

**EMERGENCY MEDICINE CLINICAL ROTATION
COMPETENCY BASED CURRICULUM
Revised January 2009**

During the third year of the curriculum, students expand their knowledge of emergent conditions and gain the ability to apply the knowledge in the clinical setting. The curriculum is taught through on-line case modules, emergency medicine grand rounds, reading assignments and through the one-on-one student-preceptor experience in caring for patients in the emergency setting. Students are expected to complete their modules and research literature regarding current cases they see in the emergency room.

The Core Competencies that are to be gained in the third year include:

I. Communication Skills

- a. The student has in year one and two had a complete curriculum for collecting and documenting a history in adults, children and geriatric patients. A Geriatric and Internal Medicine early clinical experience reinforced this skill. The student has not yet had experience in rapidly taking an emergent history, prioritizing and applying information, and effectively communicating the history. The student should be taught through clinical mentoring to complete an emergent history in a time efficient manner to include:
 - i. Chief complaint
 - ii. History of present illness including:
 1. In medical and surgical emergencies — focused histories according to complaint
 2. In trauma mechanisms of injury
 - iii. Past medical and surgical history
 - iv. Allergies, medications, and previous side effects
 - v. Pregnancy state
 - vi. Transfusions and Coagulopathies or blood disorders
 - vii. Family / social history that may affect care and discharge.
- b. The student must demonstrate effective communication so as to:
 - i. Gain the confidence of the patient
 - ii. Develop an appreciation of the effect of age, racial and cultural background, and economic status on the health of the patient.
 - iii. Explain the condition and surgical procedure to the patient and family in an effective manner
 - iv. Obtain informed consent when indicated
- c. The student must document the patient's history and current visit in a well organized written report. (Computerized or dictation where required)

- d. Effectively present the patient's case in an oral report to the attending and convey important data to the health care team.

II. Clinical Skills

a. Physical Examination

- i. The student is taught to perform a physical on adults, children and geriatric patients in the PPC course and on early clinical experiences. During the emergency medicine rotation experience the student should be taught to rapidly assess the patient's signs and symptoms, to perform a focused emergency physical exam and to prioritize and to apply the information gained from the exam to triage the patient as to the level of severity and emergent needs. The specific physical exam skills the student must perform are:
 1. A rapid and accurate assessment of the overall status of the patient
 2. An accurate focused physical examination for each system as it relates to the patient's presenting symptom and specifically to the following emergent conditions:
 - a. Chest Pain
 - b. Shortness of Breath and respiratory distress
 - c. Altered State of Consciousness
 - d. Shock
 - e. Cardiac distress
 - f. Abdominal Pain
 - g. Psychiatric emergency
 - h. Hemorrhage
 - i. The student will not arrive on the rotation with these skills and these skills are those the attending must mentor through clinical teaching.

b. Trauma

- i. Through clinical instruction and role-modeling the student should be taught to:
 1. Perform a rapid yet comprehensive exam on an acute trauma patient
 2. Assure the ABCDE protocols of trauma
 3. Assure comfort and privacy during the exam

c. Procedural Skills

- i. The medical student will be supervised while performing any procedural skill in emergency medicine. While on the emergency medicine rotation the student is expected to develop the majority of the following skills:
 - 1. Accurately and rapidly provide patient assessment and triage
 - 2. Perform assessment of communicable disease and comply with medical communication and reporting policies
 - 3. Provide CPR and assist in ACLS
 - 4. Suture minor lacerations of the extremity or trunk
 - 5. Emergent EKG interpretation with over-read
 - 6. Emergent chest, spine, and extremity x-ray interpretation with over-read
 - 7. IV line placement
 - 8. Urinary catheter placement
 - 9. Endotracheal intubation with observation and or assistance
 - 10. Wound hemorrhage control
 - 11. Nasal hemorrhage control
 - 12. Foreign body removal nose
 - 13. Incision and drainage of simple and complex abscesses
 - 14. Evaluation of foreign body in the eye, removal of simple foreign bodies with assistance
 - 15. Fracture assessment and stabilization including basic splinting

d. Advanced Procedural Skills

- i. The student should observe the following skills and assist the ER preceptor when appropriate; the student should know the indications for and the complications of the following:
 - 1. Observe laceration repair of the face, ear, and eyelid
 - 2. Chest tube placement
 - 3. Interosseous line placement
 - 4. Suprapubic tap
 - 5. Abdominal tap
 - 6. Initiation of Thrombolytics
 - 7. Internal and External Cardiac Pacing
 - 8. Central Line
 - 9. Reduce Joint Dislocation

III. Problem Solving and Diagnostic Skills

- a. The student must be able rapidly assess the emergency patient and to rapidly formulate a differential diagnosis so the patient may be stabilized, treated, and the appropriate disposition made (discharge, admission, transfer and specialty consultation). In order to accomplish this, the student must be able to:
 - i. Formulate a differential diagnosis for the most common emergent conditions based upon:
 1. Presenting signs and symptoms
 2. The judicious use of laboratory and diagnostic studies
 - ii. Develop a management plan that includes:
 1. Determination of acute intervention needed
 2. Determination of urgency of treatment needed
 3. Provides for patient education
 4. Plans for continuing care
- b. Emergency Medicine is a unique specialty and most students will not begin the rotation with these complete problem solving and diagnostic skills, However, under the appropriate guidance, students should be expected to improve throughout the rotation. The student should not be evaluated as compared to an EM physician but as compared to a third year medical student. In addition, the student should not be judged on these skills until the end of the rotation.

