

### **Surgical Medicine Rotation Learning Outcomes:**

Upon completion of the Surgical Medicine Rotation, the clinical year PA student will possess **the knowledge, clinical and technical skills, interpersonal skills, professional behaviors, clinical reasoning and problem-solving abilities** necessary to demonstrate entry-level proficiency through demonstration of the following:

To obtain the following RLO's, students will participate in the clinical care of surgical patients requiring assessment and management of acute and chronic general surgery conditions in adolescent, adult and geriatric populations.

1. Obtain a thorough surgically-focused history based on the patient's chief complaint or clinical presentation.
2. Perform a surgically-focused physical exam based on the patient's chief complaint.
3. Present relevant findings of the history and physical exam to the preceptor.
4. Develop an appropriate differential diagnosis for the presenting concern or clinical presentation.
5. Order and interpret laboratory and diagnostic studies indicated for the evaluation of patients in pre-operative or post-operative settings.
6. Describe the protocol for informed consent for a surgical procedure.
7. Demonstrate scrubbing technique, gowning and gloving, and sterile technique in the intra-operative setting.
8. Identify indications and conditions warranting emergent intervention by a general surgery service.
9. Participate in a pre-operative time-out procedure.
10. Observe, assist with and perform common procedures performed in the intra-operative setting, including suturing.
11. Document care of the patient for a general surgery encounter.
12. Develop post-operative treatment plans for patients, to include pharmacotherapy, lifestyle modification, rehabilitative care, non-pharmaceutical therapies, referral to specialists and patient education.
13. Communicate the discharge process to a patient hospitalized for surgery, with emphasis on transition of care and responsible pain management.
14. Provide education for patients and families regarding wound care, post-operative restrictions, and follow-up.
15. Assess a patient for common post-operative complications.
16. Demonstrate appropriate professional demeanor, ethics, and respect for patients, families, and healthcare team members.
17. Demonstrate respect for patient rights to individuality and privacy by treating confidential information with professional discretion.
18. Demonstrate appropriate response to feedback.

19. Demonstrate an ability to collaborate with other healthcare professionals to provide patient-focused care.

### **Instructional Objectives for Surgical Medicine**

**Under appropriate preceptor supervision, by the end of this rotation, the clinical PA student will be able to demonstrate knowledge and competence pertaining to each of the Instructional Objectives (IOs are observable actions or behaviors) listed below in patients of any age from birth to elderly and with acute, chronic, and/or emergent pre-op, intra-op, and post-op presentations:**

#### **History Taking and Physical Exam Skills: The student should be able to demonstrate competency in the following:**

1. Conducting surgically-focused interviews based on presenting complaints
2. Identifying pertinent historical information
3. Correlating current complaint with presented history and review of systems
4. Performing surgically-focused physical examinations
5. Performing physical exam techniques pertinent to the patient's chief complaint
6. Identifying normal and abnormal physical examination findings

#### **Developing a differential diagnosis: The student should be able to demonstrate competency in the following:**

1. Presenting to the preceptor the significant history as it relates to possible differential diagnosis
2. Presenting to the preceptor the significant physical exam findings as they relate to possible differential diagnosis
  - Demonstrating knowledge of the etiology, epidemiology, pathophysiology, anatomy, prognosis, and complications pertinent to each diagnosis commonly encountered in general surgery
3. Developing a differential diagnosis with consideration to the most likely diagnosis, the most common diagnosis, as well as the most severe and/or life threatening diagnosis

#### **Selecting and Interpreting Laboratory and Diagnostic Studies: The student should be able to demonstrate competency in the following:**

1. Identifying indication for initial and subsequent diagnostic or laboratory studies as they pertain to pre-operative and post-operative evaluation of patients
2. Selecting appropriate common screening tests for medical conditions encountered
3. Identifying cost effectiveness, benefits, contraindications, sensitivity and specificity, and informed consent for diagnostic studies or procedures.

