

**Truman Medical Center Hospital Hill**  
**PGY2 Critical Care Residency**  
**Learning Experience Description and Learning Activities**

**Emergency Medicine**

**Preceptor:**

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Emergency Medicine

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**1) General Description**

Emergency medicine is a required four week learning experience at Truman Medical Center. The Emergency Department (ED) consists of 34 primary patient care beds, 3 trauma beds, 7 “specials” beds in a locked unit, and 7 fast track/urgent care beds. In the event there are no available inpatient beds, admitted patients may be boarded in the ED until beds become available. Boarded patients, once inpatient orders have been written, are no longer considered ED patients and care is transferred to the admitting team.

This rotation is structured to build upon the knowledge and skills acquired from the resident’s Pharmacy Practice Residency in order to provide the skills necessary to become proficient in the delivery of emergency care. At the end of the rotation the resident should be able to independently function as the pharmacist in charge in the emergency department with the ability to execute advanced treatment plans in all scenarios, including (but not limited to): trauma, medical resuscitation, cardiac arrest, procedural sedation, and rapid sequence intubation. The primary role of the pharmacist in the ED is to ensure the appropriate pharmacotherapeutic management of critically ill patients. The pharmacist is expected to have working knowledge of a wide spectrum of disease states, specifically the treatment of such disease states, and will be relied upon to develop appropriate treatment plans in conjunction with other members of the health care team. The expectation is that the pharmacist will facilitate the expeditious treatment of acutely ill patients and will enhance efficiency in this fast paced environment.

**2) Rotation Expectations and Responsibilities:**

- Provide Pharmacy review of medication orders prior to administration, when available and appropriate
- Actively participate during cardiac resuscitations and traumas, assists with the preparation of parenteral medications for emergency use, and offers medication/dosing consultation when available and appropriate.
- Participate in providing didactic and experiential training in Clinical Pharmacy for baccalaureate (BS) and doctoral (PharmD) students and clinical pharmacy residents
- Provide patient specific medication use teaching for discharge medications when appropriate
- Attend any presentations that the emergency department holds.
  - Grand Rounds (schedule variable, will provide calendar at beginning of rotation)
  - Faculty Lecture Series (as appropriate)
  - Trauma Conference (as appropriate)
- Present one topic discussion on an emergency medicine topic of interest to the pharmacy and or Emergency Department staff.
- Provide one case presentation to the pharmacy staff at the conclusion of the rotation regarding medical/pharmacological management of an emergently ill patient.
- Assist with precepting UMKC School of Pharmacy students (General Medicine I and General Medicine II), as well as with PGY1 residents who may rotate through the TMC ED.
- Additionally, a short rotation with the KCFD Emergency Medical Services (EMS) may be possible.

### 3) Disease States

The resident will be exposed to a wide range of disease states in the ED. Through literature review, topic discussion, and/or direct care patient experiences, the resident will be expected to become proficient in the following disease states during their first experience in the ED:

<b>Chief Complaints</b>			
1. Shortness of Breath	2. Chest Pain	3. Abdominal Pain	4. Altered Mental Status
<b>Disease States</b>			
<u>Electrolytes</u>		<u>Pulmonary</u>	<u>Airway Management</u>
<ul style="list-style-type: none"> <li>Hyperkalemia</li> <li>Hyponatremia</li> <li>Hypertatremia</li> <li>Acid/base disorders</li> </ul> Blood gas interpretation		<ul style="list-style-type: none"> <li>Allergic reactions</li> <li>Asthma exacerbations</li> <li>COPD exacerbations</li> <li>Pneumonia</li> <li>Pulmonary embolus</li> </ul>	<ul style="list-style-type: none"> <li>Respiratory failure</li> <li>Rapid sequence intubation</li> <li>Mechanical ventilation</li> <li>Sedation &amp; analgesia for the intubated patient</li> </ul>
<u>Cardiovascular</u>		<u>Gastrointestinal</u>	<u>Genitourinary</u>
<ul style="list-style-type: none"> <li>Acute coronary syndrome/myocardial infarction</li> <li>Advanced cardiac life support/cardiac arrest</li> <li>Hypertensive urgency/emergency</li> <li>Hemodynamic support</li> <li>Shock states</li> <li>Acute heart failure</li> </ul>		<ul style="list-style-type: none"> <li>GI bleed</li> <li>Appendicitis</li> <li>Cholecystitis</li> <li>Vomiting</li> <li>Constipation</li> <li>Diarrhea</li> </ul>	<ul style="list-style-type: none"> <li>Obstetric emergencies</li> <li>Vaginal hemorrhage</li> <li>Sexually transmitted diseases</li> <li>Sexual assault</li> </ul>
<u>Endocrinology</u>		<u>Skin/Soft Tissue Structure</u>	<u>Miscellaneous</u>
<ul style="list-style-type: none"> <li>Diabetic ketoacidosis</li> <li>Adrenal insufficiency</li> <li>Myxedema</li> <li>Thyrotoxicosis</li> </ul>		<ul style="list-style-type: none"> <li>Cellulitis</li> <li>Lacerations</li> <li>Bite wounds (human, dog, cat, snake)</li> <li>Deep vein thrombosis</li> </ul>	<ul style="list-style-type: none"> <li>Procedural sedation</li> <li>Psychiatric emergencies</li> <li>Chronic pain syndromes</li> </ul>

### 4) Required Readings

Required reading materials for this learning experience include, but are not limited to the following: (a link to a shared ED Dropbox folder will be made available to the resident)

- Rapid Sequence Intubation
- Sedation and Analgesia
- Seizure / Status Epilepticus
- Acid / Base Disorders
- Hypotension, Shock, Vasopressors

