

Emergency Medicine Rotation Student Manual

The University of Maryland School of Medicine



Robert L. Rogers, M.D., FAAEM, FACEP, FACP
Director of Undergraduate Medical Education
Emergency Medicine Elective Director

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Rotation in Emergency Medicine

Guidelines for Medical Students

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1. Introduction

Welcome to the emergency medicine rotation at The University of Maryland!

The emergency medicine rotation is an exciting 4-week experience aimed at teaching medical students the necessary skills to take care of patients with a wide variety of undifferentiated urgent and emergent conditions. Students will learn how to approach patients with common and potentially life-threatening complaints such as chest pain, headache, abdominal pain, and many others. Students will gain crucial skills in patient assessment and stabilization. Emphasis is placed on teaching students how to develop a working differential diagnosis and how to appropriately narrow it.

According to the National Hospital Ambulatory Care Survey an estimated 110 million visits were made to hospital emergency departments in 2002. This is an increase of 23% since 1992 (89 million ED visits). During this same period of time, the number of operating emergency departments across the country decreased by about 15%.

Regardless of your intended career path, the pathology of illness seen during your emergency medicine rotation will provide you with a unique educational opportunity.

National Hospital Ambulatory Medical Care Survey: 2002 Emergency Department Summary

Most commonly reported chief complaints: (% distribution of visits)

- Abdominal pain 6.5%
- Chest pain 5.1%
- Fever 4.8%
- Cough 2.7%
- Shortness of breath 2.7%
- Headache 2.6%
- Back pain 2.5%

Principles of Emergency Medical Care

All patients that you encounter in the ED should be evaluated in a systematic fashion. The principles of care that are listed below will help provide you with a template and framework to approach each patient.

- 1) First and foremost is to determine the presence of a life threatening condition. Cardinal complaints such as chest pain, shortness of breath, abdominal pain, headache, and altered mental status, etc. need to be systematically evaluated. Emergency Medicine is primarily a complaint oriented rather than a disease specific specialty. The presence of even a potentially life threatening illness will often require early aggressive management to decrease associated morbidity and mortality. In all serious illness / injury the “ED safety net” should be employed. This consists of vascular access, cardiac monitoring, and supplemental oxygen. With clinical experience, it is often easier to identify a sick patient. The ability to rapidly identify an ill appearing patient is paramount to the practice of emergency medicine. At times identifying a sick patient may be straight forward. The patient may just look sick when you enter the treatment room. He may be sweaty and holding his chest, or he may lying still on a stretcher with an altered mental status. **As a medical student, the identification of a sick or even a potentially sick patient (abnormal vital signs, SOB, cardiac CP, peritoneal findings, altered mental status, etc.) should prompt you to immediately obtain the assistance of the senior EM resident or the attending physician.**
- 2) Often during your primary patient assessment, you have to determine what interventions are necessary to stabilize the patient. Initial care will often be directed at airway management, hemodynamic stabilization, and arrhythmia management, etc. These interventions may either correct or treat an emergent condition, or prevent one from occurring. This principle is ever so important when you are managing critically ill patient’s.
- 3) **What is “ROWCS”? Rule Out Worst Case Scenario-**After the immediate life threatening process is stabilized, it is important to identify other potential serious disorders (high potential morbidity) that are consistent with the patient’s presentation. Remember it is not uncommon for a patient to present with more than one pathologic process. The adage “worst first” clearly applies to the specialty of emergency medicine. Only after the life or limb threatening etiologies are ruled out, are the more benign processes considered.
- 4) Early on in the course of treatment, a decision has to be made as to what diagnostic tests if any are indicated. Diagnostic tests often include various radiographic and/or laboratory tests. The decision to order diagnostic tests should be made in conjunction with your senior EM resident or attending physician (see section on diagnostic testing).

- 5) Is a specific diagnosis possible or even necessary? Accepting the humbling nature and at times the uncertainty of our specialty is often necessary. Patient care will most often be instituted prior to a formal diagnosis. It is not uncommon to either discharge or admit a patient without a specific diagnosis. Abdominal pain is a common chief complaint in which we will discharge a patient without a specific diagnosis. We will often label the patient with “abdominal pain etiology unclear.” This commonly used label can be viewed as a diagnosis of exclusion. It is only after a thorough history and physical examination, appropriate laboratory and/or radiographic tests that this label is applied. As a general rule all patient’s with this diagnosis should meet the following criteria prior to being discharged; no peritoneal findings, tolerating oral fluids, not requiring parenteral analgesia, adequate follow up (often within 12 – 24 hours).
- 6) **Does this patient require hospitalization?** This is a critical decision point in the management of all emergency department patients. Although this seems simple, the disposition of some patient’s, i.e., does the patient require hospitalization or can he/she be discharged, may not be as simple as it seems. In order to make this decision, one must at times take into account other aspects of the patient’s social/living situation in addition to his or her medical illness. Does the patient have access to routine follow up health care, can he or she pay for their prescriptions, and are they reliable to follow up as directed? Are they homeless, are family members or visiting nurses available to assist the patient with his or her needs? It is also important to determine if the patient will be able to perform his/her activities of daily living at home prior to discharging them from the ED. In 2002, approximately 12% of all ED visits across the country resulted in hospital admission. Many urban ED’s have much higher patient acuity than the national average resulting in a greater percentage of patients requiring hospital admission. It is not uncommon for a busy, high acuity urban emergency department to admit 20% - 25% of the patients that they encounter.
- 7) **If the patient will be discharged, have you addressed proper outpatient follow up?** Many patient’s will require follow up with a primary care physician, some with a specialist. The care provided by the emergency department is often only one facet of the total care required by the patient. When discharging a patient from the ED, it is often helpful to document on the discharge instructions pertinent test results (positive or negative) or interventions that were performed during their evaluation. It is also helpful to advise the patient to bring his/her discharge instructions with them when they follow up with there primary care physician.
- 8) **Does the chart reflect the full extent of the evaluation and treatment performed in the ED?** “If it isn’t charted, it didn’t happen” Proper documentation will first and foremost benefit the care that the patient receives. Secondly, in the event of an unanticipated bad outcome, the chart may be reviewed in a peer review process or in the case of litigation, proper documentation will be extremely helpful.

