CARDIOLOGY

Overview

The practice of Cardiology is the prevention, diagnosis and management of disorders of the cardiovascular system. The educational purpose of this hospital based rotation is for residents to acquire the knowledge and skills necessary to become competent in the evaluation and care of patients with common cardiovascular disorders, and to learn which patients should be referred to, or managed jointly with, a cardiologist. Residents will be exposed to the major areas of cardiovascular medicine, which should be mastered by a competent general internist. Inpatient consultations will be performed under the supervision of the attending cardiologist. Consultation services will be provided for patients in the Emergency Department, inpatient units, and the Intensive Care Units at Saint John Medical Center. Services available to assist in the evaluation and care of patients with cardiovascular diseases include phlebotomists, respiratory therapists, ECG technicians, ultrasound and echocardiogram technicians, exercise treadmill, nuclear medicine, interventional and non-interventional cardiology, a specialist in electrophysiology, and a full service cardiac catheterization lab.

Goals
(All PGY levels)

To teach residents the degree of cardiology necessary to become a competent internist.

To teach residents the ability to recognize when an internist should consult a cardiologist

Objectives

Unless specified, objectives should be met at all levels of training.

Patient Care

- To provide patient care that is compassionate, appropriate, and effective.
- To obtain a thorough, yet focused medical history.
- To collect accurate and essential medical information from previous medical records, outside facilities, and from primary care providers.
- To proficiently perform a complete cardiovascular physical examination.
- To improve proficiency in the auscultation of heart sounds and to accurately identify cardiac murmurs.
- To gain proficiency in the interpretation of ECG's.
- To formulate an appropriate differential diagnosis.
- To appropriately select, and interpret the results of cardiovascular tests including cardiac enzymes, BNP, ECG, echocardiogram, stress tests, and cardiac catheterization.
- To identify and implement appropriate treatment strategies for a variety of common cardiovascular diseases.
To provide high quality cardiac care for the patient with ischemic heart disease, valvular heart disease, congestive heart failure, and arrhythmias consistent with evidence-based standards of care.

To demonstrate the use and appropriate application of evidence based care.

To educate patients and families about specific cardiovascular diseases

To identify and recommend health care strategies that promote prevention and risk factor reduction.

Medical Knowledge

To expand knowledge in the basic and clinical sciences underlying cardiovascular disease.

To improve understanding of the clinical presentation, diagnosis, and treatment of common acute and chronic cardiovascular conditions requiring hospitalization.

To develop familiarity with evidence based diagnostic and therapeutic approaches to inpatient cardiac problems.

To demonstrate understanding of the use, indications, interactions, and side effects of medications commonly employed in the treatment of cardiovascular diseases.

PGY-2/3 To access and critically evaluate current medical information and scientific evidence relevant to inpatient cardiac care.

PGY-2/3 To develop a depth of understanding and appreciation for cardiovascular illness that allows one to capably teach selected topics in cardiology to interns and students.

Practice-Based Learning and Improvement

To identify deficiencies in one's knowledge, skills and attitudes in the care of hospitalized cardiac patients.

To develop strategies for correcting deficiencies in one's knowledge, skills and attitudes in the care of patients with cardiovascular disease.

To review outcomes of patients cared for by the cardiology consult service.

To retrospectively evaluate patient transfers to a higher acuity setting to determine the reason(s) why previous management strategies may have failed.

To evaluate the requesting physician's satisfaction with the care provided by the cardiology consult service.

To evaluate patient satisfaction with the care provided by the cardiology consult service.

PGY-2/3 to role model reflective practice and to facilitate the learning of interns and students.
Interpersonal Skills and Communication

- To communicate in a sensitive and effective manner, with patients and families from
diverse ethnic and socioeconomic backgrounds.
- To ensure that a patient's questions pertaining to his or her cardiovascular disease(s)
have been satisfactorily answered.
- To communicate clearly and effectively with physicians who have requested consultation
regarding the reasons for consultation and the specific clinical questions to be addressed.
- To complete a concise consultation note with clear, detailed recommendations.
- To document completely and legibly the necessary information for daily progress (SOAP)
notes, including an assessment of the patient’s condition and response to therapy, and a
plan for ongoing care.
- To ensure that all questions asked by the requesting physician/team have been
satisfactorily answered.
- PGY-2/3 To communicate effectively with other members of the health care team to
ensure that the plan of care is understood.
- PGY-2/3 To obtain the skills necessary to present topics informally and formally to a
group.

