

# LAC+USC Medical Center

## Cardiology Consult Orientation

2019-2020

### **Faculty in Charge of Rotation:**

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### **First Day of Rotation:**

Report to LAC+USC 4<sup>th</sup> floor CCU at 7:00 AM for signout.

Please make sure to watch the Orientation Video prior to starting this rotation. Videos can be accessed through MyEvaluations or on the Chief's website ([uscmmedicine.blog](http://uscmmedicine.blog) / Resources / Rotation Orientation & Objectives / Cardiology Consult).

## GOALS

The purpose of the rotation on the Cardiology Consult service is to gain experience in the diagnosis and management of acute and chronic cardiac illnesses 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.

## MILESTONES

### USC/LAC+USC Internal Medicine Residency Cardiology Consult Rotation

OVERALL COMPETENCY PROGRESSION BY CORE COMPETENCY AND PGY LEVEL  
(Adapted from ABIM Developmental Milestones)

#### CORE COMPETENCY: PATIENT CARE

PGY LEVEL			GOAL – Gathers and synthesizes essential and accurate information to define each patient’s clinical problem OBJECTIVES
		3	a. Role model gathering subtle and reliable information from the patient for junior members of the healthcare team when applicable.
PGY LEVEL			GOAL – Develops and achieves comprehensive management plan for each patient OBJECTIVES
		3	a. Role models and teaches complex and patient centered care b. Develops customized prioritized care plans for the most complex patients, incorporating diagnostic uncertainty and cost effectiveness principles.
PGY LEVEL			GOAL – Manages patients with progressive responsibility and independence OBJECTIVES
		3	a. Independently manages patients across clinical settings who have a broad spectrum of clinical disorders including undifferentiated syndrome
PGY LEVEL			GOAL – Skill in performing procedures OBJECTIVES
	2	3	a. Appropriately perform invasive procedures and provide post-procedure management for common procedures when applicable.
PGY LEVEL			GOAL – Requests and provides consultative care OBJECTIVES
	2	3	a. Provides consultative services for patients with basic and complex clinical problems requiring detailed risk assessment b. Appropriately weighs recommendations from consultants in order to effectively manage patient care

#### Evaluation Methods

Faculty evaluation, Direct observation

#### CORE COMPETENCY: MEDICAL KNOWLEDGE

PGY LEVEL			GOAL – Clinical Knowledge OBJECTIVES
	2	3	a. Possesses the scientific, socioeconomic and behavioral knowledge required to provide care for complex medical conditions and comprehensive preventive care
PGY LEVEL			GOAL – Knowledge of diagnostic testing and procedures. OBJECTIVES
		3	b. Interprets complex diagnostic tests accurately c. Understands the concepts of pre-test and test performance characteristics d. Teaches the rationale and risks associated with common procedures and anticipates potential complications when performing procedures

