FMLH Outpatient Continuity Clinic Curriculum

**Description of Rotation or Educational Experience**

The Froedtert and Medical College of Wisconsin Cardiovascular Center offer a wide range of cardiovascular problems from heart failure to severe three vessel coronary disease to complicated congenital heart disease. The clinics and the diverse patient populations they serve represent an excellent resource for the training program. All fellows will attend a half day outpatient cardiac clinic at Froedtert and Medical College of Wisconsin Cardiovascular Center every other week (alternating weeks will be at the Zablocki VA Medical Center Cardiovascular Clinics.) The fellow will evaluate and diagnose new patients referred as well as follow patients with chronic cardiac problems in his/her clinic throughout their training period. All patients seen by the fellow are examined and evaluated by a faculty member who is assigned to the fellow during their time in the training program. The fellow and faculty member will formulate a management plan, and patients will subsequently be seen by the fellow and the assigned faculty on a follow up basis throughout the remainder of their training. It is expected that the fellow become proficient in the outpatient evaluation and management of patients with cardiac problems, including the ability to take an accurate history and perform an accurate and thorough physical examination. It is also anticipated that the fellow become proficient in the long term management of patients with chronic cardiovascular problems.

**Patient Care**

**Goal**

Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to:

**Competencies**

- Gain clinical experience in the prevention, evaluation and management of outpatients with, but not limited to, the following: chronic coronary heart disease, congestive heart failure, arrhythmias, syncope, history of acute myocardial infarction and other ischemic syndromes, lipid disorders, hypertension, cardiomyopathy, valvular heart disease, pulmonary heart disease and pulmonary embolism, peripheral vascular disease, infections and inflammatory heart disease, cardiovascular rehabilitation and prevention.
- Gain clinical experience in the evaluation and long term management of outpatients with the following: adult congenital heart disease, pericardial disease.
- Gain clinical experience in the evaluation and long term management of patients with: cerebrovascular disease; heart disease in pregnancy.
- Gain clinical experience in the management of: preoperative and postoperative patients; cardiac transplant patients; geriatric patients with cardiovascular disease.

**Objectives: First Year Fellows**

- Learning to take an accurate cardiovascular focused history and physical and coming up with a treatment plan with the direct guidance of the faculty member.
Objectives: Second and Third Year Fellows
  - Taking an accurate cardiovascular focused history and physical and accurately assessing the patient and formulating a treatment plan independently with further confirmation from the assigned supervising faculty member.

Medical Knowledge

Goal
Fellows must 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 are expected to:

Competencies
  - Enhance their knowledge of the following content areas: cardiovascular anatomy; cardiovascular physiology; cardiovascular metabolism; cardiovascular pharmacology, including drug metabolism, adverse effects, indications, the effects on aging, relative costs of therapy, and the effects of non-cardiovascular drugs upon cardiovascular function; cardiovascular pathology; genetic causes of cardiovascular disease.
  - Enhance their knowledge in regards to prevention of cardiovascular disease, including: epidemiology and biostatistics; risk factors; lipid disorders.
  - Become familiar with diagnostic techniques, including: magnetic resonance imaging; fast computed tomography; positron emission tomography.
  - Gain clinical experience in the interpretation of the following: chest x-rays, echocardiograms, electrocardiograms, radionuclide studies of myocardial function and perfusion.

Competencies
  - Gain clinical experience in the evaluation and long term management of outpatients with, but not limited to, the following: chronic coronary heart disease, congestive heart failure, arrhythmias, history of acute myocardial infarction and other acute ischemic syndromes, lipid disorders, hypertension, cardiomyopathy, valvular heart disease, pulmonary heart disease and pulmonary embolism, peripheral vascular disease, infections and inflammatory heart disease, cardiovascular rehabilitation.
  - Gain clinical experience in the evaluation and long term management of outpatients with the following: adult congenital heart disease, pericardial disease, cardiovascular trauma.
  - Gain clinical experience in the evaluation and long term management of patients with: cerebrovascular disease; heart disease in pregnancy.
  - Gain clinical experience in the long term management of: preoperative and postoperative patients; cardiac transplant patients; geriatric patients with cardiovascular disease.

