



## **University of Illinois, Metropolitan Group Hospitals Program in General Surgery**

**Rotation Title:** Colorectal Surgery - Lutheran General Hospital

**Level of Training:** PGY I, PGY V

**Faculty:** Dr. L. Prasad, Dr. J. Park, Dr. S. Marecik

### **Rotation Description:**

This service embodies the basic curriculum of colorectal surgery. This rotation gives the resident extensive exposure to various laparoscopic, Robotic, and open colorectal cases. Attached goals and objectives will be covered largely through patient exposure and through didactic interaction between you and the teaching faculty. You are expected to augment your education with self study and discussion covering all attached goals and objectives in the written curriculum for residents. It is encouraged to use all the attached references to further augment your education.

### **Assessment:**

Monitoring of the accomplishment of the stated objectives will be performed using the following methods:

1. 360 degree evaluation: End of rotation assessment of resident's performance with respect to the stated objectives by faculty, nurses, fellow residents, patients and medical students.
2. Case Logs: auditing of operative cases pertinent to the specialty in the

Surgical Operative Log.

3. Written Examination: Performance on the annual ABSITE examination, Gastrointestinal, Skin and Soft Tissue, thoracic and vascular systems section.

### **Surgical Skills Advancement:**

The resident will exhibit surgical performance skills based on the following guidelines:

1. By the end of the rotation, have completed (per necessity) the OSAT/OSCA for the following procedures:
  - a. PGY 1: Boot camp
  - b. PGY 5: Open and laparoscopic Colectomies, Colonoscopies

## **COMPETENCY-BASED LEARNING OBJECTIVES**

### **Patient Care**

1. Perform a complete and thorough history and physical exam with adjunctive studies.
2. Initiate the laboratory evaluation and any other initial diagnostic studies with an understanding of the tests to be ordered.
3. Make informed decisions about diagnostic and therapeutic interventions.
4. Be proficient in the preoperative preparation for surgery and routine postoperative care.
5. Understand basic pathophysiology pertinent to the colorectal surgical patient
6. Understand the basic indications for common radiological and interventional studies used in the care of the colorectal patients such as plain chest, CT scans, MRI's, Endorectal Ultrasound, Colonoscopies

## Medical knowledge:

### Junior Level:

1. Define the basic scientific principles of the alimentary tract and digestive system diseases to include:
  - a. Anatomy, embryology, and biochemistry of the gastrointestinal (GI) tract
    - (1). Embryologic development of primitive foregut and hindgut and its appendages, including normal rotation and fixation
    - (2). Histology of alimentary tract, including differentiation of cell types
    - (3). Anatomy of alimentary tract from esophagus to anus with emphasis on systemic blood supply, portal venous drainage, neural-endocrine axis, and lymphatic drainage
    - (4). Abdominal anatomy, explaining its relationship to lower thorax, retroperitoneum, and pelvic floor
    - (5). Mucosal transport, including mechanism of absorption of nutrients and water
    - (6). Sites of electrolyte and acid-base regulation
  - b. Normal bacterial flora and their concentrations in the upper and lower GI tract
  - c. Immunologic properties of the GI tract and how this barrier is affected by: trauma, sepsis, burns, malnutrition, and chronic disease
  - d. Principles of intestinal healing
    - (1). Normal GI tissue integrity and strength and how this relates to healing of anastomoses
    - (2). Effects of suturing and stapling techniques of the gut
2. Explain and give examples for the following aspects of gastrointestinal diseases:
  - a. Infections inside and outside the GI tract , including the peritoneum
  - b. Embryologic abnormalities of the GI tract, including:

- (1). Strictures
  - (2). Stenoses
  - (3). Volvulus
- 
- c. Congenital and acquired abnormalities of gut motility
  - d. Neoplasia of the GI tract
  - e. Ulceration of the proximal and distal GI tract
  - f. Causes of GI obstruction
  - g. Causes of paralytic ileus
  - h. Causes of GI hemorrhage
  - i. Causes of GI perforation
  - j. Causes of abdominal abscess formation or secondary peritonitis
  - k. Short gut and malabsorptive conditions
  - l. Acute and chronic mesenteric ischemia
  - m. Inflammatory bowel diseases
  - n. Causes of an acute abdomen
  - o. Management of intestinal ostomies
  - p. Traumatic injury to abdominal viscera

Senior Level:

2. Specify the pathophysiology of multisystem problems of the alimentary tract and digestive system, including neurohumoral and hormonal interactions.
3. Explain the physiologic rationale for the following gastrointestinal operations:
  - a. Small bowel resection with anastomosis
  - b. Ostomy formation
  - c. Resection of colon and rectal segments with nodes for tumors like right hemicolectomy, left hemicolectomy, low anterior resection, APR
  - d. Bypass of GI tract segments for resectable tumors
  - e. Drainage of abdominal and retroperitoneal abscesses (percutaneous vs. operative)
  - f. Various perianal surgeries including fistula management, hemorrhoids, pilonidal cysts
4. Detail the standard intraoperative techniques and alternatives associated with each of the above operations.