#### Evaluation Methods

Faculty evaluation, Direct observation, Conference Attendance

#### CORE COMPETENCY: SYSTEMS BASED PRACTICE

PGY LEVEL			GOAL – Works effectively within an interprofessional team
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			<b>OBJECTIVES</b>
		3	<ul style="list-style-type: none"> <li>a. Understands the roles and responsibilities of and effectively partners with, all members of the team.</li> <li>b. Actively engages in team meetings and collaborative decision making</li> </ul>
<b>PGY LEVEL</b>			<b>GOAL – Recognizes system error and advocates for system improvement</b>
			<b>OBJECTIVES</b>
		3	<ul style="list-style-type: none"> <li>a. Identifies systemic causes of medical error and navigates them to provide safe patient care</li> <li>b. Advocates for safe patient care and optimal patient care systems</li> <li>c. Activates formal system resources to investigate and mitigate real or potential medical error</li> <li>d. Reflects upon and learns from own critical incidents that may lead to medical error</li> </ul>
<b>PGY LEVEL</b>			<b>GOAL – Identifies forces that impact that cost of health care, and advocates for, and practices cost-effective care</b>
			<b>OBJECTIVES</b>
		3	<ul style="list-style-type: none"> <li>a. Consistently works to address patient specific barriers to cost effective care</li> <li>b. Advocates for cost conscious utilization of resources</li> <li>c. Incorporates cost awareness principles into standard clinical judgments and decision making including screening tests</li> </ul>
<b>PGY LEVEL</b>			<b>GOAL – Transitions patients effectively within and across health delivery systems</b>
			<b>OBJECTIVES</b>
		3	<ul style="list-style-type: none"> <li>a. Appropriately utilizes available resources to coordinate care and ensures safe and effective patient care within and across delivery systems</li> <li>b. Proactively communicates with past and future care givers to ensure continuity of care.</li> </ul>
<b>Evaluation Methods</b>			
Faculty Evaluation			
<b>CORE COMPETENCY: PRACTICE BASED LEARNING AND IMPROVEMENT</b>			
<b>PGY LEVEL</b>			<b>GOAL – Monitors practice with a goal for improvement</b>
			<b>OBJECTIVES</b>
		3	<ul style="list-style-type: none"> <li>a. Regularly self reflects upon one’s practice or performance and consistently acts upon those reflections to improve practice</li> <li>b. Recognizes sub-optimal practices or performance as an opportunity for learning and self-improvement</li> </ul>
<b>PGY LEVEL</b>			<b>GOAL – Learns and improves via feedback</b>
			<b>OBJECTIVES</b>
		3	<ul style="list-style-type: none"> <li>a. Solicits feedback from all members of team and patients</li> <li>b. Consistently incorporates feedback</li> <li>c. Welcomes unsolicited feedback</li> </ul>
<b>PGY LEVEL</b>			<b>GOAL – Learns and improves at the point of care</b>
			<b>OBJECTIVES</b>
		3	<ul style="list-style-type: none"> <li>a. Routinely “slows down” to reconsider an approach to a problem, ask for help, or seek new information</li> <li>b. Routinely translates new medical information needs into well-formed clinical questions.</li> </ul>
<b>Evaluation Methods</b>			
Faculty Evaluation, Direct Observation			
<b>CORE COMPETENCY: PROFESSIONALISM</b>			
<b>PGY LEVEL</b>			<b>GOAL – Has professional and respectful interactions with patients, caregivers, and members of the interprofessional team</b>
			<b>OBJECTIVES</b>
		3	<ul style="list-style-type: none"> <li>a. Demonstrates empathy, compassion and respect to patients and caregivers in all situations</li> <li>b. Demonstrates a responsiveness to patient that supersedes self-interest</li> <li>c. Anticipates, advocates for, and proactively works to meet the needs of patients and caregivers</li> </ul>

			d. Positively acknowledges input of members of the interprofessional team and incorporates that input into plan of care as appropriate.
<b>PGY LEVEL</b>			<b>GOAL</b> – Accepts responsibility and follows through on tasks <b>OBJECTIVES</b>
		3	a. Prioritizes multiple competing demands in order to complete tasks and responsibilities in a timely and effective manner b. Willingness to assume professional responsibility regardless of the situation
<b>PGY LEVEL</b>			<b>GOAL</b> – Responds to each patient’s unique characteristics and needs <b>OBJECTIVES</b>
		3	a. Recognizes and accounts for the unique characteristics and needs of the patient/caregiver b. Appropriately modifies care plan to account for a patient’s unique characteristics and needs
<b>PGY LEVEL</b>			<b>GOAL</b> – Exhibits integrity and ethical behavior in professional conduct <b>OBJECTIVES</b>
		3	a. Demonstrates integrity, honesty and accountability to patients b. Actively manages challenging ethical dilemmas and conflicts of interest c. Identifies and responds appropriately to lapses of professional conduct among peer groups
<b>Evaluation Methods</b>			
Faculty Evaluation, Peer Evaluation, Direct Observation			
<b>CORE COMPETENCY: INTERPERSONAL AND COMMUNICATION SKILLS</b>			
<b>PGY LEVEL</b>			<b>GOAL</b> – Communicates effectively with patients and caregivers <b>OBJECTIVES</b>
		3	a. Incorporates patient specific preferences into plan of care b. Identifies and incorporates patient preference in shared decision making across a wide variety of patient care conversations c. Quickly establishes a therapeutic relationship with patients and caregivers, including persons of different socioeconomic and cultural backgrounds
<b>PGY LEVEL</b>			<b>GOAL</b> – Communicates effectively in interprofessional teams <b>OBJECTIVES</b>
		3	a. Consistently and actively engages in collaborative communication with all members of the team b. Verbal, non-verbal and written communication consistently acts to facilitate collaboration with the team to enhance patient care.
<b>PGY LEVEL</b>			<b>GOAL</b> – Appropriate utilization and completion of health records <b>OBJECTIVES</b>
		3	a. Health records are organized, accurate, comprehensive, and effectively communicate clinical reasoning b. Health records are succinct, relevant and patient specific
<b>Evaluation Methods</b>			
Faculty Evaluation			

## ROTATION STRUCTURE

### STARTING THE ROTATION

Before the first day on service, sign-out should occur from the outgoing member to the oncoming team member. Please make sure to watch the Orientation Video prior to starting this rotation. Videos can be accessed through MyEvaluations or on the Chief's website ([uscmedicine.blog / Resources / Rotation Orientation & Objectives / Cardiology Consult](http://uscmedicine.blog/Resources/Rotation%20Orientation%20&%20Objectives/Cardiology%20Consult)).

