

Cardiovascular Medicine, IMMC, R2

I. Title and Length

- A. Title: Cardiology Rotation
- B. Length: 4 weeks

II. Division Director and Staff

- A. Course Director: Abul Khan, M.D.
Contact Phone Numbers = Office 875-9279 (Carrie)
- B. Other Faculty: Heart and Vascular Care Cardiologists
 1. David Lemon, M.D.
 2. Jay Yans, M.D.
 3. Dirk Ver Steeg, M.D.
 4. Jim Lovell, D.O.
 5. Frank Haugland, M.D., PhD.
 6. Jon Fudge, M.D.
 7. Pamela Nerheim, M.D.

III. Orientation

Contact Carrie in the HVC office prior to the start of the rotation to arrange the first day orientation session. A list of patients for you to see and follow will be provided at the orientation session. A schedule listing which cardiology faculty will attend on the service during the rotation will then be provided.

IV. Objectives and Description

A. Educational purpose

The purpose of this rotation is to gain useful didactic and clinical knowledge in the care of cardiac patients. Most of your experience will be on telemetry, but the entire field of cardiology, including evaluation and treatment of the chronic phase of cardiac diseases, will be covered during the month.

B. Principal Teaching Methods

1. Active patient care: You should take an active role in the care of patients assigned to you in the Coronary Care Unit or cardiac telemetry unit. You should develop a plan for that patient's care and then implement it.
2. The cardiologists will rotate teaching responsibilities on a weekly

basis. The assigned cardiology teaching physician for the week will meet with you Monday through Friday mornings at 7:30 AM to round on patients you are following. You will work with this physician to cover new admissions and consults. The attending physician will discuss care plans for new patients seen and will discuss teaching issues relative to these patients.

3. Didactic sessions: Weekly sessions will be scheduled with the teaching faculty to review specific topics in cardiology also addressed in the Syllabus.

C. Educational Content

1. Patients - You will care for patients with chest pain, arrhythmias, acute myocardial infarction, unstable angina, congestive heart failure and other problems typical of an inpatient cardiology service at a tertiary care referral center.
2. Procedures - Under the direct supervision of assigned attending cardiologists, you will gain familiarity and comfort in placing arterial lines, Swan-Ganz catheters, and temporary pacemakers, both transthoracic and transvenous.
3. Educational sessions - You will participate in didactic sessions as described above.
4. Residents should perform periodic literature searches on topics in cardiology pertinent to their patients.

D. Competency-Specific Learning Objectives

Patient Care

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents must demonstrate ability to effectively evaluate and manage patients with cardiology conditions and demonstrate competence with required procedures encountered during the rotation. Procedures the resident should gain proficiency in during the rotation include central venous lines, arterial lines, temporary transvenous cardiac pacing and electrical cardioversion procedures

Medical Knowledge

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and epidemiological sciences and the application of this knowledge to patient care. Residents must demonstrate the ability to access and critically evaluate current medical information relevant to cardiology and demonstrate understanding of assigned reading materials in syllabus.

Practice-Based Learning & Improvement

Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents must demonstrate the ability to identify gaps in knowledge and skills in the care of patients with cardiology conditions and demonstrate real-time strategies to address these gaps. Demonstrate ability to teach junior learners if subintern and/or intern also on service during the rotation.

Interpersonal and Communication Skills

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange with patients, families and professional associates. Residents must demonstrate adequate communication abilities in dealings with patients and families. Demonstrate timely and complete medical records, including admission notes, consult notes, procedure notes and discharge summaries

Professionalism

Residents must demonstrate a commitment to carry out professional responsibilities, adhere to ethical principles, and demonstrate sensitivity in caring for a diverse patient population. Residents must demonstrate respectful behavior towards patients and families, colleagues, nurses and other allied health personnel. Always protect patient confidentiality and provide informed consent.

Systems-Based Practice

Residents must demonstrate an awareness of, and responsiveness to, the larger context and system of health care and the ability to effectively call on system resources to provide optimal care of patients. Residents must demonstrate an evidence-based, cost-conscious approach to patient care. Collaborate with nursing, social services and other allied health care providers to assure timely, comprehensive care provided.

E. Ancillary Educational Materials

1. CCU Syllabus -
2. Assessment - You should use MKSAP and MedStudy questions to assess your fund of knowledge in cardiology. You may discuss problem areas with division teaching faculty.

