



الهيئة السعودية للتخصصات الصحية  
Saudi Commission for Health Specialties

# Adult Gastroenterology



سَبِّحْ لِلَّهِ عَمَّا يُشْرِكُونَ

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## I. INTRODUCTION

The Kingdom of Saudi Arabia is a rapidly developing country that has made remarkable progress in health services. Disorders of the gastrointestinal tract (GIT) and hepatobiliary system are one of the major causes of mortality in the country.

Consequently, there is demand for a national training program to equip physicians adequately for their work, delivering the training they must undergo to achieve certification in Gastroenterology and Hepatology from the Saudi Commission for Health Specialties (SCFHS). This training will give the trainee a good grasp of the basic clinical, social, economic, and environmental aspects of health to enable them to handle gastrointestinal (GI) and hepatobiliary problems.

The Gastroenterology Training Program is a three-year, full-time, structured, and supervised training program in Gastroenterology and Hepatology. It will involve admission to an approved Joint Program with rotations at different hospitals. We expect each resident to develop into a consultant subspecialist over the three years of training. This requires a transition from the role of the trainee to one of greater responsibilities. It is expected that residents will quickly assume a consultant role as their knowledge of the subspecialty increases. This has implications for punctuality, reliability, oral and written communication abilities, teaching and supervision of junior residents, and interaction with allied health workers. Performance in these areas is monitored and assessed at regular intervals, with feedback provided.

The primary aim of the Gastroenterology Training Program is to produce gastroenterologists capable of providing total care to patients with GI problems. These include disorders of the GIT and its related organs: the pancreas, gallbladder, and the liver.

*The Canadian Medical Education Directives for Specialists (CanMEDS) framework is applied in postgraduate training programs in many countries. It offers a model of physician competencies that emphasizes not only medical expertise but also many additional non-medical roles that aim to better serve society's needs. Therefore, the SCFHS is adopting the CanMEDS framework to establish the core curriculum of all training programs, including the Saudi Board Certification in Gastroenterology.*



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## II. GENERAL OBJECTIVES OF THE TRAINING PROGRAM

### Definition

Gastroenterology is the medical specialty that deals specifically with the investigation, diagnosis, and management of disorders of the digestive system, including the pancreas and liver. The specialty is distinguished between pediatric and adult disciplines, based on differences in knowledge and technical skills. There is overlap in some aspects of the two disciplines at the adolescent transition.

### General Objectives

Specialists in Gastroenterology are expected to be competent consultants with well-founded knowledge of all aspects of Gastroenterology, including relevant basic sciences, research and teaching, and appropriate technical capabilities. They need to be able to establish effective professional relationships with patients and their families and caregivers. They must have sound knowledge of either general internal medicine or pediatrics, and an appreciation and understanding of the close relationship that commonly exists between diseases of the digestive organs and of other organ systems. They are required to be competent, self-directed learners, who can adapt practice patterns according to the general principles of evidence-based medicine.

Trainees must demonstrate Gastroenterology-pertinent knowledge, skills, and attitudes relating to gender, culture, and ethnicity. In addition, all trainees must demonstrate the ability to incorporate gender, cultural, and ethnic perspectives in research methodology, data presentation, and analysis.

### Goals

Upon completion of the training program, a trainee is expected to be a competent subspecialist in Gastroenterology, capable of assuming a consultant's role in the subspecialty. The trainee must acquire a working knowledge of the subspecialty's theoretical basis, including its foundations in the basic medical sciences and research.

Trainees must demonstrate the requisite knowledge, skills, and attitudes for providing effective patient-centered care and services to a diverse population. In all aspects of subspecialist practice, the trainee must be able to address issues of gender, sexual orientation, age, culture, ethnicity, and ethics in a professional manner.

### Gastroenterology Competencies

On completing their training, the resident will have acquired the following competencies and will function effectively as a:

1. Medical Expert
2. Communicator
3. Collaborator
4. Manager
5. Health Advocate
6. Scholar
7. Professional

### Medical expert

#### Definition

As Medical Experts, gastroenterologists integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional attitudes in their provision of patient-centered care. Medical Expert is the central physician Role in the CanMEDS framework.

