

University of Utah Hospital

Surgery and Trauma Rotation – PGY1 Residents

Preceptor and Supporting Pharmacist Staff:

- Daniel Lee, Pharm.D. – primary preceptor
- David Canann, Pharm.D. – primary preceptor

Duration: 4 weeks

Site Description:

The majority of patients on the General Surgery and Trauma patients will be the surgery floors, OTSS and SSTU. The Ortho & Trauma Surgical Specialty Unit (OTSS) is located on the 6th floor of the University of Utah Hospital and is a 41 bed unit. The majority of patients are under the care of the orthopedic surgery, trauma surgery, and general surgery teams.

The Surgical Specialty & Transplant Unit (SSTU) is located on the 5th floor of the University of Utah Hospital and is a 26 bed unit. The majority of patients are under the care of the general surgery, vascular surgery, trauma surgery, transplant surgery, and urology.

Rounds normally start around 8:00, but can vary due to the OR schedule and new traumas. 7 am to 3:30 pm, M-F, is the expected shift the residents will be on site.

Role of the Pharmacist:

The Clinical Pharmacist works up patients, completes medication reconciliation, provides new med education to patients, and rounds on floor patients (non-ICU) with the General Surgery/Trauma team daily. Pharmacists use primary literature and patient data to respond to drug information questions and make therapeutic recommendations. Pharmacists provide staff and patient education.

Rotation Description and Resident Expectations:

Residents will work with the Clinical Pharmacist to optimize care for the patients on the General Surgery/Trauma service. The resident will round on floor patients (non-ICU) with the General Surgery/Trauma team, but will also be responsible for patients on other services including orthopedic, plastic, urology, and transplant surgery teams.

The resident will spend time with multiple preceptors throughout the course of the rotation. Residents will discuss and present their patients to the preceptor and make appropriate adjustments to optimize patient care. Every Friday, the resident will lead a whiteboard discussion while they lead the topic discussion for preceptors.

Residents will also spend two days observing surgeries in the OR, and working with the OR Pharmacist. Trauma observation experience will also be available to the residents. University of Utah is a Level 1 Trauma Center, so there are many interesting learning experiences on the Trauma service.

There are two required presentations in addition to leading the white board discussions on Fridays. The resident will present a journal club article and a case presentation or inservice. Residents may be on rotation the same time as students providing opportunities for layered learning.

RLS Goals:

Acute-1 Rotation:

- R1.1 In collaboration with the health care team, provide safe and effective patient care to a diverse range of patients, including those with multiple co-morbidities, high-risk medication regimens, and multiple medications following a consistent patient care process.
 - OBJ R1.1.1 Interact effectively with health care teams to manage patients' medication therapy.
 - OBJ R1.1.2 Interact effectively with patients, family members, and caregivers.
 - OBJ R1.1.4 Analyze and assess information on which to base safe and effective medication therapy.
 - OBJ R1.1.5 Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans (care plans).
 - OBJ R1.1.7 Document direct patient care activities appropriately in the medical record or where appropriate.
 - OBJ R1.1.8 Demonstrate responsibility to patients.
- R1.2 Ensure continuity of care during patient transitions between care settings.
 - OBJ R1.2.1 Manage transitions of care effectively.
- R3.1 Demonstrate leadership skills.
 - OBJ R3.1.1 Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership.

Acute-2 Rotation:

- R1.1 In collaboration with the health care team, provide safe and effective patient care to a diverse range of patients, including those with multiple co-morbidities, high-risk medication regimens, and multiple medications following a consistent patient care process.
 - OBJ R1.1.1 Interact effectively with health care teams to manage patients' medication therapy.
 - OBJ R1.1.3 Collect information on which to base safe and effective medication therapy.
 - OBJ R1.1.6 Ensure implementation of therapeutic regimens and monitoring plans (care plans) by taking appropriate follow-up actions.
 - OBJ R1.1.8 Demonstrate responsibility to patients.
- R1.3 Prepare, dispense, and manage medications to support safe and effective drug therapy for patients.
 - OBJ R1.3.2 Manage aspects of the medication-use process related to formulary management.
- R3.1 Demonstrate leadership skills.
 - OBJ R3.1.2 Apply a process of on-going self-evaluation and personal performance improvement.
- R3.2 Demonstrate management skills.
 - OBJ R3.2.4 Manages one's own practice effectively.
- R4.1 Provide effective medication and practice-related education to patients, caregivers, health care professionals, students, and the public (individuals and groups).
 - OBJ R4.1.1 Design effective educational activities.

