

## **Emergency Observation Medicine Fellowship**

### **Emory University School of Medicine, Department of Emergency Medicine**

#### **Overview**

The clinical operations of an emergency department observation unit will be learned through involvement in the three observation units at Emory University Hospital, Emory Crawford Long Hospital, and Grady Memorial Hospital. Clinical operations will include learning to develop observation services in a variety of health care settings. This will include clinical protocols, clinical skills unique to an ED observation unit, unit operation policies, staffing, economic issues, and regional and national health care policy issues.

Educational issues will include learning the scope of observation medicine in the US and abroad. It will also include understanding the scope of observation medicine among various health care providers ranging from attending physicians, residents, nurses, and medical students. You will assist with the development of a model curriculum for various providers, as well as participate in these educational activities. National meetings and conferences will be integrated into the fellowship on an as needed basis.

The refinement and expansion of observation medicine will be learned through participation in clinical research and scholarly publications. There are several research opportunities at various levels of completion that offer the opportunity to participate in. It will be important to achieve proficiency in limited number specific research skills which will serve well in this professional endeavor. Time will be allocated to this as well.

#### **Curriculum**

- I. General
  - a. Principles of Observation Medicine
  - b. International scope of observation medicine
  - c. Basic fellowship skills
    - i. Data management training – SPSS, excel, Access,
    - ii. Research tools – Endnote, Quosa, pubmed, survey monkey
- II. Clinical Services
  - a. Administration
    - i. Definition of services
      1. Observation services
        - a. EDOU
        - b. Inpatient observation status
      2. Scheduled elective outpatient services
      3. “Boarded patients” or “Holds”
    - ii. Administrative design of an EDOU
      1. Open vs closed
      2. Hybrid vs pure EDOU
      3. Administrative structure
    - iii. Guidelines for an EDOU

1. Hospital and ED operations
  2. EDOU operations
  - iv. Development of an EDOU protocol
    1. Format of condition specific guidelines
    2. Feasibility study, literature search, workgroup consensus document, draft protocol, broad input and revisions, pilot testing, implementation, data collection, protocol revisions
    3. Sample protocols
  - v. Staffing an EDOU
    1. Nursing
    2. Ancillary
    3. Physician
    4. Midlevel
  - vi. Performance measures of an EDOU
    1. Data management and Utilization review metrics
      - a. Data capture methodologies
      - b. Critical metrics for an EDOU
    2. Quality assurance / continuous quality improvement metrics
    3. Patient satisfaction measures
  - vii. EDOU physical design
    1. Layout within a hospital
    2. Physical design characteristics
    3. Equipment requirements
  - viii. Economic issues
    1. Basic principle of health care economics – cost, charge, equity, effectiveness
    2. Cost analysis, equity analysis, and reporting
      - a. Facility
      - b. Professional
    3. Coding and billing
      - a. Third party payers
        - i. Government
        - ii. Private
        - iii. Other
      - b. Facility
      - c. Professional
    4. Justification of a new EDOU or expansion of an existing EDOU
      - a. Facility
      - b. Professional
- b. Clinical Skills
- i. ECG interpretation
    1. Basic
    2. Alternate lead placement
    3. ST segment monitoring
    4. ECG mapping
  - ii. Stress testing
    1. Physiology

2. Appropriate utilization , indications, contraindications, limitations, and interpretation of results.
3. Modalities:
  - a. Exercise
  - b. Pharmacological
    - i. Chronotropic – Dobutamine
    - ii. Vasodilators – adenosine, dipyrimadole
- iii. Cardiac imaging – appropriate utilization, indications, contraindications, limitations, and interpretation of results:
  1. Nuclear
    - a. Technecium / sestimibi
    - b. Rubidium
    - c. Thallium
  2. Echo
    - a. Stress
    - b. Rest
  3. MRI
    - a. Stress
    - b. Rest
  4. CTA
    - a. Coronary calcium scoring
    - b. Coronary CT angiography
- iv. Tilt table testing – appropriate utilization, indications, contraindications, limitations, and interpretation of results
- v. Neurovascular imaging
  1. Carotid Doppler imaging
  2. MRI / MRA of the head and neck
  3. CTA of the head and neck with CT perfusion
  4. MRI diffusion / perfusion imaging
- c. Clinical Services
  - i. General format – to be applied to all clinical conditions
    1. Preparatory research and reading
    2. Patient selection
    3. EDOU interventions
    4. Clinical outcomes
    5. Impact analysis
  - ii. Cardiovascular conditions
    1. Chest pain evaluation for possible acute coronary syndrome
    2. Syncope
    3. Atrial fibrillation
    4. Congestive heart failure
    5. Transient ischemic attack
    6. Uncontrolled hypertension
  - iii. General conditions
    1. Dehydration
    2. Asthma / COPD
    3. Electrolyte abnormalities
    4. Sickle cell anemia

- iv. Gastrointestinal conditions:
  - 1. Abdominal pain
  - 2. Upper GI bleeding
  - 3. Lower GI bleeding
  - 4. Pancreatitis
  - 5. Diverticulitis
- v. Infections:
  - 1. Pyelonephritis
  - 2. Pneumonia
  - 3. Cellulitis
  - 4. Viral meningitis
  - 5. Fever of unknown source
- vi. Genitourinary conditions
  - 1. Hyperemesis gravidarum
  - 2. Renal colic
  - 3. Hematuria
  - 4. PID
  - 5. Vaginal bleeding
- vii. Pediatrics
  - 1. Dehydration
  - 2. Croup
  - 3. Asthma
  - 4. F.U.O.
  - 5. Hyperbilirubinemia
- viii. Trauma
  - 1. Pneumothorax
  - 2. Blunt abdominal trauma
  - 3. Penetrating abdominal trauma
  - 4. Head injury
- ix. Toxicology
  - 1. TCA
  - 2. Acetaminophen
  - 3. Warfarin
  - 4. Alcohol
- x. Psychiatric and substance abuse issues

### III. Educational opportunities

- a. Nurses
- b. Midlevel providers
- c. Medical students
- d. EM residents
  - i. PGYI curriculum
  - ii. PGYII curriculum
  - iii. PGYIII curriculum
- e. Fellowship
  - i. Curriculum development
  - ii. Test development
- f. Emergency medicine attending

- i. Didactic curriculum
    - ii. Online curriculum
  - g. Administrative and health care policy leaders
  - h. National educational opportunities
- IV. Research and scholarly activities
  - a. Research basics
    - i. Designing clinical research
    - ii. Categories of research studies
  - b. Research project
    - i. Define study question
    - ii. Describe methods
    - iii. Determine feasibility
    - iv. Write study protocol
    - v. Procedural issues:
      - 1. Funding and support
      - 2. IRB approval
    - vi. Pilot testing
    - vii. Implementation and completion
    - viii. Analysis
    - ix. Abstract
    - x. Manuscript
  - c. Scholarly activities
    - i. Chapters
    - ii. Review articles
    - iii. Books
    - iv. Presentation at national meetings

## **Competencies**

1. Patient and Family Care
2. Medical Knowledge
3. Practice-Based Learning and Improvement
4. Interpersonal and Communication Skills
5. Professionalism
6. Systems-Based Practice