### Description

Gastroenterologists possess a defined body of knowledge, clinical skills, procedural skills, and professional attitudes, which are directed to effective patient-centered care. They apply these competencies to collect and interpret information, make appropriate clinical decisions, and carry out diagnostic and therapeutic interventions. They do so within the boundaries of their discipline, personal expertise, the healthcare setting, and the patient's preferences and context. Their care is characterized by up-to-date, ethical, and resource-efficient clinical practice, as well as effective communication with patients, other healthcare providers, and the community. The Role of Medical Expert is central to the function of physicians and draws on the competencies included in the Roles of Communicator, Collaborator, Manager, Health Advocate, Scholar, and Professional.

### Key Competencies

Gastroenterologists are able to

1. Function effectively as consultants, integrating all of the CanMEDS Roles to provide optimal, ethical, and patient-centered medical care;
2. Establish and maintain clinical knowledge, skills, and attitudes appropriate to their practice;
3. Perform a complete and appropriate assessment of a patient;
4. Use preventive and therapeutic interventions effectively;
5. Demonstrate proficient and appropriate use of procedural skills, both diagnostic and therapeutic;
6. Seek appropriate consultation from other health professionals, recognizing the limits of their own expertise.

### Enabling Competencies

Gastroenterologists are able to:

1. **Function effectively as consultants, integrating all of the CanMEDS Roles to provide optimal, ethical, and patient-centered medical care**
  - 1.1. Effectively perform a consultation, including the presentation of well-documented assessments and recommendations in written and/or verbal form in response to a request from another healthcare professional.
  - 1.2. Demonstrate effective use of all CanMEDS competencies relevant to their practice.
  - 1.3. Identify and appropriately respond to relevant ethical issues arising in patient care.
  - 1.4. Effectively and appropriately prioritize professional duties when faced with multiple patients and problems.
  - 1.5. Demonstrate compassionate and patient-centered care.
  - 1.6. Recognize and respond to the ethical dimensions in medical decision-making.
  - 1.7. Demonstrate medical expertise in situations other than patient care, such as providing expert legal testimony or advising governments, as needed.
2. **Establish and maintain clinical knowledge, skills, and attitudes appropriate to Gastroenterology**
  - 2.1. Apply knowledge of the clinical, socio-behavioral, and fundamental biomedical sciences relevant to Gastroenterology, including the:
    - 2.1.1. Anatomy, embryology, physiology, and pathology of the digestive system, including the pancreas and liver;
    - 2.1.2. Principles of biochemistry, molecular biology, and genetics as they apply to the digestive system;
    - 2.1.3. Principles of metabolism, pharmacokinetics, pharmacodynamics, and toxicity of drugs commonly used in Gastroenterology;
    - 2.1.4. Principles of endocrinology, intermediary metabolism and nutrition, oncology, microbiology, and psychiatry as they apply to the digestive system;

- 2.1.5. Principles of GI surgery, including the indications for and the complications of operations on the GIT;
  - 2.1.6. Diseases affecting the digestive system, pancreas, and liver, including the epidemiology, pathophysiology, methods of diagnosis, management, and prognosis of such diseases;
  - 2.1.7. Indications, interpretations, limitations, and complications of diagnostic procedures performed on the digestive tract;
  - 2.1.8. Hazards of endoscopic procedures for the operator, assistants and patient, and the measures appropriate to minimize such hazards;
  - 2.1.9. Principles of fluoroscopy used during endoscopic procedures, including the safe use of X-rays for both patient and operator;
  - 2.1.10. Advances in the management of GI disorders, including organ transplantation and therapeutic endoscopy.
  - 2.2. Describe the CanMEDS framework of competencies relevant to Gastroenterology.
  - 2.3. Apply the lifelong learning skills of the Scholar Role to implement a personal program, so as to keep up-to-date and continually enhance areas of professional competence.
  - 2.4. Contribute to enhancing care quality and patient safety in Gastroenterology, integrating the available best evidence and best practices.
- 3. Perform a complete and appropriate assessment of a patient**
- 3.1. Effectively identify and explore issues to be addressed in a patient encounter, including the patient's context and preferences.
  - 3.2. Elicit a history that is relevant, concise, and accurate to context and preferences, for the purposes of prevention and health promotion, diagnosis, and/or management.
  - 3.3. Perform a focused physical examination that is relevant and accurate, for the purposes of prevention and health promotion, diagnosis, and/or management, with particular emphasis on areas specific to the digestive system and its disorders, including nutritional deficiencies.
  - 3.4. Select and interpret medically appropriate investigative methods in a resource-effective and ethical manner, including:
    - 3.4.1. Imaging modalities (barium studies, ultrasound, computerized tomography (CT) scan, magnetic resonance imaging (MRI), radioisotope scan, endoscopic retrograde cholangiopancreatography (ERCP), endoscopic ultrasound, capsule endoscopy) for the digestive system, pancreas, and liver;
    - 3.4.2. Tests commonly employed in gastrointestinal function laboratories, including breath tests and motility studies;
    - 3.4.3. Tissue biopsies of the GIT and liver;
    - 3.4.4. Endoscopic procedures including biopsies of the upper and lower GIT, including, but not limited to, colonoscopy, upper endoscopy, and sigmoidoscopy;
    - 3.4.5. Appropriate use and care of equipment used in endoscopic procedures;
    - 3.4.6. Appropriate use of clinical data to formulate problems and to correctly develop investigation and management plans to deal with the patient's problem(s).
  - 3.5. Demonstrate effective clinical problem-solving and judgment to address patient problems, including interpreting available data and integrating information to generate differential diagnoses and management plans for GI diseases.
  - 3.6. Demonstrate the ability to recognize, evaluate, and manage GI emergencies, including, but not limited to:
    - 3.6.1. Acute GI hemorrhage;
    - 3.6.2. Acute abdominal pain;

