**Medical Knowledge and Patient Care:**

Residents must demonstrate understanding of anatomy and physiology of the gastrointestinal tract, with particular focus on the esophagus, stomach, duodenum, and the colon. The physical relationship and attachments of these parts of the intestine to adjacent organs must be understood. Pre-procedure evaluation of a patient undergoing endoscopy is of paramount importance. The resident is expected to understand the indications and contraindications for endoscopic procedures, and to be able to choose the safest and most cost-effective procedure for a particular patient or disease process. The physical machinery, optics, and care of flexible and rigid endoscopes must be understood by the resident. The use of peri-procedural sedation, evaluation, and ASA guidelines are to be learned by the resident. The resident must be able to recognize, diagnose, and manage complications of endoscopic procedures, including perforation and hemorrhage.

**Disease-Based Learning Objectives:**

**Esophageal Neoplasms:**
1. Pathophysiology, presentation, and anatomy of esophageal cancers.
2. Workup and management of esophageal cancers, including obstruction and bleeding.
3. Endoscopic evaluation (including endoscopic ultrasound) of cancer.
4. Palliative options for esophageal cancers.

**Benign Esophageal Conditions:**
1. Pathophysiology of esophageal varices, webs, and diverticula.
3. Indications and contraindications to endoscopy for the above conditions.

**Gastric Neoplasms:**
1. Pathophysiology, presentation, and anatomy of gastric cancers.
2. Workup and management of gastric cancers, including upper gastrointestinal bleeding, obstruction, and perforation.
3. Endoscopic evaluation of gastric cancers.

**Duodenal and Gastric Ulcer:**
1. Pathophysiology of peptic and non-peptic ulcer disease.
2. Work up of ulcer disease, including neoplastic syndromes with ulcer presentation.
3. Endoscopic management of bleeding ulcers or other causes of upper gastrointestinal hemorrhage.
4. Post-procedure and medical management of ulcer disease.
Biliary and Pancreatic Disease:
1. Pathophysiology and anatomy of the biliary and pancreatic systems, stone disease, and neoplasia.
2. Workup and pre-procedure management of a patient with biliary or pancreatic duct obstruction.
3. Indications for Endoscopic Retrograde Cholangiopancreatography, and endoscopic management of obstructive disease.

Colonic Polyps and Cancer:
1. Pathophysiology and anatomy of colonic polyps and neoplasms, including polyposis syndromes.
2. Current colorectal cancer screening guidelines and modalities.
3. Workup and management of a patient with occult or overt gastrointestinal bleeding or obstruction.
4. Endoscopic management of colonic polyps and cancers.
5. Ultrasonographic evaluation of rectal cancers.
6. Indications for surgical intervention following polypectomy.

Lower Gastrointestinal Bleeding:
1. Pathophysiology of diverticular disease and vascular anomalies.
2. Pre-procedure management GI hemorrhage.
3. Endoscopic evaluation and management of sources of lower GI hemorrhage.

Inflammatory Bowel Disease:
1. Pathophysiology of ulcerative colitis and Crohn’s disease.
2. Indications for endoscopic evaluation and neoplastic surveillance for inflammatory bowel disease.
3. Endoscopic findings of inflammatory bowel disease.

Operations by Level:

PGY-2:
1. Rigid proctoscopy

PGY-3:
1. Flexible sigmoidoscopy

PGY-4 & 5:
1. Esophagogastroduodenoscopy
2. Colonoscopy

Assessment:
Monthly core-competency based evaluations are used by faculty to evaluate residents. Also collective faculty feedback is given semi-annually where all the attendings collectively discuss individual resident strengths and weaknesses, and ways for improvement.
Practice Based Learning:

Objectives:
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to develop skills and habits to be able to:

- Identify strengths, deficiencies and limits in one’s knowledge and expertise
- Set learning and improvement goals
- Incorporate formative evaluation feedback into daily practice
- Use information technology to optimize learning
- Systematically analyze practice, using quality improvement methods, and implement changes with the goal of practice improvement
- Locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems
- Participate in the education of patients, families, students, residents and other health professionals, as documented by evaluations of resident’s teaching abilities by faculty and/or learners

Teaching Methods:
Residents are encouraged to develop an individualized learning plan and are assigned a mentor to determine if those goals are being achieved. The mentor, along with program director/assistant program directors at the semi-annual review, guides residents to incorporate self-assessment and feedback of others as part of their learning portfolio. Residents also get departmental lectures on quality improvement methodology as well as online research tools available at the medical library. A monthly journal club is used to teach and promote use of evidence-based medicine principles. They also receive a departmental lecture on research methodology, and are encouraged to apply the principles of research methodology and statistical analysis to their own research projects. Case presentations by residents at Morbidity and Mortality conferences allow them to analyze practice, using evidence based medicine and quality improvement methods. Participation in an animal lab on a semi-annual basis, where residents practice and teach to junior residents, basic and advanced laparoscopic surgery in animal models, allows overall practice improvement.

