Keck Medical Center
Cardiology Orientation
2021-2022

Faculty in Charge of Rotation:
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First Day of Rotation:
Report to Keck Hospital 2nd floor Cardiology lab at 7:00 AM. Please page the fellow on service the day prior to the rotation for more details. The fellow on service can be identified by contacting Sara Luna at 323-442-7419 in the Cardiology Office.

GOALS

The purpose of the rotation on the Keck Cardiology service is to gain experience in the diagnosis and management of acute and chronic cardiac illness across a wide spectrum of patient ages and diagnoses. The primary goal of this rotation is to provide an educational opportunity for the resident to acquire experience in the management of a broad range of acute and chronic cardiovascular diseases, including myocardial infarction, unstable angina, chronic coronary artery disease, evaluation of chest discomfort, use and limitations of noninvasive and invasive cardiac testing, congestive heart failure, arrhythmias, lipid disorders, hypertension, peripheral vascular disease, valvular heart disease, cardiomyopathy and pulmonary heart disease, as well as preoperative evaluation of patients with known or suspected cardiac disease. There will also be a focus on electrocardiogram interpretation, echocardiography interpretation with emphasis on basic cardiac anatomy, physiology and pathophysiological correlation.

In addition to fostering competence in the areas of patient care and medical knowledge, the service provides critical experience in collaborating with other members of the healthcare team, including cardiothoracic surgeons and pharmacists, as well as students and fellow residents, which builds skills in interpersonal communication and professionalism. Exposure to the intricacies of daily hospital care, including discharge planning and triage to higher or lower levels of care, builds competency in systems-based practice, provides opportunities to learn from mistakes, and builds patterns of practice-based learning.

ROTATION STRUCTURE

STARTING THE ROTATION

Before the first day on service, sign-out should occur from the outgoing member to the oncoming team member.

WEEKLY SCHEDULE

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7AM – 8AM		Cardiac Catheterization Conference			

DAILY SCHEDULE

7:00 AM – 7:30 AM	Sign-out
7:30 AM – 9:00 AM	Pre-Rounds, Work Rounds
9:00 AM – 11:00 PM	Attending Bedside Rounds
12:00 PM – 1:00 PM	Lunch/Conference (Grand Rounds, M&M, CPC)
1:00 PM – 6:00 PM	Patient Care and Management / Afternoon Didactics

Work Rounds

Pre-rounds and Fellow Rounds on all of the team's established patients must be conducted every morning from 7:30AM – 9AM. All team members, therefore, will become familiar with all of the patients on the team. These rounds are led by the fellow without the attending. The goal is to ensure that a management plan for the day as well as the overarching plan for each patient is established daily. A preliminary plan on each patient should be made at this time.

Attending Bedside Rounds

Attending Bedside Rounds are performed from 9:00 AM – 11:00 AM every Monday through Friday. The attending should review all of the team's new admissions from the previous twenty-four hours and discuss all of the team's established patients with new, significant developments. Any new patient must be seen by and discussed with the attending with the team at the bedside. Faculty are expected to perform bedside teaching, discussion of pathophysiology, and should use current available studies to aid in diagnostic and therapeutic decisions.

Faculty must perform discharge planning and management rounds daily. All documentation, including the initial history and physical must be signed within 24 hours. Each faculty attending is available for their team at all times when they are on service.

Cardiology Clinic

Residents on Keck Cardiology are not expected to attend Cardiology Clinic. For residents with a particular interest in outpatient cardiology, a separate elective in the Clinics can be arranged.

TEAM STRUCTURE

The Keck Cardiology team is made up of 1 PGY2 residents, 1 nurse practitioner, 1 fellow, and 1 faculty attending. Occasionally, there will be an anesthesia intern rotating on this service. An attending will be available to the house officers at all times of the day. Each attending will perform teaching rounds five days per week with their individual teams and will cover the weekends within each firm. The housestaff are expected to use this attending as the primary resource for issues regarding patient care.

ADMISSION SCHEDULE

The Keck Cardiology team accepts new admissions and consults daily. The team's attending is always responsible for all activities no matter the time of day.

SIGN-OUT

A Cardiology fellow is responsible for cross-covering and seeing consults overnight. An email sign-out is performed by the day Cardiology fellow to the covering night-time team.

CALL

There is no overnight call for residents.

TRAINEE CAPS

Residents on the Keck Cardiology service will cover up to 8 patients per day. Residents on the Keck Heart Failure service will cover up to 6 patients per day. Caps will be maintained on the weekdays and weekends. This is to ensure that the environment on this service is optimal for your learning.

DAYS OFF

All house officers on Keck Cardiology will get an average of one day off per week across the duration of the rotation. Days off will be coordinated in conjunction with the Keck Cardiology team.

EXPECTED OR UNEXPECTED ABSENCES

Any planned absences, including for fellowship interviews, must be reported to the Medicine Chief Residents. You should also let the Keck Cardiology fellow and other team members know if you will be absent from service so that patient care responsibilities can be redistributed accordingly.

