HEALTH SYSTEM
UNIVERSITY OF MICHIGAN

DEPARTMENT OF SURGERY

DIVISION OF COLORECTAL SURGERY

COLORECTAL SURGERY ROTATION
GENERAL SURGERY MAIZE (SGM)

University Hospital
East Ann Arbor Surgery Center

House Officer I
House Officer II
House Officer III
House Officer IV
House Officer V

Curriculum/Rotation Goals and
Objectives for Surgery Residents

Colorectal Surgery Service (Maize Service)

House Officer I

Goal: The goal of the HO I Colorectal Surgery rotation is to build on the resident's overall general surgical knowledge and operative experience. The focus is on learning to care for patients after colorectal operations and how to recognize surgical complications. This rotation will provide more concentrated exposure in colorectal surgery including benign anorectal diseases, colorectal and anal neoplasia, diverticulitis, inflammatory bowel disease, and pelvic floor disorders.

Learning Objectives:

Patient Care: By the end of the Colorectal Surgery rotation, the HO I resident will be able to:
1. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
2. Gather essential and accurate information about their patients
3. Suggest diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
4. Counsel and educate patients and their families, under the guidance and direction of senior residents and faculty
5. Use information technology effectively to support patient care decisions and patient education
6. Assist and perform portions of operative anorectal and office procedures
7. Collaborate with health care professionals, including those from other disciplines, to provide patient-focused care, with a particular attention to the multidisciplinary care of Colorectal Cancer and Inflammatory Bowel Disease and Pelvic Floor Dysfunction patients
8. Demonstrate safe, effective, and compassionate care for patients post-operatively who are having a normal post-operative course and be able to recognize and appropriately act when patients are having a complicated post-operative course

Medical Knowledge: By the end of the Colorectal Surgery rotation, the HO I resident will be able to:
1. Benign Anorectal Disease
a. List the physical exam and evaluation and classification of anorectal abscess and fistula b. List different medical and surgical therapies for acute anal pain and anal fissure. c. Describe the anatomy of the anal sphincter complex and classify anorectal abscesses and fistulae in relation to the sphincter and the anatomic spaces of the pelvic floor d. List the medical and surgical options for the management of acute and chronic anal fissure e. List the medical and surgical options for the management of bleeding, thrombosis, and prolapse from hemorrhoids. Distinguish between internal and external hemorrhoids and associated disorders
2. Colorectal and Anal Neoplasia
a. List the steps in the workup of a patient with newly diagnosed colon cancer. Describe the differences in the initial workup and management of cancers of the rectum versus colon b. List the tests used in workup of genetic colorectal cancer syndromes c. Describe the evaluation of anal masses, and the role of biopsy, excision, and simple

destruction procedures in the diagnosis and management of anal squamous neoplasia
d. List common post-operative complications. Discuss the surgical anatomy of the colon and rectum, its relation to the lymph node drainage of tumors, and the reasons for differences between surgical approaches to colon and rectal cancer
e. Classify the syndromes of genetic predisposition to colorectal cancer, and describe their inheritance patterns
f. Explain the role of HPV infection in the development of anal condyloma, dysplasia, and epidermoid cancer of the anus

3. Diverticulitis

a. List clinical and imaging characteristics of simple versus complicated diverticulitis
b. Describe the medical and non-operative management of acute diverticulitis and indications for urgent surgical intervention
c. List common post-operative complications
d. Describe the signs, symptoms, and imaging characteristics associated with acute, recurrent, and chronic diverticulitis

4. Inflammatory Bowel Disease

a. List the common indications for elective surgical resection in Crohn's disease versus ulcerative colitis
b. List the options for surgical resection and reconstruction in Crohn's disease versus ulcerative colitis
c. List reasons for increased risk of post-operative complications
d. Distinguish the clinical, anatomic, and histologic characteristics of Crohn's disease and ulcerative colitis
e. List the choices of acute and maintenance medical therapies for IBD in the inpatient and outpatient settings

5. Pelvic Floor

a. List the options for workup of constipation, including motility studies, ultrasound, MRI, colon transit, anorectal manometry
b. List treatment options for fecal incontinence, including bulking agents, constipating agents, injectables, biofeedback, sphincteroplasty, sacral nerve stimulator, artificial sphincter, fecal diversion
c. Describe the anatomy of the pelvic floor musculature and its neurovascular innervation, and the physiology of the anal sphincter complex
d. Classify the types of constipation (slow transit versus outlet obstruction), their etiologies (neurogenic, iatrogenic, idiopathic, etc.) and the options for laxative therapy

