CARDIOLOGY AMBULATORY ROTATION
Goals and Objectives

I. **Educational Purpose:** To provide the cardiology fellow during all three years of training with a broad based learning in all aspects of managing cardiovascular diseases in the outpatient setting.

II. **Specific Goals:** The rotation will be structured to apply the varied aspects of basic sciences and cardiac physiology to the clinical management of complex cardiovascular issues, with a primary emphasis on defining cost effective outcomes based management approaches. The trainee will be required to address clinical problems using an evidence based approach or in situations where evidence is sparse, will be challenged to develop a consensus approach to confront the clinical scenarios. Each trainee is required to evaluate and present cases independently and encouraged to pursue scholarly activity during their service tenure. Thus, on leaving the clinical rotation, the trainee will possess a familiarity with medical and surgical intervention for cardiovascular diseases, develop clinical judgment to independently recognize, manage and treat complications and become proficient in interpretation of diagnostic studies pertinent to cardiovascular diseases. In addition, the trainee will improve his knowledge in the management of cardiology consultations.

**Fellowship Year One:**
It is assumed that the fellow can take a complete and cardiovascular-pertinent history at this point and perform an adequate physical examination. A thorough differential diagnosis for each cardiovascular problem should be made and a plan proposed for each problem. Awareness of the guidelines and other principles of management should be used to structure such a plan. Following discussion with the supervising attending, this plan should be articulated with the patient, the note completed, and procedures scheduled by the ancillary staff in a timely manner. Awareness of each of the core competencies, discussed below, should come into play in the decision-making process.

**Fellowship Year Two:**
In addition to honing those skill sets noted above, focal areas of growth should include expansion of physical examination acumen, more complete development of differential diagnosis, and more complete knowledge of guidelines and principles. As the second year fellow has now experienced different technological aspects of cardiovascular diagnosis and treatment, inclusion of the benefits and risks of each should play an increasing role in discussion with the attending and the patient. At this point, more attention to system-based practice competencies, as noted below, should become an important part of each treatment plan.

**Fellowship Year Three:**
In addition to the above, mastery of physical examination and the core competencies is the goal. The fellow should demonstrate increasing independence of thought and plan in the discussion with the attending and the patient. The goal is to move toward mastery of all core competencies and demonstration of full ability to function independently and successfully in the outpatient setting of completion of the fellowship.

III. **Program Overview:** The ambulatory experience is provided within the Outpatient clinic of the Department of Cardiology, which occupies a large portion of the third floor of the Ochsner Clinic building, in close proximity to all the other sections of the department. Five examination rooms are provided for the cardiology fellows outpatients’ encounters, as well as an adjacent work area for confidential discussions with the assigned attending physician as well as for computer access to clinical laboratory, radiology, nuclear medicine and subspecialty cardiology testing.
IV. **Specific Educational Opportunities:** At the conclusion of the rotation, the trainee will have been exposed to or primarily managed the following clinical cases:

a. **Coronary Artery Diseases:** recognize and treat chronic coronary syndromes. They will learn to discern unusual presentations, distinguish the pathophysiological varieties of coronary artery disease, and evaluate the necessity for noninvasive (stress test) or invasive testing and therapeutic options. In addition, emphasis will be given in the electrocardiographic diagnosis of coronary artery diseases as well as on the interpretation of different testing modalities, such as stress testing (echo, EKG, nuclear, CTA) and coronary angiograms. In addition, emphasis is placed in cardiac rehabilitation and prevention of coronary artery disease.

b. **Valvular Heart Disease:** participate in the long-term treatment of valvular heart disease with pre-op and post-operatively, and with medical management.

c. **Hypertension:** learn how to manage patients with hypertension and learn how to design therapeutic strategies for the outpatient management of these subjects. They will also learn the pathophysiologic mechanisms and the tools necessary to differentiate essential and secondary forms of hypertension.

d. **Heart Failure:** recognize and treat heart failure and define therapeutic options that improve morbidity and patient outcomes and, develop effective transitional strategies to avoid recrudescence.

e. **Arrhythmias:** learn the diagnosis and management of the different forms of supraventricular and ventricular arrhythmias. Emphasis is placed on electrocardiographic diagnosis as well as other noninvasive and invasive electrophysiological studies.

f. **Pulmonary heart Disease:** learn the pathophysiology of pulmonary heart disease and the management of these patients. A variety of patients with pulmonary embolism, sleep apnea and chronic obstructive pulmonary disease will allow the fellow to become proficient in these clinical entities.

g. **Syncope:** learn the pathophysiology, invasive and non-invasive methods of evaluation and therapeutic strategies for patients with different types of syncopal syncope.

h. **Surgical Clearance:** evaluate patients that require surgical procedures, evaluate them for peri-operative cardiovascular risk, and offer management options.

i. **Congenital Heart Disease:** evaluate adult patients with different congenital heart disease problems.

j. **Peripheral vascular diseases:** evaluate and manage patients with peripheral vascular disease including carotid disease.

V. **Structure and Supervision:** Typically a cardiology fellow has half a day of clinic weekly. Each fellow sees a minimum of four and a maximum of six every week on a regularly scheduled basis. The cardiology fellow has direct care and management responsibility for each patient, but is supervised by the attending physician. This experience extends throughout the fellowship, through all their services without exception, so that they provide a continuity of care for patients and have regular ambulatory care responsibility.

VI. **Scholarly Activity:** The fellows are mentored to develop skills in teaching and review of the literature in cardiovascular diseases. Similarly the fellows are expected to use these skills under the direct supervision of a staff attending in the preparation of materials for presentations. In addition, clinical research is encouraged.