Assessment:
Monthly core-competency based evaluations are used by faculty to evaluate residents. Also collective faculty feedback is given semi-annually where all the attendings collectively discuss individual resident strengths and weaknesses, and ways for improvement.
Systems Based Practice:

Objectives:
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Work effectively in various health care delivery settings and systems, including private offices of surgeons
- Coordinate patient care within the health care system
- Incorporate considerations of cost awareness and risk-benefit analysis in patient care
- Use system resources to advocate for quality patient care and optimal patient care systems
- Work in interprofessional teams to enhance patient safety and improve patient care quality
- Participate in identifying systems errors and in implementing potential systems solutions

Teaching Methods:
Residents get departmental lectures of health care finance and cost-effective resource allocation, as well as on different health care delivery systems to help understand the financial underpinnings of various insurance models. They also participate in discussion of medical errors or “near-miss” events at general surgical conferences. There is a lecture on patient safety and medical liability for residents to better understand provision of quality patient care.

Assessment:
Monthly core-competency based evaluations are used by faculty to evaluate residents. Also collective faculty feedback is given semi-annually where all the attendings collectively discuss individual resident strengths and weaknesses, and ways for improvement.

Professionalism:

Objectives:
Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

They must demonstrate:
- Compassion, integrity and respect for others, including accountability to patients and society, and professional commitment to excellence.
- Adherence to ethical principles by practicing patient-centered care that encompasses confidentiality, respect and autonomy via appropriate informed consent and shared decision making
- Cultural competence, by being sensitive and responsive to a diverse patient population as well as colleagues, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

**Teaching Methods:**
Professionalism is taught
- primarily during clinical experiences where residents observe and adopt the behavior of senior residents and faculty
- by assigning mentors who are positive role-models
- using departmental lectures at the Monday morning conferences (Schwartz lecture series) by a member of the hospital Ethics committee and risk management team
- giving an institutional lecture to the incoming intern class on cultural sensitivity and diversity.

**Assessment:**
A global 360 degree multi-rater evaluation is used to assess resident performance with respect to professionalism and interpersonal and communication skills. These are filled out anonymously by health care professionals, including nurses, and by their colleagues. The residents are also assessed at semiannual meetings, where they get collective faculty assessment and feedback about professionalism and interpersonal and communication skills, in addition to other competencies.

**Interpersonal and Communication Skills:**

**Objectives:**
Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families and professional associates. They must demonstrate that they can:
- Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds
- Communicate effectively with physicians, other health professionals, and health related agencies
- Work effectively as a member or leader of a health care team
- Maintain comprehensive, timely and legible medical records

**Teaching Methods:**
Interpersonal and communication skills are taught primarily during clinical experiences where residents observe the faculty and senior residents, and participate in, delivering bad news, holding family meetings to discuss ongoing care, educating patients and their families, and
resolving conflict. Also daily meetings of the junior residents with social workers and case managers, as well as conversations with consultants, refine the skill of communication with other health care professionals to provide better patient care. Communication with colleagues is encouraged by having a standardized method of hand-off between junior and senior residents to help reduce medical errors and promote continuity of care. The junior residents receive ongoing lectures from the chief residents to develop and refine the skill of seamless hand-off of patient care. The residents also get a lecture at the Schwartz lecture series about case management and documentation.

Scholarly communication is taught by having residents present cases and literature search at Morbidity and Mortality conferences, as well as General and Vascular Surgery conferences on Thursday and Friday mornings. These conferences help develop effective lecture and teaching skills, as they communicate effectively to their colleagues by presenting cases, associated complications and data, as well as teach the medical students. The residents are also given a talk on research methodology and opportunities, and are encouraged to present their scholarly work via presentations, abstracts, or publications.

Assessment:
A global 360 degree multi-rater evaluation is used to assess resident performance with respect to professionalism and interpersonal and communication skills. These are filled out anonymously by health care professionals, including nurses, and by their colleagues. The residents are also assessed at semiannual meetings, where they get collective faculty assessment and feedback about professionalism and interpersonal and communication skills, in addition to other competencies.