9) **Please keep in mind that your documentation does NOT go in the medical record.**

10) Here are a few documentation helpful hints:

- Time and date all notes in the medical record
- Write your notes legibly
- If you make a mistake, draw one line through it and sign your initials
- Document complete history and physical examinations
- Document vital signs, and address abnormalities
- Document the results of all tests that you have ordered (labs, EKG, x-rays, etc)
- When you speak to consultants, document name and times
- Document the patient's response to therapy
- Document repeat examinations
- Document your thought process (medical decision making)
- Never write derogatory comments in the medical record
- Never change or add comments to the medical record after the fact. It may be appropriate to add an addendum not if it is properly timed and dated
- Document your procedures
- If the patient leaves against medical advice (AMA), document that you have explained the specific risks of leaving AMA.
- Document discharge instructions and plans for out patient follow up

2. Rotation Objectives, Evaluation, and Grading

Objectives for the rotation are based on the six Accreditation Council of Graduate Medical Education (ACGME) “core competencies” that emergency medicine residency education is based on.

The overall goal of the emergency medicine rotation is to help students develop the necessary skills to diagnose and manage patients with undifferentiated urgent and emergent conditions.

At the end of the rotation, each student should be able to do the following:

1. Patient Care

- Efficiently perform a medical interview
- Perform a directed physical examination
- Develop a differential diagnosis
- Initiate resuscitation and stabilization measures
- Correctly perform the following procedural techniques: intravenous line, ECG, foley catheter, splint sprain/fracture, suture laceration
- Perform assessment of the undifferentiated patient
- Develop skills in disposition and follow-up of patients
- Develop an evaluation plan
- Develop a therapeutic plan

2. Medical Knowledge

- Identify the acutely ill patient
- Interpret test and imaging data
- Describe an initial approach to patients with the following ED presentation: chest pain, shortness of breath, abdominal pain, fever, trauma, shock, altered mental status, GI bleeding, headache, seizure, overdose (basic toxicology), burns, gynecologic emergencies, and orthopedic emergencies

3. Professionalism

- Treat patients and families with respect and compassion
- Demonstrate professional and ethical behavior
- Develop sensitivity to cultural issues
- Interact with consultants and other emergency department staff

4. Communication and Interpersonal Skills

- Effectively communicate with all members of the healthcare team
- Develop effective listening skills
- Demonstrate an availability to patients, families, and colleagues

5. Practice Based learning and Improvement

- Evaluate own performance
- Actively use practice-based data to improve patient care

- Use information technology to improve patient care
- Incorporate feedback into improvement activities
- Evaluate the medical literature

6. *Systems-Based Practice*

- Mobilize outside resources for patient care
- Assure follow-up plan for all patients seen in the emergency department

Your clinical grade will be based on evaluations from faculty members and residents and consists of the following:

1. **Interpersonal Skills and Professionalism**

Acceptance of patient care responsibilities

- Behavior: accepts responsibility for emergency department management including history, physical examination, gathering of lab and x-ray data, collating all diagnostic information, following patient's progress, answering patient questions, and arranging for appropriate disposition and follow-up

Professional demeanor

- Behavior: respectful, polite, professional, ethically-sound

Use of listening skills in dealing with patients and their families

- Behavior: asks open-ended questions, empathizes with patients, involves family in gathering data, and helping family assist patient in appropriate medical and therapeutic decisions

Attitudes toward patients, staff, and peers

- Behavior: respectful, polite, professional, works within a team framework

Recognize the need for self-improvement

- Behavior: continuous endeavor to improve knowledge base

2. **Patient Care and Data Collection Abilities**

Obtain an appropriate history

- Criteria: takes a thorough, complete, and careful history

Perform an accurate examination

- Criteria: performs a thorough, accurate physical examination, identifying pertinent positive findings, demonstrating competency in regional examination.

Skill in obtaining added history (from family, EMS records, chart review, information services)

- Criteria: attentive to patient's hospital record, searched for past medical history and data to support the present complaint, obtaining additional information from family members and adds EMS information to each HPI

Quality of presentation.

- Criteria: reliable, concise, thorough reporting

3. **Medical Knowledge**

Investigational and analytic thought

- Criteria: able to competently discuss evaluation of plain x-rays, ECGs and laboratory

information as it pertains to the patient's case

Knowledge and application of basic sciences

- Criteria: able to competently discuss the pathophysiology as it pertains to the patient's case

4. Data Synthesis (Problem-Solving Abilities)

Formulate a working impression

- Criteria: formulates a pertinent priority based differential diagnosis; always has ideas regarding the patient's clinical condition

Follow patient progress

- Criteria: performs serial examinations; identifies any change in the patient's condition and promptly alters management plan

Formulate a treatment plan

- Criteria: identify achievable and reasonable ways to manage a patient's illness given the constraints of ED resources

Ability to determine a disposition

- Criteria: provides a thoughtful approach to patient care after ED discharge

5. Procedural Aptitude

Ability to state the appropriate therapeutic treatment or procedure

- Criteria: accurately outline any therapeutic test or procedure that should be performed.

State how it will be done and do it

- Criteria: excellence in performing such procedures as suturing, insertion of IVs, catheters, obtaining blood gases, etc

Your final grade is composed of several components: clinical performance and written examination results. In addition, you will be graded on motivation and attitude towards learning.

Guidelines for Grading and Evaluation:

1. The University of Maryland School of Medicine uses a standard grading system when assigning clinical rotation grades to medical students.
2. The standard grading system provides the following levels of credit: Honors, A, B, C and two levels of non-credit: Incomplete and Fail
3. The following is a breakdown of the grading system:
 - a. Honors (H) – a performance that is clearly superior reflecting a comprehensive achievement of the knowledge, skills, attitudes, and behaviors that are outlined under the section of emergency medicine core clinical skills. **An Honors grade is usually reserved for the top 10% of medical students.** Rigid cut off values are not used. Year to year the percentage of student receiving an Honors grade may vary.