- 3.6.3. Fulminant colitis;
  - 3.6.4. Biliary obstruction, including ascending cholangitis;
  - 3.6.5. Liver failure;
  - 3.6.6. Ingested foreign bodies.
4. **Use preventive and therapeutic interventions effectively**
- 4.1. Implement an effective management plan in collaboration with a patient and their family.
  - 4.2. Demonstrate effective, appropriate, and timely application of preventive and therapeutic interventions relevant to Gastroenterology, including, but not limited to:
    - 4.2.1. Screening colonoscopy;
    - 4.2.2. Upper endoscopy for Barrett's esophagus;
    - 4.2.3. Upper endoscopy for portal hypertension;
    - 4.2.4. Surveillance for hepatobiliary malignancy.
  - 4.3. Ensure appropriate informed consent is obtained for therapies and transfusion of blood products;
  - 4.4. Ensure patients receive appropriate end-of-life care.
5. **Demonstrate proficient and appropriate use of procedural skills, both diagnostic and therapeutic**
- 5.1. Demonstrate effective, appropriate, and timely performance of diagnostic procedures relevant to Gastroenterology, including:
    - 5.1.1. Upper GI endoscopy and biopsy;
    - 5.1.2. Colonoscopy and biopsy;
    - 5.1.3. Esophageal manometry;
    - 5.1.4. Paracentesis (adult patients only).
  - 5.2. Demonstrate effective, appropriate, and timely performance of therapeutic procedures relevant to Gastroenterology, including:
    - 5.2.1. Luminal dilation;
    - 5.2.2. Polypectomy;
    - 5.2.3. Endoscopic hemostasis;
    - 5.2.4. Foreign body removal.
  - 5.3. Ensure appropriate informed consent is obtained for procedures.
  - 5.4. Document and disseminate information related to procedures performed and their outcomes.
  - 5.5. Ensure adequate follow-up is arranged for procedures performed.
6. **Seek appropriate consultation from other health professionals, recognizing the limits of their own expertise**
- 6.1. Demonstrate insight into the limits of their own expertise.
  - 6.2. Demonstrate effective, appropriate, and timely consultation of other health professionals as needed for optimal patient care.
  - 6.3. Arrange appropriate follow-up care services for a patient and their family.

## Communicator

### Definition

As Communicators, gastroenterologists effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during, and after the medical encounter.

### **Description**

Gastroenterologists enable patient-centered therapeutic communication through shared decision-making and effective dynamic interactions with patients, families, caregivers, other professionals, and important other individuals. This Role's competencies are essential for establishing rapport and trust, formulating a diagnosis, delivering information, striving for mutual understanding, and facilitating a shared care plan. Poor communication can lead to undesired outcomes, and effective communication is critical for optimal patient outcomes. The application of these communication competencies and the nature of the doctor-patient relationship vary for different specialties and forms of medical practice.

### **Key Competencies**

Gastroenterologists are able to:

1. Develop rapport, trust, and ethical therapeutic relationships with patients and families;
2. Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues, and other professionals;
3. Accurately convey relevant information and explanations to patients and families, colleagues, and other professionals;
4. Develop a common understanding on issues, problems, and plans with patients and families, colleagues, and other professionals to develop a shared care plan.
5. Convey effective oral and written information about a medical encounter.