Systems-Based Practice:

By the end of the Colorectal Surgery rotation, the HO I resident will be able to:

1. Explain the role of systems in delivering optimal health care, including how "system problems" contribute to quality problems
2. Explain how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice
3. Explain how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources
4. Use and application of health care resources
    a. Demonstrate the appropriate ordering and completion of diagnostic and laboratory testing, in both urgent and non-urgent circumstances
    b. Request, obtain and utilize consultations appropriately
5. Advocate for quality patient care and assist patients in dealing with system complexities
    a. Collaboration with non-physician caregivers
    b. Demonstrate cooperative patient care with mid-level providers
    c. Describe the skills and roles of enterostomal therapists in the care of patients with intestinal stomas
    d. Describe the skills and roles of pelvic floor physical therapists in the management of

defecatory disorders
6. Collaborate with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance

Practice-Based Learning and Improvement: By the end of the Colorectal Surgery rotation, the HO I resident will be able to:
1. Demonstrate insight while self-evaluating performance
2. Incorporate feedback
3. Identify strengths, deficiencies, and limits in self-knowledge and expertise
4. Set learning and improvement goals in a manner that fosters productive self-directed learning and actively participate in quality improvement project(s)
5. Locate, appraise, and assimilate evidence from scientific studies pertinent to patients
6. Use technology to enhance patient care and self-improvement

Professionalism: By the end of the Colorectal Surgery rotation, the HO I resident will be able to:
1. Exhibit ethical and responsible behavior, including respect, compassion, honesty, and integrity, in all aspects of practice and scholarly activity Accountable to patients, society and the profession and acknowledges errors
2. Maintain responsibility for his or her own emotional, physical, and mental health, including fatigue awareness and avoidance, and commitment to lifelong learning and self-assessment
3. Demonstrate appropriate sensitivity to the colorectal surgery patient population, and understand how their needs may be different from other patients
4. Recognize the importance of timely record keeping and its impact on the quality of general surgery care
5. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices
6. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

Interpersonal and Communication Skills: By the end of the Colorectal Surgery rotation, the HO I resident will be able to:
1. Create and sustain a therapeutic and ethically sound relationship with patients
2. Demonstrate and employ effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills
3. Work effectively with others as a member or leader of a health care team or other professional group
4. Interview and evaluate the patient, especially the colorectal surgery patient

Colorectal Surgery Service (Maize Service)

House Officer II

Goal: The goal of HO II Colorectal Surgery rotation is to further build on the resident's overall surgical knowledge and operative experience. The focus is on learning to care for patients before and after colorectal surgery and how to recognize surgical complications. This rotation will provide more concentrated exposure in colorectal surgery including benign anorectal diseases, colorectal and anal neoplasia, diverticulitis, inflammatory bowel disease, and pelvic floor disorders. Residents will further their operative knowledge of anorectal procedures and begin to develop advanced laparoscopic and open skills for the treatment of colon and rectal diseases.

Learning Objectives:

Patient Care: By the end of the Colorectal Surgery rotation, the HO II resident will be able to:
1. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
2. Gather essential and accurate information about their patients
3. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
4. Counsel and educate patients and their families, under the guidance and direction of senior residents and faculty
5. Use information technology effectively to support patient care decisions and patient education
6. Perform with assistance operative anorectal and office procedures. Begin to assist with complex laparoscopic procedures such as right colectomy, ileocolic resection, and diverting colostomy
7. Collaborate with health care professionals, including those from other disciplines, to provide patient-focused care, with a particular attention to the multidisciplinary care of Colorectal Cancer and Inflammatory Bowel Disease and Pelvic Floor Dysfunction patients
8. Be able to appropriately care for patients post-operatively who are having a normal post-operative course and be able to recognize and appropriately act when patients are having a complicated post-operative course

