

CARDIOLOGY ROTATIONS 2008 – 2009

Overview

Herein are outlined the educational objectives of the Cardiology rotations, as well as a description of the clinical experiences for medicine residents (PGY 1, 2, and 3). At the beginning of the rotations, residents should receive a list of Cardiology topics to be covered in conferences, along with references.

The clinical ideal of the Cardiology Section is compassionate, evidence-based care using state-of-the-art diagnostic and therapeutic modalities. Experienced faculty physicians provide close supervision and oversight of all resident care. The Cardiology Ward and Consultation Services offer residents the opportunity to evaluate and manage patients with various forms of cardiovascular disease or at risk for cardiovascular disease, including those with acute coronary syndromes, valvular heart disease, congestive heart failure, and dysrhythmias. The practice of preventive cardiology is encouraged. There will be an emphasis on basic electrocardiographic and echocardiographic interpretation.

Learning Venues/ Activities

Scheduled Conferences

- Tuesday 7:30 a.m., BRI Room F4-42: *Cardiac Catheterization/ Morbidity and Mortality Conference.*
- Wednesday 7:30 a.m., Room 6-329: *Clinical case conferences or didactic lectures/videotapes on core curriculum topics.*
- Thursday 7:30 a.m., BRI Room F4-42: *Clinical case conferences, journal clubs, ECG/echo conferences, or research conferences.*
- Last Friday of each month., BRI Room F4-42: *Combined Cardiology and Cardiothoracic surgery clinical case conference.*

Cardiology Ward Service/ Coronary Care Unit

Description: The Cardiology inpatient team cares for patients admitted to both the Cardiology ward service and the Coronary Care Unit. Each month, one upper level resident and two PGY-1 residents assigned. Junior medical students are assigned for two-week blocks. Residents and students work closely with a subspecialty fellow and the faculty attending. Patient care responsibilities are similar to those of General Medicine ward teams, but details of the process of care will be determined by the attending and the fellow. The Department of Medicine Chairman and Program Director will set limits on the number of patients that may be assigned to these teams, in consultation with the Cardiology Section Chief. The team is on call every fifth night, in rotation with the General Medicine ward teams. Patients who are worked up while on call and are not appropriate for the Cardiology team will be admitted to the General Medicine teams. Residents assigned to the Cardiology team

attend Morning Report. In addition, they may attend certain conferences of the Cardiology section.

Schedule Monday through Friday:

- 7:00 – 8:00 a.m. – Work rounds (exact time set by resident and fellow)
- 8:00 – 9:00 a.m. – Morning report
- 9:30 – 11:30 a.m. – Attending rounds (exact time set by attending)/ Continuity Clinic as scheduled
- 12:00 – 1:00 p.m. – Noon conference
- 1:00 – 5:00 p.m. – Ward responsibilities/Continuity clinic as scheduled

Weekends and Holidays:

- The attending, fellow, and upper level resident will set time of rounds.

Cardiology Consultation Service

Description: The attending faculty and/or fellow assigned to the service will determine residents' schedule and responsibilities. In addition to answering consultations and working in the Stress Lab, residents attend certain conferences of the section. Upper level residents on consult services will usually have a limited number of "obligation" call responsibilities assigned by the Internal Medicine Chief Resident, and also attend their assigned Continuity Clinic each week. This takes precedence over any clinics or conferences of the service. Ordinarily, this rotation is based entirely at LSUHSC-S. However, occasionally residents are assigned to the Cardiology Service of the Overton Brooks VA Medical Center. Responsibilities and learning objects at the two locations are identical.

Schedule Monday through Friday:

- 8:00 a.m. – 12:00 noon—Perform stress tests
- 12:00 – 1:00 p.m.—Noon conference (Department of Medicine)
- 1:00 – 5:00 p.m.—Consult rounds/Heart Station activities (including, but not limited to interpreting stress tests, electrocardiograms, echocardiograms, and ambulatory electrocardiograms)/Continuity clinic as scheduled

Cardiology Clinic:

- Wednesday 1:00 – 4:30 p.m., Medicine Specialty Clinic, third floor Ambulatory Care Center: Residents may attend if there is no conflict with their Continuity Clinic or Consultation Service rounds.

Elective Rotations

Description: Residents who have completed the standard rotation Consultation Service rotation may request an elective rotation that focuses on any aspect of the clinical activities of the Cardiology Section. Requests must be approved by the Chief

of the Cardiology Section at either LSUHSC-S or the Overton Brooks VA Medical Center, and the Internal Medicine Program Director. All prerequisites for approval of electives listed in the Department of Medicine *Resident Handbook*, must be fulfilled.

Learning Resources

- Standard medical and Cardiology textbooks
- Applicable sections of UpToDate, available through the LSUHSC-S Library website and the VAMC.
- Consensus guidelines of the American Heart Association/American College of Cardiology, available through the websites of these organizations:
 - <http://americanheart.org>.
 - <http://www.acc.org>.
- ECG Wave-Maven Self-Assessment Program for Students and Clinicians
 - <http://ecg.bidmc.harvard.edu/maven/mavenmain.asp>.
- Articles, reading lists distributed during the rotations.