Enabling Competencies: Gastroenterologists are able to:

- 1. Develop rapport, trust, and ethical therapeutic relationships with patients and families**
  - 1.1. Recognize that being a good communicator is a core clinical skill for gastroenterologists, and that effective physician-patient communication can foster patient satisfaction, physician satisfaction, adherence, and improved clinical outcomes.
  - 1.2. Establish positive therapeutic relationships with patients and their families that are characterized by understanding, trust, respect, honesty, and empathy.
  - 1.3. Respect patient confidentiality, privacy, and autonomy.
  - 1.4. Listen effectively.
  - 1.5. Be aware of and responsive to nonverbal cues.
  - 1.6. Effectively facilitate a structured clinical encounter.
  - 1.7. Communicate effectively to obtain a thorough and relevant patient history.
  - 1.8. Demonstrate sensitivity to patient concerns when presenting in the presence of a patient and/or family.
- 2. Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues, and other professionals**
  - 2.1. Gather information about not only the disease but also a patient's beliefs, concerns, expectations, and illness experience.
  - 2.2. Seek out and synthesize relevant information from other sources, such as a patient's family, caregivers, and other professionals.
- 3. Accurately convey relevant information and explanations to patients and families, colleagues, and other professionals**
  - 3.1. Deliver information to a patient and their family, colleagues, and other professionals in a humane manner and in such a way that it is understandable and encourages discussion and participation in decision-making.

4. **Develop a common understanding on issues, problems, and plans with patients, families, and other professionals to develop a shared care plan**
  - 4.1. Effectively identify and explore problems to be addressed from a patient encounter, including the patient's context, responses, concerns, and preferences.
  - 4.2. Respect diversity and difference, including, but not limited to, the impact of gender, religion, and cultural beliefs on decision-making.
  - 4.3. Encourage discussion, questions, and interaction in the encounter.
  - 4.4. Engage patients, families, and relevant health professionals in shared decision-making to develop a care plan.
  - 4.5. Effectively address challenging communication issues, such as obtaining informed consent, delivering bad news, and addressing anger, confusion, and misunderstanding.
  
5. **Convey effective oral and written information about a medical encounter**
  - 5.1. Maintain clear, accurate, and appropriate records (e.g., written or electronic) of clinical encounters and plans.
  - 5.2. Effectively present verbal reports of clinical encounters and plans.
  - 5.3. When appropriate, effectively present medical information to the public or media about a medical issue.
  - 5.4. Demonstrate effective consultation skills in presenting well-documented assessments and recommendations in written and/or verbal form, including:
    - 5.4.1. Procedural and specialty test reports;
    - 5.4.2. Responses to requests by other health professionals and third parties.

## Collaborator

### Definition

As Collaborators, gastroenterologists effectively work within a healthcare team to achieve optimal patient care.

### Description

Gastroenterologists work in partnership with others who are appropriately involved in the care of individual or specific groups of patients. This is increasingly important in a modern multiprofessional environment, where the goal of patient-centered care is widely shared. Modern healthcare teams comprise not only a group of professionals working closely together at one site, such as a ward team, but also extended teams with a variety of perspectives and skills, in multiple locations. It is, therefore, essential for physicians to be able to collaborate effectively with patients, families, and an interprofessional team of expert health professionals to provide optimal care, education, and scholarship.

### Key Competencies

Gastroenterologists are able to...

1. Participate effectively and appropriately in an interprofessional healthcare team;
2. Work effectively with other health professionals to prevent, negotiate, and resolve interprofessional conflict.

### Enabling Competencies

Gastroenterologists are able to

1. **Participate effectively and appropriately in an interprofessional healthcare team**
  - 1.1. Clearly describe their roles and responsibilities to other professionals.