Objectives: First Year Fellows
  - Gain a better understanding of the basic physiology of cardiovascular diseases including but not limited to: chronic coronary heart disease, congestive heart failure, arrhythmias, long term follow up after acute myocardial infarction and
other acute ischemic syndromes, lipid disorders, hypertension, cardiomyopathy, valvular heart disease, pulmonary heart disease and pulmonary embolism, peripheral vascular disease, infections and inflammatory heart disease, cardiovascular rehabilitation, prevention, adult congenital heart disease, pericardial diseases, and cardiovascular trauma.

- Learn long term management of patients after hospitalization for acute coronary syndromes.
- Learn indications for referral to the catheterization laboratory.
- Learn indications for referral and follow up echocardiography studies as it pertains to valvular heart disease, pulmonary heart disease, congestive heart failure.
- Learn indications and contraindications of placement of defibrillators and pacemakers, biventricular devices.
- Familiarize themselves with the presentation and management of acute and chronic heart failure.
- Become familiar with presentation and management of benign and malignant arrhythmias.
- Become familiar with indications for cardiac testing as it pertains to their patients including but not limited to: stress testing, echocardiography (TTE and TEE), cardiac catheterization (right and left), and electrocardiograms.
- Learn appropriate duration between follow up.
- Become familiar with common issues in long term management of patients with adult congenital heart disease.

Objectives: Second and Third Year Fellows

- Master the physiology and pathophysiology of cardiovascular diseases including but not limited to: chronic coronary heart disease, congestive heart failure, arrhythmias, acute myocardial infarction and other acute ischemic syndromes, lipid disorders, hypertension, cardiomyopathy, valvular heart disease, pulmonary heart disease and pulmonary embolism, peripheral vascular disease, infections and inflammatory heart disease, cardiovascular rehabilitation, prevention, adult congenital heart disease, pericardial diseases, and prevention.
- Independently interpret data obtained from both invasive and noninvasive cardiac studies as it pertains to outpatients.
- Co-manage with attendings patients with a history of heart transplantation or adult congenital heart disease.

Practice-Based Learning and Improvement

Goal
Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning. Fellows are expected to develop skills and habits to be able to:

Competencies
- Identify strengths, deficiencies and limits in one’s knowledge and expertise.
- Set learning and improvement goals.
- Incorporate formative evaluation feedback into daily practice.
- Locate, appraise and assimilate evidence from scientific studies related to their patients’ health problems.
- Use information technology to optimize learning.
- Participate in the education of patients, families, students, residents and other health professionals, as documented by evaluations of the fellow’s teaching abilities by faculty and/or learners.

**Objectives: First Year Fellows**

- Set learning and improvement goals in conjunction with the clinic attending at the beginning of the year, and reassess throughout the fellowship every six months.
- Learn about the resources available including textbooks and the internet to implement optimal patient care.
- Share data and knowledge obtained from literature or internet searches
- Receive verbal feedback routinely and utilize that feedback to optimize performance.

**Objectives: Second and Third Year Fellows**

- Set learning and improvement goals at the beginning of each year and reassess every six months.
- Independently use available resources to quickly and efficiently obtain information vital to optimal patient care.
- Use information obtained to effectively educate patients and their families.
- Receive verbal feedback and utilize routinely to optimize performance.

### Systems Based Practice

**Goal**

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Fellows are expected to:

**Competencies**

- Work effectively in various health care delivery settings and systems relevant to cardiovascular medicine.
- Coordinate patient care within the health care system relevant to cardiovascular medicine.
- Incorporate considerations of cost awareness and risk-benefit analysis in patient care.
- Advocate for quality patient care and optimal patient care systems.
- Work in interprofessional teams to enhance patient safety and improve patient care quality.

**Objectives: First Year Fellows**

- Assist in coordinating care with Froedtert and other outpatient services such as pharmacies, primary care clinics, cardiac rehabilitation, echocardiography lab, and cardiac catheterization lab.
- Assist in the communication between the referring physicians to improve the quality of patient care.

