Rotation Specific Objectives: Gastroenterology

Residents will spend one block on Gastroenterology. This month will consist 1 week of clinics, 2 weeks on the consult service and one week of observation of complex endoscopic procedures. While on the consult service residents, when possible will follow the course of the patient from admission, to discharge and observe any diagnostic or therapeutic endoscopic procedures that pertain to the patient. The resident will not participate in GI call and will be able to cover general surgery call during this month. The primary focus will be on Gastroenterology problems, understanding the pathophysiology and management. Residents usually complete this rotation in Core of discipline.

Goals and Objectives

Core, TTP

a. *Knowledge*
   - Well organised understanding of gastrointestinal anatomy, pathology and pathophysiology (see as per specific RCPSC goals of training in General surgery)

b) *Attitudes*
   - Communicates effectively with patients and families, colleagues & allied health professionals
   - Professional behaviours (honesty, reliability, & confidentiality)

c) *Academics*

RC Competencies:

a) *MEDICAL EXPERT*

At the conclusion of the transition to practice the resident should meet all of the following objectives in spite of variations in rotation durations and resident exposure to gastroenterology.

1.4.1. **Surgical anatomy**, including arterial supply, venous and lymphatic drainage, and innervation of:
1.4.1.1. Esophagus, including relationships to other structures in the neck, mediastinum, and upper abdomen
1.4.1.2. Stomach and duodenum, including relationships to other structures in the abdomen
1.4.1.3. Small intestine, including relationships to other structures in the abdomen
1.4.1.4. Colon, including relationships to other structures in the abdomen, peritoneal attachments and anatomy of the retroperitoneum

1.4.1.5. Rectum and anus, including relationships to other structures in the pelvis and perineum, anal sphincter complex, pelvic floor musculature, and perirectal and perianal spaces
1.4.1.6. Liver and biliary tract, including relationships to other structures in the abdomen, and segmental anatomy of the liver, common variants of biliary anatomy, common variants of hepatic arterial supply and venous drainage, and the relationship of the portal and systemic circulations
1.4.1.7. Pancreas, including relationships to other structures in the abdomen, and gross anatomic divisions of the pancreas, ductal anatomy and its common variants

1.4.3. **Physiology** relevant to General Surgery, including:
Esophagus
1.4.3.1.1. Pharyngoesophageal function
1.4.3.1.2. Peristalsis
1.4.3.1.3. Lower esophageal sphincter function
1.4.3.1.4. Antireflux mechanisms
Stomach and Duodenum
1.4.3.2.1. Gastric acid secretion
1.4.3.2.2. Gastric emptying
1.4.3.2.3. Duodenal exocrine and endocrine function
1.4.3.3. Small intestine, including absorption of water, electrolytes, macronutrients, micronutrients, and trace elements
Colon
1.4.3.4. Colon, including fluid absorption and colonic motility
1.4.3.5. Fecal continence and defecation
Liver, biliary tract and pancreas
1.4.3.6.1. Liver blood flow, including imaging of blood flow and changes with regeneration
1.4.3.6.2. Bilirubin metabolism, including bile production, excretion, and enterohepatic circulation
1.4.3.6.3. Pancreatic endocrine function
1.4.3.6.4. Pancreatic exocrine function

1.4.6. **Principles of oncology** as it relates to the esophagus, stomach, small bowel colon, rectum and anus 1.4.6.1. Tumor biology 1.4.6.1.1. The cell cycle and normal regulatory mechanisms 1.4.6.1.2. Effects of radiation on the cell cycle 1.4.6.1.3. Mechanisms of action of systemic therapies, including targeted therapies, on the cell cycle 1.4.6.1.4. Cellular differentiation in normal, premalignant, and malignant tissues 1.4.6.1.5. Growth and dissemination patterns of cancer 1.4.6.2. Tumor genetics