- 1.2. Describe the roles and responsibilities of other professionals within the healthcare team.
  - 1.3. Recognize and respect the diversity of roles, responsibilities, and competencies of other professionals in relation to their own.
  - 1.4. Work with others to assess, plan, provide, and integrate care for individual patients (or groups of patients)
  - 1.5. Where appropriate, work with others to assess, plan, provide, and review other tasks, such as research problems, educational work, program review, or administrative responsibilities.
  - 1.6. Participate effectively in interprofessional team meetings.
  - 1.7. Enter into interdependent relationships with other professions for the provision of quality care.
  - 1.8. Describe the principles of team dynamics.
  - 1.9. Respect team ethics, including confidentiality, resource allocation, and professionalism.
  - 1.10. Demonstrate leadership in a healthcare team, as appropriate.
- 2. Work effectively with other health professionals to prevent, negotiate, and resolve interprofessional conflict**
- 2.1. Demonstrate a respectful attitude towards other colleagues and members of an interprofessional team.
  - 2.2. Work with other professionals to prevent conflicts.
  - 2.3. Employ collaborative negotiation to resolve conflicts.
  - 2.4. Respect differences, misunderstandings, and limitations in other professionals.
  - 2.5. Recognize one’s own differences, misunderstandings, and limitations that may contribute to interprofessional tension.
  - 2.6. Reflect on interprofessional team function.

## Leader

### Definition

As Leaders, gastroenterologists are integral participants in healthcare organizations, organizing sustainable practices, making decisions about allocating resources, and contributing to the effectiveness of the healthcare system.

### Description

Gastroenterologists interact with their work environment as individuals, as members of teams or groups, and as participants in the health system locally, regionally, or nationally. Balance in the emphasis among these three levels varies depending on the nature of the specialty, but all specialties have explicitly identified management responsibilities as a core requirement for practicing medicine in their discipline. Physicians function as leaders in their everyday practice activities involving co-workers, resources, and organizational tasks, such as care processes and policies, as well as in balancing their personal lives. Thus, physicians require the ability to prioritize, effectively execute collaborative tasks with colleagues, and make systematic choices when allocating scarce healthcare resources. The CanMEDS Leader Role prescribes the active engagement of all physicians as integral decision-making participants in the healthcare system’s operation. They act to lead change in healthcare management in collaboration with other stakeholders to achieve cost-effective and best-quality care.

### Key Competencies

Gastroenterologists are able to

1. Participate in activities that contribute to the effectiveness of their healthcare organizations and systems;
2. Manage their practice and career effectively;
3. Allocate finite healthcare resources appropriately;
4. Serve in administration and leadership roles, as appropriate.

### Enabling Competencies

Gastroenterologists are able to

- 1. Participate in activities that contribute to the effectiveness of their healthcare organizations and systems**
  - 1.1. Work collaboratively with others in their organizations.
  - 1.2. Participate in systemic quality process evaluation and improvement, such as patient safety initiatives.
  - 1.3. Describe the structure and function of the healthcare system as it relates to Gastroenterology, including the roles of physicians.
  - 1.4. Describe the principles of healthcare financing, including physician remuneration, budgeting, and organizational funding.
- 2. Manage their practice and career effectively**
  - 2.1. Set priorities and manage time to balance patient care, practice requirements, outside activities, and personal life.
  - 2.2. Manage a practice, including finances and human resources.
  - 2.3. Implement processes to ensure personal practice improvement.
  - 2.4. Employ information technology appropriately for patient care.
- 3. Allocate finite healthcare resources appropriately**
  - 3.1. Recognize the importance of just allocation of healthcare resources, balancing effectiveness, efficiency, and access with optimal patient care.
  - 3.2. Apply evidence and management processes for cost-appropriate care.
- 4. Serve in administration and leadership roles, as appropriate**
  - 4.1. Chair or participate effectively in committees and meetings.
  - 4.2. Lead or implement a change in healthcare.
  - 4.3. Plan relevant elements of healthcare delivery (e.g., work schedules).

### Health advocate

#### Definition

As Health Advocates, gastroenterologists responsibly use their expertise and influence to advance the health and well-being of individual patients, communities, and populations.

#### Description

Gastroenterologists recognize their duty and ability to improve the overall health of their patients and the society they serve. Doctors identify advocacy activities as important for the individual patient, patient populations, and communities. Individual patients need physicians' assistance to navigate the healthcare system and access appropriate health resources in a timely manner.



Communities and societies need physicians' special expertise to identify and collaboratively address broad health issues and determinants. At this level, health advocacy involves efforts to change specific practices or policies on behalf of those served. Framed in this multi-level way, health advocacy is an essential and fundamental component of health promotion. Health advocacy is appropriately expressed by both the individual and collective actions of physicians in influencing public health and policy.

### **Key Competencies**

Gastroenterologists are able to...

1. Respond to individual patient health needs and issues as part of patient care;
2. Respond to the health needs of the communities they serve;
3. Identify the health determinants of the populations they serve;
4. Promote the health of individual patients, communities, and populations.