Evaluation Methods

- Global faculty evaluation at end of rotation (*all competencies*)
- Clinical evaluation exercises: Interviewing skills, examination skills; counseling skills; documented through *MyEvaluations*. Specific medical knowledge, medical knowledge, and diagnostic interpretation exercises may focus on, but are not limited to:
 - Electrocardiogram interpretation
 - Cardiac enzyme interpretation

Educational Goals – Ward Service/ Coronary Care Unit

Patient Care:

- PGY-1: Learn to perform a detailed cardiovascular examination properly; recognize and interpret common pathologic findings, including murmurs
- PGY-1: Learn to evaluate patients with chest pain appropriately
- PGY-1: Learn to assess patients with acute coronary syndrome appropriately
- PGY-1: Learn to manage systolic and diastolic heart failure appropriately
- PGY-1: Learn to manage atrial fibrillation appropriately
- PGY-1: Learn to order appropriate pharmacotherapy for chronic stable angina
- PGY-1: Learn the appropriate focused evaluation of patients with syncope
- PGY-2, 3: Learn to evaluate patients with acute myocardial infarction appropriately, and interpret laboratory markers of cardiac disease properly
- PGY-2, 3: Learn to manage patients with acute coronary syndrome appropriately
- PGY-2, 3: Learn to select appropriate cardiac stress tests and myocardial imaging studies for various categories of patients

- PGY-2, 3: Learn the indications for pacemakers and implantable defibrillators
- PGY-2, 3: Learn to order cardiac rehabilitation programs appropriately
- PGY-2, 3: Learn to evaluate patients for cardiac transplantation appropriately

Medical Knowledge:

- PGY-1: Recognize the electrocardiographic patterns in acute myocardial infarction
- PGY-1: Learn to differentiate systolic and diastolic heart failure and understand the pathophysiology of each.
- PGY-1: Recognize cardiac murmurs and their differential diagnosis
- PGY-1: Understand the indications, evidence for expected benefits, and adverse effects of pharmacologic agents used in the management of congestive heart failure
- PGY-1: Learn to interpret echocardiogram reports appropriately
- PGY-1: Understand the pathophysiology of chronic angina, acute coronary syndrome, and acute myocardial infarction
- PGY-2, 3: Understand the pathophysiology of neurocardiogenic syncope
- PGY-2, 3: Understand the pathophysiology of congestive heart failure
- PGY-2, 3: Interpret electrocardiography and telemetry rhythm strips appropriately
- PGY-2, 3: Understand the pathophysiology of valvular heart diseases
- PGY-2, 3: Understand the pathophysiology of adult congenital heart disease
- PGY-2, 3: Understand the pharmacokinetics, pharmacodynamics, indications, and adverse reactions to the following agents or classes of agents: Aspirin, clopidogrel, IIb-IIIa glycoprotein receptor inhibitors, antithrombin agents, thrombolytic agents, beta- adrenergic blocking agents, ACE inhibitors, nitrates, statins.
- PGY-2, 3: Understand the differential diagnosis of pericardial disease
- PGY-2, 3: Understand the pathophysiology of atrial fibrillation
- PGY-2, 3: Understand the pathophysiology and rationale for treatment of ventricular arrhythmias
- PGY-2, 3: Understand the pathophysiology and rationale for treatment of bradyarrhythmias
- PGY-2, 3: Understand the differential diagnosis of right heart failure and pulmonary hypertension

Educational Goals – Consultation Service

Many of the problems and disease processes encountered on the Cardiology ward service will also be seen on the Consultation Service. Therefore, the educational goals of both rotations overlap. Residents assigned to this rotation should review and be guided by the applicable ward service goals. Educational goals specific to the Consultation service are listed below.

Patient Care

- PGY-2, 3: Learn to administer and interpret cardiac stress tests appropriately
- PGY-2, 3: Learn to manage perioperative cardiac arrhythmias appropriately
- PGY-2, 3: Learn the appropriate perioperative management for patients with coronary artery disease

Medical Knowledge

- PGY-2, 3: Understand the indications for transesophageal echocardiography
- PGY-2, 3: Learn to interpret cardiac nuclear cardiac imaging reports appropriately
- PGY-2, 3: Understand the cardiac risks of non-cardiac surgery

Practice-Based Learning and Improvement:

- Research one or more key clinical question related to a learning objective under the *Patient Care* and *Medical Knowledge* competencies

Common Educational Goals for Subspecialty Consultation Services

Interpersonal and Communication Skills

- Develop skill in interviewing patients with problems in the scope of the subspecialty, with attention to education and culturally-sensitive language.
- Develop skill in giving a focused presentation of clinical findings to the attending faculty.
- Develop skill at communicating findings and recommendations of consultations to primary physicians, both verbally and in writing
- Learn to communicate appropriate information to patients who are seen in consultation, and in obtaining informed consent for procedures performed by the subspecialty.

Professionalism

- Demonstrate a commitment to excellence and continuous professional development.
- Demonstrate punctuality and preparation for consultation rounds.
- Demonstrate courteous and professional behavior during encounters with patients and families.

- Demonstrate appropriate professional relationships with colleagues, faculty, and other members of consultation team.
- Demonstrate respect for patients' primary physicians in discussions with patients and within the consult team.
- Demonstrate a habit of evaluating consultations patients and conveying information in a timely manner

Practice-based Learning and Improvement

- Demonstrate a pattern of self-evaluation of performance, identifying gaps in medical knowledge during the evaluation and management of patients, and incorporating feedback into performance.
- Demonstrate a pattern of replicating the effective clinical decision making of faculty and fellows
- Demonstrate a pattern of independent reading and study related to the diseases encountered in the clinics and through hospital consultations.
- Demonstrate a pattern of using library and Internet resources to appraise the literature related to problems encountered during the rotation, and of applying evidence to patient care.
- Learn to critically appraise articles in the subspecialty.

Systems-based Practice

- Develop an understanding of the hospital resources available to the evaluation and management of patients with problems encountered by the subspecialty.
- Demonstrate sensitivity to health care costs, and insight into balancing costs and quality care.
- Demonstrate sensitivity in working with case managers, clinical coordinators, technicians, and other paramedical personnel to enhance the effectiveness of patient care.
- Demonstrate a knowledge of and commitment to the rules governing confidentiality of patient information.