The grade of Honors should be reserved for the outstanding student. He or she should be resourceful, efficient, and insightful. In comparison to his or her peers, the student should have an in-depth understanding of medical knowledge and underlying scientific principles and be able to apply these principles to clinical medicine. The student should consistently perform detailed, but focused history and physical examinations, and be able to integrate their findings to generate a comprehensive problem list and differential diagnosis. He or she should be able to select diagnostic studies that are most appropriate for the specific patient presentation and apply these tests appropriately based on the differential diagnosis. The student should be able to present his or her cases in a well-organized fashion that is easy to follow and includes all pertinent data even on complicated cases. He or she should always demonstrate respect, courtesy, honesty, integrity, and other behaviors that are becoming of a medical professional, and should be a role model for other medical students. The student should perform above expectations and should strive for excellence even in difficult situations.

- b. A – a performance that is well beyond the minimum course requirements. An A grade is usually reserved for the next 25% - 35% of medical students. Rigid cut off values are not used. Year to year the percentage of students receiving an A grade may vary.

The grade of A should be reserved for the solid medical student. He or she should also be resourceful and efficient. The student should have an above average fund of medical knowledge and understanding of underlying scientific principles. He or she should be able to apply many of these principles to clinical situations that they encounter in the emergency department. The student should be able to perform an appropriate but focused medical history and physical examination and be able to develop an appropriate problem list and differential diagnosis. Most if not all major problems are identified, although some minor details may be overlooked. The student should be able to present his or her cases in an organized fashion that is easy to follow and includes most of the pertinent data, even on complicated cases. The student should also demonstrate respect, courtesy, honesty, integrity, and other professional behaviors that are becoming of a medical professional. The grade of A is usually reserved for the above average student.

- c. B – a performance that meets the basic course requirements. A Pass grade is usually reserved for the next 50% - 60% of medical students. Rigid cut off values are not used. Year to year the percentage of students receiving a B grade may vary.

The grade of B should be reserved for the average student. He or she should have an average fund of medical knowledge and understanding of scientific principles. He or she should be able to apply some of these principles to clinical situations. The student should be able to perform an adequate history and physical examination on uncomplicated cases and be able to develop an appropriate problem list and differential diagnosis. At times, the student may have some difficulty in identifying pertinent review of system questions, or may omit certain portions of the medical history and physical examination in more complicated cases. Case presentations are generally organized, although at times pertinent information is omitted and less relevant information is included. The student should also demonstrate respect, courtesy, honesty, integrity, and other behaviors that are becoming of a medical professional.

- d. C – a performance that falls below acceptable minimum standards.

The grade of condition should be reserved for the student whose performance falls below acceptable minimum standards. In this situation, the student may have a poor fund of knowledge and understanding of scientific principles. He or she is generally unable to apply these facts or principles to clinical situations. The student is unable to perform an adequate basic history and physical examination, and is often unable to generate an adequate problem list and differential diagnosis even for straightforward, single system cases. History and physical examinations findings may be inaccurate, or grossly incomplete, omitting key clinical information and findings. Case presentations are disorganized and difficult to follow even for straightforward complaints. The student fails to demonstrate the expected behaviors of a medical professional. Unprofessional behavior may include; acting disrespectful to any patient, family member, or healthcare team member, being dishonest, arriving late for clinical shifts, unexcused absences, or being unreliable.

- e. Fail (F) – a performance that is well below acceptable minimum standards.

Traditionally, the assignment of a Failing grade is reserved for the medical student that demonstrates egregious unprofessional behavior.

Your Clinical Evaluation:

Keep a list of **ALL residents and attendings** you work with and present patients to. This list will need to be turned in to Dr. Rogers at the end of the rotation. Your clinical evaluation will be based on these. **At the end of every shift you will be required to login to UMEM.ORG and select the resident(s)/attending(s) you worked with. Electronic evaluations are then sent out automatically.**

The following is the shift evaluation card that we used to use. We now have electronic evaluation so these cards are no longer in use. They are shown to demonstrate what is actually on the electronic version that is sent to residents and faculty.

Shift Evaluation Card-Side 1

University of Maryland School of Medicine Emergency Medicine Student Rotation Clinical Evaluation Metric



The following areas of performance should be assigned a grade of *Honors, A, B, or C*:

1. Medical Knowledge
2. History
3. Physical Examination
4. Differential Diagnosis/Formulation of Treatment Plan
5. Presentation of Clinical Data
6. Patient Rapport/Professionalism
7. Motivation/Attitude towards learning
8. Procedural Skills

Definition of Grades:

- *Honors* (superb, superstar, outstanding)-Consistently goes above and beyond expected performance. Usually top 5% of students.
- *A* (very good)-Very good but not quite an Honors. Many students fall into this grade range. Above average but not Honors.
- *B* (average, good)-Designation for the average medical student. May have trouble with some elements of performance.
- *C* (below average, needs remediation)

