

## Rotation: Cardiology Consultation Service

Director: TBA

Faculty: Drs. Abraham, T., Blumenthal, Brinker, Corretti, Lange, Lima, Traill, Thiemann and Weiss, J., Zieman

Rotation Hours: Mon - Fri, 8am to 7 pm; Sat and Sun, 5 hours per day; 2 weekends off;

### A. Consult Service: Medical Knowledge

	Principal Educational Goals	Learning Activities	Evaluation Methods
1.	Ability to obtain a complete medical history, perform a careful and accurate physical examination with emphasis on cardiac findings and review charts and pertinent records.	DPC, AR	AE
2.	Ability to write a concise evaluation, assess the cardiovascular risk of the patient and make therapeutic decisions and proper interventions based on patient preferences, scientific evidence, and sound clinical judgment.	DPC, AR, CAC, EC, ECG, NC, FS	AE, RR
3.	Effectively evaluate and manage patients with complex cardiac illnesses, particularly, acute coronary syndromes, congestive heart failure, valvular heart disease and cardiac transplantation patients.	DPC, AR, FS, CAC, EC, HR, DSP, CC	AE
4.	Ability to risk stratify patients after being evaluated by echocardiography, cardiac stress test, coronary angiograms, nuclear cardiovascular procedures and other invasive and non-invasive procedures.	ECG, CAC, IC, CC, GR	AE
5.	Effectively direct the team performing CPR and advance cardiac life support.	DPC, EP, IL	AE
6.	Ability to recognize and deal with complications from invasive and non-invasive procedures.	DPC, FS, EP	AE
7.	Ability to participate in behavior modification and strategies to educate patients and other health professionals in the management of cardiovascular risk factors and life style modification.	DPC, AR, PCF	AE
8.	Ability to participate in the discussion of end-of-life issues with patients and their families.	DPC, FS, EI, PC	AE, PR

### B. Consult Service: Patient Care

	Principal Educational Goals	Learning Activities	Evaluation Methods
1.	Familiarity with basic science concepts and mechanisms of cardiovascular disease.	CC, RC, HR, NC, JC, IL	AE, ECR
2.	Familiarity with current medical literature, clinical trials, and evidence based medicine in cardiology.	JC, CC, GR, NC	AE
3.	Familiarity with the broad spectrum of cardiovascular diseases.	CC, NC, GR	AE, EC, PR
4.	Familiarity with the pathophysiological Principals of cardiovascular disease.	AU, EP, CC, GR	AE, DSP

### C. Consult Service: Interpersonal Skills and Communication

	Principal Educational Goals	Learning Activities	Evaluation Methods
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1.	Communicate effectively the consult findings with physician colleagues and other members of the health care team in a timely fashion to assure comprehensive patient care.	DPC, AR, PC, FS, PC	AE, PR, RR
2.	Present findings to patient and family members in a compassionate and informative manner.	DPC, AR, EI, PC	AE, PR
3.	Provide educational instructions and other learning tools to patients to reinforce behavioral modification.	DPC, AR, PCF	AE

#### D. Consult Service: Professionalism

	Principal Educational Goals	Learning Activities	Evaluation Methods
1.	Interact professionally with patients, patients' family, colleagues, and other members of the health care team.	DPC, AR, PC, FS	AE, PR, RR
2.	Appreciation of the spiritual and social context of wellness and illness.	DPC, AR, EI, FS, PC	AE

#### E. Consult Service: Practice-Based Learning and Improvement

	Principal Educational Goals	Learning Activities	Evaluation Methods
1.	Commitment to scholarship and the use of evidence based cardiovascular medicine.	CC, GR, LC, FS	AE, ECR
2.	Broad reading of the cardiovascular literature and access and research of Medline and internet tools.	CC, GR, JC, RC	AE, ECR

#### F. Consult Service: Systems-Based Practice

	Principal Educational Goals	Learning Activities	Evaluation Methods
1.	Understand the complexities of cardiovascular disease patients and utilize the multidisciplinary resources necessary to care for them.	DPC, AR	AE
2.	Collaborate with other members of the health care team to assure comprehensive cardiac care.	DPC, AR, PC	AE, PR
3.	Understand the system complexities in invasive and noninvasive cardiology.	DPC, AR, GR, EC, CAC, IC, EP	AE
4.	Willingness to learn by participation in ward rounds, teaching conferences and other educational activities.	DPC, AR, GR, NC	AE
5.	Effective utilization of risk stratification using evidence-based medicine.	DPC, AR, CC, IL, NC	AE
6.	Develop effective communication with referring physician, health care team, patient and their family, regarding purpose and findings of the consult.	DPC, AR, PC	AE, RR, PR
7.	Expand learning in out-patient ultrasound and nuclear cardiology to optimize understanding of patients risk stratification.	DPC, AR, EC, ACS, CC, IL	AE
8.	Consideration of cost effectiveness and outcome measurements of tests and interventions associated with consultations.	DPC, AR, FS	AE

## Learning objectives and expectations while on this rotation

- The Consult fellow will be the initial cardiologist to evaluate consultations requested by all in-patient services at Hopkins. In addition, the fellow will provide pre-operative cardiac evaluation (“clearance”) in the outpatient Pre-Anesthesia Care Unit (PACU) and assist the Emergency Department Chest Pain Evaluation Unit in determining which patients require admission, which may be sent home and how to organize cardiologic follow-up.
- The fellow will learn to deal effectively and professionally with patients, families, other medical personnel, as well as outside lay persons/potential patients who request to speak with a cardiologist
- It is expected that the fellow will see patients with the Attending in clinic if possible, other duties permitting.
- As the cardiology consultant “on call”, the fellow will field all requests for assistance with cardiac problems and either deal with them himself/herself or triage them to the appropriate service.
- In all these activities, the fellow will develop sufficient expertise that s/he will be able to function independently as an effective consultant cardiologist.

## Learning Activities

- Bedside cardiovascular history and physical examination
- ECG interpretation consistent with level of training
- Interpretation of treadmill exercise tests, Holter monitors and tilt table tests
- Correlate physical exam with other cardiology laboratory diagnostic techniques, for example echocardiograms, cardiac catheterizations, radionuclide and other non-invasive imaging (MRI, CT scans, etc.).

## Content and methods

- ACC/AHA guidelines for pre-operative cardiac evaluation.
- Review article on management of atrial fibrillation (probably the single most common reason for request for consultations)
- Daily review of echocardiograms and other imaging techniques on patients being seen by the consultation service
- Direct observation by the attending of fellow’s cardiac physical examination
- Clinical and non-invasive assessment of prosthetic heart valves (tissue and mechanical)
- Long-term management of post-CABG, post-PTCA, post-MI patients with emphasis on details of “secondary prevention.”
- Basics of “primary prevention” of atherosclerosis (see Preventive Cardiology curriculum)

**Supervision:** no procedures are performed on this service; however, fellows are always supervised by the attending

**Evaluation Process** (*fellows will be evaluated on each rotation using a competency-based system on E-Value*).

- One-on-one feedback of accuracy and completeness of patient histories
- Direct observation by the attending of fellow’s cardiac physical examination
- Review and critique with fellows their independent interpretation of diagnostic studies
- Review and critique with fellows their assessment and plans for patient’s on whom they have consulted
- Observe and provide feedback on how fellows interact with patients, families and other medical personnel