.
6. Practice accurate and effective communication skills as they relate to patients, family, and healthcare providers.
7. Improve written communication skills by succinctly yet comprehensively documenting the cardiology care plan.
8. Improve the ability to work effectively and communicate clearly with a multidisciplinary team.
9. Identify the components necessary for safe transitions of care between the intensive care unit, general cardiology wards, procedure units, and hospital discharges.
10. Provide a safe environment that fosters autonomy through graduated learning and increased responsibility.

Level of Supervision:

The level of supervision will be determined by the level of training, the experience of the resident, and the clinical scenario. In addition to the general cardiology attending, APPs and at times a cardiology fellow will also provide guidance and teaching. The attending and/or fellow will review each admission and follow-up encounter, including key parts of the history exam, laboratory data, and diagnostic tests, with the resident.

Resident Responsibilities:

1. Direct cardiology care for patients admitted to the inpatient cardiology service.
2. Serve as the primary provider, under the supervision of the cardiology attending, for your assigned patients. On the first day you will be assigned a set of patients and will subsequently be given new admissions. Admissions are assigned by the APP holding the pager; generally determined by rotation through APPs/residents and individual census. There is no cap to the census on the service, nor to the resident's personal census.
3. Daily resident responsibilities include:
 1. Analyze and synthesize pertinent clinical information from the past and current hospitalization to develop an evidence-based treatment plan
 2. Present the patient during provider rounds
 3. Communicate the plan of care to nursing staff
 4. Place all orders (medications, lab, and procedures)
 5. Consult subspecialty teams as indicated



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6. Coordinate care with ancillary services
 7. Provide safe and complete transitions of care on discharge
 8. Complete a daily note for each patient that addresses the active cardiology and non-cardiology problems and associated plan of care.
4. Lead family meetings and update patients and families as appropriate.
 5. Help determine the need for and coordinate cardiovascular procedures.
 6. Assist in interpretation of invasive and non-invasive cardiovascular diagnostic testing.
 7. Aid in transitions of patients who need to be transferred to the CVICU and provide appropriate sign-out.
 8. Complete the discharge summary and discharge care plan including medication reconciliation, follow-up visits and communication with the outpatient providers as appropriate.
 9. Ensure a 1-week follow up appointment is on the AVS prior to discharge (either with PCP or cardiology team) for any patient with a diagnosis of acute or acute on chronic heart failure. Ask team for assistance in making these appointments.

Rotation Structure:

1. One upper level resident will be assigned for two or three weeks. The rotation will start on a Monday and end on a Friday.
2. The shifts during the rotation are Monday to Friday from 7AM to 7PM
3. There are no night time responsibilities
4. There are no clinics on this rotation
5. Residents will be able to schedule health maintenance half days during this rotation, as mandated by GME. In accordance with internal medicine policies, a 6-week notification prior to the schedule change is preferred.
 1. If there is an emergency please notify the lead APP (Trish Thoms), cardiology fellow and attending on the service, IM residency coordinator, and cardiology Education Coordinator, Kindell Adams (adamkind@ohsu.edu)

First Day Nuts & Bolts:

On their first day, the resident should email Kindell Adams (adamkind@ohsu.edu) to receive the weekly cardiology conferences schedule. The resident should arrive at the 7C Provider Workroom (next to pt room 11) at 7 AM, where the inpatient cardiology team is located. Patients will be distributed amongst the two APPs and the resident. Residents are expected to participate in Multi-D rounds from 8:30 AM to 9:00 AM. If time allows, residents can attend the morning cardiology conferences from 7am-8 am.

One of the APPs will carry a Cards AP pager, 12065 (also found under the inpatient cardiology portion on Smartweb).

Use the following note templates for cardiology notes:

- . CARIPHP (H&P)



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- . CARIPROGRESSNOTE (progress note)
- . CARIPTRANSFER (transfer note, to or from ICU/other service)
- . CARIPDCSUMMARY (discharge summary)
- . CARIPTAVRDISCHARG (discharge summary for simple TAVR hospitalization)

Use the following dot phrases in AVS discharge instructions when applicable:

- . CARIPDCFOLLOWUP (in basket message to scheduler for follow up appointments)
- . CARIPACSDCINSTR (post stent placement instructions)
- . CARIPACSPSTCATHFEMINSTR (post-femoral artery access instructions)
- . CARIPACSPSTCATHRADIALINSTR (post-radial artery access instructions)
- . CARIPTAVRDCINSTR (post-TAVR instructions)
- . CARIPVALVEDCINST (post-valve procedure instructions, NOT TAVR)
- . CARIPEPABLINSTR (post-EPS/ablation instructions)
- . CARIPICDINSTR (post-ICD implant instructions)
- . CARIPPPMINSTR (post-pacemaker implant instructions)
- . CARIPEPSICDINSTR (post-subcutaneous ICD implant instructions)
- . CARIPEPMICRAINSTR (MICRA leadless PPM implant instructions)
- . CARIPDCWHOTOCALL (contact info to be added to AVS)

Daily Schedule:

| Time | Activity |
|----------------|---|
| 7:00-7:15 am | Sign-out from moonlighter/overnight provider |
| 7:15-8:00 am | Morning cardiology conference* |
| 8:00-8:30 am | Card-flip with attending followed by pre-rounding |
| 8:30-9:00 am | Multidisciplinary rounds |
| 10:00-12:00 pm | Round with general cardiology attending |
| 12:00-1:00 pm | Afternoon cardiology conference* |
| 1:00-7:00 pm | Follow up patient care Coordinating care, family meetings etc. New admissions Procedure and imaging review Complete notes |
| 7 PM | Sign-out to moonlighter/overnight provider |

* See conference schedule and WebEx links below.

Didactics:

1. Attend core cardiology conferences from 7-8 am and 12-1pm Monday through Friday. Please see the general conference schedule below. For the specific weekly schedule, please email Kindell Adams (adamkind@ohsu.edu).
2. Teaching rounds will be scheduled throughout the rotation in specific areas, including but not limited to echocardiography, catheterization lab, valve procedures, EP studies.
3. Interpretation and review of cardiovascular diagnostic testing with the cardiology fellow and attending throughout the day

Cardiology Conference Schedule

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---|--|--|--|---|
| | | 7:30-8:30 am: Electrophysiology & Device Conference | 7-8 am: Cardiac Catheterization Conference | 7-8 am: Integrative Physiology Conference |
| | 8-9 am: IM Gran Rounds | | | |
| 12-1 pm: Electrophysiology Didactic Conference | 12-1 pm: Multidisciplinary Conference | 12-1 pm: Cardiology Didactic Conference | 12-1 pm: Research Conference | 12-1 pm: Imaging Conference |
| 12-1 pm: IM Noon Report | 12-1 pm: IM Noon Conference | 12-1 pm: IM Noon Report | 1:15-2:15 pm: IM Intern Report | 1:15-2:15 pm: IM Intern Report |
| | | | 5-6 pm: Cardiology Grand Rounds | |

Methods of Assessment:

1. Competency-based evaluation via MedHub by each cardiology attending the resident works with on the rotation. APPs will contribute to the evaluation submitted by the attendings.
2. Verbal feedback will be given to the resident by each cardiology fellow and attending at the mid-point and end of the rotation.
3. The resident will evaluate the rotation, the supervising cardiology attending, and will participate when asked in MedHub evaluations of members of the interprofessional



Requests for time off:

- Any request to have time away from the rotation must go through the residency office or chief resident (½ day off does not mean full day off)
- Request for time off must be asked in advance (6 weeks) unless it is urgent in which the chief resident on call must be contacted