



SURGICAL RESIDENT CURRICULUM FOR DIVISION OF GASTROINTESTINAL SURGERY (Including Endoscopy)

Residency years included:

PGY1 PGY2 PGY3 PGY4 PGY5 Fellow

I. Overview of Division of Gastrointestinal Surgery

The Division of Gastrointestinal Surgery is a clinically busy unit that provides surgical care for patients with gastrointestinal and general surgical diseases. Areas of special interest include pancreatic and biliary diseases, foregut diseases, morbid obesity, complex hernia, and colon and rectal diseases. Nearly 1200 operations are performed per year many of which are complex and referred for tertiary care. To accommodate this volume yet provide a focused resident experience the division is divided into two clinical units: 1. Foregut and Hernia; 2. Colorectal. The faculty of the Division includes Drs. Mark Koruda, Timothy Farrell, Hartwig Bunzendahl, Timothy Sadiq, Wayne Overby, and Reza Rahbar. Additionally, a rotating clinical instructor and GI research trainee may also participate in resident education.

Surgery resident education is a specific aim of the Division of Gastrointestinal Surgery. Each rotation currently includes residents from postgraduate years (PGY) I, II, IV, and V. This team of residents works cooperatively to provide preoperative, intraoperative, and postoperative care to the patient with gastrointestinal diseases. For the junior resident, special emphasis is placed on preoperative and postoperative management. Senior residents assist with the instruction of the junior residents and focus and the intraoperative care of the surgical patient. The primary goal of instruction is to nurture the development of each surgical resident such that he/she can function at a high level of competence as a general surgeon. Although the clinical focus of the service is gastrointestinal diseases, the ultimate goal of resident training is to train residents to function independently as a general surgeon within the framework of the clinic and hospital setting. Each resident must know and understand the six core competencies put forth by the Accreditation Council of Graduate Medical Education. The learning environment in the Division of Gastrointestinal Surgery will stress these core competencies and resident evaluation will be based on these principles.

For trainees who wish to have specialized training in gastrointestinal surgery, optional learning experiences include basic science laboratory investigation,

surgical research related to minimally invasive surgery, and advanced clinical training focusing on minimally invasive surgery and advanced open gastrointestinal surgery.

II. Core Competencies and Learning Objectives

- A. Patient care.
- B. Medical knowledge.
- C. Practice-based learning and improvement.
- D. Interpersonal and communication skills.
- E. Professionalism.
- F. Systems-based practice.

PGY I

1. Patient Care

- a. To gather and interpret essential and accurate information about the patient's health status.
- b. To do simple procedures including intravenous line placement, urinary catheter placement, central line placement, etc.
- c. To round on a daily basis on all hospitalized patients, performing a complete physical examination, acquiring an update on pertinent laboratory and radiological examinations, and compiling this information into a concise presentation to be made on morning rounds.
- d. To execute patient management plans.
- e. To counsel and educate patients and families.

2. Medical Knowledge

- a. To learn the principles of preoperative and postoperative management including fluid and electrolyte management, pain control, wound care, drain management, aftercare, enteral and parenteral nutrition, etc.
- b. To learn the basics of various gastrointestinal disease processes including their clinical presentation, pathophysiology, diagnostic workup, therapeutic management, and prognosis.

- c. To expand the resident's fund of knowledge from medical textbooks, journals, and electronic media.

3. Practice-Based Learning

- a. To participate in the education of medical students.
- b. To attend and participate in conferences.
- c. To develop, implement, and monitor a personal strategy for continued education.

4. Interpersonal and communication skills

- a. Obtain and synthesize relevant history from patients and family members.
- b. To communicate effectively with other housestaff, service attendings, other physicians, medical students, nurses and paramedical personnel.
- c. Convey appropriate information to patients, family members, and consulting physicians to achieve consensus on a therapeutic plan
- d. Dutifully maintain accurate, timely, and thorough medical records.

5. Professionalism

- a. To demonstrate compassion and integrity through respectful patient care, family interactions, and communication with other care providers.
- b. To function as a part of the larger health team environment by respecting the opinion of others.