Medical Knowledge: By the end of the Colorectal Surgery rotation, the HO II resident will be able to:
1. Benign Anorectal Disease
a. Apply principles of evaluation and workup to define candidates for medical versus surgical therapy for acute anal pain and anal fissure b. Discuss surgical options for treatment of anal fistula, based on classification in relation to the sphincter and the anatomic spaces of the pelvic floor c. Discuss the selection of medical versus surgical options for the management of acute and chronic anal fissure d. Discuss selection of treatment options for the management of bleeding, thrombosis, and prolapse from hemorrhoids. Distinguish between internal and external hemorrhoids and associated disorders
2. Colorectal and Anal Neoplasia
a. Describe the staging of and adjuvant therapy for locally advanced rectal cancer, and regionally metastatic colon cancer

b. Outline the testing and evaluation of patients with suspected genetic colorectal cancer syndromes
c. Describe the staging and prognosis of epidermoid cancers of the anus
d. Describe the operative options for patients with genetic colorectal cancer syndromes
e. Compare the approaches to locally controlled versus locally advanced rectal cancer, including the modalities of local staging, use of chemotherapy and radiation relative to surgery

3. Diverticulitis

a. Discuss indications for operative versus nonoperative management of acute simple and complicated diverticulitis
b. Summarize the evidence for and against elective colon resection for recurrent simple and complicated diverticulitis
c. Describe post-operative complications and their management.
d. Describe the Hinckey classification for staging acute diverticulitis and its implications for medical and surgical therapy
e. Describe the diagnostic workup for distinguishing diverticulitis from diseases that may mimic it -Crohn's colitis, colorectal cancer, ischemic colitis, or other diagnoses

4. Inflammatory Bowel Disease

a. Distinguish the clinical, anatomic, and histologic characteristics of Crohn's disease and ulcerative colitis
b. Describe the mechanisms of action of the acute and maintenance medical therapies for IBD in the inpatient and outpatient settings
c. List the choices of acute and maintenance medical therapies for IBD in the inpatient and outpatient settings
d. Discuss the operative resection and reconstruction procedures in Crohn's disease versus ulcerative colitis
e. Describe post-operative complications and their management

5. Pelvic Floor

a. List the options for workup of constipation, including motility studies, ultrasound, MRI, colon transit, anorectal manometry
b. List treatment options for fecal incontinence, including bulking agents, constipating agents, injectables, biofeedback, sphincteroplasty, sacral nerve stimulator, artificial sphincter, fecal diversion
c. Describe the anatomy of the pelvic floor musculature and its neurovascular innervation, and the physiology of the anal sphincter complex
d. Classify the types of constipation (slow transit versus outlet obstruction), their etiologies (neurogenic, iatrogenic, idiopathic, etc.) and the options for laxative therapy

Systems-Based Practice:

By the end of the Colorectal Surgery rotation, the HO II resident will be able to:

1. Explain the role of systems in delivering optimal health care, including how "system problems" contribute to quality problems
2. Explain how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice
3. Explain how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources
4. Use and application of health care resources
   a. Demonstrate the appropriate ordering and completion of diagnostic and laboratory testing, in both urgent and non-urgent circumstances
   b. Request, obtain and utilize consultations appropriately
5. Advocate for quality patient care and assist patients in dealing with system complexities
   a. Collaboration with non-physician caregivers
   b. Demonstrate cooperative patient care with mid-level providers
   c. Describe the skills and roles of enterostomal therapists in the care of patients with intestinal stomas

d. Describe the skills and roles of pelvic floor physical therapists in the management of defecatory disorders
6. Collaborate with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance

Practice-Based Learning and Improvement: By the end of the Colorectal Surgery rotation, the HO II resident will be able to:
1. Demonstrate insight when self-evaluating performance
2. Incorporate feedback
3. Identify strengths, deficiencies, and limits in self-knowledge and expertise
4. Set learning and improvement goals in a manner that fosters productive self-directed learning and actively participate in quality improvement project(s)
5. Locate, appraise, and assimilate evidence from scientific studies pertinent to patients
6. Use technology to enhance patient care and self-improvement