**Objectives: Second and Third Year Fellows**
• Coordinate care with Froedtert outpatient services to improve patient care and safety.
• Clearly communicate plans with referring physicians plans to enhance patient care and safety.
• Understand and participate in the continuous quality improvement process as it pertains to the cardiology services.

Professionalism
Goal
Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Fellows are expected to demonstrate:

Competencies
• Compassion, integrity, and respect for others.
• Responsiveness to patient needs that supersedes self-interest.
• Respect for patient privacy and autonomy.
• Accountability to patients, society, and the profession.
• Sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

Objectives: First Year Fellows
• Learn to apply evidence based medicine to patient care.
• Show respect for patients and peers in daily interactions.

Objectives: Second and Third Year Fellows
• Practice sound evidence based medicine.
• Continue to treat patients and peers with the utmost respect.

Interpersonal and Communication Skills
Goal
Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:

Competencies
• Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds.
• Communicate effectively with physicians, other health professionals, and health related agencies.
• Work effectively as a member of leader of a health care team or other professional group.
• Maintain comprehensive, timely, and legible medical records.

Objectives: First Year Fellows
• Learn to communicate effectively with the faculty and other members of the patient care team, and with the referring physicians.
• Learn to communicate effectively with patients and their family members.
• Learn to deliver bad news in an effective and compassionate fashion.
### Objectives: Second and Third Year Fellows

- Communicate effectively with faculty, referring physicians, patients, and their families.
- Lead discussions regarding long term management plans with patients and their family members in an effective and compassionate manner.

### Teaching Methods

The primary teaching method will be through direct supervision with the assigned attending, where the fellow will see the patient and formulate a treatment plan with his/her attending regarding immediate evaluation and long term management and follow up of the patient with chronic cardiovascular problems or new onset problems.

The fellow is expected to review studies such as catheterization, echocardiograms, stress tests, daily labs, and radiologic studies with the attending to enhance their learning.

The fellow will be expected to practice sound evidence based medicine and will be given access to resources to be utilized to enhance this practice. Resources include citations of important literature and use of hospital and MCW-based information technology.

### Assessment Method (Fellows)

Fellows are given verbal feedback on their performance by the faculty throughout each year, and in each clinic. Final evaluations by each attending will be based on the general ACGME competencies of patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, systems-based practice, and professionalism. A formal written evaluation will be entered by the faculty into New Innovations. It will then be reviewed and signed by the fellow.

Fellows are also evaluated through use of the 360 evaluation system, where feedback from nursing, social work, case management, patients, and others can be used to assess and refine performance. Specifically communication, systems-based practice, and professionalism can be further assessed.
Assessment Method (Program Evaluation)

Fellows will assess the clinic as well as their attending physicians. These will be written evaluations which will be shared with the Chair of the Division as well as the Fellowship Program Director. Feedback from the fellows will allow for correction of any perceived deficiencies in learning opportunities on this rotation.

Level of Supervision

One faculty member is assigned to the fellow for the duration of their fellowship. This attending will evaluate all clinic patients with the fellow and supervise the fellow in all patient interactions.

Educational Resources

The fellow will be expected to practice sound evidence based medicine and will be given access to resources to be utilized to enhance this practice. Resources include citations of important literature and use of hospital and MCW-based information technology.

Guidelines:


Gibbons et al. 2002 GUIDELINE UPDATE FOR EXERCISE TESTING. Circulation 2002;106:1883-1892
Chronic Stable Angina: ACC/AHA 2002 Guideline Update for Management of Patients with (J Am Coll Cardiol 2003; 41:159-68)


Textbooks:
Braunwald’s Heart Disease: A Textbook of Cardiovascular Medicine, 7th ed.
Clinical Recognition of Congenital Heart Disease; Perloff, 5th ed.
Diagnosis and Management of Adult Congenital Heart Disease; Gatzoulis, Webb, Daubney.
Chou’s Electrocardiography in Clinical Practice; Surawicz/Knilans, 5th ed.
Cardiosource.com