

CCU ROTATION CURRICULUM

Description of Rotation or Educational Experience

The CCU rotation provides the fellow with the opportunity to manage the patients admitted to the CCU with various critical cardiovascular disease states. Overall objectives of the rotation will include:

Specific educational goals for this rotation include

1. Learning assessment of and day-to-day management of critically ill patients under direct supervision of the CCU Attending
2. Supervision for the housestaff and medical students who are involved in the care of the CCU and heart failure patients
3. Serve as the liaison between the housestaff and the nursing and support staff to ensure the best patient care
4. Teaching of the housestaff and medical students relevant topics to management and understanding of cardiovascular diseases

Progressive Education

Over the 2 months of this rotation, fellows are given progressive responsibility for the care of critically ill patients, including independently conducting afternoon sign-out rounds to developing skills appropriate to a junior attending.

MEDICAL KNOWLEDGE

GOAL: Demonstrate knowledge of established and evolving biomedical, clinical, epidemiologic and social-behavioral sciences, as well as application of this knowledge to patient care. On this rotation, cardiology fellows are expected to extend their knowledge in the evaluation and management of critically ill patients. Specific areas emphasized include understanding the assessment and management of acute cardiac conditions and an understanding of basic cardiac physiology:

1. Cardiovascular physical exam
 - a. GOALS Evaluate and recognize
 - i. Normal and normal variants
 - ii. Common structural/valvular abnormalities VSD, IHSS, TR)
 - iii. Findings with acute coronary syndrome, CHF, cardiogenic shock, pulmonary hypertension, pericardial tamponade
 - iv. Evaluation of the peripheral vasculature (carotids, aorta, renal arteries, extremities)
 - b. Methods
 - i. Use auscultatory practice tapes
 - ii. Use teaching stethoscope
2. Cardiovascular medicine testing modalities
 - a. GOALS: understand indications for, interpretations of, and risks of diagnostic testing used for critically ill patients including:
 - i. EKGs

- ii. Pulmonary artery catheterization
 - iii. Coronary angiography and intervention
 - iv. Emergency cardioversion
 - v. Temporary pacemakers.
- 3. Common cardiovascular disease states
 - a. Coronary and peripheral arterial disease
 - i. GOALS
 - 1. Understand the spectrum of disease from “silent ischemia” to acute coronary syndrome in the coronary bed, and from claudication to limb loss in peripheral vascular disease
 - b. Congestive heart Failure
 - i. GOALS:
 - 1. Understand spectrum of etiologies and their work-ups
 - 2. Learn current medical treatment and prognostic evaluation
 - 3. Become familiar with the treatment of endstage heart failure and cardiogenic shock, including medical, surgical and mechanical interventions
 - 4. Gain exposure to cardiac transplantation: (indications for, and chronic post-op care of)
 - c. Systemic and Pulmonary Hypertension
 - i. GOALS:
 - 1. Evaluation for primary and secondary causes
 - 2. Medical, surgical and intravascular treatment options
 - d. Valvular heart disease
 - i. GOALS:
 - 1. Diagnosis of common congenital and degenerative valvular lesions
 - 2. Medical and surgical treatments for valvular lesions (indications for valvular replacement)
 - 3. Evaluation and treatment of acute and sub-acute endocarditis
 - e. Arrhythmias
 - i. GOALS:
 - 1. Diagnosis and treatment of acute arrhythmia problems including syncope, sudden death, SVT, VT, heart block, sick sinus syndrome
 - 2. Role of electrophysiologic testing, ablation procedures, pacemakers, defibrillators and biventricular pacing in managing critically ill patients.
 - f. Congenital heart disease
 - i. GOALS:
 - 1. Understand basic cardiovascular embryology
 - 2. Appreciation for the clinical presentation of the “uncorrected” adult patient
 - 3. Common surgical “corrections” for congenital lesions
 - 4. Clinical issues regarding the surgically “corrected” adult

- g. Degenerative or systemic diseases affecting the cardiovascular system
 - i. GOALS:
 - 1. Review of most common collagen vascular diseases (Marfan's, Scleroderma, Sjogren's)
 - 2. Rheumatologic disorders (SLE, RA)

PATIENT CARE

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

Competency:

- 1. Evaluate acutely ill patients with cardiovascular issues with particular attention to changing symptoms and hemodynamic variables.
- 2. Be able to respond with appropriate urgency to changes in clinical status.

Objective

- 1. Understand and promptly respond to changes in the physical, emotional or hemodynamic status of CCU patients.

INTERPERSONAL AND COMMUNICATION SKILLS

Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

Competency:

- 1. Work effectively as a member or leader of a health care team or other professional group
- 2. Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds.

Objective:

- 1. Function as leader of CCU management team in absence of attending.
- 2. Provide updates to patients and families about current status as significant changes occur.
- 3. Assure efficient communications between all members of CCU team.

PROFESSIONALISM

Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principals.

Competency:

1. Respect for privacy and autonomy
2. Compassion, integrity and respect for others.

Objective:

1. Demonstrate understanding of HIPPA regulations, particularly as they relate to patients in a critical standing.
2. Demonstrate respect for all members of CCU team, including nurses, pharmacists, etc. and mentor housestaff.

PRACTICE-BASED LEARNING AND IMPROVEMENT

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.

Competency:

1. Participate in the education of patients, families, students and residents as documented by evaluations of a resident's teaching abilities by faculty and/or learners.
2. Incorporate formative evaluation feedback into daily practice.
3. Identify and perform appropriate learning activities

Objective:

1. Provide didactic lectures to housestaff and students.
2. Demonstrate improvement in diagnostic skills, both technical and cognitive in management of acutely ill patients.
3. Incorporate current data into lectures and patient management.

SYSTEMS BASED PRACTICE

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.

Competency:

1. Coordinate patient care within the health care system relevant to their clinical specialty
2. Advocate for quality patient care and optimal patient care systems.

Objective:

1. Work with all team members in CCU to optimize patient care.
2. Evaluate and identify potential areas for improvement.

Assessment Method (fellows)

1. Feedback from attending during and after daily rounds
2. Feedback from nursing staff, either directly or through CCU attending

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.

EDUCATIONAL METHODS

1. Review on CCU and ward rounds
2. Ad Hoc discussions with patient care team, including nurses, pharmacists, therapists, etc.
3. Didactic lectures in core house staff curriculum, CCU fellow's talks
4. Catha conference
5. Selected review articles and reference books
6. ACC/AHA guidelines
7. Internet resources: Lane Library, Up to date, etc

SUPERVISION

- During the rotation, the attending is present for morning rounds and is available throughout the day for any questions. The fellow receives direct and immediate feedback from the attending physician on the management of critically ill patients

ROTATION DIRECTOR

- Randall Vagelos, M.D

FEEDBACK MECHANISM

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.