

PGY1 Course Description

Learning Experience Title: Emergency Medicine

Preceptor:

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Emergency Medicine

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Emergency Department

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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. A pharmacist in this role will 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.

This rotation is structured to integrate knowledge from didactic coursework and experiential rotations into the residents general practice of pharmacy. By the completion of the experience, the pharmacy practice resident will be expected to demonstrate enhanced proficiency in the delivery of emergency care and should be able to independently recommend and initiate treatment plans for the care of ED patients. Emphasis will be placed upon providing care during the following: Cardiac arrest, medical resuscitation, trauma, procedural sedation, rapid sequence intubation, etc.

Learning Experience 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.
 - o Grand Rounds (schedule variable, will provide calendar at beginning of rotation)
 - o Faculty Lecture Series (as appropriate)
 - o Trauma Conference (as appropriate)
- Present one topic discussion on an emergency medicine topic of interest to the pharmacy staff.
- Provide one case presentation to the pharmacy staff at the conclusion of the rotation regarding medical/pharmacological management of an emergently ill patient.
- Participate in informal topic discussions with preceptor and pharmacy students regarding emergency medicine topics 2-4 times monthly

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 develop baseline knowledge of following disease states:

| Chief Complaints | | | |
|---|---|---|--------------------------|
| 1. Shortness of Breath | 2. Chest Pain | 3. Abdominal Pain | 4. Altered Mental Status |
| Disease States | | | |
| <u>CNS</u> <ul style="list-style-type: none"> • Ischemic/hemorrhagic stroke • Meningitis • Migraine • Seizure • Spinal cord injury • Intracranial | <u>Pulmonary</u> <ul style="list-style-type: none"> • Allergic reactions • Asthma exacerbations • COPD exacerbations • Pneumonia • Pulmonary embolus | <u>Airway Management</u> <ul style="list-style-type: none"> • Respiratory failure • Rapid sequence intubation • Mechanical ventilation • Sedation & analgesia | |

| | | |
|---|--|--|
| <p style="text-align: center;"><u>Cardiovascular</u></p> <ul style="list-style-type: none"> • Acute coronary syndrome/myocardial infarction • Advanced cardiac life support/cardiac arrest • Hypertensive urgency/emergency • Hemodynamic support • Shock states • Acute heart failure • Dysrhythmias | <p style="text-align: center;"><u>Gastrointestinal</u></p> <ul style="list-style-type: none"> • GI bleed • Appendicitis • Cholecystitis • Vomiting • Constipation • Diarrhea • Obstruction • Pancreatitis • Cirrhosis | <p style="text-align: center;"><u>Gentiourinary</u></p> <ul style="list-style-type: none"> • Obstetric emergencies • Vaginal hemorrhage • Sexually transmitted diseases • Sexual assault |
| <p style="text-align: center;"><u>Endocrinology</u></p> <ul style="list-style-type: none"> • Diabetic ketoacidosis • Adrenal insufficiency • Myxedema • Thyrotoxicosis | <p style="text-align: center;"><u>Renal</u></p> <ul style="list-style-type: none"> • Hepatic encephalopathy • UTI • Pyelonephritis • Renal calculi • Acute renal failure • Chronic renal failure | <p style="text-align: center;"><u>Trauma</u></p> <ul style="list-style-type: none"> • Initial burn management • Antibiotic prophylaxis • Trauma resuscitation |
| <p style="text-align: center;"><u>Toxicology/Overdose</u></p> <ul style="list-style-type: none"> • Acetaminophen • Alcohol • Aspirin • Opiates • Benzodiazepines • Sympathomimetics/Hallucinogenics • Ethylene glycol • Tricyclic antidepressants • Antidotes • Decontamination | <p style="text-align: center;"><u>Hematology/Oncology</u></p> <ul style="list-style-type: none"> • Febrile neutropenia • Cord Compression • Tumor Lysis Syndrome • Hypercalcemia • Sickle cell crisis • Hemophillia | <p style="text-align: center;"><u>Skin/Soft Tissue Structure</u></p> <ul style="list-style-type: none"> • Cellulitis • Lacerations • Bite wounds (human, dog, cat, snake) • Deep vein thrombosis |

| | | |
|---|---|--|
| <u>Electrolytes</u> | <u>Miscellaneous</u> | |
| <ul style="list-style-type: none"> • <u>Hyperkalemia</u> • <u>Hyponatremia</u> • <u>Hypernatremia</u> • <u>Acid/base disorders</u> • <u>Blood gas interpretation</u> | <ul style="list-style-type: none"> • <u>Procedural sedation</u> • <u>Psychiatric emergencies</u> • <u>Chronic pain syndromes</u> | |

Learning Experience Activities:

| Activity | Objectives Covered |
|--|---------------------------|
| Develop a daily routine that emphasizes direct patient care activities by triaging patient care activities according to patient acuity and formulating daily treatment plans according to that acuity | R1.1.5 |
| Develop a daily routine that emphasizes direct patient care activities by providing prompt, evidence based pharmaceutical recommendations and drug information | R1.1.5 |
| Develop a daily routine that emphasizes direct patient care activities by establishing appropriate inter-professional and inter-patient relationships in the ED | R1.1.5 |
| Perform pharmaceutical care monitoring for critically ill ED patients by developing and maintain patient specific monitoring sheets that have relevant information needed to formulate appropriate therapeutic recommendations | R1.1.6 |
| Perform pharmaceutical care monitoring for critically ill ED patients by evaluating patient's drug therapy throughout the course of their ED visit to ensure optimal care is delivered | R1.1.6 |
| Perform pharmaceutical care monitoring for critically ill ED patients by constructing 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 | R1.1.6 |
| Develop an appropriate treatment plan in the setting of an acute medical emergency | R1.3.1 |
| Obtain and prepare medications for emergent administration according to the organizational policies and procedures | R 1.3.1 |
| Exhibit appropriate time management skills in the ED | R.3.1.1 |

| | |
|--|---------|
| Demonstrate effective communication skills when interacting with other healthcare providers | R.3.1.1 |
| Lead interprofessional teams (which may include physicians, medical students, nurses and/or nursing students, and other members of the multi-disciplinary healthcare team) | R.3.1.1 |

Objectives selected to be evaluated during the learning experience:

| Objective | |
|------------------|--|
| R1.1.5 | (Creating) Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans (care plans). |
| R1.1.6 | (Applying) Ensure implementation of therapeutic regimens and monitoring plans (care plans) by taking appropriate follow-up actions |
| R3.1.1 | (Applying) Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership. |

Requirements of Learning Experience:

Expected hours:

0800-1700; these times may vary depending on presentation of medical resuscitation or trauma patients

Required assignments:

One topic discussion to pharmacy staff, emergency medicine/disease state management topic discussions with ED staff, one formal presentation to pharmacy staff on emergency medicine related topic

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
- Toxicology
- Procedural Sedation

The resident should be familiar with these topics **prior to the discussion with the preceptor/students.**

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.

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)

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 verbally (formative) throughout the course of the learning experience and electronically (summative) via PharmAcademic® at the conclusion of the experience. Once the resident is finished with all of the requirements for the experience, the preceptor and the resident will discuss the learning experience as a whole both formally and informally. The resident will also be responsible for providing both formative and summative feedback at the conclusion of the experience. All evaluations must be submitted by the conclusion of the learning experience.

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

Pharmacy Resident

Primary Preceptor