Professionalism: By the end of the Colorectal Surgery rotation, the HO II resident will be able to:
1. Exhibit ethical and responsible behavior, including respect, compassion, honesty, and integrity, in all aspects of practice and scholarly activity Accountable to patients, society and the profession and acknowledges errors
2. Maintain responsibility for his or her own emotional, physical, and mental health, including fatigue awareness and avoidance, and commitment to lifelong learning and self-assessment
3. Demonstrate appropriate sensitivity to the colorectal surgery patient population, and understand how their needs may be different from other patients
4. Recognize the importance of timely record keeping and its impact on the quality of general surgery care
5. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices
6. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

Interpersonal and Communication Skills: By the end of the Colorectal Surgery rotation, the HO II resident will be able to:
1. Create and sustain a therapeutic and ethically sound relationship with patients
2. Demonstrate and employ effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills
3. Work effectively with others as a member or leader of a health care team or other professional group
4. Interview and evaluate the patient, especially the colorectal surgery patient

Colorectal Surgery Service (Maize Service)

House Officer III

Goal: The goal of HO III Colorectal Surgery rotation is to further build on the resident's overall surgical knowledge and operative experience. The focus is on learning to care for patients before, during, and after colorectal surgery and how to recognize surgical complications. This rotation will provide more concentrated exposure in colorectal surgery including benign anorectal diseases, colorectal and anal neoplasia, diverticulitis, inflammatory bowel disease, and pelvic floor disorders. Residents will develop advanced laparoscopic and open skills for the treatment of colon and rectal diseases.

Learning Objectives:

Patient Care: By the end of the Colorectal Surgery rotation, the HO III resident will be able to:
1. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
2. Gather essential and accurate information about their patients
3. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
4. Counsel and educate patients and their families, under the guidance and direction of senior residents and faculty
5. Use information technology effectively to support patient care decisions and patient education
6. Perform with assistance operative anorectal and office procedures. Assist with complex laparoscopic procedures such as right colectomy, ileocolic resection, and diverting colostomy
7. Collaborate with health care professionals, including those from other disciplines, to provide patient-focused care, with a particular attention to the multidisciplinary care of Colorectal Cancer and Inflammatory Bowel Disease and Pelvic Floor Dysfunction patients
8. Be able to appropriately care for patients post-operatively who are having a normal post-operative course and be able to recognize and appropriately act when patients are having a complicated post-operative course

Medical Knowledge: By the end of the Colorectal Surgery rotation, the HO III resident will be able to:
1. Benign Anorectal Disease
a. Discuss physiology, anatomy, and pathogenesis of anal fissure, fistula, abscess, and hemorrhoid in the clinic and in the operating room and choose appropriate medical and surgical options for treatment b. Distinguish differences in anorectal pathology in patients with altered immune function: Crohn's, HIV, chronic immune suppression c. Identify anorectal processes requiring urgent treatment. d. Compare and contrast treatment options for disease progression and recurrence
2. Colorectal and Anal Neoplasia
a. Describe anatomy, pathogenesis, genetics, and staging of colon and rectal cancer b. Explain stage-based treatment and surveillance c. Demonstrates appropriate workup for patients with suspected genetic syndromes and treatment options for patients with genetic predisposition syndromes d. Select appropriate diagnostic tests and treatment of obstructing and near-

obstructing tumors
e. Explain rectal and anal cancer multimodal treatment for localized and advanced tumors
f. With assistance, identify the components of a TME
g. Formulate appropriate imaging strategies and interpret results

3. Diverticulitis

a. Discuss indications for operative versus nonoperative management of acute simple and complicated diverticulitis
b. Summarize the evidence for and against elective colon resection for recurrent simple and complicated diverticulitis
c. Appropriately recognizes when patients have failed medical management and need surgery
d. Recognize and manage post-operative complications
e. Formulate the diagnostic workup for distinguishing diverticulitis from diseases that may mimic it -Crohn's colitis, colorectal cancer, ischemic colitis, or other diagnoses

4. Inflammatory Bowel Disease

a. Distinguish the clinical, anatomic, and histologic characteristics of Crohn's disease and ulcerative colitis
b. Assess patients and formulate appropriate suggestions for acute and maintenance medical therapies for IBD in the inpatient and outpatient settings
c. Compare and contrast operative resection and reconstruction procedures in Crohn's disease versus ulcerative colitis
d. Explain post-operative complications and their management