1.4.6.2.1. Oncogenes and tumor suppressor genes 1.4.6.2.2. Role of genetic testing in suspected hereditary cancers 1.4.6.2.3. Common familial cancer syndromes and their genetic mechanisms 1.4.6.3. Cancer epidemiology, including incidence, prevalence, and risk factor. 1.4.6.4. Prevention of malignancy 1.4.6.4.1. Methods that can be used to protect against or limit the risk of malignancy, including environmental factors, medications, and vaccines 1.4.6.4.2. Definition and important attributes of a screening test, and malignancies for which there are effective screening tests 1.4.6.4.3. Role of prophylactic surgery in patients at high risk 1.4.6.5. Diagnostic tools to establish diagnosis and evaluate patients with cancer 1.4.6.5.1. Role of and the potential impact of molecular diagnostics on treatment, prognosis, and outcome 1.4.6.6. Cancer staging and risk stratification 1.4.6.7. Treatment of patients with malignancies 1.4.6.7.1. Surgical options in the diagnosis and staging, cure, prolongation of survival, improvement in quality of life, and/or palliation of malignancy 1.4.6.7.2. Principles of neoadjuvant, adjuvant and palliative therapies for malignancies, including chemotherapy, radiotherapy, immunotherapy, and hormonal therapy 1.4.6.7.3. Role of treatments that provide effective palliation, enhance prevention and decrease recurrence, and improve quality of life 1.4.6.8. Principles of a follow-up program for patients who have been treated for malignancy 1.4.6.9. Guidelines for management of malignancy

1.4.10. **Principles of endoscopy** 1.4.10.2. Potential risks and complications of endoscopic procedures for patient, operator, and assistant, and the measures appropriate to minimize such hazards 1.4.10.3. Infection control and sedation, as relevant to the endoscopy suite

1.4.11. **Principles of nutrition** 1.4.11.1. Normal requirements for calories, carbohydrates, fat, protein, vitamins, trace elements, and minerals 1.4.11.2. Nutritional assessment techniques 1.4.11.3. Effects of trauma and illness on nutritional requirements 1.4.11.4. Indications for enteral and parenteral nutrition supplementation and their potential complications

Perform a patient-centred clinical assessment in the area of gastrointestinal problems and establish a specific management plan

2.2 Elicit a history, perform a physical exam, select appropriate investigations, and interpret their results for the purpose of diagnosis and management, disease prevention, and health promotion 2.2.1. Gather a relevant clinical history 2.2.2. Identify and interpret the clinical significance of findings in a physical examination

2.2.4. Select appropriate methods to stage malignancies 2.2.5. Select and interpret medical imaging 2.2.5.1. Radiography 2.2.5.2. Ultrasonography 2.2.5.3. Computed tomography (CT) 2.2.5.4. Magnetic resonance imaging (MRI) 2.2.5.5. Nuclear imaging 2.2.5.6. Positron emission tomography (PET) 2.2.6. Interpret the clinical relevance of laboratory and pathology reports 2.2.7. Determine the indications for, and benefits and risks of surgical intervention for the clinical presentation 2.2.8. Assess peri-operative risk Establish goals of care in collaboration with patients and their families1 2.3. , which may include slowing disease progression, treating symptoms, achieving cure, improving function, and palliation 2.3.1. Identify opportunities for advance care planning discussions and explore the patient's values, wishes and preferences related to end-of life-care 2.3.1.1. Apply knowledge of settings for end-of-life care, including home, hospice, palliative care units, and hospital.

Establish a patient-centered management plan, including non-operative, preoperative, operative, and postoperative care for patients with the following conditions:

Esophagus
2.4.1. Anatomic abnormalities, including esophageal diverticula and hiatus hernia
2.4.2. Gastroesophageal reflux disease and its complications, including Barrett's esophagus
2.4.3. Infectious and inflammatory conditions, including eosinophilic esophagitis
2.4.4. Injuries, including perforation, trauma, and caustic exposure
2.4.5. Neoplasms of the esophagus, including benign and malignant
2.4.6. Obstruction, including foreign bodies and strictures
2.4.7.Pharyngoesophageal motility disorders
Stomach and Duodenum
2.4.8 Gastric foreign bodies
2.4.9 Neoplasms of the stomach, including benign and malignant
2.4.10 Neoplasms of the duodenum, including benign and malignant
2.4.11 Peptic ulcer disease and its complications, including hemorrhage, perforation, and obstruction2.4.11.1.Long-term complications after peptic ulcer surgery
2.4.12. Stress gastritis
2.4.13. Vascular compression of the duodenum
Small intestine
2.4.14. Inflammatory conditions, including Crohn's disease, neutropenic enteritis, and radiation enteritis

