

University of Utah Health Care

PGY1 Pharmacy Residency

Salt Lake City, Utah

Rotation Name

Emergency Medicine – (Transitions of Care)

Rotation Preceptors

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Rotation Duration: 4 weeks

Site Description

The University of Utah Emergency Department is a Level I Trauma Center containing 44 ED beds and 10 Extended Care Unit beds and serves approximately 60,000 patient visits annually. During this rotation a resident will perform the usual institutional activities such medication history reconciliations and clarifying distributional questions. Emergency Department specific activities may include performing prospective reviews of medications administered in the ED, identify potential drug-related problems and communicate these to other health care providers, participate in trauma/cardiac/brain attack codes, participate in topic/article discussions, present patients to a preceptor, be a resource to the ED staff in the areas of pharmacotherapy, pharmacokinetics, drug interactions, adverse effects, and side effects of commonly administered medications.

The Emergency Medicine rotation is held at the University of Utah Hospital Emergency Department (ED) and the Emergency Department Extended Care Unit (ECU). The ED clinical team includes pharmacists, physicians, advanced practice clinicians, nurses, EMTs, respiratory therapists, social workers, and case managers.

Rotation Description

The resident will:

- Complete the Rotation Orientation Checklist with the preceptor during the first week
- Perform medication history intakes/reconciliation as per hospital policy
- Perform prospective review of medications administered in the ER
- Identify potential drug-related problems, formulate a pharmaceutical plan, and communicate this with the caregiver and/or the patient
- Actively participate in at least 90% of cardiac arrest codes, trauma resuscitation, and brain attack evaluations during the resident's shifts
- Participate in bi-weekly topic presentations/article reviews
- Present at least three patients to preceptor daily
- Identify evidence-based and cost-effective drug therapy choices for common medical conditions treated in the ED
- Act as an easily-accessible resource to ED staff, residents and students regarding the pharmacology, pharmacokinetics, drug interactions, compatibility, adverse effects, and any other aspect of medications commonly administered in the ED setting
- Provide disease state education and patient-specific medication counseling in areas that may include anticoagulation and medications newly prescribed to the patient.
- Depending on rotation scheduled, perform microbial culture follow-up daily which includes obtaining culture results, reviewing antimicrobial changes needed, and documenting interventions in the electronic medical record
- Identify opportunities for improvement of the organization's medication-use system by monitoring for medication errors and documenting via Report and Learn (RL)

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RLS Objectives

Objective R1.1.1: (Applying) Interact effectively with health care teams to manage patients' medication therapy.

Objective R1.1.2: (Applying) Interact effectively with patients, family members, and caregivers.

Objective R1.1.3: (Analyzing) Collect information on which to base safe and effective medication therapy.

Objective R1.1.7: (Applying) Document direct patient care activities appropriately in the medical record or where appropriate

Objective R1.2.1: (Analyzing) Manage transitions of care effectively

Objective R3.1.1: (Applying) Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership

Objective R4.1.2: (Applying) Use effective presentation and teaching skills to deliver education

Emergency Medicine Rotation Activities and Teaching Methods Linked to Objectives

Rotation Activity	Teaching Method(s)	Objective
During interactions with physicians and nursing staff, proactively determine appropriateness of medication order before dispensing. If needed, resident may need to educate provider of appropriate ordering and modifying techniques. On average this may occur around 10 times per shift.	Direct Instruction Modeling Coaching	Objective R1.1.3: Collect information on which to base safe and effective medication therapy.
Participate in all cardiac arrest codes, trauma resuscitation, and brain attack evaluations. When appropriate, the resident will compound, label, and prime standard concentration drips with proper technique and advise staff of appropriate titration and administration.	Modeling Coaching Facilitating	Objective R1.1.2 Interact effectively with patients, family members, and caregivers Objective R1.1.3: Collect information on which to base safe and effective medication therapy Objective R3.1.1 Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership
On a daily basis, the resident should be proactive and intimately involved in each patient's emergency care experience and medical care. Required activities include a continual presence on the unit, being present at bedside for any acute drug related need, and attending all critical care stays. Other opportunities may present, such as being present for EMS report, attention to patient and family needs, and consult for the charge nurse. At the end of this rotation, the resident should be able to demonstrate effective assertiveness in presenting pharmacy concerns and follow through. The emergency department is a confluence of transitions of care issues; the resident must effectively triage, document, and deliver, appropriate pharmacy interventions to the patients in greatest need. The resident will be responsible for documenting at least one Report and Learn report weekly.	Modeling Coaching	Objective R1.1.1: Interact effectively with health care teams to manage patients' medication therapy. Objective R1.1.2 Interact effectively with patients, family members, and caregivers. Objective R1.1.3: Collect information on which to base safe and effective medication therapy. Objective R1.1.7 Document direct patient care activities appropriately in the medical record or where appropriate Objective R1.2.1 Manage transitions of care effectively