### 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 – 11:30 AM	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
6:00 PM – 6:30 PM	Sign-out to Night Float resident

### Work Rounds

The Fellow Work Rounds are an opportunity for the consult team to discuss and evaluate the consults from the night before and the difficult management cases with the fellow prior to rounding with the attending. A preliminary plan on each patient should be made at this time.

### Attending Bedside Rounds

Attending Bedside Rounds are performed from 9:00 AM – 11:30 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. All documentation, including the initial consult note must be signed within 24 hours. Each faculty attending is available for their team at all times when they are on service.

Please note, that on weekends, it is the responsibility of the day resident to staff all consults with the attending on-call at 5:00 PM prior to signing out at night. Similarly, it is the responsibility of the night resident to staff all overnight consults with the attending on-call at 7:00 AM in the morning, prior to signing out during the day. The attending on-call may be found on AMION (lacusc > IM-Card Attendings).

### Cardiology Clinic

Residents on the Cardiology Consult Service are not expected to attend Cardiology Clinic unless otherwise indicated by the Chief Residents.

## **TEAM STRUCTURE**

There will be 4-5 residents at any given time on the Cardiology Consult team. Additionally, depending on the time of year there can be 2 fourth year medical students rotating on the service. The team will be overseen and managed by two Cardiology fellows. An attending will be available to the house officers at all times of the day.

## **CALL**

There is no overnight call for residents. The residents on service will alternate service coverage for each of the weekends during the rotation. The weekend call schedule will be determined by the team collectively and should be turned into the Chief Residents on the 1<sup>st</sup> day a new resident joins the team so that it may be accurately reflected on AMION.

## **DAYS OFF**

All house officers on the Cardiology Consult service will get an average of one day off per week across the duration of the rotation. Days off will be designated by the Chief Residents and is available on AMION. Predetermining everyone's days off will ensure that days off are distributed fairly and that the appropriate complement of residents and interns are in the hospital at all times.

# CURRICULUM

## EDUCATIONAL PLAN

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. There will also be a focus on electrocardiogram interpretation, echocardiography interpretation with emphasis on basic cardiac anatomy, physiology and pathophysiological correlation.

The curriculum is organized into two components:

1. inpatient cardiology consultative services
2. didactic lectures and conferences

## LEARNING OBJECTIVES

	<b>PGY2/PGY3</b>
Patient Care	<ul style="list-style-type: none"> <li>• Ability to take a good medical history and perform a careful and accurate physical examination</li> <li>• Ability to write concise, accurate and informative histories, physical examinations and progress notes</li> <li>• Maintain focus and timeliness in the evaluation and management of cardiovascular problems</li> <li>• Develop strategies to efficiently evaluate and manage chest pain and various arrhythmias</li> <li>• Develop strategies to efficiently evaluate and manage congestive heart failure</li> <li>• Ability to formulate comprehensive and accurate problem lists, differential diagnoses and plans of management</li> <li>• Develop and demonstrate proficiency in interpretation of chest x-rays</li> <li>• Develop and demonstrate proficiency in interpretation of electrocardiograms</li> <li>• Willingness and ability to help patients engage in strategies of disease prevention with an emphasis on smoking cessation, diet, and exercise</li> </ul>
Medical Knowledge	<ul style="list-style-type: none"> <li>• Expand clinically applicable knowledge base of the basic and clinical sciences underlying the care of cardiac patients</li> <li>• Access and critically evaluate current medical information and scientific evidence relevant to management of acute coronary syndromes</li> <li>• Familiarity with indications for and interpretation of cardiac biomarkers, chest x-ray and electrocardiograms</li> <li>• Familiarity with indications for stress testing cardiac catheterization and echocardiograms</li> <li>• Diagnose and manage atrial and ventricular arrhythmias, valvular disease, cardiomyopathy, dyslipidemia.</li> <li>• Perform preoperative evaluations of patients with known or suspected cardiac disease.</li> <li>• Resident will also have a working knowledge of:               <ol style="list-style-type: none"> <li>1. The diagnostic tests which are important in evaluating patients with acute cardiac disease.</li> <li>2. The indications for cardiac stress testing.</li> <li>3. The pre-operative management of the patient with coronary artery disease who are awaiting surgery or have post-operative cardiac complications.</li> <li>4. Acute and chronic management of patients with heart failure and commonly occurring arrhythmias.</li> </ol> </li> </ul>