**UNIVERSITY OF MARYLAND
EMERGENCY MEDICINE
STUDENT CLINICAL EVALUATION FORM**



**University of Maryland
Emergency Medicine**

Evaluation Metric used for clinical grade

Medical Knowledge				
Deficient knowledge; has difficulty applying basic science principles to related clinical problems, even after instruction on similar cases	Average to inadequate knowledge base. May have difficulty applying basic science principles to related clinical problems.	Adequate knowledge base for level of training. Uses basic science principles appropriately to identify patient problems.	Knowledge base excellent, displays considerable insight in relating principles to complex patient problems.	Not Evaluated
C (below average)	B (Good, Average)	A (Very Good)	Honors (Stellar, Superstar)	NE
History				
Misses essential information; is dis-organized or inconsiderate of patient's needs	Frequently asks too much or too little history. Identifies most problems but doesn't fully characterize them.	Complete, focused and accurate history.	Consistently precise and skillful history. Identifies significant findings in a perceptive and organized manner.	Not Evaluated
C	B	A	Honors	NE
Physical Examination				
Consistently uses faulty technique, performs inappropriate exam, misses major findings.	Occasionally misses findings and/or performs inappropriate or faulty exam.	Conducts systematic exam. Recognizes and follows up most significant findings. Above average skills.	Conducts thorough appropriate examinations and prioritizes significant findings, uncovers subtle findings	Not Evaluated
C	B	A	Honors	NE
Differential Diagnosis / Formulation of Treatment Plan				
Frequently not able to organize, summarize, or explain clinical data.	Poor integration of data. Differential may be incomplete or reflect illogical reasoning.	Usually reflects an accurate and logical interpretation of the data.	Synthesizes data to comprehensive problem list. Can suggest therapeutic plan.	Not Evaluated
C	B	A	Honors	NE
Presentation of Clinical Data				
Not able to organize, summarize, or explain clinical data.	May fail to identify significant findings. Occasional disorganized presentation or notes.	Logical, accurate and timely presentation of patient problems both verbally and in chart.	Concise, accurate and timely presentation of even complex patient problems in both verbal and written form.	Not Evaluated
C	B	A	Honors	NE
Patient Rapport / Professionalism				
Dramatic absence of patient-doctor communication skills. Disrespectful, rude, and insensitive in office or hospital.	Inconsistently demonstrates acceptable conduct. Communications sometimes inappropriate, not sensitive to patients needs beyond that of the illness.	Consistently demonstrates acceptable conduct. Aware of patient's needs.	Impeccable professional conduct. Integrates psychosocial issues into patient care. Develops effective relationships with patients.	Not Evaluated
C	B	A	Honors	NE

Motivation / Attitude towards learning

Fails to follow through on assignments. Poor attendance without explanation. Seems disinterested.

Occasionally fails to follow through on assignments. Rare unexplained absence. Lacks enthusiasm

Can be relied on to complete assigned tasks. Attentive. Interested. Usually works independently.

Reliable. Eager. Completes assigned tasks and seeks new responsibilities. Self directed learner. Works fully independently. A "go-getter"

Not
Evaluated

C

B

A

Honors

NE

Procedural Skills

Poor understanding of the procedure. Unwilling to take direction. Poor effort in completing task in timely and acceptable manner

Performed task at minimal level. No desire to learn a more effective or efficient method.

Completes procedure. Understanding of procedural skill. Attentive. Interested in result and alternative methods.

Needs no explanation to start procedure. Asks for critique. Efficient and effective technique. Usually works independently.

Not
Evaluated

C

B

A

Honors

NE

3. The Macy Report and the Liaison Committee for Medical Education (LCME)

What in the world is the Macy Report and why should you care? The Macy Foundation Report was published in 1995 and stated that “All students who graduate from medical school should be capable of handling emergency situations.” In addition, the LCME (governs accreditation of US medical schools) has stated that all medical students should be exposed to emergency medicine.

Regardless of what specialty you choose, you will be called upon to evaluate and treat patients with urgent and emergent conditions. The skill set that you will learn during this rotation will be invaluable to you in your career.

4. The Emergency Medicine Rotation

Emergency Medicine Clerkship Course Requirements

All Students:

- Mandatory attendance at the emergency medicine student orientation is required. The medical student orientation will be held on the 1st day of each rotation block. All students should report to the Emergency Medicine conference room, 110 South Paca Street, 6th floor, Suite 200. Rare exceptions may be made on an individual basis if arrangements are made prior to the start of the rotation block.
- Mandatory attendance for all clinical shifts is required to successfully complete the Emergency Medicine Clerkship. The clinical shifts are generally 8-10 hours in length. It is expected that you should stay and complete the work-up of the patient(s) (usually up to 30 minutes) that you are managing even if this is beyond the length of your shift. Inform the attending physician and resident before you leave the emergency department at the conclusion of your shift. This will help to insure that all patient related matters have been addressed.
- All requests for switching shifts with another student need to be approved beforehand by the Director of Undergraduate Medical Education (Dr. Rogers). Please e-mail the Director at robrogers2@verizon.net for all requests.
- If for any reason, you miss an assigned clinical shift (unexpected medical or personal emergency, etc.) please notify the Director or attending physician on duty. Please also send an email to the director to notify them of your absence. **The EM rotation attendance policy allows for up to 3 excused absences.** All excused absences (residency interviews, USMLE testing, etc.) need to be approved by the Director in advance. It is left up to the discretion of the Director as to how he/she handles all

excused and unexcused absences. For example, students may need to make up missed shifts on previously scheduled days off, present a prepared topic, or take a written test. Individual situations will be handled on a case by case basis.

Unexcused absences or lateness is unprofessional, and will affect your final rotation grade. If you anticipate a scheduled absence such as a residency interview or USMLE II testing, please notify the clinical site director as soon as possible so that the scheduling conflict can be resolved. If you have an unexpected medical illness or family emergency that will cause you to miss a clinical shift please try to contact the attending physician working in the ED and also notify the clinical site director when possible. The attendance policy is strictly enforced.

- All clinical shifts and any non-clinical responsibilities must be completed by the end of the rotation block. Rare exceptions may be made on a case by case basis by the Director.
- **Great emphasis is placed on making sure students are comfortable performing procedures such as intravenous line placement. You should perform all necessary procedures on all of your patients (IVs, blood draws, etc). Do not delegate these tasks to the nurses or techs unless you need assistance.**

Recommended procedures to be performed during the rotation

- Arterial blood gas
- Arthrocentesis (knee)
- Digital block
- Incision and drainage (abscess)
- Infiltration of local anesthesia
- Laceration repair (sutures)
- Lumbar puncture
- NG tube insertion
- Splinting (ankle, forearm/wrist)

Shift Pearls:

- Sign in – sign out responsibilities
- When you start a clinical shift, you should evaluate the next new patient to be seen.
- Students should not sign out to one another unless specifically instructed to do so by the senior EM resident or attending physician.
- If you are seeing a patient shortly before the end of your shift, and have not yet discussed the case with the senior EM resident or attending do not sign the case out to the next student. Before leaving at the end of your shift, you should discuss all of your cases that still have pending issues (labs, x-rays, disposition, etc.) with the senior EM resident or attending physician.
- Always inform the attending physician before you leave the emergency department at the conclusion of your shift. This will help to insure that all patient related matters have been addressed.
- Dress code – Hospital scrubs or professional attire is recommended. Tee shirts, blue jeans, sweat shirts or other “street clothes” are not acceptable as they do not adhere to professional standards.