V. Patient Care

- A. Maximum number of patients - You will be responsible for a maximum number of 12 patients at any one time. Also, you will not be asked to admit more than 8 patients in any given 48 hour period. If a senior medical student is also assigned to the rotation, you are expected to assign that student a maximum of 4 patients, and have the student work up a maximum of 2 patients per 24 hour period. This will raise the entire service patient maximum to 16 patients, with a total maximum of 12 patient admissions for any 48 hour period. If you exceed these thresholds, you should inform the attending cardiologist calling you with an admission that you have reached your service capacity.
- B. Lines of responsibility:
1. When a patient presents to the medical center for you to see, you will either be paged by the attending directly, or if time does not permit, the cardiology nurses or office may contact you. Once you meet the patient, you should fully assess the patient, devise a plan, and begin to implement it. You should then contact the attending cardiologist to discuss your assessment and plan.
 2. Your admission note should consist of either a dictation of an H&P on the hospital line, listing your attending in that note, or a completed admission note using the electronic medical record. You must also identify the patient's primary care physician and list his/her name on the admission note if dictated.
 3. You will follow the daily care of that patient until he/she is discharged from the hospital. This includes the entire CCU course of the patient, as well as the patient's care on the cardiac telemetry unit.
 4. When discharged, you should write discharge orders and review the pertinent discharge information with the patient and family. In addition you are expected to complete a timely discharge summary on the day of discharge. Both the attending physician's name and the primary care physician's name should be listed on the discharge summary.
 5. If a patient is critically ill on admission, you should immediately page the admitting cardiologist and notify him/her of this.
 6. You will receive direct and indirect supervision (with direct supervision available) at all times from the attending cardiology faculty.
- C. Code Team Responsibilities: In addition to taking calls from nursing

personnel on teaching patients you are following, you will also be the team leader on codes occurring anywhere in the medical center. You will need to wear the code pager during the day, and also the nights that you are on call. The code pager should be given to the resident on call for the ICU/CCU during checkout rounds.

- D. Weekend Coverage - You will have one day free of patient care responsibilities each week. This will typically be Sunday, unless you have assigned call on Sunday (you would typically have Saturday off that weekend).
- E. Continuity of Care Clinic- You will attend Continuity of Care Clinics while you are assigned to the Cardiology Service

VI. Medical Records and Procedural Documentation

- A. You are responsible for signing all orders, progress notes, history and physical summaries and discharge summaries that you perform while on this rotation.
- B. Procedural Documentation- You should keep a log of all your procedures while a resident at Iowa Methodist. You will need direct supervision for the first 5 arterial lines, as well as the first 5 Swan-Ganz lines, and the first 3 temporary pacemakers. After that, the cardiologist need not directly supervise you, but you should never perform a procedure without first discussing it with the attending physician, unless such a procedure is performed on a life-saving emergent basis.

VII. Evaluation

- A. At the end of the rotation, the resident will be evaluated by the supervising faculty. Personal feedback will be provided and an evaluation form will be completed and returned to the residency office. The evaluation form will be reviewed and signed by the resident.
- B. The resident will be evaluated by faculty in each of the required six general competency areas as follows:
 - 1. **Patient Care:** We will evaluate the resident's ability to interview and examine patients with chest pain, congestive heart failure and abnormal heart rhythms. We will evaluate the resident's clinical judgment in diagnosing and treating these specific conditions.
 - 2. **Medical Knowledge:** We will test and examine each resident's knowledge base with regards to the ability to communicate verbally, cardiovascular knowledge gained through the month with regards to all relevant cardiovascular disease processes. These will come predominantly during rounds in discussing individual patient

conditions and also during informal mini-lectures which will be given when clinical care responsibilities allow this to occur.

3. **Practice-Based Learning:** We will evaluate whether residents gain experience and knowledge in evaluating and treating patients with chest pain, acute coronary syndromes, congestive heart failure and abnormal heart rhythms. We will also assess how the resident implements the technologies that are available for diagnosis and treatment and whether or not the resident accepts appropriate responsibility for the care of assigned patients. The resident must demonstrate competency both in presenting individual assessment and plans for patients and by completing outside reading and review of the literature that is discussed with the attending during rounds. The resident must demonstrate knowledge of existing, nationally recognized guidelines applicable to conditions commonly encountered in cardiovascular medicine, and an ability to reflect upon his or her own practice.
4. **Interpersonal and Communication Skills:** Residents will be evaluated on the relationships that they maintain with patients on a daily basis and how they act with other medical professionals. This will include the nurses, medical students, other residents and other attendings from associated specialties.
5. **Professionalism:** Residents will be evaluated on whether they demonstrate respect and compassion for patients and other medical health care professionals and whether they are honest and responsible with regards to clinical care of their patients.
6. **Systems-Based Practice:** Residents will be evaluated for improvement in the ability to interview, diagnose and treat patients with chest pain syndromes, acute coronary syndromes, congestive heart failure and abnormal cardiovascular rhythms. The resident will be evaluated upon his or her ability to provide care that is timely, appropriate, and conscious of both quality and cost.

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