Once orientated, the resident will answer all drug information questions. This may include questions from ED providers, residents, and students regarding the pharmacology, pharmacokinetics, drug interactions, compatibility, adverse effects, and any other aspect of medications commonly administered in the ED setting.	Coaching Facilitating	Objective R1.1.1: (Applying) Interact effectively with health care teams to manage patients' medication therapy. Objective R1.1.3: (Analyzing) Collect information on which to base safe and effective medication therapy. Objective R4.1.2 Use effective presentation and teaching skills to deliver education
Resident, when asked, will provide literature to support their drug information response.	Coaching Facilitating	Objective R4.1.2: Use effective presentation and teaching skills to deliver education.
For complicated drug information responses, that require more than a simple verbal response, the resident will be evaluated on their ability to analysis appropriate patient population literature. This may happen up to three times on this rotation.	Facilitating	Objective R1.1.3: Collect information on which to base safe and effective medication therapy. Objective R4.1.2: Use effective presentation and teaching skills to deliver education.
Due to the unique patient populations and challenging practice atmosphere, residents will be required to identify potential drug-related problems and therapeutic goals specific to patients' emergency care. This would include evaluating the patient's view of effective treatment, compromising on the realistic limits of treatment, and educating patient and staff on how the patient's unique age/weight/physical status may change plans and outcomes.	Direct Instruction Modeling Coaching	Objective R1.1.3: Collect information on which to base safe and effective medication therapy. Objective R4.1.2: Use effective presentation and teaching skills to deliver education.
The resident should be able to discern the use of consensus guidelines and how to apply them to individual patient care. The resident will demonstrate this through microbial culture follow-up (if rotation schedule permits), developing anticoagulation plans (in-and out-patient), communication concerns for compliance and cost during treatment plans, and patient specific antimicrobials regimens related to emergency care.	Modeling Facilitating	Objective R1.1.3: Collect information on which to base safe and effective medication therapy. Objective R1.1.7: Document direct patient care activities appropriately in the medical record or where appropriate. Objective R1.2.1: Manage transitions of care effectively.
During patient care, the resident will select the appropriate provider to address issues with and recommend patient specific therapeutic regimen in a time correspondent to the needs of emergency care. This activity will be observed a minimum of once daily.	Coaching Facilitating	Objective R1.1.1: Interact effectively with health care teams to manage patients' medication therapy.
The emergency medicine pharmacists are responsible for patients in the observation unit adjacent to the Emergency Department; the resident will ensure patients in this unit receive appropriate pharmacotherapy evaluations and any necessary counseling regarding new medications. Medications can be either helpful or harmful to patients in observation; the resident will critically	Modeling Coaching Facilitating	Objective R1.1.2: Interact effectively with patients, family members, and caregivers. Objective R1.2.1: Manage transitions of care effectively. Objective R4.1.2: Use effective presentation and teaching skills to deliver education.

appraise if any changes are warranted, subsequently discussing recommendations with the appropriate provider(s). The resident will then communicate any pertinent information to patients and if appropriate their family and caregivers.		
As opportunities allow (e.g. nurse shift change, low patient census) the resident will present brief inservices to the healthcare providers in the department. Topics may cover a wide range of areas, tailored to the residents' interests, including medication safety, therapeutics, pharmacology, adverse drug events, drug information resources, department policies/procedures, and pathophysiology.	Coaching Facilitating	Objective R3.1.1: Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership. Objective R4.1.2: Use effective presentation and teaching skills to deliver education.
The ED provides a unique opportunity to experience transitions of care from: <ul style="list-style-type: none"> • Home/SNF/EMS transport/outside hospital to ED admission • ED admission to observation, acute care, and intensive care • ED admission to interventional procedures (cath lab, interventional radiology, etc) • ED admission to discharge home/SNF/mental health facilities. The resident will identify and discuss various areas for potential error, how to control/prevent errors, and how to document if errors occur. The resident should also take an active role in creating solutions for prevention and communicating/educating on these solutions.	Modeling Coaching Facilitating	Objective R1.2.1: Manage transitions of care effectively. Objective R3.1.1: Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership. Objective R4.1.2: Use effective presentation and teaching skills to deliver education.

Readings and Preparatory Work

**Reading file can be accessed through "Group" H-drive, clinical pharmacist, ED Readings

ASHP Guidelines on Emergency Medicine (Am J Health-Syst Pharm—Vol 68, 2011) DOI 10.2146/sp110020e
Selected standard reading list topics (over course of rotation, **bold required**):

- 1. Rapid Sequence Intubation**
- 2. Toxicology**
- 3. ACS/unstable angina/MI/thrombolysis/anticoagulation**
- 4. CVA/TIA**
5. DKA/HONK
6. Hypertensive emergency/urgency/HTN out of control
7. Seizures
8. DVT/PE
9. Dysrhythmias
10. CHF
11. Infectious disease issues- pneumonia, UTI, meningitis, abdominal infections, SSTI, rectal abscess
12. Asthma/COPD guidelines for emergency management

Orientation Materials

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Your preceptor will meet with you on the first day of rotation to start reviewing orientation check-list and create a calendar with expectant activities.