Emergency Department Organization

The emergency department can be a very hectic, but exciting, environment to work in. Some students can become overwhelmed with the working environment. As a rule, you are expected to follow the patients you pick up and ONLY those patients. You essentially “own” these patients, and you should be involved in anything that happens to them. During your assigned shift you are expected to pick up and carry at least 2 and no more than 4-6 patients. Typically, you should not be following more than this number of patients.

When you arrive for your shift, let the senior resident AND attending physician know that you are working that shift. You are expected to be on time and to work until your shift is over. Don’t forget to eat during your shift and take bathroom breaks. Sounds silly, but during a busy shift we all forget to do these essential things. Take care of yourself!

The emergency department at The University of Maryland is subdivided into emergent and urgent areas. When you see “UC” on your schedule, it means that you will be working in the urgent care area of the ED. You will have shifts scheduled in both areas. In the past, students assigned to one area were not allowed to work on the other side. Although I would prefer you stick to the side you are assigned to, I realize that there needs to be some flexibility in order to work with more attendings and get to know them for purposes of letters of recommendation. In order to “float” to the other side of the ED, please check with the attending on duty in your assigned area and get their permission. As a rule of thumb, if there are already two students working on that side, you should

stay in your assigned area. If you desire to work with a certain attending, please let me know and I can potentially make accommodations if possible. This is not guaranteed. If this becomes a problem, please let me know.

You will be responsible for picking up charts in the “to-be-seen” rack and going to see the patient first. Patients with chest pain, as an example, should be seen alongside an intern or resident. When you are going to pick up a chart, please check first with the attending and/or swing/senior resident. Sometimes it will not be appropriate for you to see the patient first (unstable patient for example). Don’t be offended. Remember: patient care always comes first. In addition, **you should strive to spend NO MORE than 15 minutes in the room performing an initial history and physical examination.**

You will present cases directly to the “swing resident” who is working during your shift. This resident is responsible for seeing patients with you and teaching you. For the most part, there will always be a swing resident available. If there is not a swing resident working, you will present cases to the senior resident and/or attending physician working during that shift. Remember, if you are going into emergency medicine, try to present cases to the attending. You should be totally immersed in the clinical experience: if a patient needs a CT scan, you order it. If they need a consult from orthopedics, you will call and discuss the case with the orthopedic resident on call.

All documentation done by medical students is to be written on an appropriate T sheet. Your documentation is not to go into the final medical record. Keep copies of ALL T-sheets you fill out for EVERY patient and turn into Dr. Rogers. Filling out charts is not busy work. **Completing charts allows me to assess that you are thinking about a differential diagnosis and documenting pertinent information.** Please remember that all charts turned in by students are evaluated. Make sure to list a differential diagnosis and management plan.

It is the students’ (and residents’) responsibility to discuss all cases with the attending. No patient should be discharged from the ED without the attending knowing about it.

Remember when you work VA ED shifts to save all documentation and turn in with your University patient documentation.

IDs and computer access

You will fill out an information sheet during orientation in order to obtain an ID. IDs are made between 7:30-8:30am and 12:00-1:00pm beside the Shock Trauma auditorium. This can be done after the 11:30-12:15 lecture is finished.

Computer training can be accomplished by two different means. Computer training is held in the Greene Street building (across the street from the hospital) in room 335B Tuesdays between 8am and 4pm on a walk-in basis. You can also get computer access

online. Completing this training is essential as you be using the computer system to order labs and imaging studies.

Emergency Medicine Rotation Pearls:

- Show up on time and be ready to work
- Don't be overwhelmed by tasks that aren't yours. Stick to your patients and "stay in your zone." This will minimize the overwhelming nature of the ED.
- Patients you pick up belong to you. Immerse yourself in their care.
- *Don't report the patients history and physical to the resident and/or attending and wait for them to tell you what to do or to pimp you. Be assertive, and tell them your differential diagnosis, what you think is going on and why, and what your plan and disposition is. This is how you shine!*
- You are not alone, so don't feel overwhelmed. You have an attending and residents to help guide you if you really aren't sure what the next step should be.
- *Remember, you are here to learn! Have fun*
- Show enthusiasm, initiative, and interest during the EM rotation. You will have the best experience and make the best impression on evaluators.
- Know one's limitations and ask for help when needed.
- Over confidence at the student level will be perceived negatively.
- Focus on learning, providing good care to patients and getting the most that you can from the provided experiences.
- Follow cases through to completion of the pertinent ED work-up.
- Stay after your scheduled shifts to tie things up, esp. if the faculty attending does so.
- Ask to observe interesting cases and or procedures that you are not directly involved in.
- Dress and act professionally.
- Be non-judgmental about patient's diverse ethnic backgrounds, socioeconomic status, and variable levels of acuity of illness. Respect goes a long way!
- Be diligent in tracking down the studies you order on patients and keep your staff informed of the results.
- Be cognizant of personal safety - use universal precautions, seek help with potentially combative or violent patients.

Presenting to Faculty and Residents

The following is one way to present patients to residents and attendings. Please stick to this or some other type of format. Some attendings may want a different presentation format-be flexible. Keep presentations limited to 3-5 minutes

Presumed Top 3 Diagnoses:

Start your presentation by listing your top 3 diagnosis. It is OK to be wrong, just be ready to defend your hypothesis. For example, "I believe this patient either has congestive heart failure or pneumonia." This introductory list lets the resident/attending know what you are thinking right up front.

Chief Complaint:

Patient's chief complaint as listed on the chart or in their own words. Be brief.