CURRICULUM

EDUCATIONAL PLAN

On the Keck Cardiology rotation, the resident under the supervision of the cardiology fellow and attending will provide consults to complex tertiary academic center patients, post-cardiac surgery patients, and pre-op evaluations for non-cardiac surgery. The resident will perform a complete work-up including a detailed history and physical examination, review of the medical records, conceptualization of the medically relevant issues, and establish a plan for the appropriate diagnostic and therapeutic approaches. The resident will determine whether non-invasive or invasive testing is appropriate and whether an urgent pharmacologic or procedural intervention should be initiated. Additionally, relevant imaging and hemodynamic findings will be reviewed and discussed.

CONFERENCES

Cath Conference (optional)
Cath Conference is held every Tuesday morning at 7:00 AM in IPT Conference Room B.

EDUCATIONAL METHODS

The principle teaching method of the Keck Cardiology service is direct teaching from the faculty assigned to this service. The faculty reviews the history, physical exam, laboratory tests, cardiac noninvasive and invasive tests, and treatment plan with the resident and provides direct feedback about the resident's performance in these assessments. The experience is complemented by conferences, lectures, and supplementary reading.

EDUCATIONAL RESOURCES

The main educational material during the inpatient rotation consists of individual cases which are used as template to discuss differential diagnosis, invasive and non-invasive data and therapeutic modalities for a variety of cardiovascular pathology. Patient management conferences and morbidity-mortality conferences also provide the resident with the opportunity to learn and review current cardiovascular literature. The resident is expected to read appropriate materials to supplement the learning experience. Below is a suggested reading list:

- American College of Cardiology/American Heart Association Guidelines https://www.acc.org/guidelines
- Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine – available at Norris Medical Library
- Mayo Clinic Board Review
- Journal of the American College of Cardiology – available at Norris Medical Library
- Circulation Journal – available at Norris Medical Library
- New England Journal of Medicine – available at Norris Medical Library

EVALUATION TOOLS

The attending physician is responsible for providing verbal feedback and must submit evaluations of the resident physicians in MyEvaluations. The attending must meet face-to-face to provide mid-

point and end-of-rotation feedback with all of the house officers they evaluate and indicate that discussion on the evaluation form. Evaluations must be completed within one week of completing a rotation. Peer evaluations for other trainees on the team should be completed in a timely manner.

PATIENT CARE

LOCATION & PATIENT CHARACTERISTICS

The Keck Cardiology service is primarily at the Keck Hospital with occasional consults at the Norris Comprehensive Cancer Center.

The patient population at Keck Hospital is very diverse, with multiple ethnic and age groups represented. The spectrum of these encounters will range from primary presentation of cardiac disease processes to the tertiary care. Patients receiving inpatient care are generally here for complicated acute or chronic cardiac disease. We also receive transfers from outside hospitals needing acute hospitalization for higher levels of care. The care for these patients will occur on either general medicine floors or ICU.

ADMISSIONS

All potential patient admissions are determined by faculty members of the Division of Cardiovascular Medicine. Residents will be made aware of any admissions by either the cardiology fellow on service or the attending physician. Once the patient arrives to an inpatient bed, the resident will be notified for admission orders.

INPATIENT CONSULTS

All cardiology consults are placed through the resident. All new consults should be relayed to the fellow on service immediately.

Consults should be viewed with the following priorities:

- **Emergent:** Emergent consults must be reviewed and co-signed by fellow and/or faculty within two hours. Review by faculty must occur within 24 hours or sooner if appropriate.
- **Urgent:** Urgent consults must be reviewed and co-signed by fellow and/or faculty within 8 hours. Review by faculty must occur within 24 hours.
- **Routine:** Routine consults must be seen, reviewed and co-signed by fellow and/or faculty within 24 hours.

DISCHARGES

The decision to discharge a patient and the discharge plan must be discussed with the attending each day. This discharge plan should also be discussed with the patients. All hospital discharges require Discharge Instructions and educational material for the patient, appropriate medication reconciliation and prescriptions, appropriate follow-up referrals or appointments, an electronic discharge order, and a Discharge Summary (please see below).

RAPID RESPONSE & CODE BLUES

If a patient appears acutely unstable, do not hesitate to call the Rapid Response Team. If your patient is decompensating rapidly and requires intubation or resuscitation, call a Code Blue. If there is a change in patient status (i.e. death, transfer to ICU, change in code status/goals of care) please inform your fellow and attending promptly.

Always document goals of care discussions, even if the decision is to remain full code. Keep in mind that the code status obtained during the hospitalization is dynamic and only relevant to the current hospitalization. It does not necessarily hold true for the next hospitalization unless the patient has a signed a POLST or on discussion with your patient, he/she reiterates his/her desired code status. Upon discharge, a POLST form should be completed in an effort document goals of care. The pink original goes with the patient and a copy should be placed in the chart for scanning into PowerChart.

PLACING CONSULTS

Decisions to consult a different service should always be discussed with the attending of the team. The consultant can be reached either through the operator (dial "0" from any hospital phone) or through QGenda. Remember to be courteous when calling the consult and have a well-defined question for your consultants. Please give your consults enough time to see your patients, so try placing consults as early in the day as possible.

