BASIC SCIENCE OBJECTIVES

At the end of the Colorectal Surgery Residency the resident should be able to:

1. Describe the embryology of the small intestine, colon, rectum, and anus.

2. Describe the anatomy of the small intestine, colon, rectum and anus.

3. Describe the physiology of the small intestine, colon, rectum and anus.

4. Demonstrate understanding of the management of fluids and electrolytes in patients undergoing surgery of the intestine, colon, rectum, and anus.

5. Demonstrate understanding of applied pharmacology related to treatment of problems in the small intestine, colon, rectum and anus.

6. Demonstrate understanding of bacteriology related to the small intestine, colon, rectum and anus..

7. Demonstrate understanding of nutritional considerations in the management of diseases of the small intestine, colon, and rectum.

CLINICAL OBJECTIVES

At the end of the Colorectal Surgery Residency the resident should be able to demonstrate proficiency in:

1. Evaluating by clinical history and physical examination and prescribing treatment for patients with disorders of the lower gastrointestinal tract and anus

2. Evaluating and interpreting imaging studies of the bowel, including plain and contrast x-ray's, CT and MRI scans, ultrasound studies, angiography and radionucleotide scintigraphy, defecography and PET scans.

3. Planning and performing patient preparation prior to surgery and follow-up care of patients after surgery

4. Performing diagnostic and therapeutic endoscopies including anoscopy, rigid and flexible sigmoidoscopy, colonoscopy, polypectomy and stent placement

5. Performing anorectal surgery including common office procedures such as sclerotherapy, banding of hemorrhoids, excision of thromboses and drainage of abscesses.

6. Performing colonic and small bowel surgery using open and minimally invasive techniques.

7. Performing and evaluating ano-rectal physiology testing including defacography, intestinal transit studies, intra-rectal ultrasound, anal manometry and biofeedback.

8. Recogonizing and managing complications of colorectal diseases and surgery.

OBJECTIVES IN CLINICAL APPLICATION
DISEASE MANAGEMENT

The Colorectal resident will learn and understand basic science and clinical aspects of the following disorders:

Absorptive Disorders

Short Bowel
Choleric Diarrhea
Extra colonic diarrhea
Sprue
Irradiation

Anorectal Disorders

Abscess - acute (simple/complex)
- skin infections

Anal Complications in the immuno-suppressed patient
Fistula-in-ano (Simple/Complex)
Rectovaginal Fistula

Vascular Disease

Hemorrhoidal Disease
Rectal Varices

Veneral Disease

Condylomata acuminata
Gonorrhea
Syphilis

Lymphogranuloma Venereum

AIDS – HIV

Herpes

Sphincter Disorders - Incontinence

Idiopathic

Traumatic

Anal Stenosis

Miscellaneous

Pilonidal Disease

Procidentia

Pruritus

Trauma

- abdominal
- anorectal

Foreign Bodies

Congenital Malformation of the Colon

Atresia and Stenosis of the Colon

Imperforate Anus

Hirschsprung's Disease

Diverticular Disease

Diverticulitis

Abscesses

Fistulas

Obstruction

Bleeding

Fistulas

Small bowel

Large Bowel

Ano-rectal

Functional Disturbance

Irritable Colon

Chronic Constipation

Infectious Colitides

Bacterial / Mycotic

Salmonella	Brucella	Chlamydia
Shigella	Proteus	Campylobacter
Yersinia	Tuberculosis	Actinomycosis

Viral

CMV

HSV

Pseudomembraneous colitis - C-difficile

Parasitic Infections

Amebiasis	Balantidiasis	Trichuriasis
Enterobiasis	Ascariasis	Strongyloidiasis
Schistosomiasis	Giardiasis	

Inflammatory Bowel Disease

Mucosal Ulcerative Colitis

- Proctosigmoiditis vs. Pancolitis
- Acute Complications
- Chronic Complications

Crohn's Disease

- Small bowel
- Large Bowel
- Anal

Neoplastic Disease

Benign

- Adenomas
- Lymphoid hyperplasia
- Lipoma
- Leiomyoma
- Lymphangioma

Carcinoid

- Small bowel
- Appendiceal
- Large Bowel
- Rectal
- Metastatic

Epithelial

- Squamous / Basaloid
- Bowen's Disease
- Paget's Disease
- Mucoepidermoid
- Anal Gland
- Melanoma