IV. Professional and Ethical Competencies

- a. The student must be able to practice emergency medicine exhibiting a professional demeanor that provides assurance to the patient, the family, and the general public. The student must practice performing patient care with the integrity and consideration of all legal and ethical issues. The student must:
 - i. Be dutiful in performing his or her patient care duties, arriving on time and stay until all patient care duties are complete.
 - ii. Be diligent in his or her efforts to perform patient care duties.
 - iii. Be prepared in readings as assigned by the preceptor
 - iv. Obtain an informed consent where indicated
 - v. Appreciate and acknowledge the patient's right to refuse care
 - vi. Obtain a Transfusion consent when indicated
 - vii. Identify and interact with surrogate decision makers
 - viii. Explain all options and alternatives
 - ix. Be diligent in Risk Management
 - x. Identify the contractual nature of medical care

- xi. Obtain information from patient on advanced directives when indicated
- xii. Abide by all HIPPA and Confidentiality rules
- xiii. The student should be judged on his professionalism throughout the rotation.

V. Osteopathic Specific Competencies

- a. The emergency room setting is often not readily conducive to the application of osteopathic manipulation as there is not a historical patient physician relationship. Patients are often critically ill and the case does not allow time for manipulation, nor are manipulative techniques indicated. The student should however exhibit those competencies inherent to the practice of osteopathic medicine including:
 - i. Be able to relate the patient considerations in the assessment and management of emergent patients including cultural, social, spiritual, family, and behavioral considerations.
 - ii. Be able to perform a comprehensive examination of the patient with attention to the palpatory and visual examination of the musculoskeletal system.
 - iii. Differentiate musculoskeletal chest pain from cardiac or pulmonary chest pain
 - iv. Assess musculoskeletal pain as it relates to injury or somatic dysfunction.
 - v. Assesses risk factors and counsels patients appropriately regarding risks.
 - vi. Determine if outpatient osteopathic medical treatment may be helpful in their management.

VI. On Line Case Modules

- a. In the on line case based curriculum, the medical student should approach the cases using the following plan:
 - i. Review the on line pre-case information OR any chapter or suggested reading prior to attempting the case.
 - ii. Interpret the case following the history and physical findings, answering questions being sure to consider all diagnostic areas of the case prior to making a diagnosis
 - iii. Formulate a differential diagnosis and rule out those diagnosis that do not apply in a systematic fashion
 - iv. Formulate a diagnostic plan, judiciously ordering those tests or procedures needed to Narrow the diagnosis
 - v. Determine the most appropriate treatment based upon those findings.
- b. Important to this rotation will be determining the number of cases to standardize the exposure with emphasis to cover those critical decisions that will likely be encountered by a primary care physician as well as those covered on NBOME and USMLE.

- c. The following is a list of the on-line interactive cases the student will complete and on which the post rotation exam is based. In each case the student must identify the signs and symptoms, describe the pathophysiology, formulate a differential diagnosis, order or perform the most common diagnostics indicated, identify key diagnostic criteria, diagnose and manage the following:
 - i. Acute Chest Pain (2 cases)
 - ii. Shock
 - iii. Upper Airway Obstruction
 - iv. Aneurysm
 - v. Cardiac Arrhythmia (2 cases)
 - vi. Neurological Trauma
 - vii. Trauma (Chest and Abdominal)
 - viii. GI Bleed
 - ix. Abdominal Pain
 - x. Shortness of Breath (2 cases)
 - xi. Endocrine Disorder with resultant Electrolyte Disturbance
 - xii. Allergic Reaction / Anaphylaxis
 - xiii. Drug and/or Poisoning Overdose
 - xiv. Febrile Illness and shortness of breath
 - xv. Environmental Exposure — Burn and Carbon Monoxide Poisoning
 - xvi. Altered Mental Status / Coma
 - xvii. Animal Bite and Laceration
 - xviii. Seizure with Meningitis vs. Encephalitis

VII. Additional Third Year Curriculum Delivery

- a. Students will complete the Principles of ACLS and ATLS manuals on-line
- b. Monthly clinical conferences will provide lectures illustrating interesting presentations of common emergent conditions.
- c. The one-month rotation provides a clinical exposure to the practice of emergency medicine and to the most common emergent conditions that a rural primary care physician may encounter.

VIII. Global Assessment of Medical Students in the Third Year

- a. The medical student is assessed in a 360 degree model during the third year.
- b. Self evaluation is provided as the case modules provide the student with a performance report specific to each area.
- c. A post-rotation exam is given to assure the student has acquired the basic content.
- d. Year end comprehensive exams are given.
- e. A year end OSCE exam is given along with Standardized patient exams.
- f. Objective Structural Clinical Exam and Simulated Patient Exams to evaluate patients presenting with
 - i. Chest pain
 - ii. Shortness of breath

- iii. Trauma
- iv. Abdominal pain
- v. Altered state of consciousness
- g. Finally the student is evaluated by the preceptor as to the application of his or her medical knowledge to the clinical setting using a student competency based rating form to be completed by the clinical faculty member.
- h. Evaluations are given randomly throughout the year to staff and patients with which the student comes in contact. This is primarily done in the ambulatory setting.
- i. Documentation: An on-line log will be utilized by the student to identify the procedures performed, the diagnosis (code) record. The faculty member will verify the information at the end of the rotation on-line using a password signature or by a signed log.