

GOALS AND OBJECTIVES FOR CARDIOLOGY ROTATION

Introduction:

This two-month rotation consists of rotations involving cardiac care unit, inpatient cardiology consult service, and cardiology outpatient clinic. Residents are scheduled to spend equal amount of time rotating cardiac care unit and inpatient cardiology consult service. The resident is expected to attend weekly cardiology grand rounds and is expected to present at these rounds on at least one occasion.

For cardiology rotation, residents will be assigned to Al-Adan Hospital, Al-Farwaniya hospital , Mubarak Hospital, Amiri Hospital

Rotation Structure and Schedule:

On the cardiac care unit, residents are expected to round on a minimum of 2-4 patients per day. At the discretion of the attending supervision physician, the resident is expected to admit patients presenting with acute coronary syndromes, chronic stable angina, congestive heart failure, arrhythmias and conduction disorders and valvular heart disease. The resident is expected to pre-round on their patients' daily, write progress notes in the chart and discuss daily progress of their patients on rounds with the rest of the cardiology team lead by the consultant cardiologist. It is expected that the resident complete their progress notes prior to rounds and, in certain instances, the residents may ask to complete a discharge summary when their patients are discharged from the service.

On the consult service, it is expected that resident sees a minimum of 2-4 new cases per day, and follow up on minimum of 3-5 cases/day. The resident will initially perform all new consults. The patient is subsequently seen jointly by the cardiology fellow/medical student and the attending. Consultation note prepared by the resident will not be placed in the chart until signed by the attending. Emphasis is placed upon a pertinent history and physical with review of laboratory trends. In this regard, residents are expected to learn to formulate appropriate management plans for patients with cardiovascular diseases, including use of medication, laboratory testing, and application of noninvasive and invasive cardiac testing results. The resident will also be called upon to provide accurate pre-operative cardiac risk assessment for patients undergoing non-cardiac surgeries.

In the outpatient cardiology clinic, the resident is expected to work with preceptor on a one to one basis critically evaluate evidence basis for cardiovascular-related diagnosis and treatment such as the use of medications for primary prevention for heart disease, medical and surgical management of acute arterial occlusive disease, and interpret and apply treatment guidelines for a variety of cardiovascular-related conditions, such as national cholesterol treatment guidelines and the treatment of hypertension.

Sample Daily Schedule on Cardiology Inpatient Consult Service:

7:30 am to 8:00 am: Resident attends morning report. Residents must maintain 70% mandatory attendance.

8:00 am to 12:00 am: Resident follows up on old patients and work up new consults.

12:30 pm to 2:00 pm: Team gather and round on all new and old patients.

Sample Daily Schedule on Cardiac Care Unit:

7:30 am to 8:00 am: Resident attends morning report. Residents must maintain 70% mandatory attendance.

8:00 am to 9:00 am: Pre-Rounds on patients

9:00 am – Noon: Teaching rounds with rest of the team and consultant cardiologist.

12:30 pm -2:00 pm: Teaching/Didactics/Follow up on patients.

Sample Daily Schedule on Outpatient Cardiology Clinic:

7:30 am to 8:00 am: Resident attends morning report. Residents must maintain 70% mandatory attendance.

8:00 am to 1:00 pm: See patients in ambulatory cardiology clinic along with supervising attending cardiologist.

1:00 pm to 2:00 pm: Didactic teaching session.

On-call Schedule:

Residents are assigned to covering cardiology service call when rotating on cardiology service. Call is every 5th night. Residents will cross-cover CCU, ER and consult service. Residents will be supervised at all times when on call by senior cardiologist.

Objectives and Core Competency:

Residents are evaluated monthly based on CAN med core competency: (1) Medical expert; (2) Communicator; (3) Collaborator; (4) Leader; (5) Health advocate; (6) Scholar; and (7) Professional.

3. Medical Expert:

■ R1-R2 residents:

By the end of the rotation, the resident will be able to:

1. Accurately demonstrate taking an appropriate cardiac history to include assessment of significance and severity of symptoms, medication and other treatment history, and likelihood of alternate diagnoses.
2. Formulate appropriate management plans for patients with cardiovascular diseases, including use of medication, laboratory testing, and application of noninvasive and invasive cardiac testing results.
3. Accurately read and interpret ECGs, identifying normal and abnormal rhythms.

4. Describe the presentation and treatment of stable and unstable angina and acute coronary syndrome/acute MI.
5. Discuss the pathophysiology, evaluation and treatment of common dysrhythmias, especially atrial fibrillation.
6. Describe diagnosis, management, and significance of hypertension and dyslipidemia
7. Identify physical findings of common valvular disorders and correlate them with echocardiographic findings.
8. Describe pathophysiology, diagnosis, and treatment of congestive heart failure.