Lymphomas

Malignant

- Primary (non-obstructive/obstructive)
- Secondary

Polypoid

- Polps - spontaneous
- Polyposis syndromes

Retrorectal Tumors

Sarcomas

Obstruction

- Mechanical
- Volvulus
- Pseudo-obstruction

Vascular Disease

Occlusive disease (small/large bowel)

- arterial
- venous
- ischemic colitis

Arterio-venous

- malformation - congenital and acquired

OBJECTIVES IN CLINICAL APPLICATION PROCEDURES

General Procedures

Hyperalimentation

- Total parenteral nutrition
- Element and special diets

Stomal Therapy

Chemotherapy - general concepts and current protocols

Radiation therapy - general concepts including: dose, time, fields.

Ano-rectal Procedures

Incision and drainage of abscess

Excision of thrombosed hemorrhoid

Sclerosis of internal hemorrhoids

Elastic ligation of internal hemorrhoids

Hemorrhoidectomy

Excision hypertrophied anal papilla

Anal fistulotomy (simple/complex)

Placement of setons

Anal sphincterotomy with or without fissurectomy

Botox therapy for fissures

Anoplasty (plastic operation for stricture)

Excision - Pilonidal cyst

Excision - Hidradenitis suppurativa

Treatment - condyloma acuminata

Transanal excision rectal tumors

Sphincter reconstruction – anterior overlapping

Sphincter reconstruction – post-anal repair

Ano-Vaginal Fistula repair

Rectal-Vaginal Fistula repair

Procedures for prolapse and hemorrhoids (PPH)

Endoscopic Procedures

Colonoscopic examination with polypectomy and biopsy and control of bleeding

Decompression of large bowel obstruction with stents

Decompression of volvulus

Proctosigmoidoscopy with rigid/flexible

Operative Procedures (Open and Laparscopic)

Right hemicolectomy with anastomosis

Left hemicolectomy with anastomosis

Sigmoid colectomy with colorectal anastomosis

Proctocolectomy with ileostomy

Proctocolectomy with ileoanal anastomosis, pelvic pouch procedure

Colectomy with ileorectal anastomosis

Subtotal colectomy with ileostomy

Anterior proctosigmoidectomy with colorectal anastomosis

(Stapled and Hand sewn)

Hartman's procedures

Abdominal-perineal proctosigmoidectomy - end colostomy

Pull-through coloanal anastomosis

Small bowel resection with anastomosis

Construction ileostomy (conventional/continent)

Construction colostomy

Colostomy construction, end/diverting

Colostomy closure

Colostomy relocation

Colostomy revision

Ileostomy, construction (end, loop, continent)

Ileostomy revision

Parastomal hernia repair

Lysis adhesions (bowel obstruction)

Procedures for procidentia

Cecostomy

Miscellaneous Procedures

Local Treatment of rectal cancer

Liver Biopsy - partial hepatectomy

Total abdominal hysterectomy/bilateral salpingo-oophorectomy

Colovaginal fistula

Colovesical fistulas

Interpersonal and Communication Skills:

Goal:
Residents will demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

Objectives:
The resident will demonstrate effective communication skills with patients and families across a broad range of socioeconomic and cultural backgrounds. They will communicate effectively with physicians, other health professionals and health related agencies. The resident will act in a collegial consultative role to other physicians and health professionals. The resident will demonstrate effective teaching skills with other residents and students.

Teaching Methods:

1. The faculty as role models and mentors
2. Workshop - teaching and evaluating communication skills involved with giving feedback, at the JMC Clinical Skills Center. (See letter Dr.Worzala.)
3. Teaching residents to teach review course
4. Communication and interpersonal skills course on the GME toolkit site

Assessment Methods:

1 Global evaluation by faculty
2 360 evaluations (patients, nurses, office staff, residents, students
3 Evaluation during workshop at "standardized student" stations (similar to standardized patients.)

Educational Resources:

1. Teaching Residents to teach review course; GME office
2. Communication and interpersonal skills course; GME toolkit site

Professionalism:

Goal:
Residents will behave in a professional manor and adhere to ethical principles. The resident will be reliable, honest, respectful, compassionate and altruistic.

