

## **Emergency Department Student Elective Goals and Objectives**

### **Goals:**

During the Emergency Department (ED) rotation, the student will develop his/her knowledge and skills associated with the evaluation, treatment and disposition of patients in the UVM Medical Center ED. Additionally, the student will gain exposure to a variety of common procedures in emergency medicine.

### **Objectives:**

See detailed course objectives below. Overall, at the end of the rotation, the student should be able to:

1. Perform a thorough, yet targeted history and physical examination on the emergency patient resulting in a prioritized assessment of the immediately acute and potentially life-threatening problems for the patient.
2. Develop an initial plan for the stabilization and workup of acute problems, including laboratory and imaging examinations, as well as obtaining input from the appropriate consulting services.
3. Appropriately interpret laboratory and imaging studies.
4. Develop a plan for appropriate disposition of patients to various settings including creation of clear and complete discharge instructions.
5. Demonstrate technical skills required for management of common emergency conditions.
6. Effectively communicate and coordinate care with other health care professionals as required for patient needs. Students will be sensitive to health care costs while striving to provide quality care.

### **Expectations:**

1. The student is expected to be an active part of the ED treatment team during his or her shifts.
2. Your schedule will be matched one to one with an attending on each shift and you will likely work with the same attending more than once during the month. If you are unsure who you are working with, please check in with the ED Secretary.
  - 7am-4pm: Acute Care
  - 8am-5pm: General Treatment
  - 9am-6pm: Swing (see patients on both acute and GT)
  - 1p-11p: Pedi ED (Works primarily with GT attending)
  - 3:30p-12a: Acute Care
  - 5:30p – 2a: Swing
  - 11:30p-7a: Overnight
3. The clinical schedule will allow students to gain experience over a range of shifts including day shifts, evening shifts, and overnight shifts, on both weekdays and weekends.
4. If you must leave during your shift for any reason, you must let your attending know and sign over information about the progress on your patients.
5. When working on the Acute or Swing shift please use the computers across from the Acute Care secretary's desk. When working in GT please use the computer behind the GT secretary's desk. Try to be in close proximity to the attending.
6. First, sign up for a patient in Prism and see that patient within 2-3 minutes of signing up.
7. Whenever there is concern for instability, abnormal vital signs, or need for immediate intervention you should notify an attending immediately. Otherwise, obtain the

- appropriate information to make an assessment and plan including a focused history and physical exam. This generally should not take more than 10 minutes.
8. Immediately after this focused evaluation of the patient, you are expected to discuss the patient and make a plan for work up and treatment with an attending. This should happen within a few minutes after coming out of the patient room and prior to entering orders in Prism. DO NOT delay presenting to your attending.
  9. You will follow up on the patient's progress with treatment and review results of all testing performed. Remember to keep patients and families updated if they are in the ED for a while, as the wait and uncertainty can be very distressing.
  10. You will discuss the result of the ED workup and make plans for any consultations and disposition with the ED attending prior to placing calls or discharging the patient.
  11. You should be managing several active patients at a time with the general goal of seeing approximately one patient per hour of the shift. (8-10 patients total per shift)
  12. Any procedures MUST be performed under the direction and supervision of the ED attending. Discuss any procedures that you would like to perform with the ED attending.
  13. Always maintain a positive, caring and professional demeanor. Communicate clearly and respectfully with patients and other members of the patient's treatment team.
  14. At some point during your shift, if you would like to take a short break, you must notify your attending so that they know you will be out of the ED.
  15. At the end of your shift, you should participate in sign out with your attending to the oncoming attending. We expect that students complete the work up and treatment plan on their patients to a point where handoff is appropriate. Ask the attending if you are unsure about whether it is appropriate to sign off.
  16. Feel free to ask the attending for feedback at the end of the shift.