HPI:

Present a thorough but CONCISE history of present illness. For pain (chest, head, abdomen) perform OLDCAAR-onset, location, duration, character, alleviating factors, aggravating factors, radiation. Pertinent workup, pertinent positives/negatives belong here.

Pertinent Review of Records:

Example: chest pain. Has the patient ever presented with chest pain. Have they ever had a stress test, CT scan, or cardiac catheterization?

Pertinent Medications/Allergies/Family and Social History:

Document all of this pertinent information BUT present only pertinent information.

Review of Systems:

Include only pertinent information. If the patient is in the ED for a thumb injury, you don't need to say that the patient denies chest pain, shortness of breath, etc. Include only the pertinent information that helps rule in or out the diseases on your list of differential diagnoses.

VITAL SIGNS:

Always start your physical examination with the vital signs. Should include pulse rate, blood pressure, respiratory rate (20 means nobody measured), temperature, and pulse oximetry

Physical Examination:

Present a directed physical examination that addresses those areas pertinent to the chief complaint. You may be asked to present a more in-depth examination depending on the complaint and the attending.

Differential Diagnoses:

Present a list of the emergent causes and common causes of the patient's complaint. This is your chance to list AT LEAST 5 entities. Tell the attending or resident what you think is going on with the patient and be ready to defend your decision. THIS IS THE MOST IMPORTANT PART OF YOUR PRESENTATION as it shows your ability to synthesize information and think. WHATEVER YOU DO, DO NOT REGURGITATE A HISTORY AND PHYSICAL AND WAIT FOR THE RESIDENT/ATTENDING TO TELL YOU WHAT TO DO! Think!

Evaluation Plan:

Present your evaluation plan. What tests or imaging studies do you want to get. Be ready to defend this. Try to determine how much or how little you think needs to be done. Again, THINK for yourself.

Anticipated Disposition:

Tell the attending or senior resident what you anticipate the disposition to be based on current findings and based on the expected results of the tests you want to order. This will make you think of criteria for admitting and discharging patients.

"Rule-out-worst-case-scenario"

Every patient complaint should be assumed to be a symptom of a potentially life-threatening disease entity. All complaints (headache, chest pain, etc) should be assumed to be a harbinger of "badness" until proven other wise. This is the "ROWCS" approach (rule-out-worst-case-scenario)

Clinical Schedule

Students will work approximately 14-16 shifts (most are 8 hour shifts, some are 10 hour shifts) during the rotation in The University of Maryland emergency department. You will sign up for shifts on orientation-the first day of the rotation. You are expected to be punctual, responsible, and a team player. You are allowed to switch shifts with other students but should be equivalent shifts. The Director should approve any other changes. You will be excused from your shift if there is a scheduled lecture or lab. I will try to minimize shift interruptions as much as possible.

**See clinical shift schedule (to be handed out during orientation)*

Lectures

Lectures will be held for you during the rotation and are given by emergency medicine faculty. We have an extraordinarily involved group of attendings who are very dedicated to medical student education. Student feedback has consistently indicated that the lectures are superb and cover clinical entities you are likely to see in the emergency department. You will be provided a schedule/location of the lectures on orientation day. You are expected to be at all lectures. If lectures are held during clinical shifts, you will be excused from clinical duties. Just let the attending and senior resident you are working with that day know that you need to leave to attend lecture. Students do not need copies of lecture handouts or Power Point slides as exam questions usually come from the textbook readings. The lectures are designed to supplement the reading material.

In the very near future, we will be uploading video presentations of some of the lectures to the residency website (www.umem.org) so that they can be viewed anytime.

Topics include the following:

- Approach to chest pain
- Approach to shortness of breath (adult)
- Airway management
- Pitfalls in the diagnosis of myocardial infarction
- Approach to abdominal pain
- Approach to wound care
- Approach to shock
- Approach to altered mental status
- Approach to GI bleeding
- Approach to headache
- Risk Management
- Approach to asthma
- Use of sedatives and analgesics in the ED
- Approach to ENT/Ophthalmologic emergencies

- Approach to gynecologic emergencies
- Approach to seizures
- Approach to endocrine emergencies
- Approach to the orthopedic examination

Lectures will be held during the first week of the rotation and are approximately 45-50 minutes in duration. A schedule of the lectures will be handed out during orientation.

Labs

Teaching labs are an integral part of the educational experience provided to medical students during the rotation. These include:

- Procedure lab (held in the medical school anatomy lab)
- Simulation lab
- Ultrasound lab
- Splint lab
- Suture lab

There will be a procedure lab (held in the Maryland State Board of Anatomy Lab at The School of Medicine) during your rotation. Procedures that will be taught include airway management, central lines, chest tubes, surgical airways, etc. This lab has been a traditional favorite among medical students.

Videos of all procedures can be found on the University of Maryland Residency website. Go to www.umem.org and click on “student opportunities.” In the far right column is a listing of procedure videos.

- **ALL videos should be reviewed prior to the procedure lab date.**

NEW July 2008:

Additional Educational Activities/Online Learning

In addition to lectures/small groups given by faculty, we have obtained a login and password for medical students on this rotation for Emedhome.com. Students have free access to this site. Do not under any circumstance give out the login/password information to anyone. This emergency medicine website has videos and presentations.

Go to: www.emedhome.com

Login: student@umaryland.edu

Password: emedhome

EMedHome.com
The Homepage of Emergency Medicine

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EMCast	CME Feature Article	On-Line EM Lectures	CME: In Focus
The Monthly Emergency Medicine Podcast hosted by Amal Mattu, MD. July, 2008: (1) Cocaine-Associated Chest Pain/MI (2) Complications of Bariatric Surgery (3) Anti-Pla... » View EMCasts	Posted monthly, each article is available for 2 CME Credit Hours. » Pediatric Emergency Medicine Literature Review » Articles with CME Credit » Archived Articles	Sit back and watch lectures from the best EM conferences in the comfort of your own home for immediate CME credit! » Info & Available Lectures » View a Demo	Special Video CME Lectures Complicated Skin Infections, Including MRSA, in EM Practice - Billy Mallon, MD Cardiac Imaging For the Emergency Physician. Where are we now? - Amal Mattu, MD

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Monthly Article
Clinical Cases
Online EM Lectures
Clinical Pearls
Podcasts
MultiMedia Cases
CT Interpretation
Images in EM
Daily Question
Archives

Resource Center
Calculators
PDF Database

After logging on, click on “Online EM Lectures” on the left. Then, click “View Lecture List.” After this, change the “conference tab” to “View Lectures Sorted by conference” and view/listen to the following:

The following presentations should be viewed/listened to within “View Lectures Sorted by list.” Some are videos and some are audio. Questions on the examination may come from these presentations.