4. Explaining risks associated with diagnostic studies or procedures to the patient, including informed consent process
5. Identifying normal and abnormal laboratory/diagnostic ranges and results for studies
6. Performing the lab and diagnostic studies safely and with appropriate technique
7. Interpreting results of lab and diagnostic studies correctly

**Developing, Documenting, and Executing an Assessment and Plan: Student should be able to demonstrate competency in the following:**

1. Correlating lab and diagnostic data to the differential diagnosis to help select the most likely diagnosis
2. Developing and documenting a surgical diagnosis and plan based on patient complaint
3. Participating in the OR as follows:
  - Scrubbing and gowning in surgical attire using and maintaining sterile technique
  - Identifying and describing use of commonly used surgical instruments and suture materials
  - Identifying the responsibilities of each member of the surgical team
  - Assisting in surgical procedures as directed by surgical preceptor
    - suturing and stapling
    - identifying management of surgical bleeding
  - Managing patients' status post-operatively in the recovery room
  - Providing care for post-operative patients to include
    - wound care and wound healing
    - identifying signs of post-operative infection
      - discuss the differential diagnosis and management of surgical wound infections
4. Documenting a surgical admission, pre-operative and post-operative focused note for each of the preoperative, intra-operative, postoperative encounters using a site-specific template
5. Documenting a pertinent pre-op and post-op pharmacologic management plan
6. Developing a discharge plan and documenting patient understanding to include:
  - wound care and management
  - pain management, with understanding of appropriate opioid stewardship
  - dietary management/restrictions
  - physical activity/work/school restrictions
  - warning signs/complications
  - pharmacologic and non-pharmacologic plan for outpatient follow up, including primary care and community resources
7. Providing and documenting patient counseling and education that is patient-centered, culturally sensitive and inclusive to ensure patient's understanding of the plan, including:

- Health prevention such as nutrition, safety, domestic violence screen, and substance use
- Physical activity and exercise modifications
- Necessary age-appropriate screenings and periodic health assessments
- Adjustments to lifestyle changes related to ADLs, physical/mental impairment, culture and diverse backgrounds, violence/assault/safety, rehabilitative care, palliative care, death and dying
- Attention to body, soul, and spirit with consideration of and sensitivity to patient's religious/spiritual beliefs, health practices, and lifestyle choices

**Developing and Documenting Pharmaceutical Therapeutics and Treatment Modalities: The student should be able to demonstrate competency in the following:**

1. Discussing rationale for utilization of each drug, be it in the pre-operative, intra-operative, or post-operative setting, with understanding of:
  - a. Mechanism of action
  - b. Indications for use
  - c. Contraindications
  - d. Side effects
  - e. Adverse reactions
  - f. Potential for drug-drug interactions
  - g. Therapeutic effects
  - h. Dosing
  - i. Cost-effectiveness
  - j. Drug toxicity
  - k. Identify risks for, and signs and symptoms of drug interactions from polypharmacy
  - l. Methods to reduce medication errors
  - m. Cross-reactivity of similar medications
2. Selecting appropriate pharmacologic therapy for medical conditions encountered
3. Reviewing patient's current pharmacologic regimens and adjusting as appropriate
4. Managing adverse drug reactions
5. Determining appropriate resources to determine appropriate medications
6. Documenting orders and prescriptions for treatment medications

**Applying Basic Science Concepts: The student should be able to demonstrate competency in the following:**

1. Identifying normal and abnormal human anatomy and physiology to correlate how it applies to surgical conditions encountered
2. Correlating pathophysiologic principles to specific disease processes
3. Correlating abnormal physical exam findings to a given disease process

4. Applying abnormal results of diagnostic tests to a given disease process

**Professionalism: The student should be able to demonstrate competency in the following:**

1. Demonstrating sensitivity to the emotional, social, and ethnic background of patients
2. Demonstrating respect for the privacy and confidentiality of each patient
3. Communicating and interacting professionally with other members of the healthcare team.
4. Identifying limitations and willingness to seek help from supervising preceptors, and referencing appropriate resources.
5. Demonstrating an openness to receiving constructive criticism
6. Initiating independent outside research concerning clinical cases encountered
7. Performing duties with a professional attitude in such areas as attendance, dress code, and demeanor