

Cardiology Howard University Hospital

Overview and Rationale

Cardiology is the prevention, diagnosis, and management of disorders of the cardiovascular system, including ischemic heart disease, cardiac dysrhythmias, cardiomyopathies, valvular heart disease, pericarditis and myocarditis, endocarditis, congenital heart disease in adults, hypertension, and disorders of the veins, arteries, and pulmonary circulation. Management of risk factors for disease and early diagnosis and intervention for established disease are important elements of cardiology. The general internist should be able to provide primary and secondary preventive care and initially manage the full range of cardiovascular disorders.

The need for additional competencies in cardiovascular disease will depend on the availability of a cardiologist in the primary practice setting. In some communities, the general internist may be responsible for management of more complex cardiovascular disorders that require intensive hemodynamic monitoring (for example, balloon-tipped pulmonary artery catheters) in the intensive care unit.

Goals:

- 1) To acquire the knowledge, skills and attitude to effectively assess and manage the patient with cardiovascular disease

Objectives: At the end of the rotation the resident should be able to;

- 1) Demonstrate in-depth knowledge of the pathology of the cardiovascular system.
- 2) Demonstrate competence in the interpretation of common test used in the assessment and evaluation of cardiovascular diseases.
- 3) demonstrate competency in the consultative management of patients with cardiovascular diseases

Rotation Description and Lines of Responsibility

The cardiology rotation is a four rotation offered at Howard University Hospital comprising both an outpatient and an inpatient consultative experiential educational experience. The attending cardiologist is responsible for all clinical, educational, and administrative activities during this rotation. Residents will also interact with fellows doing subspecialty training in cardiology. The fellows will directly supervise the residents' clinical and academic activity. The fellows report directly to the attending physician.

Initially the resident will independently assess and evaluate inpatient consultations from the clinical services at HUH. The resident is responsible for collecting and collating all laboratory and radiological data and the subsequent completion of the consult data base. Patients are presented to the attending physicians during daily teaching rounds, which take place at the bedside. Teaching rounds are patient-based discussions and demonstrations which are evidence-based and involve all aspects of the care of the patient including clinical, diagnostic, therapeutic aspects of care.

Residents will also attend the outpatient cardiology clinics. These include the general cardiology clinic and the specialty clinics, such as the electrophysiology clinic, preoperative evaluation clinic and hypertension clinic. Residents will assess and follow new and established patients in the clinic, under the direct supervision and mentorship of the attending physician assigned to the clinic. The resident will be exposed to the outpatient management of common cardiovascular disorders and to appreciate the natural history of these disorders.

During the rotation residents are expected to attend typical cardiovascular procedures such exercise stress testing, transthoracic and trans-esophageal echocardiography, cardiac catheterization, nuclear cardiovascular imaging and pacemaker insertion and interrogation.

Teaching Methods

Core Lectures

A series of lectures covering core elements in cardiovascular diseases will be given throughout the year primarily at pathophysiology conference and at grand rounds. Residents are required to attend these conferences.

Teaching Rounds:

Teaching rounds are held on a daily basis and are facilitated and led by the attending physician. Teaching rounds are patient-based discussions and demonstrations that are evidence-based.

Didactics:

Didactics are done on a daily basis and the residents are required to research and present to the attending physician the following topics;

- Arrhythmias
 - Atrial
 - Conduction abnormalities
 - Pacemaker management
 - Ventricular
 - Congenital heart disease
- Congestive heart failure
 - Acute pulmonary edema
 - Chronic congestive heart failure
 - Diastolic
 - Systolic
- Coronary artery disease
 - Angina pectoris, chronic stable
 - Angina pectoris, unstable
 - Myocardial infarction, complicated
 - Myocardial infarction, uncomplicated

- Myocardial infarction follow up
- Postoperative care (CABG, PTCA)
- Endocarditis
- Hypertension
 - Chronic stable hypertension
 - Hypertensive crisis
 - Secondary hypertension
- Myocardial disease
 - Cardiomyopathy
 - Myocarditis
- Pericardial disease
 - Acute pericarditis
 - Pericardial tamponade
- Preoperative evaluation of the cardiac patient (see also Consultative Medicine)
- Vascular disease
 - Aneurysm (atherosclerotic, mycotic)
 - Aortic disease
 - Arterial insufficiency
 - Chronic venous stasis
 - Deep venous thrombosis
 - Dissecting aneurysm
- Valvular heart disease

Cardiac catheterization conference:

Residents are required to attend this weekly conference.

Journal Club

Residents are required to participate in this weekly conference

Procedure Skills

- Advanced cardiac life support
- Insertion of balloon-tipped pulmonary artery catheter (optional)
- Insertion of temporary pacemaker (optional)

Primary Interpretation of Tests

- Stress electrocardiography (optional)

Ordering and Understanding Tests

- Ambulatory ECG monitoring
- Echocardiography
- Electrophysiology testing
- Left ventricular catheterization and coronary angiography
- Nuclear scan wall motion study
- Right ventricular catheterization (including flotation catheter)
- Stress electrocardiography and thallium myocardial perfusion scan
- Tilt-table physiology study

Evaluation Methods:**Residents**

Residents are evaluated by faculty in a summative fashion at the end of the rotation. A global rating form is used to assess the six competencies.

Faculty

Faculty are evaluated in an anonymous fashion using a global rating form. These forms are submitted to the program director's office.

Rotation

The rotation is evaluated using a global rating. Residents are required to submit these forms at the end of the rotation.

Reading Lists