5. Explain the indications and contraindications for diagnostic and therapeutic colonoscopies.
6. Assess alternatives to surgical intervention in the management of complex diseases of the alimentary tract and digestive system such as:
  - a. Crohn's disease
  - b. Ulcerative colitis
  - c. Diverticulitits
  - d. Perianal fistulas
7. Summarize the preoperative, intraoperative, and postoperative management of complex diseases:
  - a. Re-operative abdomen
  - b. High output GI fistulas
  - c. Inflammatory bowel disease with strictures, pouches, ostomies, and perineal fistulas
  - d. Recurrent colon malignancy
  - e. Carcinomatosis

Junior level:

1. Evaluate emergency department or clinic patients who present with problems referable to the colorectal diseases
2. Serve as assistant to the primary surgeon during operations of the colon, and anorectum.
3. Perform less complicated surgical procedures such as:
  - a. Hemorrhoidectomy
  - b. Anal fissurectomy and fistulectomy
  - c. Incision and drainage of perirectal abscesses
4. Accept responsibility for (under the guidance of the chief resident and attending surgeon) the postoperative management of:
  - a. Nasogastric tubes
  - b. Intestinal tubes
  - c. Intra-abdominal drains
  - d. Intestinal fistulas
  - e. Abdominal incisions (simple and complicated)

5. Evaluate and manage nutritional needs (enteral and parenteral) of surgical patients until normal GI function returns.
6. Provide follow-up care to the surgical patient in the outpatient clinic or surgical office.

Senior Level:

1. Perform initial consultation for inpatients, develop differential diagnosis and initiate treatment plan.
2. Perform, under appropriate supervision, GI operations, including:
  - a. Small bowel resection with anastomosis
  - b. Drainage of abdominal and retroperitoneal abscesses
  - c. Lysis of adhesions
  - d. Repair of enterotomies
  - e. Colon resection
  - f. Creation of ostomies
3. Develop diagnostic and therapeutic endoscopy skills such as:
  - a. Endoscopic control of LGI bleeding
  - b. Diagnostic colonoscopy
  - c. Polypectomy

**Practice Based and Life Long Learning:**

1. Develop a personal program of self-study and professional growth with guidance from the teaching staff and senior residents. An understanding of the etiology, pathogenesis, pathophysiology, diagnosis and management of colorectal disorders will allow for sound surgical judgment, which relies on knowledge, rational thinking and the surgical literature.
2. Utilize current literature resources to obtain up-to-date in and practice evidence-based medicine.
3. Participate in teaching and organization of the educational weekly conferences.
4. Participate in activities of the Department of Surgery (including all teaching conferences) and assume responsibility for teaching and supervision of subordinate surgical house staff, and medical students.
5. Participate in the Department Morbidity & Mortality conference and utilize information to further improve patient care.

6. Participate in daily teaching rounds and be able to present patients in an organized and complete fashion
7. Topic of the day in the computerized life long learning portfolio

### **Professionalism:**

1. Practice compassionate patient care maintaining the highest moral and ethical values with a professional attitude.
2. Demonstrate understanding of the needs and feelings of others, including the patient's family members, allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.
3. Communicate and collaborate effectively in a team of health care providers
4. Demonstrate respect, compassion and integrity in the care of surgery patients on a daily basis
5. Demonstrate mature and educated approach to Ethical issues commonly encountered
6. Show sensitivity to patients' culture, age, gender and disabilities
7. Recognize and appropriately handle sensitive cases of abuse
8. Be self-aware and have knowledge of professional limits by practicing on-going medical education and self-improvement.
9. Be accountable to profession in their actions and decisions

### **Interpersonal Relationships And Communication:**

1. Create and sustain a therapeutic and ethically sound relationship with patients and patient families
2. Work effectively with other members of the medical team including allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.
3. Maintain professional interactions with other health care providers and hospital staff

### **Systems Based Practice:**

1. Understand how the health care organization affects surgical practice of colorectal surgery
2. Demonstrate cost effective health care

3. Be able to coordinate multi-specialty and multidisciplinary care practice including discharge planning, social service, rehabilitation, and long-term care
4. Follow established practices, procedures, and policies of the Department of Surgery and integrated and affiliated hospitals.
5. Maintain complete of medical records operative notes staff sheets and notes, patient database cards and other patient care related documentation in a timely, accurate and succinct manner.

### **READING MATERIALS:**

Educational materials which will function as guides for resident education during this course include but are not limited to:

1. The SCORE General Surgery Resident Curriculum Portal accessed at <https://portal.surgicalcore.org/home>
2. Schwartz's Principles of Surgery
3. Zollinger's Atlas of Surgical Operations
4. The Surgical Core Curriculum accessed via Access Surgery through the University of Illinois-Chicago website

### **OUTCOMES:**

Outcomes for the various goals and procedures in this curriculum will be assessed along the following standards:

1. Superior: the resident exhibits conceptual understanding beyond that which is described in this bulletin, and practice performance which is at a standard for a resident at a more advanced PGY year.
2. Above-Average: the resident has shown understanding and performance that is above what is expected for the rotation.
3. Competent: the resident exhibits conceptual understanding and practice based performance standards that are minimal, for the appropriate PGY year, for advancing towards surgical practice.
4. In Need of Remediation: the resident has failed to grasp the basic concepts and practices necessary to advance past this rotation for the PGY year, and shows need of repeating or training augmentation.

