

# CARDIOLOGY ROTATION CURRICULUM

TARGET: PGY 1-3  
Updated January 2018

## A. EDUCATIONAL GOAL

Residents are expected to gain a level of competence in order to comfortably diagnose and treat common cardiac conditions independently. For less common or more complex cases, residents will be able to appropriately consult or refer.

## B. ROTATION DESCRIPTION AND STRUCTURE

Training will take place at the Olive View-UCLA Medical Center. Rotations on the Cardiology service will be two weeks in length. In addition to the inpatient consultation service, residents will participate in weekly Cardiology clinics. Supervision will be provided by the Cardiology faculty and assisted by the fellow(s).

## C. OBJECTIVES (By RRC competency and PGY level)

At the completion of this rotation (and with additional experience and study throughout the training program) the resident will be able to:

### 1. Medical Knowledge

*Note:* The Medical Knowledge objectives of this curriculum are comprehensive. It is understood that residents will focus their study on the medical conditions of the patients they are exposed to during the rotation. Residents should also enhance their medical knowledge in the other areas listed below. Exposure to additional patients and conditions, supplemented by individual study, should take place on other rotations throughout the residency. Competency with all of the Medical Knowledge objectives is not expected until the end of the 3-year training program.

- Demonstrate a working knowledge (indications, limitations and appropriate utilization or interpretation) of the following (*PGY 1 – basic knowledge; PGY 2/3 – advancing knowledge*)
  - Exercise stress tests
  - Echocardiography
  - CXR (for evidence of cardiac disease)
  - EKG (residents will be able to independently interpret the following conditions)
    - Myocardial infarction and ischemia
    - Chamber enlargement
    - Intraventricular conduction disturbances
    - Pre-excitation and bypass tracts
    - Drugs, electrolytes, and miscellaneous EKG changes in systemic disease
    - Supraventricular arrhythmias
    - Ventricular arrhythmias
- Demonstrate an appropriate knowledge of the basic and clinical sciences, understand complex relationships and mechanisms of disease, and recommend appropriate diagnostic and treatment options for the following medical conditions (*PGY 1 – basic knowledge; PGY 2/3 – advancing knowledge; by the end of the 3<sup>rd</sup> year, a resident should be able to independently implement an effective diagnostic and treatment plan or know how and when to appropriately refer*):

- **Valvular Heart Disease**
  - Mitral stenosis
  - Mitral regurgitation
  - Mitral valve prolapse
  - Aortic stenosis
  - Aortic regurgitation
  - Tricuspid disease (TS/TR)
  - Pulmonic disease (PS/PI)
  - Infective endocarditis
  - Prosthetic valves
  
- **Coronary Artery Disease**
  - Atherosclerosis – pathology, pathogenesis pathophysiology
  - Acute coronary syndrome
  - Myocardial infarction – recognition and management of complications and risk stratification after MI
  - PCI (Balloon angioplasty, stents, etc.)
  - Coronary artery bypass – randomized trials/registry data
  - Thrombolytic and antiplatelet agents – indication and use
  - Exercise testing (including Bayes theorem, Diamond and Forrester data)
  - Nuclear cardiology diagnostic methods – indications and interpretations
  - Hyperlipidemia
  - Cardiac Catheterization – indications, complications and interpretations
  
- **Cardiomyopathy**
  - Hypertrophic cardiomyopathy
  - Dilated cardiomyopathies
  - Restrictive cardiomyopathies
  - Cardiac tumors
  - Cardiac emergencies
  
- **Congestive heart failure**
  - Bedside recognition of left and right ventricular failure
  - Left ventricular diastolic dysfunction
  - Etiology of CHF
  - Pathophysiology of CHF
  - Hemodynamics changes in CHF
  - Management of CHF
  
- **Pulmonary Heart disease**
  - Pathophysiology of pulmonary heart disease
  - Primary pulmonary hypertension
  - Cor pulmonale
  - Pulmonary embolism
  
- **Pericardial Disease**
  - Etiology and recognition of pericardial disease
  - Pathophysiology of pericardial tamponade and constriction
  - Treatment of pericardial disease
  - Indication for urgent pericardiocentesis and basic procedures.
  