VII. **Technical Experience:** The trainees are encouraged to participate under direct supervision by the attending physicians of cardiovascular diagnosis through history, physical examination and laboratory methods; the natural history of cardiovascular diseases, the medical and surgical management as well as the primary and secondary prevention of and rehabilitation from the full spectrum of cardiovascular disorders and conditions.
VIII. **Reading Lists and materials:** At the beginning of the rotation and throughout, the trainees are continuously provided with structured reading lists that are updated as the scientific body of evidence grows. Some of the reading material recommended is:

- The latest ATP guidelines
- Framingham risk score model
- The latest JNC guidelines
- Secondary prevention guidelines
- ACC/AHA CHF guidelines
- ACC/AHA Atrial-Fibrillation guidelines
- ACC/AHA Chronic Stable Angina Management
- ACC/AHA Perioperative Cardiovascular Evaluation
- Diabetes CV guidelines

**Note:** Some of the above listed information may be found on the ACC website (acc.org)

IX. The attending staff physicians submit quarterly evaluations that are shared with the fellow and program director. In addition, the fellows will be evaluated upon the basic six core competencies established by the ACGME as follows:

**Patient Care:**
Competency: **Provides compassionate, appropriate, and effective health care for the treatment of cardiac problems and the promotion of health.**

1. Gathers essential and accurate information about the patient through interviews, examination, and complete history and by appropriately accessing adjunctive sources of information to this obtained from the patient and/or family members.
3. Fellows learn the practice of health promotion, disease prevention, diagnosis, care, and treatment of men and women in all age ranges within the domain of adult cardiology, during health and all stages of illness. This includes, but is not limited to, management of patients with ischemic heart disease, congestive heart failure, valvular heart disease, and disorders of cardiac rhythm.

**Medical Knowledge:**
Competency: **Demonstrates knowledge of concepts involved in the outpatient diagnosis and management of dyslipidemia, hypertension, coronary artery disease, arrhythmias, heart failure, and peri-operative risk assessment.**

1. Understands and employs recommendations and pharmacotherapy for lipid management
2. Understands and employs recommendations and pharmacotherapy for hypertension.
3. Understands recommendations for dietary management of weight, lipids and hypertension and discusses such with clinic patients.
4. Understands outpatient use of warfarin and anti-arrhythmic drugs and appropriately monitors such.
5. Understands indications for and limitations of outpatient diagnostic tests including stress testing, echocardiography and ambulatory electrocardiographic monitoring.
6. Fellows demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows learn the scientific method of problem solving, evidence-based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.
**Practice-Based Learning and Improvement:**
Competency: Evaluates each patient individually and addresses new problems/questions encountered through assimilation of scientific evidence as part of improving care practices.

1. Identify strengths, deficiencies, and limits in one’s knowledge and expertise;
2. Set learning and improvement goals;
3. Identify and perform appropriate learning activities;
4. Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement;
5. Incorporate formative evaluation feedback into daily practice; locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems;
6. Use information technology to optimize learning;
7. Participate in the education of patients, families, students, residents and other health professionals.

**Interpersonal and Communication Skills:**
Competency: Fellows demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

1. Fellows communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds;
2. Maintains comprehensive, timely and legible medical record demonstration and correspondence related to patient care activities.
3. Communicate effectively with physicians, other health professionals, and health related agencies provide accurate and timely feedback to referring physician.
4. Actively listens and elicits appropriate information from the patient and/or family members and colleagues.
5. Work effectively as a member or leader of a health care team or other professional group;
6. Act in a consultative role to other physicians and health professionals;

**Professionalism:**
Competency: Proficiency is primarily behavioral and attitudinal. The major components of professionalism are commitment, adherence, and sensitivity.

Commitment means respect, altruism, integrity, honesty, compassion, empathy, and dependability; accountability to patients and society; and professional commitment to excellence (demonstrated by engaging in activities that foster personal and professional growth as a physician).

Adherence means accepting responsibility for continuity of care; and practicing patient-centered care that encompasses confidentiality, respect for privacy and autonomy through appropriate informed consent and shared decision-making as relevant to the specialty.

Sensitivity means showing sensitivity to cultural, age, gender and disability issues of patients as well as of colleagues, including appropriate recognition and response to physician impairment.

Fellows are expected to demonstrate:
(1) compassion, integrity, and respect for others;
(2) responsiveness to patient needs that supersedes self-interest;
(3) respect for patient privacy and autonomy;
(4) accountability to patients, society and the profession; and,
(5) sensitivity and responsiveness to a diverse patient population, including but not limited to
diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

**Systems Based Practice:**
Competency: Focuses on the broader context of patient care within the multiple layers of a
healthcare system including purchasers (employers, government), insurers (commercial,
Medicare, Medicaid), delivery systems (hospitals, physician networks, drug and technology
companies, community resources), work group (local entity providing care such as a group
practice, hospital service), providers (physicians, nurses, physicians extenders and others both
as individuals and teams that provide direct care), and the users (patients and families).
Demonstrates teamwork skills to identify, analyze, implement, evaluate and report
improvement initiatives as well as identifying system errors.

1. Understands accesses, utilizes and evaluates effectiveness of resource providers, and
   systems to provide optimal cardiac therapy.
2. Understands different medical practice models and delivery systems and how to best
   utilize them to care for the individual patient.
4. Advocates and facilitates patient advancement through the health care system.