2.4.15. Ischemia, including acute and chronic
2.4.16.Benign and malignant neoplasms including,
Adenocarcinoma Carcinomatosis
Gastrointestinal (GI) stromal tumours Lymphoma
Neuroendocrine tumours Metastases from other sites
2.4.18 Other conditions, including infectious diseases, hemorrhage, foreign bodies and short bowel syndrome
Colon
2.4.22. Diverticular disease and its complications
2.4.23. Hemorrhage
2.4.24. Infectious conditions, including conditions caused by Clostridium difficile and cytomegalovirus
2.4.25. Inflammatory conditions, including neutropenic colitis, radiation colitis, and inflammatory bowel diseases including Crohn's disease, ulcerative colitis, and microscopic colitis (indications for each operation, mamament of fulminant colitis)
2.4.26. Ischemia, including occlusive and non-occlusive disease
2.4.27. Motility disorders, including irritable bowel syndrome, colonic inertia, and acute and chronic pseudo-obstruction
2.4.28. Neoplasms, including benign and malignant (to include tumours of the appendix, colon, rectum, anus, omentum, desmoid tumors, retropritoneal fibrosis and retroperitoneal tumors)
2.4.28.1. Sporadic cancer, including mechanism and adenoma-to-carcinoma sequence 2.4.28.2. Familial cancer, including familial adenomatous polyposis (FAP), hereditary nonpolyposis colorectal cancer (HNPCC), and other polyposis syndromes
2.4.29. Obstruction
2.4.30. Perforation Rectum and anus
2.4.31. Rectal conditions
2.4.31.1. Fecal incontinence (Constipation-Work-up, Diagnostic tests, Medical and Surgical ManagementIncontinence-Work-up, Diagnostic tests, Medical and surgical management Manometry and special investigations Understand the principles of manometry and normal values anorectal applications Define EMG and the role in investigation of incontinence. Understand the application of defecography)
2.4.31.2. Neoplasms, including benign and malignant
2.4.31.3. Obstructed defecation
2.4.31.4. Proctitis, including due to ulcerative colitis, radiation, and sexually transmitted infection
2.4.31.5. Rectal prolapse, rectocele
2.4.31.6. Rectovaginal fistula

2.4.32. Anal and perianal conditions
2.4.32.1. Abscess
2.4.32.2. Anal fissure, including acute and chronic
2.4.32.3. Condyloma
2.4.32.4. Fistula
2.4.32.5. Hemorrhoids
2.4.32.6. Neoplasms of the anal canal and perianal skin
2.4.32.7. Pruritus ani
Liver
2.4.33. Acute liver failure, including referral for transplantation if indicated
2.4.34. Infections, including viral, bacterial, and parasitic
2.4.35. Liver cysts, including benign (simple and complex), and malignant
2.4.36. Portal hypertension
2.4.37.Neoplasms, including benign and malignant
Biliary tract
2.4.38. Benign inflammatory processes
2.4.39. Biliary obstruction and its complications
2.4.41. Neoplasms, including benign and malignant
2.4.42. Stone formation and complications
Pancreas
2.4.43. Cystic lesions, including inflammatory, infectious, and neoplastic
2.4.44. Neoplasms, including benign and malignant
2.4.45. Pancreatitis, including local and systemic complications

i) **Plan and perform procedures and therapies for the purpose of assessment and/or management**

3.1.2. Screening and surveillance for
3.1.8. Endoscopy 3.1.8.1. Appropriate monitoring of patients undergoing upper GI endoscopy or colonoscopy 3.1.8.2. Use of medications to facilitate endoscopic procedures, including sedatives, narcotic analgesics, and antispasmodic medications
3.2. Obtain and document informed consent, explaining the risks and benefits of, and the rationale for, a proposed procedure or therapy 3.2.1. Recognize and address challenges arising in emergency situations and when patient capacity to provide consent is limited
3.3. Prioritize procedures or therapies, taking into account clinical urgency and available resources 3.3.1. Triage patients appropriately for emergent, urgent or elective care and interventions 3.3.2. Select patients appropriately for intraoperative pathology consultations
3.4. Perform procedures in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances

ii) **Diagnostic Procedures and technical skills specific to gastroenterology**

Paracentesis

3.4.1 Liver biopsy

b) COMMUNICATOR

Establish professional therapeutic relationships with patients and their families