### **Detailed Objectives:**

#### **I. Patient Care**

- A** Demonstrate skills in core activities required for patient care including establishing rapport, collecting a patient history and performing a physical examination.
- B** Interpret clinical findings, make appropriate use of tests and procedures, formulate assessments, and develop effective plans to diagnose, treat, and prevent health problems and to promote patient health.
- C** Demonstrate compassion, courtesy, and respect for the social and cultural perspective of the patient.

Students must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. The students are expected to meet the following objectives:

#### **1. Clinical**

- Develop skills in initial stabilization, essential diagnostic work-up, emergency core procedures, and ED management of acutely ill and injured patients in the unique ED environment.
- Begin to prioritize diagnostic and therapeutic interventions.
- Perform an accurate complaint-directed history and physical examination, synthesizing essential data necessary for the management of patients in the ED.
- Manage patients with multiple medical problems, comparing with a prior medical record when appropriate, and identifying significant differences between the current presentation and past presentations.

- Progress to the management of multiple patients simultaneously, demonstrating effective task-switching.
- Present patients to attendings in an accurate and concise manner, narrowing and prioritizing the list of weighted differential diagnoses based on all of the available data.
- Interact with patients and their families in a professional and humane fashion.
- Give the rationale for, and complications of, any ED procedure undertaken.
- Select appropriate pharmaceutical agents based upon relevant considerations.
- Function comfortably as a member of the entire ED team including attendings, other students, residents, nurses, physician assistants, clerks and other ancillary staff.
- Use appropriate consultation resources, and communicate professionally with resident and attending physicians from other specialties.
- Clearly and completely document on the chart the history, physical exam, clinical course, assessment and plan of each patient.
- Formulate appropriate disposition plans and instructions, and communicate them to patients and families.
- Re-evaluate patients being observed or monitored in the ED, evaluating the effectiveness of therapies and modifying treatment plans accordingly.

## **2. Procedural**

Students in emergency medicine will begin to develop procedural skills within the scope of practice of EM. Attending faculty will supervise all procedures performed by students in the ED. Procedures may include some of the following:

### Resuscitation

- Adult medical resuscitation
- Adult trauma resuscitation
- Pediatric medical resuscitation
- Pediatric trauma resuscitation

### Airway Techniques

- Supplemental oxygen; oral and nasal airways
- Orotracheal intubation – direct and video laryngoscopy
- Mechanical ventilation – indications, limitations, and complications

### Anesthesia

- Local anesthesia
- Use of paralytic and induction agents for RSI
- Moderate and deep sedation for procedures

### Diagnostic procedures

- Arthrocentesis
- Lumbar puncture
- Nasogastric intubation
- Thoracentesis
- Paracentesis
- Tonometry/Slit lamp examination

### Genitourinary

- Bladder catheterization
- Pelvic exams

### Otolaryngology/ophthalmology

- Epistaxis control--nasal packing
- Laryngoscopy and Nasopharyngeal endoscopy

### Hemodynamic and vascular techniques

- Peripheral venous access
- Ultrasound-guided venous access
- Arterial blood sampling

### Musculoskeletal

- Splinting and immobilization of extremity injuries and non-displaced fractures
- Fracture and dislocation immobilization
- Fracture and dislocation reduction
- Spinal immobilization

#### Thoracic and Cardiovascular

- Cardiac pacing—transthoracic and transvenous
- Defibrillation and cardioversion

#### Wound care

- Laceration repair
- Incision and drainage of abscesses

#### Ultrasound

- FAST exam for trauma
- Lung US and limited Echo
- RUQ and renal US

## II. Medical Knowledge

**A** Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences related to the practice of medicine.

**B** Apply scientific knowledge to explain determinants of health, mechanisms and consequences of diseases, and principles underlying methods of diagnosis, treatment, prevention, and health promotion, at individual and population levels in current and evolving health care settings.

**C** Interpret and analyze information to develop appropriate diagnostic assessments and plans for treatment, disease prevention, and promotion of health.

**D** Locate, evaluate, and synthesize information required for patient care from the medical literature using appropriate resources and technology.

