ENDOSCOPY LEARNING OBJECTIVES

Preamble

General surgeons perform diagnostic and therapeutic endoscopic procedures in their surgical practices. These procedures are very helpful in screening, surveillance and preoperative planning.

The Endoscopy rotation provides the General Surgery resident a solid basis for further endoscopic experience on other rotations and for further training in more advanced endoscopic procedures after completion of training in General Surgery.

General Objectives

Upon completion of the Endoscopy rotation, the General Surgery resident is expected to:

- Demonstrate knowledge, technical skills and decision-making capabilities pertinent to the management of patients requiring **routine** upper and lower gastrointestinal endoscopy
- Understand the functioning of a gastrointestinal endoscopy unit

Specific Objectives

At the completion of the Endoscopy rotation, the General Surgery resident will have acquired the following competencies and will function effectively as:

**Medical Expert**

- Establish and maintain clinical knowledge, skills and attitudes appropriate to the Endoscopy rotation
  - Apply knowledge of the clinical, socio-behavioral and fundamental biomedical sciences relevant to the Endoscopy rotation

The resident in General Surgery is required to attain sufficient knowledge as follows:

**Basic/General Areas**
- Anatomy of the upper and lower GI tract, including:
  - Normal anatomy
  - Alteration with surgery
- Gastrointestinal Pathology
- The gastrointestinal endoscopy unit, including:
  - Organization
  - Functions
  - Personnel
- Principles of endoscopy, including:
  - Endoscopy basics
  - Endoscopy equipment, including:
    - Instrument technology
    - Accessories
    - Cleaning and disinfection
  - Indications
  - Contraindications
  - Diagnostic techniques
  - Therapeutic techniques
  - Complications
- Principles of conscious sedation

**Specific Disease Entities**
- Upper GI Problems requiring endoscopy, including:
  - Esophageal problems, including:
    - Gastroesophageal reflux disease, including:
      - Hiatus hernia
      - Schatzki’s ring
      - Esophagitis
      - Barrett’s esophagus
      - Strictures
    - Esophageal cancer
    - Esophageal varices
    - Ingested foreign body
- Gastric problems, including:
  - Peptic ulceration
  - Gastric erosions
  - Gastritis
  - Arteriovenous malformations
  - Watermelon stomach
  - Dieulafoy’s lesion
  - Gastric cancer
  - Gastric lymphoma/MALT lesions
  - Bezoars
  - H pylori, including:
    - Diagnosis
    - Treatment options
  - Gastric varices
  - Pyloric ulcer
  - Pyloric stenosis/stricture

- Duodenal problems, including:
  - Duodenal ulcer
  - Duodenitis
  - Arteriovenous malformations of the duodenum
  - Celiac disease

- Other problems, including:
  - Hemobilia
  - Aortoenteric fistula
  - Endoscopy for upper GI bleeding

- Lower GI problems requiring endoscopy, including:
  - Anorectal disorders, including:
    - Anal fissure
    - Anal carcinoma
    - Hemorrhoids
    - Inflammatory bowel disease
    - Solitary rectal ulcer
    - Rectal cancer

- Colonic disorders, including:
  - Colitis, including:
    - Infectious colitis
    - Inflammatory bowel disease
    - Ischemic colitis
  - Diverticular disease
  - Polyps
  - Colon cancer
  - IBS/motility disorders
  - Volvulus

- Ileal disorders, including:
  - Ileitis, including:
    - Crohn’s disease
    - Infectious ileitis
  - Neoplasms, including:
    - Carcinoid tumour

- Other problems, including:
  - Endoscopy for lower GI bleeding

**Perform a complete and appropriate assessment of the patient**
- Elicit a history that is relevant, concise and accurate
- Perform a focused physical examination that is relevant and accurate
- Select medically appropriate investigations in a resource-effective and ethical manner
- Demonstrate effective clinical problem solving and judgment to address the problems, including interpreting available data and integrating information to generate differential diagnoses and management plans

**Use preventive and therapeutic interventions effectively**
- Implement an effective and prioritized management plan for the patient
- Demonstrate effective, appropriate and timely application of therapeutic interventions relevant to the Endoscopy rotation
- Ensure appropriate informed consent is obtained for therapies