Objective Number (Level of Learning Required) & Description	Rotation Evaluated	Teaching Method(s)	Related Rotation Activities
R1.1 In collaboration with the health care team, provide safe and effective patient care to a diverse range of patients, including those with multiple co-morbidities, high-risk medication regimens, and multiple medications following a consistent patient care process.			
OBJ R1.1.1 Interact effectively with health care teams to manage patients' medication therapy.	Acute-1 Acute-2	Direct instruction Modeling Coaching Facilitation	-Round with team -Communicate appropriate recommendations for medication regimen changes or monitoring to various surgical teams -Work with case management on discharge to SNF patients

OBJ R1.1.2 Interact effectively with patients, family members, and caregivers.	Acute-1	Direct instruction Modeling Coaching Facilitation	-Talk with patient and family for medication histories, vaccine screening, and patient education
OBJ R1.1.3 Collect information on which to base safe and effective medication therapy.	Acute-2	Direct instruction Coaching Facilitation	<ul style="list-style-type: none"> - Review patient data daily to help guide clinical decision making - Review labs for electrolyte repletion, TPN modifications, medication implications - Interpretation of drug levels and dose adjustments
OBJ R1.1.4 Analyze and assess information on which to base safe and effective medication therapy.	Acute-1	Direct instruction Coaching Facilitation	<ul style="list-style-type: none"> - Review patient data daily to help guide clinical decision making and recommendations
OBJ R1.1.5 Design or redesign safe and effective patient-centered therapeutic regimens and monitoring plans (care plans).	Acute-1	Direct instruction Coaching Facilitation	<ul style="list-style-type: none"> - Customize plan due to patient specific data - Re-assess plan with new information, and adapt with regimen changes
OBJ R1.1.6 Ensure implementation of therapeutic regimens and monitoring plans (care plans) by taking appropriate follow-up actions.	Acute-2	Direct instruction Facilitation	<ul style="list-style-type: none"> - Ensure important changes get made through proper follow up and communication to surgery teams
OBJ R1.1.7 Document direct patient care activities appropriately in the medical record or where appropriate.	Acute-1	Direct instruction Modeling Coaching Facilitating	<ul style="list-style-type: none"> - Write daily pharmacy progress notes - Write Vancomycin monitoring progress notes - Document patient education as appropriate
OBJ R1.1.8 Demonstrate responsibility to patients.	Acute-1 Acute-2	Modeling Coaching Facilitation	<ul style="list-style-type: none"> - Take ownership for all patient care activities
R1.2 Ensure continuity of care during patient transitions between care settings.			
OBJ R1.2.1 Manage transitions of care effectively.	Acute-1	Direct instruction Modeling Coaching Facilitation	<ul style="list-style-type: none"> - Review discharge to SNF orders to ensure proper therapy and transition of care - Work with surgery teams and case management to optimize transition to SNF

			- Provide pass off information to other pharmacists
R1.3 Prepare, dispense, and manage medications to support safe and effective drug therapy for patients.			
OBJ R1.3.2 Manage aspects of the medication-use process related to formulary management.	Acute-2	Direct instruction Modeling Coaching Facilitation	- Assess non-formulary requests and take appropriate action - Use patient own med process when necessary - Use medication management policies to guide decision making
R3.1 Demonstrate leadership skills.			
OBJ R3.1.1 Demonstrate personal, interpersonal, and teamwork skills critical for effective leadership.	Acute-1	Direct instruction Modeling Coaching Facilitation	- Work effectively with all members of the multidisciplinary team to optimize patient care
OBJ R3.1.2 Apply a process of on-going self-evaluation and personal performance improvement.	Acute-2	Direct instruction Modeling Coaching Facilitation	- Confront areas of improvement and reassess progress frequently - Initiate discussions with preceptor to help guide feedback
R3.2 Demonstrate management skills.			
OBJ R3.2.4 Manages one's own practice effectively.	Acute-2	Direct instruction Modeling Coaching Facilitation	- Develop clinical practice based on different preceptors styles - Multitask effectively - Always take ownership of patient outcomes
R4.1 Provide effective medication and practice-related education to patients, caregivers, health care professionals, students, and the public (individuals and groups).			
OBJ R4.1.1 Design effective educational activities.	Acute-2	Direct instruction Modeling Coaching Facilitation	- Customize educational materials based on audience - Complete a staff In-service or case presentation

Expected Progression:

Time Frame	Resident Progression
Pre-Rotation and Day 1	<ul style="list-style-type: none"> - The resident should come ready to discuss resident progress to date, areas of excellence, areas of improvement needed, and three goals for the rotation. - The preceptor will orient the resident to the unit, health care professionals, and workflow. - The preceptor will review the rotation description, calendar, learning activities, projects, required and recommending reading material, and expectations with the resident.
Week 1	<ul style="list-style-type: none"> - The resident will present patients to the preceptor twice per day (briefly at 0830 and thoroughly after rounds each day). - The resident will discuss all interventions and reasoning with the preceptor prior to making recommendations to the team. - The resident will take into account each patient’s comorbidities, allergies, weight, laboratory values, vitals, renal function, hepatic function, and current medications prior to recommending changes to drug therapy. - The resident will prioritize patient care based on acuity. - The resident will interview patients and accurately document admission medication histories
Week 2	<ul style="list-style-type: none"> - The resident will demonstrate that information learned in the first week can be incorporated readily into their patient care. - The resident will complete or co-sign admission medication histories for all patients on the team without error. - The resident will provide and document anticoagulation education for all patients on the team. - The resident will provide personalized education on discharge medications for all patients on the team.
Week 3	<ul style="list-style-type: none"> - The resident will demonstrate that information learned in the first 2 weeks can be incorporated readily into their patient care. - The resident will strive to develop excellent written and verbal communication skills. - The resident will demonstrate efficiency at, and dedication to, completing patient care activities, rotation projects, and residency responsibilities. - The resident will identify and address all common therapy issues and begin to identify and address more complex therapy issues. - The team should be reaching out primarily to the resident to answer questions.
Week 4	<ul style="list-style-type: none"> - The resident will demonstrate that information learned in the first 3 weeks can be incorporated readily into their patient care.

	<ul style="list-style-type: none"> - The resident is expected to provide comprehensive pharmaceutical care to all patients on their service. - The resident should be independent at the practice site by the last day of rotation. - The resident will demonstrate understanding of all required surgery policies and procedures. - The resident will complete all Week 4 rotation assignments by the next to the last day of the week.
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****After the resident's first acute care rotation, it is expected that they will progress faster to achieve rotation milestones by 2-3 days for patient care activities.**

Daily Activities:

- Rounds with the General Surgery/ Trauma Team
- Gather patient data, workup patients, and make appropriate interventions
- Present patients to preceptor
- Answer questions from RNs, MDs, and other team members
- Write electronic progress and consult notes
- Patient education – anticoagulants, analgesia, new medications
- Topic discussions with preceptors
- Staff education
- Fill out med safety/error reports as necessary
- Research and Project participation
- Weekly whiteboard discussions
- DVT prophylaxis optimization
- Electrolyte abnormalities and replacement
- Antibiotic monitoring
- Renal adjustment of medications
- TPN Optimization
- Anticoagulation monitoring recommendations
- Analgesia recommendations and monitoring
- Conversions, IV to PO, PO to DHT, etc.
- Anti-emetics recommendations
- Home meds order corrections/optimization
- Timing of medication administration

List of Potential Topic Discussions/ Readings:

- Perioperative Medication Management
- Analgesia in the surgery/trauma population
- Warfarin Teaching and Enoxaparin Teaching
- VTE Prophylaxis
- HAP/CAP
- Bone and Joint Infections
- Acute Kidney Injury
- Bowel Regimens
- Solid Organ Transplant Overview
- Post-Op Ileus
- Stress Ulcer Prophylaxis

- Enteral Nutrition
- Urinary Tract Infections
- Pain Management, Part 1: Basics of Pain Management
- Pain Management, Part 2: epidurals, nerve blocks, etc
- ACLS Medications
- Rapid Sequence Intubation Medications
- Atrial Fibrillation
- Antibiotics and Allergies
- Anti-emetic therapy
- Parental Nutrition
- Post-Operative Diabetes Management
- Bone and Joint infections
- Heparin Induced Thrombocytopenia
- Intra-operative administration Tranexamic Acid in THAs and TKAs
- Warfarin vs Aspirin for Thromboprophylaxis in TKAs and THAs
- DAOC role in surgery population
- Methylnaltrexone and Naloxegol

Projects:

- In-service to Team Presentation or Case Presentation
 - To be decided by the student and approved by the preceptor
 - 10-15 minute presentation and a one page handout
- Journal Club Article
 - Resident's choice
 - Approved by preceptor
 - Presented to preceptors

Evaluation:

The resident will receive verbal feedback daily and weekly from the unit pharmacist/preceptor. There will be a formal midpoint and final evaluation. Since there are several preceptors, communication is key to smooth transitions and to optimize efficiency. Students are often on rotation the same time as residents (maximum of one student and one resident), giving residents the opportunity to precept and evaluate students.