**E** Demonstrate behaviors of life-long learning guided by continuous self-assessment and improvement.

### Competency Objectives

Students are expected to:

- Demonstrate knowledge of the scientific method of problem solving and evidence-based decision making.
- Demonstrate a commitment to lifelong learning and an attitude of caring derived from humanistic and professional values.
- Actively prepare and participate in all mandatory EM didactic conferences.
- Identify knowledge gaps and achieve satisfactory improvement in EM knowledge base as judged by the EM faculty.
- Prepare for and participate in the NBME exam at the end of the rotation.
- Demonstrate an understanding of ED alert protocols related to trauma, stroke, myocardial infarction, sepsis, and patients leaving against medical advice.

## III. Practice-Based Learning

**A** Apply principles of evidence-based medicine to inform patient care in current and evolving health care settings, including for diagnosis, treatment, and prevention of health problems and for promotion of health.

**B** Teach and perform research to contribute to the education of other health professionals

☒ **C** Demonstrate practices of self-assessment and continuous improvement, based on reflection and feedback, of the knowledge, skills and attitudes required for patient care in current and evolving health care settings.

Students must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.

### **Competency Objectives**

Students are expected to develop skills and habits to be able to:

- Identify strengths, deficiencies and limits in one's knowledge and expertise and create learning and improvement goals.
- Identify and perform appropriate learning activities, including attendance at all mandatory EM conferences.
- Incorporate formative evaluation feedback into daily practice.
- Locate, appraise and assimilate evidence from scientific studies related to patients' health problems.
- Demonstrate basic skills of providing evidence-based healthcare.
- Use information technology to optimize learning and improve patient care.
- Participate in the education of patients, families, students, residents and other health professionals.

## **IV. Interpersonal and Communication Skills**

☒ **A** Communicate and collaborate effectively with patients, families and health professionals to provide compassionate, appropriate, and effective patient care.

☒ **B** Communicate appropriately and effectively with patients, families, and the public across a broad range of socioeconomic and cultural backgrounds

Students must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

### **Competency Objectives**

Students are expected to:

- Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds.
- Demonstrate caring and respectful behaviors with patients, families (including those who are angry and frustrated), and all members of the health care team.
- Communicate effectively with physicians, other health professionals, and health related agencies.
- Work effectively as a member of the health care team or other professional group.

## **V. Professionalism**

☒ **A** Behave in accordance with professional and ethical principles, including but not limited to altruism, compassion and empathy, accountability and responsibility, excellence and scholarship, duty and service, social responsibility, honor and integrity, respect, humility, and cultural competence.

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

### **Competency Objectives**

Students are expected to:

- Demonstrate compassion, integrity, and respect for others at all times.
- Maintain responsiveness to patient needs that supersedes self-interests.
- Demonstrate respect for patient privacy and autonomy.
- Demonstrate accountability to patients, society, and the medical profession.
- Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.
- Attend all mandatory EM conferences.
- Complete evaluations of the didactics, supervising faculty and course.
- Exhibit a professional attitude toward patients, colleagues, staff and consultants.
- Be punctual to ED shifts and required learning activities.

## **VI. Systems-Based Knowledge**

**A** Demonstrate awareness of and responsiveness to the larger context of systems of health care through effective use of system resources, coordination of care, and practices that enhance quality and safety.

**B** Participate in the care of patients as an integrated member of an effective health care team.

Students must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

### **Competency Objectives**

Students are expected to:

- Coordinate patient care within the health care system relevant to their ED visit, for example arranging follow-up appointments with specialists or return visits to the ED for reevaluation.
- Advocate for quality patient care and optimal patient care systems, for example advocating admission or close follow-up based upon consideration of financial, social, and cultural issues, as well as primary care access.
- Work in interprofessional teams to enhance patient safety and improve the quality of care delivery.
- Demonstrate competence in communicating with team members in the hand-over process to facilitate both continuity of care and patient safety.
- Participate in performance improvement to optimize self-learning, ED function, and patient safety.
- Use technology to accomplish and document safe health care delivery.