Role of Pharmacist

The **role of the Emergency Medicine Pharmacist** includes evaluating pharmacotherapy needs for all patients in the Emergency Department (utilizing a direct patient care model), reviewing appropriateness of medication therapy, medication compliance, adverse drug reactions, labs, development of treatment plans, protocols, and making recommendations to the emergency medicine providers, along with coordinating with inpatient/outpatient providers who care for, or will soon care for, our patients. During acute resuscitations the pharmacist will provide pertinent recommendations and assist in preparing medications as patient acuity necessitates (in general we are not responsible for order entry or medication preparation). EM pharmacists respond to C-Arrests, Rapid Responses, Brain Attacks, Critical patients, and Trauma activations. The EM Pharmacist will prioritize delivery of excellent patient care, along with the needs of the Emergency and Pharmacy Department Staff.

Resident Expectations

The Emergency Department utilizes a multidisciplinary team approach consisting of attending physicians, fellows, residents, interns, medical students, nursing, pharmacy, respiratory therapy, social work, crisis workers, EMT, paramedic and case management, who may provide care for each patient as the individual patient's needs dictate.

The pharmacy resident on service will progress towards providing comprehensive pharmaceutical care to all patients in the Emergency Department. Patient care is the primary focus of this rotation. The resident is expected to independently identify patient care needs along with triaging requests from the various patient care teams (primarily Emergency Medicine, but may also field requests from inpatient teams, outpatient clinics, flight teams, and affiliate facilities) and will be the primary pharmacy contact. The resident will be expected to follow more patients as the rotation progresses, working towards meeting the needs of the entire ED census. Communicating pertinent patient information either through verbal recommendations or documentation in the electronic chart is expected (after discussion with the on-site preceptor). Following up on recommendations is essential in the ED since the transitory nature of the ED can allow for pertinent aspects of care to be delayed or forgotten.

A great deal of patient variety is seen on this rotation. There will be a few required topic discussions (see list in previous sections) but often topic discussions will be brief, impromptu, and based on patient care issues during the resident's shift. The resident is expected to present one topic discussion per week in addition to leading a discussion on a relevant journal article each week. When possible, the resident will also present a 3-5 minute presentation during nurse report emphasizing a topic pertinent to the oncoming nurses. The resident may also participate in additional quality improvement projects during the rotation.

Residents will also be expected to respond (with a preceptor) to all C-Arrests, Rapid Responses, Brain Attacks, Critical patients, and Trauma activations occurring in the ED during a shift – and inpatient as the opportunity necessitates (more likely to occur during the evening shifts compared to day shifts).

(Length of time preceptor spends in each of the phases will be customized based upon resident's abilities and timing of the learning experience during the residency training year)

Day 1: Preceptor will review EM learning activities and expectations with resident. Resident should come ready to discuss resident progress to date, areas of excellence and areas of improvement needed, and three

goals for rotation. Preceptor will orient resident to the unit, health care professionals, computer tracking program and workflow.

Week 1: Resident to work up approximately 1/3 of the team's patients and present to preceptor as interventions arise or at completion of triage workup. Resident will prioritize patient care based on acuity and may have to pass off patient care information to preceptor in order to participate in trauma resuscitation, brain attack work-up, sepsis resuscitation, etc. Preceptor to stay in unit and participate in work up and bedside attendance with resident, modeling pharmacist's role on the health care team.

Week 2: Resident to work up approximately half of the team's patients and present to preceptor as interventions arise or at completion of triage workup. Resident will prioritize patient care based on acuity and may have to pass off patient care information to preceptor in order to participate in trauma resuscitation, brain attack work-up, sepsis resuscitation, etc. Preceptor will stay in unit and coach the resident to take on more responsibility as the pharmacist on the team in the work up and bedside attendance. Preceptor to prompt other health care professionals to direct questions and needs to resident, but will intervene in the case of emergent care needed.

Weeks 3-4: Resident expected to work up all patients and independently intervene in a proactive manner without preceptor's confirmation for all decision making. Preceptor will be in the unit or available at all times through pager and/or personal phone. Preceptor will be close by in order to provide timely, direct feedback.

Excellent patient care prioritization, communication, and interpersonal skills are vital to success in this experience. The resident must devise efficient strategies for accomplishing the required activities in a limited time frame.

Project (optional)

An inservice may be given to nursing and/or EMT staff or to physicians/providers as an optional project for the PGY1 resident during their rotation.

This would be evaluated under **Objective R4.1.2 Use effective presentation and teaching skills to deliver education**. Teaching method: facilitation and coaching.

Typical Daily/Weekly Activities

Rotations are typically 4 weeks of day shift (0700-1530) or 4 weeks of swing shift (1430-2300) as determined by the availability of the preceptors.

Resident may attend Trauma Grand Rounds, Toxicology Case Conference, Brain Attack meetings as schedule permits

The ED can be a hectic environment. Having flexibility and good multi-tasking skills are vital during this rotation. Triage of competing demands is also essential.

Evaluations

The resident will receive daily oral feedback regarding their ongoing performance and improvement. Evaluations will be documented in PharmAcademic. At the midpoint of the rotation, the primary preceptor will evaluate the resident. At the end of the rotation, the resident will self-evaluate, the preceptor will evaluate the resident, and the resident will evaluate both the preceptor and the learning experience.

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