■ **R3-R4 residents:**

By the end of the rotation, the resident will be able to:

- 1) Meet competency stated for R1-R2 residents.
- 2) The resident will demonstrate the ability to describe the etiology, epidemiology, pathophysiology, clinical features, relevant laboratory knowledge, and the therapeutic options for major cardiovascular disease, including:
 - I. Chest pain
 - II. Dyspnea
 - III. Syncope
 - IV. Palpitations
 - V. Cardiac murmurs
 - VI. Abnormal cardiac enzymes
 - VII. Congestive heart failure
 - VIII. Coronary heart disease
 - IX. Acute coronary syndromes and their complications
 - X. Valvular heart disease
 - XI. Cardiomyopathies
 - XII. Pericarditis and pericardial effusion and tamponade
 - XIII. Pulmonary hypertension
 - XIV. cardiogenic shock
 - XV. Infective Endocarditis
- 3) Manage acute cardiac emergencies in the initial phase of treatment in the emergency room and on the cardiac care unit.
- 4) Assess and manage patients with hypertensive crisis, bacterial endocarditis, heart murmur, and known valve disease, (esp. mitral and aortic).
- 5) Give an in-depth electrocardiogram interpretation
- 6) When appropriate, demonstrate proficiency in central line and arterial line insertion and cardioversions.
- 7) utilize the learning opportunities of Basic echocardiography; Exercise stress testing; and Exercise and chemical stress imaging.

■ **R5 resident:**

By the end of the rotation, the resident will be able to develop proficiency and competency in the following areas:

- 1) Demonstrate competence in managing patients in the coronary care unit with common cardiology conditions e.g. chest pain, acute myocardial infarction, congestive heart failure, cardiogenic shock, unstable angina and arrhythmias, pericardial effusion and tamponade.
- 2) Perform a preoperative cardiac risk assessment for non-cardiac surgery

2. **Communicator:**

By the end of this rotation, the resident at all levels will be able to perform the following:

- 1) Establish a therapeutic relationship with patients and their families, emphasizing active listening, understanding, trust, empathy, and confidentiality.
- 2) Communicate in an effective manner, verbally and in written form, with other members of the health care team.
- 3) Obtain a full cardiac history using effective communication skills with cardiac patients and their families/care takers
- 4) Provide appropriate patient education on cardiovascular diagnosis and treatment as part of a management plan based upon the literacy level of patients and their families/care takers.
- 5) Coordinate care with patient and other team members for chronic disease management of congestive heart failure, cardiac rehabilitation, and other care programs as appropriate.
- 6) Discuss appropriate information with the patient, his/her family, and other healthcare providers (hospitalists, intensivists, other physician requesting consultation, and primary care physicians) to facilitate the optimal management plan for the care of the patient.

4. **Collaborator:**

By the end of this rotation, the resident at all levels will be able to perform the following:

- 1) Recognize that high quality cardiology care is best provided by a team approach, collaborating with cardiovascular surgeon, EP cardiologists, interventional cardiologists, pharmacists, dietitians, social workers and nurses.
- 2) Work effectively in an interdisciplinary team, demonstrating an understanding and respecting the roles of other health disciplines.
- 3) Appropriately utilize other healthcare organizations and allied healthcare professionals in the efficient management of ambulatory cardiac patients, particularly the implications for medication selection based upon insurance coverage (or lack of coverage) for the patient.

4. **Leader:**

By the end of this rotation, the resident at all levels will be able to perform the following:

- 3) Residents will demonstrate timeliness in completing assignments & performing consultations (which should typically be completed and reviewed on the day received), and progress notes.

- 4) Resident will demonstrate the ability to prioritize and perform necessary follow-up.
- 5) Resident will demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.
- 6) Resident will demonstrate a commitment to ethical principles pertaining to confidentiality of patient information and informed consent.
- 7) Resident will demonstrate appreciation of the social context of illness.
- 8) Resident will demonstrate the consideration of the cost-effectiveness of diagnostic and treatment strategies.

5. Health Advocate:

By the end of this rotation, the resident at all levels will be able to perform the following:

- 1) Understand and utilize the multidisciplinary resources necessary to care optimally for cardiac patients.
- 2) Use evidence-based, cost-conscious strategies in the care of the patients.
- 3) Understanding when to ask for help and advice from supervising physicians.
- 4) Learning by participation in teaching conferences, and other educational activities.
- 5) Effective collaboration with other members of the health care team in the service of the patient.

6. Scholar:

By the end of this rotation, the resident at all levels will be able to perform the following:

- 1) Ability to undertake a critical appraisal of the literature
- 2) Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
- 3) Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.
- 4) Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- 5) Use information technology to manage information, access on-line medical information; and support their own education.
- 6) Facilitate the learning of students and other health care professionals.

7. Professional:

By the end of this rotation, the resident at all levels will be able to perform the following:

- 1) Interact professionally toward patients, families, colleagues, and all members of the health care team.
- 2) Acceptance of professional responsibility as the primary physician for patients under his/her care.
- 3) Increase self-awareness to identify methods to manage personal and professional sources of stress and burnout.
- 4) Demonstrate recognition of personal limitations of professional competence and demonstrate a willingness to call upon others with special expertise.
- 5) Appropriate attendance and punctuality at clinical rounds, and clinics.
- 6) Be aware of the ethical and legal aspects of patient care.
- 7) Strive for a balance between personal and professional roles and responsibilities.

Evaluations:

Evaluations should be done on an ongoing basis and residents should ensure they receive and provide verbal mid-rotation feedback to discuss strengths & weaknesses and ensure objectives are being met. At the end of the rotation, a written evaluation will be completed by the attending, with whom the resident spent the majority of their rotation. It is also expected that the residents will complete evaluations on all attendings with whom they have worked.