1.1. Communicate using a patient-centred approach that encourages patient trust and autonomy and is characterized by empathy, respect, and compassion
1.2. Optimize the physical environment for patient comfort, dignity, privacy, engagement, and safety
1.3. Recognize when the perspectives values or biases of patients, patients' families, physicians, or other health care professionals may have an impact on the quality of care, and modify the approach to the patient accordingly
1.4. Respond to a patient's non-verbal behaviours to enhance communication
1.5. Manage disagreements and emotionally charged conversations
1.5.1. Discuss autopsy and organ donation when appropriate
1.6. Adapt to the unique needs and preferences of each patient and to his or her clinical condition and circumstances 1.6.1 Apply a proactive approach to managing patient expectations and needs through the course of their illness

Elicit and synthesize accurate and relevant information, incorporating the perspectives of patients and their families

2.1 Use patient-centred interviewing skills to effectively gather relevant biomedical and psychosocial information
2.2 Provide a clear structure for and manage the flow of an entire patient encounter
2.2.1 Gather information accurately and effectively under time constraints
2.3 Seek and synthesize relevant information from other sources, including the.patient's family, with the patient's consent

Share health care information and plans with patients and their families

3.1 Share information and explanations that are clear, accurate, and timely, while assessing for patient and family understanding 3.1.1 Convey treatment options, including operative, nonoperative, interventional radiology, and endoscopic measures

Engage patients and their families in developing plans that reflect the patient's health care needs and goals

4.1. Facilitate discussions with patients and their families in a way that is respectful, non-judgmental, and culturally safe

4.2 Assist patients and their families to identify, access, and make use of information.and communication technologies to support their care and manage their health

4.3. Use communication skills and strategies that help patients and their families make informed decisions regarding their health

Document and share written and electronic information about the medical encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy

5.1 Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements management

5.2 Communicate effectively using a written health record, electronic medical record,.or other digital technology

5.3. Share information with patients and others in a manner that enhances understanding and that respects patient privacy and confidentiality

COLLABORATOR

Work effectively with physicians and other colleagues in the health care professions

1.1 Establish and maintain positive relationships with physicians and other colleagues.in the health care professions to support relationship-centred collaborative care

1.2. Negotiate overlapping and shared responsibilities with physicians and other colleagues in the health care professions in episodic and ongoing care

1.3 Engage in respectful shared decision-making with physicians and other colleagues.in the health care professions

Work with physicians and other colleagues in the health care professions to promote understanding, manage differences, and resolve conflicts

2.1. Show respect toward collaborators

2.2. Implement strategies to promote understanding, manage differences, and resolve conflict in a manner that supports a collaborative culture

Hand over the care of a patient to another health care professional to facilitate continuity of safe patient care

3.1. Determine when care should be transferred to another physician or health care professional

3.2. Demonstrate safe handover of care, using both oral and written communication, during a patient transition to a different health care professional, setting, or stage of care

Leader

Contribute to the improvement of health care delivery in teams, organizations, and systems

1.1 Apply the science of quality improvement to systems of patient care

1.1.1 Demonstrate awareness of guidelines for reporting surgical results

1.1 Contribute to a culture that promotes patient safety

1.3 Analyze patient safety incidents to enhance systems of care

1.3.1 Participate in reviews of patient complications and deaths

1.4 Use health informatics to improve the quality of patient care and optimize patient safety

Engage in the stewardship of health care resources

2.1 Allocate health care resources for optimal patient care

2.2 Apply evidence and management processes to achieve cost-appropriate care

2.2.1 Recognize the responsibility to forgo treatments that are futile

Demonstrate leadership in professional practice

3.1 Demonstrate leadership skills to enhance health care

3.2 Facilitate change in health care to enhance services and outcomes

Manage career planning, finances, and health human resources in a practice

4.1 Set priorities and manage time to integrate practice and personal

4.2 Manage personal professional practice(s) and career

4.3 Implement processes to ensure personal practice improvement

4.3.1 Maintain an electronic record of operative procedures performed, including treatment complications and surgical complications as a source of reflection on performance and stimulus for personal practice improvement