Objectives

The resident will demonstrate respect for patients and their patient's families. They will exhibit respect for their peers, colleagues and other healthcare professionals. They will demonstrate sensitivity to diversity as pertains to race, color, religion and cultural background. They will complete medical records and consultations in a timely fashion. They will demonstrate altruism by doing the right thing for the right reason regardless of self cost or sacrifice

Teaching Methods:

1. Faculty as one on one role models and mentors
2. DVD on professionalism from Jefferson Medical College Clinical Skills Center (scenarios on impaired physician; abusive resident or attending; altering medical record; non- altruistic behavior
3. Review and discuss articles on professionalism(see list below) with PD.

Assessment Methods:

Professionalism will be evaluated on a continual basis throughout the year. The following methods will be used:

1. Global evaluation by faculty
2. 360 evaluations (office staff, nurses, students, residents and patients.)
3. OSCE on professionalism at the Jefferson Medical College Clinical Skills Center.

Educational Resources:

The following list are articles (medical and lay literature that will be used):

1. "In the Hospital, a Degrading Shift From Person to Patient", Benedict Carey, New York Times, August 16, 2005.
2. "Sick and Scared, and Waiting, Waiting, Waiting", Gina Kolata, New York Times, August 20, 2005.

3. “Approach to Routine Interactions with Industry: A Primer for Residents”, V. Arora, J Schneider, W Boden, H Humphrey, Semin Med Pract 2005;8: 55-63
4. “Dismembering the Ethical Physician”, Genuis S; Postgrad Med J 2006; 82:233-238.
5. “Doctors’ Delicate Balance in Keeping Hope Alive”, New York Times, Jan Hoffman, December 24, 2005
6. “Learning Words They Rarely Teach in Medical School: ‘I’m Sorry’”, Richard Friedman, July 26, 2005.

Practice-based Learning and Improvement:

Goal:

Residents will demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence and to continuously improve patient care and safety based on constant self-evaluation of outcomes and life long learning.

Objectives:

The resident will learn to identify strengths, deficiencies, and limits to his/her knowledge and expertise and then will implement a plan to correct deficiencies. Residents will locate, appraise and assimilate evidence from scientific studies related to their patients' health problems. The resident will analyze their practice experience and perform practice based improvement activities using systematic methodology. The resident will master information technology resources to manage information, access on-line medical information and support their own education. Residents will participate in the education of patients, families, students, residents and other health professionals. Residents will create and maintain a portfolio of projects.

Teaching Methods:

1. CARSEP will be taken by the resident early in the academic year in conjunction with other colorectal residencies.
2. Weekly M&M conference preparation and presentation using Jefferson Department of Surgery Template
3. Journal Club with faculty
4. Design and complete a practice improvement project
5. Review NSQIP reports for Colorectal Division
6. ACS Practice Based Learning System Case Log
7. Patient Safety/Risk Management Education Modules: Disclosure of Serious Events, Proactive Documentation and Learning From Closed Cases. (jeffline.jefferson.edu/jeffcme/)

Assessment methods:

1. Review of CARSEP and notification of score in relation to other programs
2. Discussion by Department of Surgery faculty at M&M conference
3. Global evaluation forms
4. Critique during journal club
5. Evaluation of practice improvement project by faculty
6. Review of resident portfolio

Educational Resources:

1. CARSEP from ASCRS
2. Journal articles to be chosen by resident each year
3. Patient Safety/Risk Management Education Modules: Disclosure of Serious Events, Proactive Documentation and Learning From Closed Cases. (jeffline.jefferson.edu/jeffcme/)

System-based Practice:

Goal:
The resident will demonstrate an awareness of and responsiveness to the larger system of health care, as well as the ability to call effectively on resources in the system to provide optimal healthcare.

Objectives:

The resident will learn to coordinate patient care within the Jefferson Healthcare system as well as related agencies necessary for the provision of optimal patient care.
The resident will incorporate cost awareness and risk-benefit analysis in patient care.
The importance of a team approach will be learned in all aspects of practice and patient care. The resident will participate in the identification of systems errors and the implementation of appropriate solutions.

Teaching Methods:

1. Faculty role models and mentors (division and department.)
2. Morbidity and mortality conference- systems and safety issues discussed
3. Meeting with office manager and billing department to discuss our interactions with insurance carriers as well as our billing practices.
4. GME Today Module on System Based Practice

Assessment Methods:

1. Global evaluation
2. M&M presentations and feedback
3. 360 evaluation
4. GME Today self assessment test

Educational Resources:

1. CPT book (current year)
2. GME Today Module on System Based Practice