**Demonstrate proficient and appropriate use of procedural skills**
- Demonstrate effective, appropriate and timely performance of diagnostic procedures relevant to the Endoscopy rotation
- Demonstrate effective, appropriate and timely performance of therapeutic procedures relevant to the Endoscopy rotation
• Ensure appropriate informed consent is obtained for procedures
• Appropriately document and disseminate information related to procedures performed and their outcomes
• Ensure adequate follow-up is arranged for procedures performed
• Compile and maintain an accurate and complete electronic data base for all procedures performed on the Endoscopy rotation

Having completed the Endoscopy rotation, the General Surgery resident will be able to demonstrate knowledge and technical competence in performing the following procedures:
• Diagnostic upper gastrointestinal endoscopy/biopsy
• Diagnostic colonoscopy/biopsy
• Most colonoscopic polypectomies
• Flexible sigmoidoscopy
• Rigid sigmoidoscopy
• Hemorrhoid banding and ligation

• Seek appropriate consultation from other health professionals
  • Demonstrate insight into his/her own limitations of expertise by self-assessment
  • Demonstrate effective, appropriate and timely consultation of another health professional as needed for optimal care of the patient
  • Arrange appropriate follow-up care services for the patient

Communicator

At the completion of the Endoscopy rotation, the General Surgery resident will be able to:

• Develop rapport, trust and ethical therapeutic relationships with patients and families
  • Respect patient confidentiality, privacy and autonomy
  • Listen effectively

• Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues and other professionals
  • Seek out and synthesize relevant information from other sources such as the patient’s family, caregivers and other professionals

• Accurately convey relevant information and explanations to patients and families, colleagues and other professionals
  • Deliver information to the patient and family, colleagues and other professionals in a humane and understandable manner

• Convey effective oral and written information
  • Maintain clear, accurate, appropriate and timely records of clinical encounters and operative procedures involving the patients
  • Maintain an accurate, complete and up-to-date electronic database (log) of operative procedures performed during the Endoscopy rotation
  • Effectively present verbal reports of clinical encounters and medical information during the Endoscopy rotation

Collaborator

At the completion of the Endoscopy rotation, the General Surgery resident will be able to:

• Participate effectively and appropriately in an interprofessional healthcare team
  • Recognize and respect the diversity of roles, responsibilities and competences of other professionals in the management of the patient undergoing endoscopy
  • Work with others to assess, plan, provide and integrate care of the patient

Manager

At the completion of the Endoscopy rotation, the General Surgery resident will be able to:

• Manage his/her professional and personal activities effectively
  • Set priorities and manage time to balance professional responsibilities, outside activities and personal life
  • Employ information technology effectively (e.g. electronic surgical procedure database)

• Demonstrate an understanding of cost-effectiveness in patient management
  • Utilize hospital resources wisely when managing patients

• Serve in leadership roles, as appropriate
  • Participate effectively at teaching rounds and other meetings
Health Advocate

At the completion of the Endoscopy rotation, the General Surgery resident will be able to:

- **Respond to the needs of the patient**
  - Identify the health needs of an individual patient

Scholar

At the completion of the Endoscopy rotation, the General Surgery resident will be able to:

- **Maintain and enhance professional activities through ongoing learning**
  - Pose an appropriate learning question
  - Access and interpret the relevant evidence
  - Integrate new learning into development as a general surgeon
- **Critically evaluate medical information and its sources and apply this appropriately to clinical decisions**
  - Critically appraise the evidence in order to address a clinical question
  - Integrate critical appraisal conclusions into clinical care
- **Facilitate the learning of students and residents**
  - Provide effective feedback to faculty

Professional

At the completion of the Endoscopy rotation, the General Surgery resident will be able to:

- **Demonstrate a commitment to patients through ethical practice**
  - Exhibit appropriate professional behaviors, including honesty, integrity, commitment, compassion, respect and altruism
  - Appropriately manage conflicts of interest
  - Recognize the principles and limits of patient confidentiality
  - Maintain appropriate relations with patients
- **Demonstrate a commitment to physician health**
  - Balance personal and professional priorities
  - Strive to heighten personal and professional awareness and insight