Professionalism

- To be professional in all interactions with patients, families, colleagues and all members
of the health care team.
- To demonstrate caring and respectful behaviors toward patients, families, colleagues and
other members of the health care team.
- To maintain a professional appearance at all times.
- To be punctual for rounds, scheduled meetings and conferences, and to fulfill consult
requests in a timely fashion.
- To demonstrate a commitment to excellence and to ethical principles of care.
- To ensure patient understanding of their cardiovascular illnesses and consent to
treatment plans.
- To maintain confidentiality of patient information.
- To demonstrate respect for alternative, but appropriate treatment plans recommended
by one's resident and faculty colleagues.
- PGY-2/3 To role model professional behaviors and to facilitate professionalism among
students and interns.

Systems-Based Practice

- To assist the requesting service in the coordination of patient care.
- To assist with scheduling tests, treatments, and follow up appointments to ensure that
continuity of high quality care is accomplished.
- To use evidence-based, cost conscious strategies in the care of consult service patients.
- To remain patient focused while considering practice guidelines and managed care
strategies.
- To advocate for consult service patients.
- PGY-2/3 to recognize how different insurance types affect one's hospital reimbursement.
Knowledge to be assessed

To develop understanding of a variety of cardiovascular conditions (pathophysiology, clinical features, diagnosis, and treatment) including but not necessarily limited to:

<table>
<thead>
<tr>
<th>Hypertension</th>
<th>Pericardial disease</th>
<th>Chronic valvular heart disease</th>
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<tbody>
<tr>
<td>- urgent/emergent</td>
<td>Syncope</td>
<td>Acute aortic dissection</td>
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<tr>
<td>- chronic stable</td>
<td>Bradycardia</td>
<td>Aortic aneurysms</td>
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<td>- secondary</td>
<td>Heart Block</td>
<td>Peripheral arterial disease</td>
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<td>Chest pain syndromes</td>
<td>Tachycardia</td>
<td>Chronic venous insufficiency</td>
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<td>Coronary artery disease</td>
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<td>Deep vein thrombosis</td>
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<td>Acute coronary syndromes (ACS)</td>
<td>Life-threatening tachy/brady arrhythmias</td>
<td>Multisystemic complications in the critically ill cardiac patient</td>
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<td>non-ST elevation &amp; ST elevation</td>
<td>Conduction disease and indications for pacing</td>
<td>Preoperative evaluation of the cardiac patient</td>
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<td>Complications of ACS</td>
<td>Acute manifestations of valvular heart disease</td>
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<td>Cardiogenic shock</td>
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<td>CHf (systolic and diastolic)</td>
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<td>Chronic heart failure</td>
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<td>Myocardial disease</td>
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Procedural skills

Depending on the specific cardiovascular problems encountered during the rotation, residents may have the opportunity to perform the following procedures under the supervision of the attending cardiologist:

- Advanced cardiac life support
- Elective cardioversion
- Placement of Swan-Ganz catheter
- Pericardiocentesis
- Stress electrocardiography

Methods of achieving objectives

Principal Teaching Methods:

- Direct patient care under the supervision of the assigned cardiology attending
- Daily attending management and teaching rounds with the assigned cardiology attending
- Core Noon Conference series
- Monthly cardiology/ECG conferences

Educational Materials:

- Dr. Medina’s CD of suggested readings (free to all residents, pick up from Barbara McCoy)
- Dr. De Leon’s chapters and workbook on valvular heart disease (SJMC library office)
- OU Tulsa library electronic databases and computerized resources.
- SJMC library collection of cardiology textbooks and key cardiology journals
**Assessment tools**

- The supervising cardiology attending will evaluate each resident's history and physical examination of patients daily.
- The supervising cardiology attending will review and critique resident consult notes daily.
- The supervising cardiology attending will critique each resident's assessment and plan pertaining to the cardiovascular problem being addressed.
- The cardiology attending will assess and monitor each resident's skill in the interpretation of ECG's and other diagnostic data.
- The supervising cardiology attending will monitor each resident's interaction with patients and other health care team members.
- The supervising cardiology attending will assess and monitor each resident's self-directed learning efforts.
- The supervising cardiology attending will assess resident fulfillment of the objectives detailed above.

**Evaluation process**

- Faculty and resident will review the goals and objectives at the beginning of the rotation. Each resident will sign an attestation statement verifying review of the goals and objectives.
- The supervising attending will provide verbal feedback throughout and at the completion of the inpatient rotation.
- The supervising cardiology attending will complete a formal evaluation through MyEvaluations.com at the conclusion of the rotation.
- Each resident will acknowledge review of their final evaluation through MyEvaluations.com.
- Each resident will enter procedures performed in MyEvaluations.com to be “signed off” by the supervising cardiologist.

**Teaching Faculty**

William C. Burnett, MD  
John F. Coyle II, MD  
Robert C. Haas, MD  
Jose R. Medina, MD  
Mark A. Milton, MD  
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This document was reviewed by the faculty of the Department of Medicine OUCMT 9/06 who approve and support the contents.