List of lectures to view/listen to:

- Pelvic Fractures-Tom Scalea
- Pneumonia: Myths, Pearls, and Pitfalls-Peter Deblieux
- Abdominal CT-Joe Lex
- High Risk Diagnoses-Chandra Aubin

The following lectures should be viewed/listened to from “Giant Steps in Emergency Medicine 2007:”

- 10 things to consider in the crashing patient-Amal Mattu

In addition, The San Francisco General Emergency Medicine Residency has a really impressive set of video clips on wound care and suture techniques. Please go to: <http://www.emresidency.ucsf.edu/> and view these short but very important videos. Please view these before the suture lab.

RESOURCES: EDUCATIONAL MATERIAL

UCSF and SFGH are on the leading edge of online and computer-assisted educational technology, specifically with procedural instruction. To view these videos you may be required update your browser with the latest Flash and Quicktime extensions.



Project VIPER (Video Instruction of Procedures in the Emergency Room)

1. Teaching module: [Phlebotomy / Peripheral IV / Arterial Blood Gas](#)
 - * For UCSF 2007 Transitional Clerkship MS2 students and Intersessions MS3 students
2. **Wound closure**
 - * Used for UCSF 2005-present "Procedures in Emergency Medicine" MS2 elective
 - * Resource for medical students and interns, rotating at SFGH Emergency Department
 - * Voiceover by Dr. Justin Wilkinson, a former UCSF medical student
 - Chapter 1: [Equipment](#) (1:54 min)
 - Chapter 2: [Anesthesia](#) (3:09 min)
 - Chapter 3: [Irrigation](#) (1:11 min)
 - Chapter 4: [Starting the Procedure](#) (2:30 min)
 - Chapter 5: [Simple Interrupted](#) (3:45 min)
 - Chapter 6: [Horizontal Mattress](#) (3:11 min)
 - Chapter 7: [Vertical Mattress](#) (1:10 min)
 - Chapter 8: [Corner Suture](#) (1:30 min)
 - Chapter 9: [Buried Suture](#) (1:51 min)
 - Chapter 10: [Dermabond](#) (1:56 min)
 - Chapter 11: [Steristrips](#) (0:39 min)
 - Chapter 12: [Staples](#) (0:47 min)

Wednesday Grand Rounds and Conference

Every Wednesday our emergency medicine residents have their weekly didactic conference from 7:30 am- 12:30 pm. You are expected to attend all of the Wednesday lectures. Some questions could come from these conferences. In general, you will not have scheduled shifts on wednesdays. Rarely, there will be random lecture hours that are only for the residents (administrative topics, documentation sessions). In these cases, there will sometimes be a "breakout session" for the students given by Dr. Rogers or one of the other faculty members. Please remember to sign in for the Wednesday lectures. There should be a section on the sign up sheets for students. If not, sign your name and indicate that you are a student at the bottom of one of the sheets. **Attendance is mandatory and monitored. Please sign in on the resident sign-in sheet (at the bottom of the page). Failure to attend may adversely affect your grade.**

Professional Code of Conduct

Everyone patient that you encounter in the emergency department should be treated as you would want a family member treated. You may see attitudes and behaviors that may be foreign to your value system, but you should deal with these professionally. You should treat all staff members (physicians, nurses, patient care assistants, etc.) with respect, and likewise, you should expect the same in return. If you are verbally or otherwise harassed, report this to the attending physician on duty and contact the emergency medicine clerkship director.

Disability Disclosure Statement

Any student who has a need for accommodation based on the impact of a disability should contact Dr. Rogers to discuss the specific situation.

Grading

Final grades are an average of the following:

- Clinical performance 75%
- Written examination 25%

Evaluation

Clinical evaluation of students is by Emergency Medicine Faculty and Residents.

Patient Write-ups

Please turn in ALL patient write-ups to Dr. Rogers. This is crucial. Failure to turn in your documentation may adversely affect your grade. Feel free to “think out loud” on your T-sheet. If you need additional paper, by all means use some. I will be evaluating your ability to document, generate a differential diagnosis, etc. Use an appropriate T sheet located in the T-sheet rack or a complaint-specific T-sheet.

Written Examination

A written examination will be given on the last day of the rotation and will consist of 30-40 multiple-choice questions and 10 short answer/essay-type questions. Questions are taken from various sources, including the lectures given during the rotation, oral presentations, and reading assignments.

sample multiple-choice question:

A 30 year-old male presents complaining of substernal chest pain of 4 hours duration. He describes the pain as worse with inspiration, worse in the supine position, and relieved with leaning forward. His chest x-ray is normal and his ECG shows diffuse ST segment elevation. Which of the following diagnoses is most likely?

- A. aortic dissection
- B. mediastinitis
- C. myocardial infarction
- D. pulmonary embolism
- E. pericarditis

The correct answer is E.

sample short answer question:

A 50 year-old male is brought in 911 for change in mental status. He is found to be obtunded. Describe, step by step, how you would approach this patient. Describe in detail any intervention, diagnostic procedure, or medication you feel is indicated.

Dress Code

Students should dress professionally. Scrubs are acceptable but should be matching. I would recommend that you wear a white coat while working clinically. In addition, on days when there are lectures or labs, please dress professionally. Shorts, sandals, flip flops are NOT acceptable attire. Remember, what you wear matters. Your appearance may affect your final grade.