6. System-based practice

- a. To understand when expert medical advice is necessary.
- b. To present new and interesting ideas using the latest technology to provide high-quality patient care and education.
- c. Provide thoughtful, cost effective care that does not compromise quality of care.
- d. Recognize the complexities of the health care system and assist and advocate for patients as they navigate it.

PGY II

1. Patient Care

- a. To gather and interpret essential and accurate information about the patient's health status.
- b. To do straight-forward surgical procedures such as hernia repair, gallbladder removal, line placement, etc. under supervision.
- c. To evaluate new patients and take new consultations, with the goal of identifying the major surgical problem and developing a plan for diagnosis and treatment.

2. Medical Knowledge

- a. To learn principles of care of the critically ill patient and function within the intensive care unit setting.
- b. To develop a practical understanding of common colon and rectal surgery diseases, their workup and management including:
 - (a) Anorectal
 - (i) Anorectal abscesses
 - (ii) Cryptoglandular fistula en ano
 - (iii) Internal/external hemorrhoids
 - (iv) Anal fissure
 - (v) Anal Crohn's disease
 - (vi) Rectovaginal fistula
 - (vii) Perineal hidradenitis suppurativa
 - (viii) Anal condyloma
 - (ix) Anorectal neoplasms
 - (x) Rectal prolapse
 - (xi) Fecal incontinence
 - (b) Abdominal
 - (i) Ulcerative Colitis
 - (ii) Crohn's disease
 - (iii) Colorectal cancer
 - (iv) Diverticulitis
 - (v) Colonic ischemia
 - (vi) Enterocutaneous fistula
 - (vii) Colovaginal fistula
 - (viii) Constipation
 - (ix) Intestinal volvulus
 - (x) Bowel obstruction

3. Practice-based Learning

- a. To participate in the education of medical students and interns.

- b. To attend and present at our gastrointestinal conferences.
- c. To develop, implement, and monitor a personal strategy for continued education.

4. Interpersonal and communication skills

- a. To communicate effectively with other housestaff, service attendings, other physicians, medical students, nurses and paramedical personnel.
- b. To demonstrate compassion and integrity through respectful patient care, family interactions, and communication with other care providers

5. Professionalism

- a. To demonstrate compassion and integrity through respectful patient care, family interactions, and communication with other care providers.

6. System-based Practice

- a. To understand when expert medical advice is necessary.
- b. To present new and interesting ideas using the latest technology to provide high-quality patient care and education.

PGY IV

1. Patient Care

- a. To gather and interpret essential and accurate information about the patient's health status.
- b. To evaluate new patients and take new consultations, with the goal of identifying the major surgical problem and developing a plan for diagnosis and treatment.

2. Medical Knowledge

- a. To learn the non-operative and operative management of gastrointestinal and general surgical diseases.
- b. Develop the technical competence to perform the following procedures:
 - (a) Anorectal
 - (i) Incision & drainage of perirectal abscess
 - (ii) Excision of thrombosed hemorrhoids
 - (iii) Rubber band ligation of internal hemorrhoids
 - (iv) Excisional hemorrhoidectomy

- (v) Anal fistulotomy/seton placement
- (vi) Anoplasty/advancement flap
- (vii) Lateral internal sphincteroplasty
- (viii) Anal sphincteroplasty
- (ix) Rectovaginal fistula repair
- (x) Excision/destruction of anal condyloma
- (xi) Trananal excision of anorectal neoplasms

(b) Abdominal

- (i) Segmental colectomy with anastomosis (laparoscopic and open)
- (ii) Intestinal stricturoplasty
- (iii) Hartmann resection
- (iv) Takedown of enterocutaneous fistulae
- (v) Colectomy with ileostomy
- (vi) Creation of enterostomies and colostomies (laparoscopic and open)
- (vii) Low anterior resection
- (viii) Proctocolectomy with ileal pouch-anal anastomosis
- (ix) Abdominoperineal resection
- (x) Mesh/suture rectopexy for rectal prolapse

3. *Practice-based learning*

- a. To expand the fund of knowledge primarily through journals and electronic media.
- b. To participate in medical student and junior resident education.
- c. To attend and present at conferences.
- d. To oversee the consult service and mentor the PGY-2.
- e. To develop, implement, and monitor a personal strategy for continued education.