5. Pelvic Floor

a. Demonstrate workup of constipation, including motility studies, ultrasound, MRI, colon transit, anorectal manometry
b. Select treatment options for fecal incontinence, including bulking agents, constipating agents, injectables, biofeedback, sphincteroplasty, sacral nerve stimulator, artificial sphincter, fecal diversion
c. Identify anatomy of the pelvic floor musculature and its neurovascular innervation, and the physiology of the anal sphincter complex
d. Discuss types of constipation (slow transit versus outlet obstruction), their etiologies (neurogenic, iatrogenic, idiopathic, etc.) and the options for laxative therapy
e. Discuss different surgical approaches to rectal prolapse, including abdominal and perineal operations, resections, rectopexy, with/without mesh

Systems-Based Practice:

By the end of the Colorectal Surgery rotation, the HO III resident will be able to:

1. Explain the role of systems in delivering optimal health care, including how "system problems" contribute to quality problems
2. Explain how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice
3. Explain how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources
4. Use and application of health care resources
   a. Demonstrate the appropriate ordering and completion of diagnostic and laboratory testing, in both urgent and non-urgent circumstances
   b. Request, obtain and utilize consultations appropriately
5. Advocate for quality patient care and assist patients in dealing with system complexities
   a. Collaboration with non-physician caregivers
   b. Demonstrate cooperative patient care with mid-level providers
   c. Describe the skills and roles of enterostomal therapists in the care of patients with intestinal stomas
   d. Describe the skills and roles of pelvic floor physical therapists in the management of defecatory disorders

6. Collaborate with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance

Practice-Based Learning and Improvement: By the end of the Colorectal Surgery rotation, the HO III resident will be able to:
1. Demonstrate insight when self-evaluating performance
2. Incorporate feedback
3. Identify strengths, deficiencies, and limits in self-knowledge and expertise
4. Set learning and improvement goals in a manner that fosters productive self-directed learning and actively participate in quality improvement project(s)
5. Locate, appraise, and assimilate evidence from scientific studies pertinent to patients
6. Use technology to enhance patient care and self-improvement

Professionalism: By the end of the Colorectal Surgery rotation, the HO III resident will be able to:
1. Exhibit ethical and responsible behavior, including respect, compassion, honesty, and integrity, in all aspects of practice and scholarly activity Accountable to patients, society and the profession and acknowledges errors
2. Maintain responsibility for his or her own emotional, physical, and mental health, including fatigue awareness and avoidance, and commitment to lifelong learning and self-assessment
3. Demonstrate appropriate sensitivity to the colorectal surgery patient population, and understand how their needs may be different from other patients
4. Recognize the importance of timely record keeping and its impact on the quality of general surgery care
5. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices
6. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

Interpersonal and Communication Skills: By the end of the Colorectal Surgery rotation, the HO III resident will be able to:
1. Create and sustain a therapeutic and ethically sound relationship with patients
2. Demonstrate and employ effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills
3. Work effectively with others as a member or leader of a health care team or other professional group
4. Interview and evaluate the patient, especially the colorectal surgery patient

Colorectal Surgery Service (Maize Service)

House Officer IV

Goal: The goal of HO IV Colorectal Surgery rotation is to further build on the resident's overall surgical knowledge and operative experience. The focus is on learning to care for patients before, during, and after colorectal surgery and how to recognize surgical complications. This rotation will provide more concentrated exposure in colorectal surgery including benign anorectal diseases, colorectal and anal neoplasia, diverticulitis, inflammatory bowel disease, and pelvic floor disorders. Residents will develop advanced laparoscopic and open skills for the treatment of colon and rectal diseases.

Learning Objectives:

Patient Care: By the end of the Colorectal Surgery rotation, the HO IV resident will be able to:
1. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
2. Gather essential and accurate information about their patients
3. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
4. Counsel and educate patients and their families, under the guidance and direction of senior residents and faculty
5. Use information technology effectively to support patient care decisions and patient education
6. Perform anorectal and office procedures. Assist with and perform with assistance complex laparoscopic and open procedures such as right colectomy, ileocolic resection, segmental and total colectomy, diverting colostomy, low anterior resection, TME, and APR
7. Collaborate with health care professionals, including those from other disciplines, to provide patient-focused care, with a particular attention to the multidisciplinary care of Colorectal Cancer and Inflammatory Bowel Disease and Pelvic Floor Dysfunction patients
8. Be able to appropriately care for patients post-operatively who are having a normal post-operative course and be able to recognize and appropriately act when patients are having a complicated post-operative course