DEATH

If there is a change in patient status (i.e. death, transfer to ICU, change in code status/goals of care) please inform your attending promptly. Deaths must be pronounced by a licensed provider on the primary team. All in-hospital deaths require a Death Summary to be written by the primary team. If a death is pronounced by the overnight cross-covering resident, he/she may write a brief Death Note to document the circumstances and death exam; however, a Death Summary still needs to be completed by the primary team.

Deaths in the hospital are not uncommon and may be an emotionally challenging experience. Housestaff are encouraged to discuss the experience of caring for a patient who has died with the team and/or chief residents.

DOCUMENTATION

All documentation must be completed electronically in Keck PowerChart. Each note needs to end with "Discussed with Attending Dr. [Name]" and be forwarded to the attending on service for the day for review.

History & Physical
H&Ps must be written and signed by the attending within 24 hours of admission. In PowerChart, the note type, "History and Physical" should be used.

Daily Progress Note
A daily progress note must be completed for each patient unless an H&P or Discharge Summary will be written for the day of admission or day of discharge. Daily progress notes must be forwarded for evaluation to the attending of the team. In PowerChart, the note type, "Cardiology Inpatient Progress Note" should be used.

Discharge Summary
Discharge Summaries are required for any discharge from the hospital and should be completed within 24-48 hours of discharge. This includes discharges against medical advice or elopements. In PowerChart, the note type, "Discharge summary" should be used. Discharge summaries should include the following:

- Admission date
- Discharge date
- Procedures or surgeries
- Consulting services
- Summary of hospital course
- Discharge diagnoses and medication
- Follow-up plan

Death Summary
A Death Summary is required when a patient expires in the hospital. The Death Summary should follow the format of the Discharge Summary above. In PowerChart, the note type, "Death Summary" should be used.

ACGME MILESTONES 2.0

LEARNING OBJECTIVES

Patient Care	• Ability to take a good medical history and perform a careful and accurate physical examination • Ability to write concise, accurate and informative histories, physical examinations and progress notes • Maintain focus and timeliness in the evaluation and management of cardiovascular problems • Develop strategies to efficiently evaluate and manage chest pain and various arrhythmias • Develop strategies to efficiently evaluate and manage congestive heart failure • Ability to formulate comprehensive and accurate problem lists, differential diagnoses and plans of management • Develop and demonstrate proficiency in interpretation of chest x-rays • Develop and demonstrate proficiency in interpretation of electrocardiograms • Willingness and ability to help patients engage in strategies of disease prevention with an emphasis on smoking cessation, diet, and exercise
Medical Knowledge	• Expand clinically applicable knowledge base of the basic and clinical sciences underlying the care of cardiac patients • Access and critically evaluate current medical information and scientific evidence relevant to management of acute coronary syndromes • Familiarity with indications for and interpretation of cardiac biomarkers, chest x-ray and electrocardiograms • Familiarity with indications for stress testing cardiac catheterization and echocardiograms • Diagnose and manage atrial and ventricular arrhythmias, valvular disease, cardiomyopathy, dyslipidemia. • Perform preoperative evaluations of patients with known or suspected cardiac disease.
Systems Based Practice	• Understand and utilize the multidisciplinary resources necessary to care optimally for patients • Use evidence-based, cost-conscious strategies in the care of patients • Demonstrates collaboration with other members of the health care team, including residents at all levels, fellows, attendings, medical students, nurses, pharmacists, occupational/physical therapists, nutritional specialists, patient educators, social workers, case managers, and providers of home health services • Effectively utilizes of medical consultants, including knowing when and how to request consultation, and how best to utilize the advice provided • Demonstrates willingness and ability to teach medical students and interns • Effectively leads the team, including interns, medical students, nurses, pharmacists, case managers, and social workers
Practice Based Learning and Improvement	• Identify and acknowledge gaps in personal knowledge and skills in the care of inpatient and ambulatory patients • Demonstrate independent initiative in commitment to identify and follow through with learning issues. • Develop real-time strategies for filling knowledge gaps that will benefit patients in a busy practice setting • Seek feedback from attending physicians. • Analyze and evaluate practice experiences and implement strategies to improve the quality of patient care.

	• Use information technology and other available methodologies to access and manage information, support patient care decisions and enhance both patient and resident education.
Professionalism	• Arrive at the clinic or hospital promptly, well-prepared with identified learning issues. • Assume responsibility for patient welfare in a timely manner • Performs administrative tasks and patient care responsibilities in a time and professional manner • Model effective teaching skills to students and peers. • Comply with Residency dress code
Interpersonal and Communication Skills	• Consistently establish rapport with patients and staff. • Present cases in a logical, focused manner and outline impressions that can be justified based on the clinical data. • Work as an effective team member with staff, dietitians, nurses, diabetes educators, and attending physicians. • Write appropriately thorough clinical record entry in standard form. • Communicate consultative recommendations to primary services in a respectful, timely manner. • Communicate productively with challenging patients and families