CURRICULUM ON EMERGENCY MEDICINE
University of Colorado INTERNAL MEDICINE RESIDENCY
UCH Intern Emergency Medicine Rotation

I. **Purpose and Educational Value**

The purpose of the Emergency Medicine rotation is to expose the PGY-1 internal medicine resident to common, critical and urgent medical problems with the supervision of the full-time Emergency Medicine faculty. Our goal is to have the resident learn to see and treat very ill patients from the moment they arrive at the hospital, as opposed to the partially worked up patient a resident receives on other clinical rotations. Residents will learn how to diagnose and manage patients with a variety of common medical complaints (chest pain, abdominal pain, shortness of breath), in addition to being comfortable with problems that are seen by a primary care provider (orthopedic complaints, simple lacerations, eye and ENT emergencies). The residents also learn to work within a health care team, perform a variety of invasive medical procedures, and learn how to utilize a comprehensive consulting staff.

II. **Principal Teaching Methods**

A. Patient encounters take place in the Emergency Department. TheEmergency Department provides acute interventional cardiac services, has an attached dialysis unit, and gastroenterology suite. We also have active oncology, rheumatology, orthopedic, OB-GYN, and surgery departments.

B. Teaching is provided on a patient-by-patient basis with direct, one-to-one interaction with the supervising attending physician. The fundamental teaching method involves the resident obtaining a history and physical on the patient and then presenting the patient to the attending. The attending then uses each patient to bring out teaching points. The attending then checks key parts of the history and physical and supervises the efficient work-up of the patient. Procedures are closely monitored by the attending.

C. Faculty consists of 3 double-boarded Internal Medicine/Emergency Medicine attendings, one internal medicine boarded attending (from the University of Colorado residency), one Family Medicine/Sports medicine specialist, and 6 Emergency Medicine boarded specialists. The residents are always supervised directly by one of 10 attendings.

D. Lectures-Residents are required to present a topic or case at the departmental Morbidity and Mortality conference. The presentation must be accompanied with an outline and a bibliography. Independent reading is expected. There is an additional 2 hour conference on topics related to the rotation, typically with guest speakers from other departments.

III. **Educational Content**

A. The emergency department hosting the rotation is in a community hospital. One of the advantages of this setting is we are **not** a trauma center, rather our focus is the treatment of patients with emergent medical issues such as acute MIs

and arrhythmias , acute stroke, asthma and other respiratory problems. The hospital offers around the clock acute interventional cardiology services and an on call staff consisting of neurologists, orthopedic surgeons, hand specialists, and surgeons. The residents gain experience diagnosing and treating many obstetric and gynecologic emergencies. In addition we are associated with a dialysis center and treat many patients with renal emergencies. The gastroenterology suite is adjacent to the ED, so residents are able to follow emergent patients requiring such procedures. Finally, if a resident is interested, they can spend a morning in the OR mastering airway management techniques with an anesthesiologist.

B. The demographic characteristics of the patients using the emergency departments include all races, ages, sex, and socioeconomic status in the Denver area. The residents typically see only teenage and adult patients.

C. Types of Clinical Encounters

1. The resident will experience first contact with unselected adult patients in the emergency department. Emergency care services are provided by the residents on the rotation.
2. The Emergency Department serves an average of 80 patients per day.
3. While on the Emergency Medicine rotation, residents will work an average of 40 hour weeks in 10 hour shifts, typically with no more than three 10 hour shifts in a row. Residents typically have either Saturday or Sunday off and shifts typically end at midnight.
4. The Emergency Medicine rotation qualifies as a meaningful patient responsibility rotation.

D. Procedures and Services

1. The procedures that are either reinforced or learned during the Emergency Medicine rotation include: cardiopulmonary resuscitation, venous phlebotomy, arterial blood sampling, central line placement, nasogastric tube placement, lumbar puncture, and endotracheal intubation. In addition to splinting, nasal packing, ultrasound and slit lamp usage, I and D of abscesses, arthrocentesis, and relocation of common dislocated joints.
2. The interpretive skills that are either reinforced or taught during the rotation include: ECG, radiographs through a PACS system, bedside ultrasound, urinalysis, arterial blood gases and other laboratory assays.
3. Documentation is performed on a computer based program called Tsystems. Each resident is orientated to this at the start of the rotation.

IV **Principle Ancillary Educational Materials**

A. At the beginning of each rotation, the resident is oriented to the Emergency Department with particular attention to the goals and focus of the rotation.

B. Reprints of articles on suturing, and a variety of subjects are available.

C. The emergency department maintains a reference library for residents and staff.

D. The resident is expected to read from core emergency and internal medicine texts that are available in the ED library. In addition, there is access to a variety of educational web sites (Up To Date, Poisendex, and

NEJM online.) Other reference articles are available to the residents.

V **Rotation Specific Competency Based Objectives**

A. Patient Care

1. History taking. Residents at all levels of training will collect a thorough history by soliciting patient information and by consulting other sources of primary data in a logical and organized fashion. History taking will be hypothesis driven. Interviewing within the confines of clinic schedules will be learned, use of appropriate nonverbal techniques, and demonstration of consideration for the patient will all be expected. The resident will inquire about the emotional aspects of the patient's experience while demonstrating flexibility based on patient need.
2. Physical Exam. Residents at all levels of training will learn a focused physical exam relevant to the goals of the rotation, describing the physiological and anatomical basis for normal and abnormal findings.
3. Charting. Residents at all levels of training will record data in a thorough, systematic manner.
4. Procedures.

