Emergency Medicine/Critical Care

Learning Experience Length: Approximately 6 weeks

Primary Preceptor: Christopher J. Edwards, PharmD, BCPS

ED: 520-694-9815; Office: 520-626-5404; Cell: 312-213-9317

General Learning Experience Description:

Emergency medicine (EM)/Critical Care (CC) is a 6 week advanced pharmacy practice experience in the emergency department (ED) at Banner University Medical Center Tucson (BUMCT). BUMCT is a Level 1 Trauma Center. Our 61 bed ED includes a 7 bed trauma bay and an 18 room pediatric care wing. The student will also spend time in an intensive care unit at BUMCT. During this learning experience, students will have the opportunity to work closely with the emergency medicine and critical care teams, including physicians, nurses, paramedics, respiratory therapists, and nurse practitioners, to create appropriate pharmacotherapy regimens for the patients seen in the emergency department.

Recommended Readings:

Various reading assignments will be provided throughout the learning experience. The student is encouraged to proactively engage in reading about the core topics which will be discussed to allow for detailed discussion with the preceptor and enhancement of patient care activities. Recommended readings for core topics can be found on the rotation website, edwards.faculty.arizona.edu under the link titled “APPE Rotation.”

Required Projects:

ICU Workbook – At the beginning of the rotation, the student should download a copy of the ICU workbook. This is expected to be completed over the course of the rotation and submitted during the final week of rotation. This workbook is designed to help facilitate your independent learning during this rotation. The workbook is quite long, so do not wait until the last week of rotation to begin!

Case presentation – In the last week of the rotation, the student will be expected to present a case presentation to other students on rotation at BUMCT. The case should be selected during the first half of the rotation and a draft slide deck should be submitted to the preceptor one week before the presentation for review.

Daily Student Schedule:

The student is expected to be onsite for at least 8-hours per day unless otherwise arranged by the preceptor. The student will spend the first half of their day in the ED, starting at 0800. The afternoons will be spent working in one of the ICUs or in another area of the hospital, depending on preceptor availability.

Description of Preceptor-Student Interaction/Communication:

During the EM portion of this experience, the student will spend the majority of the learning experience working directly with the preceptor. Daily activities will vary dramatically due to the dynamic nature of emergency medicine. The ICU portion of this experience will be more self-directed; however, the student will have a guidance document on the types of activities expected of them during this portion of the experience.

When possible, a layered learning model will be utilized. If a PGY1 or PGY2 resident is on rotation with you in either the ICU or in the ED, the resident will be the student's first point of contact for questions. The resident may also delegate tasks, assign readings and topic discussions, and perform other responsibilities typical of a preceptor. This layered learning model allows for a mutually beneficial experience for both students and residents. Please see the ICU workbook for more information.

The student will be expected to actively participate in topic and case discussions throughout the learning experience. Students are expected to read e-mails at the beginning, middle and end of each day at a minimum for ongoing communication. Preceptors will also check and respond to email throughout the day. This is appropriate for routine, non-urgent questions and problems. The best way to contact the preceptor during working hours is the ED phone in the morning or office phone in the afternoon. Cell phone should be used if other methods have failed.

Evaluation/Assessment Strategy:

Informal formative evaluations will be completed throughout the rotation. Formal summative evaluation of the student will be completed in RxPreceptor during weeks 3 and 6 of the rotation. Prior to submitting the final evaluation, the preceptor and student will discuss the evaluation. This discussion will provide feedback for both the student and preceptor on their performance and improvement opportunities.

Designated Meetings/Responsibilities:

- Participation in medical and surgical resuscitations
- Provision of drug information services to all members of the healthcare team
- 30-minute case presentation at the end of the learning experience
- Attendance of weekly pharmacy resident conference
- Completion of the ICU workbook

Topics (Disease States) Covered During the Learning Experience:

Topic discussions and reading key articles will be used to help develop the student's patient care skills for common disease states seen in the emergency medicine or critical care setting.

By the end of the rotation, the student will be prepared to explain the signs and symptoms, epidemiology, risk factors, pathogenesis, natural history of disease, pathophysiology, clinical course, etiology, and treatment of the most common diseases and conditions listed below.

- Medical Resuscitation (ACLS)
- Trauma Care/Resuscitation (ATLS)
    - Acute pain management
    - Antimicrobial prophylaxis in open fracture
    - Traumatic brain injury
- Rapid Sequence Intubation (RSI)
    - Post intubation sedation and analgesia
- Toxicology
    - Opioid overdose
    - Envenomation
- Diabetic Ketoacidosis (DKA)
- Seizures/Status Epilepticus
- Intracranial Bleeding
    - Anticoagulation Reversal
- Procedural Sedation
- Infectious Diseases – Empiric Coverage of Common Diseases
- Shock/Sepsis
- Pulmonary Embolism
- Asthma Exacerbation
- Ischemic Stroke
- Acute Myocardial Infarction