### 5) Goals and Objectives Evaluated

<b>Objective</b>	<b>Activity</b>
R2.2.1, 2.4.4 (Synthesis) Devise a plan for deciding which critical care patients to focus on if given limited time and multiple patient care responsibilities.	Develop a daily routine that demonstrates the prioritization of care for critically ill patients. Be aware of changes in patient condition throughout the day. Develop ability to incorporate appropriate primary literature results and patient data into a daily plan that maximizes appropriate pharmaceutical care to the emergency department patient population.
R2.5.2 (Synthesis) Design a regimen that meets the evidence-based therapeutic goals established for a critically ill patient; integrates patient-specific information, disease and drug information, ethical issues and, when possible, quality-of-life issues; and considers pharmacoeconomic principles.	Construct an evidenced based treatment regimen including goals for critically ill patients that take into consideration patient-, age-, disease- and drug-specific information as well as ethical and financial considerations for various disease states using the most current evidence based resources.

R3.1.3, 3.1.4	(Application) Use skill in case-based teaching. (Application) use skill in the four preceptor roles employed in practice-based teaching (direct instruction, modeling, coaching, and facilitation).	Present one journal club/topic discussion on an emergency medicine topic of interest to emergency department staff and/or students Precept Pharm.D. students and/or PGY1 pharmacy practice residents (if applicable).
R3.1.5	(Application) Use public speaking skills to speak effectively in large and small group situations.	Present one case presentation to the pharmacy staff at the conclusion of the rotation regarding management of an emergency department patient and present information in a concise and efficient manner.
R.5.1	(Application) Participate in the management of medical emergencies.	Participate in medical resuscitations, code blue, trauma activations, and other acute medical emergencies in the Emergency Department.

#### 6) Learning Experience Activities:

Activity	Objectives Covered
Develop a daily routine that emphasizes direct patient care activities. Be aware of changes in patient condition each day. Develop ability to incorporate appropriate primary literature results and patient data into a daily plan that maximizes appropriate pharmaceutical care to emergently ill patients. <ul style="list-style-type: none"> <li>Upon arriving to the ED, triage patient care activities according to patient acuity and formulate treatment plans accordingly</li> <li>Provide prompt, evidence based pharmaceutical recommendations and drug information.</li> <li>Establish appropriate inter-professional and inter-patient relationships in the ED.</li> </ul>	R2.1 R2.2 R2.5.2 R2.7 R2.8 R2.10 R2.11
Perform pharmaceutical care monitoring for critically ill ED patients. <ul style="list-style-type: none"> <li>Develop and maintain patient specific monitoring sheets that relevant information needed to formulate appropriate therapeutic recommendations.</li> <li>Evaluate patient's drug therapy throughout the course of their ED visit to ensure optimal care is delivered.</li> <li>Construct an evidenced based treatment regimen including goals for critically ill patients that take into consideration patient-,age-, disease- and drug-specific information as well as ethical and financial considerations for various disease states using the most current evidence based resources.</li> </ul>	R2.2 R2.4 R2.5 R2.6 R2.8 R2.9
Present one journal club/topic discussion on an emergency medicine topic of interest to emergency department staff and/or pharmacy staff.	R3.1.3 R3.1.5
Present one case presentation to the pharmacy staff at the conclusion of the rotation regarding management of an emergency department patient and present information in a concise and efficient manner.	R3.1
Assist with precepting duties for Pharm.D. students and/or PGY1 pharmacy practice residents (if applicable). Lead emergency medicine-related topic discussions with Pharm.D. students, PGY1 pharmacy practice residents and preceptor 1-2 times monthly.	R3.1
Participate in the management of medical emergencies. <ul style="list-style-type: none"> <li>Exercise skill as a team member in the management of medical emergencies as exhibited by certification in the American Heart Association Advanced Cardiac Life Support</li> </ul>	R5.1 R5.1.1

#### 7) Requirements of Learning Experience:

Expected hours: 0800-1700; these times may vary depending on presentation of medical resuscitation or trauma patients. Opportunity would also exist to work swing shift hours (1500-2300; 1800-0200) if desired.

Required assignments: One topic presentation to pharmacy staff, emergency medicine/disease state management topic discussions with the ED staff, one formal presentation to pharmacy staff on emergency medicine related topic.

#### 8) Preceptor Interaction

Daily\*: 0900 Beginning of shift briefing, patient overview  
1300-1400 Topic discussions, review patient progress, etc.

\*Times of interactions may vary depending upon department acuity level, i.e., presentation of traumas, resuscitations, cardiac arrests, or other emergent patients.

**9) Required meetings:**

Emergency Grand Rounds, Faculty Lecture Series, Trauma Conference, Trauma M&M (dates and times are variable, calendar will be provided at beginning of rotation)

**10) Method of Evaluation:**

Evaluation of the resident will be based on the ASHP activity learning experiences listed above. Each learning activity has a corresponding code following the experience which corresponds to the activity learning experience listed in PharmAcademic ®. During the orientation to the learning experience, the preceptor and the resident will review all the material contained in this learning experience description and sign a copy to be retained in the residents file.

The preceptor will provide feedback informally (verbally) and formally (electronically via PharmAcademic®) throughout the course of the learning experience. Once the resident is finished with all of the requirements for the learning experience, the preceptor and the resident will discuss the learning experience as a whole both formally and informally.

The resident will be responsible for providing a formal self-evaluation using the goals listed above and also evaluate the learning experience as a whole.

I have read and acknowledged the responsibilities of this learning experience.

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Pharmacy Resident

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Primary Preceptor