- **Congenital Heart Disease**
  - Definition, classification
  - Specific defects: bicuspid AV; ASD
  - Specific defects: VSD, PDA
  - Specific defects: complex congenital – case presentation

- **Pregnancy and Heart Disease**
  - Hemodynamics of normal pregnancy, specific defects
  - Con. Specific defects, cardiovascular drugs, treatment strategies
- **Aortic and peripheral vascular disease**
  - Aortic dissection
  - PVD
- **Arrhythmias**
- **Cardiac patient and non-cardiac surgery**

## **2. Patient Care**

- Complete an interview, physical exam and patient data review which is accurate, effective and appropriate for the patient (PGY 1-3)
- Exam skills should include the ability to diagnose different murmurs and heart sounds, peripheral vascular disease, carotid artery disease and cardiac hypertrophy (PGY 1 – basic skills, with assistance; PGY 2/3 – advancing skills, towards independence)
- Create assessments & plans and make therapeutic decisions based on appropriate data (PGY 1 – basic skills, with assistance; PGY 2/3 – advancing skills, towards independence as appropriate)
- Demonstrate sound judgment, insight and prioritization skills to make reasonable, "good sense" clinical choices (PGY 1-3)
- Safely and proficiently perform medical procedures that minimizes patients' discomfort and maintains sterile precautions (PGY 1-3)

## **3. Interpersonal and Communication Skills**

- Communicate effectively with the principle provider(s) caring for the patient, verbally and in writing (in the medical record or consult note) (PGY 1-3)
- Communicate effectively with the patients and their families regarding education and counseling (PGY 1-3)

## **4. Professionalism**

- Demonstrate respect, compassion, integrity and honesty (PGY 1-3)
- Role model responsible and ethical behavior, including acknowledgement of errors (PGY 1-3)
- Consider the needs of the primary consulting team, patients, families, colleagues and hospital/clinic staff, including being sensitive to different cultural/socioeconomic backgrounds, and avoiding judgmental behaviors (PGY 1-3)

## **5. Practice-Based Learning and Improvement**

- Demonstrate a commitment to self-assessment and improvement by listening to and incorporating feedback (PGY 1-3)
- Effectively use information technology (e.g., computer or PDA resources) and an EBM approach to providing consult care (PGY 1-3)
- Research and discusses relevant literature with the team or consulting service (PGY 1-3)

## **6. Systems-Based Practice**

- Effectively access hospital/clinic resources; appropriately coordinate inpatient care with subsequent outpatient f/u care (PGY 1-3)
- Delineate clear relationships between the consult service and the primary team (PGY 1-3)
- Complete charting requirements (date/time/sign all notes, write legibly, no unapproved abbreviations) (PGY 1-3)

## **D. TEACHING METHODS**

- Attendings and fellows will be responsible for teaching house staff during the rotation, which will include bedside teaching. Didactics will be provided during daily attending rounds and case discussions with fellows and Attendings.
- Learning is patient based, and house staff are expected to supplement their learning with additional reading on the diseases encountered.
- House staff will participate in regularly scheduled clinics and conferences, as described in (B) above.
- When not busy with other conferences or urgent patient care activity, house staff are required to attend the daily noon conference series, which covers the core lecture series for Internal Medicine and the monthly Morbidity & Mortality conferences.
- Morning Report conferences are also mandatory.

## **E. EDUCATIONAL RESOURCES**

- Up-To-Date
- Harrison's Textbook of Medicine
- Other suggested readings:
  - Braunwald's Textbook of Cardiovascular Diseases
  - The Heart Textbook of Cardiology
  - Mayo Clinic Cardiology Review
  - Constant J, Bedside cardiology. Boston, MA: Little Brown
  - Marriot. Practical electrocardiography. Baltimore,MD: Williams and Wilkins,
  - Cheitlin, MD. The chest x-ray and the diagnosis of heart disease. In Parmley, WW and Chatterjee, K, eds. Cardiology, Philadelphia, PA: Lippincott
- Criley heart sounds. CD-ROM available in cardiology suite
- On-line EBM resources are available in the Library and the house staff lounge
- ACC/AHA Guidelines (available online at [acc.org](http://acc.org))

## **F. MONITORING AND EVALUATION**

- Attending physicians will give continuous verbal feedback on the resident's performance during the rotation.
- The attending and fellow(s) will submit a written evaluation on the above objectives and competencies at the end of the rotation.
- A supervising physician will complete a computerized evaluation form after each procedure performed, to document satisfactory competency.
- Yearly in-service examinations will evaluate medical knowledge.