Medical Knowledge: By the end of the Colorectal Surgery rotation, the HO IV resident will be able to:
1. Benign Anorectal Disease
a. Integrate physiology, anatomy, and pathogenesis of anal fissure, fistula, abscess, and hemorrhoid in the clinic and in the operating room and chooses appropriate medical and surgical options for treatment b. Distinguish differences in anorectal pathology in patients with altered immune function: Crohn's, HIV, chronic immune suppression c. Distinguish and justify urgent versus elective treatment of anorectal pathology. d. Discuss treatment options for disease progression and recurrence
2. Colorectal and Anal Neoplasia
a. Integrate anatomy, pathogenesis, genetics, and staging of colon and rectal cancer b. Distinguish and justify use of specific protocols for stage-based treatment and surveillance c. Explain and justify appropriate workup for patients with suspected genetic syndromes and treatment options for patients with genetic predisposition syndromes

d. Explain and justify appropriate diagnostic tests and treatment of obstructing and near-obstructing tumors
e. Explain and justify appropriate rectal and anal cancer multimodal treatment for localized and advanced tumors
f. Identify the components of a TME and able to list strategies for treating intra-operative pelvic bleeding
g. Formulate appropriate imaging strategies and interpret results.
h. Justify and distinguishes palliative versus curative management of advanced and recurrent cancers

3. Diverticulitis

a. Justify and distinguish indications for operative versus nonoperative management of acute simple and complicated diverticulitis
b. Summarize the evidence for and against elective colon resection for recurrent simple and complicated diverticulitis
c. Appropriately recognize when patients have failed medical management and recognize which surgical option is best when a patient need surgical intervention
d. Recognize and manage post-operative complications
e. Justify and distinguish the diagnostic workup for distinguishing diverticulitis from diseases that may mimic it - Crohn's colitis, colorectal cancer, ischemic colitis, or other diagnoses

4. Inflammatory Bowel Disease

a. Integrate the clinical, anatomic, and histologic characteristics of Crohn's disease and ulcerative colitis
b. Assess patients and formulate appropriate suggestions for acute and maintenance medical therapies for IBD in the inpatient and outpatient settings
c. Justify and distinguish the operative resection and reconstruction procedures in Crohn's disease versus ulcerative colitis
d. Recognize and treat post-operative complications and their management

5. Pelvic Floor

a. Integrate workup of constipation, including motility studies, ultrasound, MRI, colon transit, anorectal manometry
b. Formulate treatment options for fecal incontinence, including bulking agents, constipating agents, injectables, biofeedback, sphincteroplasty, sacral nerve stimulator, artificial sphincter, fecal diversion
c. Integrate the anatomy and physiology of the pelvic floor musculature and its neurovascular innervation, and the physiology of the anal sphincter complex
d. Distinguish the types of constipation (slow transit versus outlet obstruction), their etiologies (neurogenic, iatrogenic, idiopathic, etc.) and the options for laxative therapy
e. Identify different surgical approaches to rectal prolapse, including abdominal and perineal operations, resections, rectopexy, with/without mesh

Systems-Based Practice: By the end of the Colorectal Surgery rotation, the HO IV resident will be able to:
1. Explain the role of systems in delivering optimal health care, including how "system problems" contribute to quality problems
2. Explain how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice
3. Explain how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources
4. Use and application of health care resources a. Demonstrate the appropriate ordering and completion of diagnostic and laboratory testing, in both urgent and non-urgent circumstances b. Request, obtain and utilize consultations appropriately
5. Advocate for quality patient care and assist patients in dealing with system complexities a. Collaboration with non-physician caregivers b. Demonstrate cooperative patient care with mid-level providers c. Describe the skills and roles of enterostomal therapists in the care of patients with intestinal stomas d. Describe the skills and roles of pelvic floor physical therapists in the management of defecatory disorders
6. Collaborate with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance

Practice-Based Learning and Improvement: By the end of the Colorectal Surgery rotation, the HO IV resident will be able to:
1. Demonstrate insight while self-evaluating performance
2. Incorporate feedback
3. Identify strengths, deficiencies, and limits in self-knowledge and expertise
4. Set learning and improvement goals in a manner that fosters productive self-directed learning and actively participate in quality improvement project(s)
5. Locate, appraise, and assimilate evidence from scientific studies pertinent to patients
6. Use technology to enhance patient care and self-improvement