Feedback for the Rotation

We take feedback about the rotation and faculty very seriously. We are constantly trying to improve the rotation and to provide the very best educational experience possible.

You will receive an e-mail with a link to a rotation evaluation/survey. This evaluation must be completed. Please provide constructive feedback.

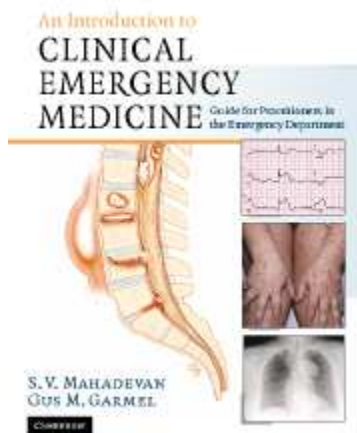
- **Final grades will not be assigned until feedback forms have been filled out.**

Reading List for the Rotation

The textbook resource for the rotation will be “*An Introduction to Clinical Emergency Medicine-Guide for Practitioners in the Emergency Department.*” (authors-SV Mahadevan and Gus Garmel) It is a fantastic book and is considered to be the best book out there for students interested in emergency medicine. It will be provided for you during the rotation.

- **All of the following chapters should be read:**
 - Approach to the emergency department patient (page 3-18)
 - Abdominal pain (page 145-160)
 - Allergic reaction (page 171-178)
 - Airway management (page 19-45)
 - Appendices A, B, and C (page 681-723)
 - Chest pain (page 193-210)
 - Diabetic emergencies (page 225-232)
 - GI Bleeding (page 365-374)
 - Headache (page 375-392)
 - Shortness of breath (page 485-502)
 - Syncope (page 517-530)
 - Seizures (page 473-484)
 - Shock (page 85-92)
 - Trauma (page 93-116)

- **Examination questions will come from these chapters.**
- **Read the chapters before the lecture.**



Optional Sessions

If enough interest exists, an optional session on applying to emergency medicine residency, preparing a CV, and other related issues will be given by Dr. Rogers.

If time allows, there will be additional presentation on visual pearls in emergency medicine. This is essentially a pictorial review of diagnoses seen in the emergency

department. The presentation has been a favorite among medical students over the past few years. Clinical photos, CT scans, x-rays, and other interesting tidbits will be shown.

All of the following must be
turned in or completed
before a final grade can be
released:

- Rotation/faculty evaluation-sent by email
- List of faculty and residents who you worked with
- Return textbook
- ALL patient write-ups for every patient you evaluated during the rotation
- Final written examination
- Evaluation of the lecture series-sent by email
- ED Procedure Log

5. Resources for Students Interested in Emergency Medicine

Medical Student Emergency Medicine WebPages

- *American Academy of Emergency Medicine* (www.aaem.org) This is an excellent resource for students. Go to the section for resident/student and click on resources. Also, you can sign up for FREE access to “Rules of the Road”-a great guide for students interested in emergency medicine.
- *Emergency Medicine Residents Association Student Page* (www.emra.org/students.cfm)
- *Society for Academic Emergency Medicine Medical Student Homepage* (www.saem.org/inform/02med.htm)

Emergency Medicine Resident Organizations

- *Emergency Medicine Residents Association* (www.emra.org)

Emergency Medicine Organizations

- *American Academy of Emergency Medicine* (www.aaem.org)
- *American College of Emergency Physicians* (www.acep.org)
- *American College of Osteopathic Emergency Physicians* (www.acoep.org)
- *Society for Academic Emergency Medicine* (www.saem.org)
- *American Board of Emergency Medicine* (www.abem.org)

Residency Application

- *Emergency Medicine Residents Association Match Guide* (www.emramatch.org)
- *Emergency Medicine Residents Association Student Page* (www.emra.org/students.cfm)
- *National Resident Matching Program (NRMP)* (www.nrmp.org)
- *Rules of the Road for Medical Students* (http://www.emstudent.org/rules_road.shtml)
- *Society for Academic Emergency Medicine-Choosing a Residency in Emergency Medicine (includes a list of available residency programs)* (www.saem.org/inform/choose.htm)

Clerkship Directors in Emergency Medicine (CDEM)-an academy of SAEM

Go to:

<http://www.saem.org/saemdnn/Academies/CDEM/ResourcesforMedicalStudents/tabid/885/Default.aspx>

You can download (for free) the “Emergency Medicine Clerkship Primer” as a PDF file. This is a wonderful resource for medical students interested in Emergency Medicine.

There are a lot of other really good (free) resources on this site. Definitely make sure to check this one out.

What do Emergency Medicine program directors look for in a candidate? (borrowed from Gus Garmel)

The 9 Ps:

- *Performance*-especially in core rotations and emergency medicine electives. Most programs emphasize clinical over preclinical abilities and test scores
- *Productivity*-research projects, manuscripts, extracurricular activities, leadership roles, volunteerism, etc.
- *Professionalism*-attitude, interaction, appearance.
- *Personality*-are you a “good fit” for the specialty of EM?
- *Preparation*-Are you aware of the “hot topics” in EM? (see separate presentation on the residency application process) How much do you know about the specialty?
- *Persistence*-Are you willing to demonstrate (appropriate) persistence? This includes learning habits, replies to interviews, expressing interest in a program, and timely, personal thank you notes to faculty interviewers.
- *Punctuality*-Do you meet deadlines, show up early or on time for your interview, clinical duties, didactic sessions, etc? This is VERY important in our specialty.
- *Passion*-Are you passionate about training in EM?
- *Potential*-Does the program director feel that you have the potential to represent the specialty of EM and the program well, and to be an outstanding resident?

Contact Information

Rob Rogers, M.D., FAAEM, FACEP, FACP
Director of Undergraduate Medical Education
Assistant Professor of Emergency Medicine and Internal Medicine
Office: 410-328-8025
robrogers2@verizon.net

Please let me know if you have any questions or if I can help you in any way!

Have a GREAT rotation!

Forms

List of Evaluators

Student Name _____

Faculty

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

Residents

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

Emergency Department Procedure Log

