

# Curriculum VA Inpatient Service

## **Description of Rotation or Educational Experience**

The goal of this rotation is for the cardiology fellow to develop effective consultative skills by integrating all components of diagnostic modalities, patient evaluation, risk-benefit analysis, evidence-based practice and communication with all appropriate services .

- Specific educational goals for this rotation include expanding knowledge of patient management in the areas of:
  - Cardiac transplantation
  - Cardiac surgery
  - Cardiac rehabilitation
  - Cardiac device implantation
  - Cardiovascular interventions
- Progression of responsibilities
  - For those rotations with technical skills (e.g. cardiovascular device implantations), the fellows are given progressive levels of autonomy in performing procedures as their skills allow.
  - For cognitive rotations, e.g. transplantation, fellows are given increasing degrees of independence in evaluating patients and planning therapeutic interventions as their skills advance.

## **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**

- Evaluate and triage patients scheduled for cardiac interventions, electrophysiology study or device implantations and participate in the procedures
- Follow patients following interventions, devices or electrophysiology study to monitor for complications
- Participate in discussion of patients followed in the cardiac transplantation clinic as either candidates for transplantation or following transplantation
- Follow the hospital course of patients from the cardiac transplantation program during admissions, manage complications resulting from immunosuppression in the post-transplant patient, and communicate plans for patient management to housestaff.
- Provide consultative services to the Cardiac Surgery service, and provide recommendations regarding management of heart failure and arrhythmias during the immediate post-operative period.

### **Objectives**

- Patients on the cardiac transplant service are reviewed with the cardiac transplant attending. When these patients are hospitalized, patient management is reviewed on a daily basis.
- Evaluation of patients for procedures is reviewed with the attending before the procedure.
- Post-op management is reviewed with the cardiac surgery team including attending staff.

## **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 demonstrate:

### **Competencies**

- Knowledge of the issues in the management of early post-operative care of the cardiac surgery patient, including understanding of medications, ventilation, hemodynamic patterns, pacemaker function, arrhythmias, bleeding, tamponade, low output states, and ventricular dysfunction.
- Understanding of the role of risk factor modification (hypertension, dyslipidemia, diabetes, exercise, smoking cessation) in the prevention of cardiovascular diseases.
- Knowledge of immunosuppressant regimens, including indications, side effect profile, and dosing of the most commonly used drugs, including corticosteroids, cyclosporine, tacrolimus, azathioprine, mycopholate mofetil, and sirolimus.
- Understanding of the basic principles of allograft rejection surveillance and treatment of cellular and humoral rejection.

### **Objectives**

- Issues of cardiac transplantation are reviewed with the transplant attending as needed.
- Input on cardiovascular surgery patients is reviewed by attending surgeons and feedback is provided to the cardiology attending staff.
- Understanding of the risks and benefits of a planned cardiac procedure is reviewed by the attending cardiologist before each procedure.

## **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

### **Objectives**

- Cases are discussed on a daily basis, and feedback is provided to the resident on their assessment. Reading resources may also be recommended, particularly if a need is identified.
- Fellows should be familiar with pharmacology of immunosuppression medications, as well as guidelines for secondary prevention of cardiovascular events. Knowledge acquisition is assessed on an on-going basis by physicians and surgeons relevant to this rotation.
- 

## **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**

- Coordinate patient care within the health care system relevant to their clinical specialty
- Work in interprofessional teams to enhance patient safety and improve patient care quality

**Objectives**

- Fellows should be knowledgeable in practice guidelines for secondary prevention , and appreciate when recommendations should follow guidelines and what circumstances warrant recommendations different from guidelines.
- On this rotation, the fellow participate in multiple team environments, including the cardiothoracic service, intensive care unit, cardiac catheterization laboratory and ward staff, and the staff of the cardiac rehabilitation program.

**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
- 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**

- How fellows approach the patients is evaluated by the attending. This includes references to the patient and a sympathetic attentiveness to emotional (PTSD, dementia) or physical issues (disabilities, age).
- Feedback is also provided to the attending physician by the nursing staff, technicians, and cardiology fellow.

**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 physicians, other health professionals, and health related agencies
- Work effectively as a member of leader of a health care team or other professional group
- Act in a consultative role to other physicians and health professionals

**Objectives**

- The fellow interacts with a variety of health care professionals and feedback is provided from these individuals.

**Teaching Methods**

Educational methods include, but are not limited to:

- Discussion of inpatient work-up (for patients being evaluated for invasive cardiac procedures) with the cardiac catheterization laboratory and EP attendings.
- Discussion of patients during Cardiac Surgery Rounds.
- Observation and direct patient care in the Cardiac Rehabilitation Clinic.

- Participation in consult Rounds as they pertain to patients co-followed by the heart failure and cardiac transplant service.
- Participation in the cardiomyopathy and cardiac transplant clinic management rounds.
- Self-paced reading of the *Active Partnership for the Health of Your Heart* booklet provided at the start of the rotation.

- 

#### Assessment Method (fellows)

- Fellows are given immediate feedback on whether their assessment and plan is appropriate at the time of presentation of inpatients and patients scheduled for procedures. Participation in the cardiothoracic surgery service, cardiac rehabilitation program and transplant clinic follow-up are evaluated by the staff on these services and feedback provided to the program director..

In addition, fellows are given individual, oral feedback at the end of the rotation. Written evaluations are entered into MedHub. Performance of the fellows in the program is reviewed on a semiannual basis with input from attendings on all the services. This cumulative feedback is then provided to the fellow by the fellowship director.

#### Assessment Method (Program Evaluation)

During the rotation and at the conclusion, fellows are asked whether their learning objectives are being met. Also, at the end of the rotation, fellows are asked to provide anonymous written feedback, as well as participating in semiannual meeting of all the cardiovascular fellows to evaluate the program.

#### Level of Supervision

On this rotation, all inpatients and patients scheduled for a procedure are reviewed with a cardiology faculty member.  
Notes are also reviewed and signed by the faculty member who has seen the patient.

#### Educational Resources

WEBSITES for cardiovascular guidelines:

American Heart Association: [www.americanheart.org](http://www.americanheart.org) (search guidelines with site search function)

American College of Cardiology: [www.acc.org](http://www.acc.org) (quality and science tab)

National Guideline Clearing House: [www.guideline.gov](http://www.guideline.gov)

Other resources:

Updates on cardiology clinical studies: [www.theheart.org](http://www.theheart.org)

Journals on-line, including *Circulation*, *New England Journal of Medicine*