4. *Interpersonal and communication skills*

- a. To demonstrate compassion and integrity through respectful patient care, family interactions, and communication with other care providers.
- b. To provide support for the chief resident.

5. *Professionalism*

- a. To assume a leadership role in communicating effectively with other housestaff, service attendings, other physicians, medical students, nurses and paramedical personnel.

- b. To understand when expert medical advice is necessary.
- 6. *System-based practice*
 - a. To function as a part of the larger health team environment by respecting the opinion of others.
 - b. To present new and interesting ideas using the latest technology to provide high-quality patient care and education.

PGY V

- 1. *Patient Care*
 - a. To gather and interpret essential and accurate information about the patient's health status.
 - b. To independently formulate a daily plan for each patient on the service
 - c. To be responsible and accountable for the care of patients on the service.
 - d. To formulate a plan for follow up care at the time of discharge.
- 2. *Medical Knowledge*
 - a. To learn and teach non-operative and operative management of gastrointestinal and general surgical diseases.
 - b. To perform and supervise gastrointestinal and general surgical procedures ranging from the straightforward to complex operations and assume responsibility and be accountable for patients' outcomes.
- 3. *Practice-based learning*
 - a. To develop a life-long, self-directed educational program that includes journal reading and electronic media and to disseminate this information to the health care team.
 - b. To lead the education of the medical students and residents and to attend and present at conferences.
- 4. *Interpersonal and communication skills*
 - a. To assume a leadership role in effective communication with housestaff, service attendings, other physicians, medical students, nurses, and paramedical personnel.
 - b. To assume the role of team leader and provide the appropriate balance of independence and oversight for each housestaff on their team.

- c. To demonstrate compassion and integrity through respectful patient care, family interactions, and communication with other care providers.
- d. To instruct medical students on presentation skills so that clinical information is clear and concise.

5. Professionalism

- a. To demonstrate compassion and integrity through respectful patient care, family interactions, and communication with other care providers.
- b. To recognize and manage the duty hour limits for each housestaff on their team.

6. System-based practice

- a. To understand when expert medical advice is necessary.
- b. To function as a part of the larger health team environment by respecting the opinion of others.
- c. To present new and interesting ideas using the latest technology to provide high-quality patient care and education.

III. Didactic Curriculum

- A. Weekly preoperative GI Surgery work conference (PGYs I, II, IV, V present cases for the upcoming week).
- B. Weekly combined GI Medicine/ GI Surgery Conference (PGYs II, IV, and V present once per rotation).
- C. Morbidity and mortality conference weekly.
- D. Laparoscopic Institute of North Carolina (LINC) conferences.
 - 1. Junior resident wet lab.
 - 2. Senior resident wet lab.
 - 3. Industry sponsored regional laparoscopic courses.
 - 4. Life after Residency Course.
 - 5. Resident as Teacher Conference.
- E. Review of classic journal articles.

IV. Apprenticeship Curriculum

Residents learn in a one:one or one:two fashion with faculty by participating in patient care activities.

- A. Preoperative and postoperative clinics.
- B. Operating room instruction.
- C. Tutorial session for residents presenting at conferences.
- D. Ward rounds.

- E. General surgical call fosters independence and effective telephone communication skills.
- F. Optional research including retrospective chart reviews, prospective studies, database outcomes analysis and laboratory investigation.

V. Evaluation

Residents are evaluated by the faculty. The senior residents participate in the evaluation of the junior residents. End-of-the-rotation faculty meetings assess the strengths and weaknesses of the residents. Evaluation forms are completed and the residents are encouraged to meet with the faculty at the conclusion of the rotation. Feedback is distributed during the rotation such that resident can address deficiencies. The faculty takes into account patient care, operative techniques, attitude and communication with others. The opinions of paramedical personnel, patients, families, and others are considered during the evaluation process. The residents are encouraged to provide feedback to the faculty regarding the strengths and weakness of the surgical experience on the Gastrointestinal Surgery service.