   Throughout the course of the month, any procedures related to the rotation will be learned under close observation with the goal of having the resident become independently skillful by the end of the month. All residents will be expected to understand and be able to verbalize the indications, risks, benefits, after-care, and follow-up of any procedures used. They will perform the consent of patients, and they will be expected to track results, interpret results, and provide results to patients in a language patients can understand.
5. Medical Decision Making, Clinical Judgment, and Management Plans. All residents will demonstrate improving skills in assimilating information that they have gathered from the history and physical exam.

   Residents will progressively be able to generate a rational differential diagnosis for the most common conditions seen on each rotation, and they will correctly identify and interpret abnormal findings. They will understand their limitation of knowledge and seek the advice of more advanced clinicians. Residents will establish an orderly succession of testing based on their history and exam findings. Basics of treatment as well as common side effects of treatment will be understood by the end of the rotation.
6. Patient counseling

Residents will be able to describe the rationale for a chosen therapy and will be able to describe medication side effects in lay terms. They will assess patient understanding and provide more information when necessary. Residents will demonstrate the ability to be a patient advocate and also educate patients and families for enhanced compliance.

B. Medical Knowledge

Residents will consistently apply current concepts in the basic sciences to clinical problem solving. They will use information from the literature and other sources including electronic databases.

C. Interpersonal and Communication Skills

Residents will develop and refine their individual style when communicating with patients. They will strive to create ethically sound relationships with patients, the physician team and ancillary staff. They will create effective written communications through accurate, complete, and legible notes. They will exhibit listening skills appropriate to patient-centered interviewing and communication. Residents will recognize verbal and nonverbal cues from patients. They will exhibit team leadership skills through effective communication as manager of a team whenever applicable on these rotations. When practicable, residents are expected to assist junior peers, medical students, and other hospital personnel to form professional relationships with support staff. Residents will respond to feedback in an appropriate manner and make necessary behavioral changes. Senior residents should be able to successfully negotiate nearly all “difficult” patient encounters with minimal direction and function with decreasing reliance upon attending physicians.

D. Professionalism

All residents will demonstrate integrity, accountability, respect, compassion, patient advocacy, and dedication to patient care that supercedes self-interest. Residents will demonstrate a commitment to excellence and continuous professional development. They will be punctual and prepared for teaching sessions. Residents will demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentially of patient information, and informed consent. Residents are expected to show sensitivity and responsiveness to patients’ culture, age, gender and disabilities.

E. Practice Based Learning and Improvement

Residents will use hospital and University library resources to critically appraise medical literature and apply evidence to patient care. They will use hand-held computers, desktop PC's and Internet electronic references to support patient care and self-education. They will model these behaviors to assist medical students in their own acquisition of knowledge through technology. They will assess the effectiveness of their own interventions and reorganize if they find inefficiencies or omissions. Whenever possible they will seek out and analyze data on practice experience, identify areas for improvement in knowledge or patient care performance and make appropriate adjustments. They will regularly demonstrate knowledge of the impact of study design on validity or applicability to individual practice.

F. Systems Based Practice

Residents will be sensitive to health care costs while striving to provide quality care. They will effectively coordinate care with other health care professionals as required for patient needs. Clinical practice guidelines will be used whenever applicable. Residents will be expected to seek out and understand current outpatient guidelines, but also recognize the limitations of these guidelines and when they may not be applicable. They will work with patient care managers, discharge coordinators and social workers to coordinate and improve patient care and outcomes.

VI. **Method of Evaluation**

A. Residents-The residents are evaluated by all the attending physicians with whom they come in contact. The final evaluation is a composite of the many individual evaluations. This evaluation is reviewed with the resident by the Director of Medical Education.

1. Clinical performance-This involves history taking, physical exam, and proficiency at procedures. The skills specific to our rotation involve using time wisely to obtain the critical information needed in patient management. The residents are evaluated on their ability to organize this information in succinct manner and prioritize the clinical evaluation. The clinical evaluation should be cost effective and focused on addressing potential emergent conditions. Proficiency at procedures is also evaluated.
2. Attitude-Residents are expected to have a positive attitude towards attendings, nursing staff, ancillary help, patients and their families. Residents are expected to

be able to handle difficult patient interactions and incorporate improvements suggested by attendings in this area during the month.

3. Fund of knowledge-Residents are expected to have a knowledge about the physiology, evaluation, and treatment of common medical conditions, and use literature and electronic databases to supplement their knowledge.
4. Interpersonal and Communication Skills- The residents are expected to create ethically sound relationships with patients, the physician/nursing team and supporting hospital personnel. The resident is expected to integrate themselves into the patient care team and successfully negotiate “difficult” patient encounters.
5. Professionalism-Residents are expected to exhibit respectful, compassionate, ethical, dedicated behaviors. Confidentiality of patient information is expected.

B. Faculty/Service -An end of rotation evaluation of the attendings and service is completed by the resident. This evaluation is reviewed by the hospital's Director of Medical Education.