Professionalism: By the end of the Colorectal Surgery rotation, the HO IV resident will be able to:
1. Exhibit ethical and responsible behavior, including respect, compassion, honesty, and integrity, in all aspects of practice and scholarly activity accountable to patients, society and the profession and acknowledges errors
2. Maintain responsibility for his or her own emotional, physical, and mental health, including fatigue awareness and avoidance, and commitment to lifelong learning and self-assessment
3. Demonstrate appropriate sensitivity to the colorectal surgery patient population, and understand how their needs may be different from other patients
4. Recognize the importance of timely record keeping and its impact on the quality of general surgery care
5. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices
6. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

Interpersonal and Communication Skills: By the end of the Colorectal Surgery rotation, the HO IV resident will be able to:
1. Create and sustain a therapeutic and ethically sound relationship with patients
2. Demonstrate and employ effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills
3. Work effectively with others as a member or leader of a health care team or other professional group
4. Successfully lead the team of residents, medical students, and physician extenders to care for colorectal surgery patients
5. Interview and evaluate the patient, especially the colorectal surgery patient

Colorectal Surgery Service (Maize Service)

House Officer V

Goal: The goal of HO V Colorectal Surgery rotation is to further build on the resident's overall surgical knowledge and operative experience and to lead the team of residents, medical students and physician extenders. The focus is on learning to care for patients before, during, and after colorectal surgery and how to recognize surgical complications. This rotation will provide more concentrated exposure in colorectal surgery including benign anorectal diseases, colorectal and anal neoplasia, diverticulitis, inflammatory bowel disease, and pelvic floor disorders. Residents will develop advanced laparoscopic and open skills for the treatment of colon and rectal diseases.

Learning Objectives:

Patient Care: By the end of the Colorectal Surgery rotation, the HO V resident will be able to:
1. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
2. Gather essential and accurate information about their patients
3. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
4. Counsel and educate patients and their families, under the guidance and direction of senior residents and faculty
5. Use information technology effectively to support patient care decisions and patient education
6. Demonstrate proficiency as a teaching assistant for anorectal and office procedures. Perform with assistance complex laparoscopic and open procedures such as right colectomy, ileocolic resection, segmental and total colectomy, diverting colostomy, low anterior resection, TME, and APR
7. Collaborate with health care professionals, including those from other disciplines, to provide patient-focused care, with a particular attention to the multidisciplinary care of Colorectal Cancer and Inflammatory Bowel Disease and Pelvic Floor Dysfunction patients
8. Be able to appropriately care for patients post-operatively who are having a normal post-operative course and be able to recognize and appropriately act when patients are having a complicated post-operative course

Medical Knowledge: By the end of the Colorectal Surgery rotation, the HO V resident will be able to:
1. Benign Anorectal Disease
a. Integrate physiology, anatomy, and pathogenesis of anal fissure, fistula, abscess, and hemorrhoid in the clinic and in the operating room and chooses appropriate medical and surgical options for treatment b. Distinguish differences in anorectal pathology in patients with altered immune function: Crohn's, HIV, chronic immune suppression c. Distinguish and justify urgent versus elective treatment of anorectal pathology d. Demonstrate knowledge of treatment options for disease progression and recurrence e. Understand and discuss current controversies in disease incidence and therapeutic options
2. Colorectal and Anal Neoplasia

a. Integrate anatomy, pathogenesis, genetics, and staging of colon and rectal cancer
b. Distinguish and justify use of specific protocols for stage-based treatment and surveillance
c. Explain and justify appropriate workup for patients with suspected genetic syndromes and treatment options for patients with genetic predisposition syndromes
d. Explain and justify appropriate diagnostic tests and treatment of obstructing and near-obstructing tumors
e. Explain and justify appropriate rectal and anal cancer multimodal treatment for localized and advanced tumors
f. Identify the components of a TME and able to list strategies for treating intra-operative pelvic bleeding
g. Formulate appropriate imaging strategies and interpret results
h. Justify and distinguish palliative versus curative management of advanced and recurrent cancers