Practice Based Learning and Improvement	<ul style="list-style-type: none"> <li>• Identify and acknowledge gaps in personal knowledge and skills in the care of hospitalized patients</li> <li>• Develop real-time strategies for filling knowledge gaps that will benefit patients in a busy practice setting</li> <li>• Commitment to professional scholarship, including systematic and critical perusal of relevant print and electronic literature, with emphases on integration of basic science with clinical medicine, and evaluation of information in light of the principles of evidence-based medicine</li> </ul>
Interpersonal and Communication Skills	<ul style="list-style-type: none"> <li>• Communicate effectively with patients and families across a broad range of socioeconomic and ethnic backgrounds</li> <li>• Communicate effectively with physician colleagues and members of other health care professions to assure comprehensive patient care</li> <li>• Communicates effectively with colleagues when signing out patients or turning over care to another service</li> <li>• Communicates patient information clearly and concisely both verbally and in writing</li> </ul>
Professionalism	<ul style="list-style-type: none"> <li>• Interact professionally toward patients, families, colleagues, and all members of the health care team</li> <li>• Acceptance of professional responsibility as the primary care provider for patients under his/her care</li> <li>• Appreciation of the social context of illness</li> <li>• Demonstrates knowledge and application of the ethical concepts of confidentiality, consent, patient autonomy, and justice</li> <li>• Demonstrates integrity, altruism, and avoidance of conflict of interest</li> <li>• Demonstrates self-awareness to identify methods to manage personal and professional sources of stress and burnout</li> </ul>
Systems Based Practice	<ul style="list-style-type: none"> <li>• Understand and utilize the multidisciplinary resources necessary to care optimally for cardiac and vascular patients</li> <li>• Use evidence-based, costconscious strategies in the care of patients with acute and chronic cardiovascular diseases</li> <li>• 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</li> <li>• Knowing when to consult or refer a patient to a medical subspecialist and how to best use the advice given</li> <li>• Effectively utilizes of medical consultants, including knowing when and how to request consultation, and how best to utilize the advice provided</li> <li>• Demonstrates willingness and ability to teach medical students and interns</li> <li>• Effectively leads the team, including interns, medical students, nurses, pharmacists, case managers, and social workers</li> </ul>

**INPATIENT CONSULTS**

All consults are placed through the Cardiology Consult VOIP (x93982) and consults should be divided up evenly amongst team members.

**Day Team Consults:** 6:30 AM – 5:30 PM

**Night Float Consults:** 5:30 PM – 6:30 AM



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.

## CONFERENCES

### Cath Conference

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

## EDUCATIONAL METHODS

The principle teaching method of the Cardiology Consult 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. Residents additionally attend didactic conferences as indicated above.

## 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 Cardiology Consult rotation is entirely at the LAC-USC hospital. Consults may be called in by the Emergency Department, OB/Gyn triage, or any primary inpatient service, including, but not limited to general inpatient medicine, MICU, ACS, SICU.

The patient population at LAC+USC Medical Center is very diverse, with multiple ethnic and socioeconomic groups represented. The spectrum of these encounters will be from primary presentation of new disease processes to the tertiary care for the patient who is referred for subspecialty care.

### **TRANSFERS TO THE CCU**

If a consulted patient is deemed to be better served on a Cardiology primary team, the patient may be transferred to the Cardiac Care Unit. This determination is made by the Cardiology Consult team fellow and should be relayed to the CCU team fellow prior to transfer.

### **DOCUMENTATION**

All documentation must be completed electronically in ORCHID. Each note needs to end with "Discussed with Attending Dr. [Name]" and be forwarded to the attending on service for the day for review. Initial Cardiology Consult notes must be written and signed by the attending within 24 hours of the consult. In ORCHID, the note type, "Inpatient Cardiology Consult" should be used. Thereafter, "Cardiology Progress Note" may be used.