Health Advocate

Respond to an individual patient's health needs by advocating with the patient within and beyond the clinical environment

1.1 Work with patients to address determinants of health that affect them and their access to needed health services or resources

1.2 Work with patients and their families to increase opportunities to adopt healthy behaviours
1.3 Incorporate disease prevention, health promotion, and health surveillance into interactions with individual patients

Respond to the needs of the communities or populations they serve by advocating with them for system-level change in a socially accountable manner

2.1 Work with a community or population to identify the determinants of health.affect them
2.2 Improve clinical practice by applying a process of continuous quality improvement 2.2.to disease prevention, health promotion, and health surveillance activities
2.3 Contribute to a process to improve health in the community or population they serve
2.3.2 Promote organ donation

Scholar

Engage in the continuous enhancement of their professional activities through ongoing learning

1.1 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice
1.2. Identify opportunities for learning and improvement by regularly reflecting on and assessing their performance using various internal and external data sources
1.3. Engage in collaborative learning to continuously improve personal practice and contribute to collective improvements in practice

Teach students, residents, the public, and other health care professionals

2.1. Recognize the influence of role-modelling and the impact of the formal, informal, and hidden curriculum on learners
2.2. Promote a safe learning environment
2.3. Ensure patient safety is maintained when learners are involved
2.4. Plan and deliver learning activities
2.5. Provide feedback to enhance learning and performance
2.6. Assess and evaluate learners, teachers, and programs in an educationally appropriate manner

3.Integrate best available evidence into practice

3.1. Recognize practice uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that can address them
3.2. Identify, select, and navigate pre-appraised resources

3.3. Critically evaluate the integrity, reliability, and applicability of health-related research and literature
3.4. Integrate evidence into decision-making in their practice

Professional

Demonstrate a commitment to patients by applying best practices and adhering to high ethical standards

1.1 Exhibit appropriate professional behaviours and relationships in all aspects of practice, demonstrating honesty, integrity, humility, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality
1.2 Demonstrate a commitment to excellence in all aspects of practice
1.3.Recognize and respond to ethical issues encountered in practice
1.4. Recognize and manage conflicts of interest
1.5 Exhibit professional behaviors in the use of technology enabled communication

General Surgery EPAs – Core of Discipline

EPA	Observation	Specific Criteria (Contextual Variables)	Number Req'd
C 1. Providing surgical consultation	Direct observation and/or case review by general surgeon, surgical subspecialist, subspecialty trainee, or TTP trainee	At least 2 different settings No more than 1 sim At least 5 complex At least 1 thyroid or parathyroid At least 3 different observers At least 5 observations by faculty	10
C3: Leading the team providing care for an inpatient surgical service	Direct and indirect observation by supervisor	At least 1 in a community setting At least 1 in a General Surgery acute care service At least 3 in a service with more than 10 patients on average At least 3 different observers	5
C4: Providing follow-up care	Direct observation and/or case discussion or chart review by supervisor	At least 2 in outpatient setting At least 2 complex At least 1 transition to palliative At least 2 different observers A range of treatment decisions	5
C 22 (SA 2): Delivering scholarly teaching to a variety of audiences, including peers, junior	Direct observation by surgeon	None	2

EPA	Observation	Specific Criteria (Contextual Variables)	Number Req'd
trainees, and/or other health professionals			

* Gold shaded rows are high likelihood and/or high priority

General Surgery EPAs – Transition to Practice

EPA	Observation	Specific Criteria (Contextual Variables)	Number Req'd
P1: Managing an outpatient clinic	Direct and indirect observation of clinic management by general surgeon	2 different assessors 2 clinics of at least ½ day each	2
P5 (SA #1): Performing the administrative, human resource and financial aspects of independent practice	Review of portfolio of activities by supervisor	None	1

* Gold shaded rows are high likelihood and/or high priority

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