3. Diverticulitis

a. Justify and distinguish indications for operative versus nonoperative management of acute simple and complicated diverticulitis
b. Summarize the evidence for and against elective colon resection for recurrent simple and complicated diverticulitis
c. Appropriately recognize when patients have failed medical management and recognize which surgical option is best when a patient need surgical intervention
d. Recognize and manage post-operative complications
e. Justify and distinguish the diagnostic workup for distinguishing diverticulitis from diseases that may mimic it -Crohn's colitis, colorectal cancer, ischemic colitis, or other diagnoses

4. Inflammatory Bowel Disease

a. Integrate the clinical, anatomic, and histologic characteristics of Crohn's disease and ulcerative colitis
b. Assess patients and formulate appropriate suggestions for acute and maintenance medical therapies for IBD in the inpatient and outpatient settings
c. Justify and distinguish the operative resection and reconstruction procedures in Crohn's disease versus ulcerative colitis
d. Recognize and treat post-operative complications and their management
e. Discusses new and investigational strategies in the management of inflammatory bowel diseases

5. Pelvic Floor

a. Integrate workup of constipation, including motility studies, ultrasound, MRI, colon transit, anorectal manometry
b. Formulate treatment options for fecal incontinence, including bulking agents, constipating agents, injectables, biofeedback, sphincteroplasty, sacral nerve stimulator, artificial sphincter, fecal diversion
c. Integrate the anatomy and physiology of the pelvic floor musculature and its neurovascular innervation, and the physiology of the anal sphincter complex
d. Distinguish the types of constipation (slow transit versus outlet obstruction), their etiologies (neurogenic, iatrogenic, idiopathic, etc.) and the options for laxative therapy
e. Explain different surgical approaches to rectal prolapse, including abdominal and perineal operations, resections, rectopexy, with/without mesh

Systems-Based Practice:

By the end of the Colorectal Surgery rotation, the HO V resident will be able to:

1. Explain the role of systems in delivering optimal health care, including how "system problems" contribute to quality problems
2. Explain how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice
3. Explain how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources
4. Use and application of health care resources
    a. Demonstrate the appropriate ordering and completion of diagnostic and laboratory testing, in both urgent and non-urgent circumstances
    b. Request, obtain and utilize consultations appropriately
5. Advocate for quality patient care and assist patients in dealing with system complexities
    a. Collaboration with non-physician caregivers
    b. Demonstrate cooperative patient care with mid-level providers
    c. Describe the skills and roles of enterostomal therapists in the care of patients with intestinal stomas
    d. Describe the skills and roles of pelvic floor physical therapists in the management of defecatory disorders
6. Collaborate with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance

Practice-Based Learning and Improvement:

By the end of the Colorectal Surgery rotation, the HO V resident will be able to:

1. Demonstrate insight when self-evaluating performance
2. Incorporate feedback
3. Identify strengths, deficiencies, and limits in self-knowledge and expertise
4. Set learning and improvement goals in a manner that fosters productive self-directed learning and actively participate in quality improvement project(s)
5. Locate, appraise, and assimilate evidence from scientific studies pertinent to patients
6. Use technology to enhance patient care and self-improvement

Professionalism:

By the end of the Colorectal Surgery rotation, the HO V resident will be able to:

1. Exhibit ethical and responsible behavior, including respect, compassion, honesty, and integrity, in all aspects of practice and scholarly activity accountable to patients, society and the profession and acknowledges errors
2. Maintain responsibility for his or her own emotional, physical, and mental health, including fatigue awareness and avoidance, and commitment to lifelong learning and self-assessment
3. Demonstrate appropriate sensitivity to the colorectal surgery patient population, and understand how their needs may be different from other patients
4. Recognize the importance of timely record keeping and its impact on the quality of general surgery care
5. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices
6. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

Interpersonal and Communication Skills: By the end of the Colorectal Surgery rotation, the HO V resident will be able to:
1. Create and sustain a therapeutic and ethically sound relationship with patients
2. Demonstrate and employ effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills
3. Work effectively with others as a member or leader of a health care team or other professional group
4. Successfully lead the team of residents, medical students, and physician extenders to care for colorectal surgery patients
5. Interview and evaluate the patient, especially the colorectal surgery patient