### **Enabling Competencies**

Gastroenterologists are able to...

- 1. Respond to individual patient health needs and issues as part of patient care**
  - 1.1. Identify the health needs of an individual patient.
  - 1.2. Identify opportunities for advocacy, health promotion, and disease prevention with individuals to whom they provide care.
- 2. Respond to the health needs of the communities they serve**
  - 2.1. Describe the practice communities they serve.
  - 2.2. Identify opportunities for advocacy, health promotion, and disease prevention in the communities they serve, and respond appropriately.
  - 2.3. Describe, in broad terms, the key issues under debate regarding changes in the Saudi healthcare system, indicating how these changes might affect societal health outcomes. Also indicate how gastroenterologists can advocate decreasing the burden of illness at a community or societal level, especially for problems relevant to Gastroenterology.
  - 2.4. Appreciate the possibility of competing interests between the communities served and other populations.
- 3. Identify the health determinants of the populations they serve**
  - 3.1. Identify populations' health determinants, including barriers to access to care and resources.
  - 3.2. Identify populations' health determinants, including barriers to access to care and resources, and apply this understanding to common problems and conditions in Gastroenterology.
  - 3.3. Identify vulnerable or marginalized populations within those served, including, but not limited to, candidates for hepatitis B virus (HBV) vaccination or hepatitis C virus (HCV) screening amongst high-risk populations, and respond appropriately, applying available knowledge on prevention to "at risk" groups within the practice.
- 4. Promote the health of individual patients, communities, and populations**
  - 4.1. Describe an approach to implementing a health determinant change within the populations they serve.
  - 4.2. Describe how public policy impacts on the health of the populations served.

- 4.3. Identify current policies that affect GI health, either positively or negatively, including, but not limited to, immunization for viral hepatitis, anti-tobacco legislation, alcohol and substance abuse programs, and healthcare for high-risk populations.
- 4.4. Identify points of influence in the healthcare system and its structure.
- 4.5. Describe the ethical and professional issues inherent in health advocacy, including altruism, social justice, autonomy, integrity, and idealism.
- 4.6. In their role as a health advocate for a patient or community, appreciate the inherent possibility of conflict with a manager or gatekeeper.
- 4.7. Describe the role of the medical profession in advocating collectively for health and patient safety.

## Scholar

### Definition

As Scholars, gastroenterologists demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application, and translation of medical knowledge.

### Description

Physicians engage in a lifelong pursuit of mastering their domain of expertise. As learners, they recognize the need to continually learn and model this for others. Through their scholarly activities, they contribute to the creation, dissemination, application, and translation of medical knowledge. As teachers, they facilitate the education of their students, patients, colleagues, and others.

### Key Competencies

Gastroenterologists are able to...

1. Maintain and enhance professional activities through ongoing learning;
2. Critically evaluate information and its sources, and apply this appropriately to practice decisions;
3. Facilitate the learning of patients, families, students, residents, other health professionals, the public, and others, as appropriate;
4. Contribute to the creation, dissemination, application, and translation of new medical knowledge and practices.

### Enabling Competencies

Gastroenterologists are able to...

1. **Maintain and enhance professional activities through ongoing learning**
  - 1.1. Describe the principles of maintaining competencies.
  - 1.2. Describe the principles and strategies for implementing a personal knowledge management system.
  - 1.3. Recognize and reflect learning issues in practice.
  - 1.4. Conduct a personal practice audit.
  - 1.5. Pose an appropriate learning question.
  - 1.6. Access and interpret relevant evidence.
  - 1.7. Integrate new learning into practice.
  - 1.8. Evaluate the impact of any change in practice.
  - 1.9. Document the learning process.
  - 1.10. Demonstrate knowledge of new advances in the management of GI disorders, including, but not limited to, organ transplantation, therapeutic endoscopy, endoscopic ultrasound, and capsule endoscopy.

2. **Critically evaluate medical information and its sources, and apply this appropriately to practice decisions**
  - 2.1. Describe the principles of critical appraisal.
  - 2.2. Critically appraise retrieved evidence to address a clinical question.
  - 2.3. Integrate critical appraisal conclusions into clinical care.
  - 2.4. Describe and critically appraise recent landmark articles that impact current Gastroenterology practice.
  
3. **Facilitate the learning of patients, families, students, residents, other health professionals, the public, and others, as appropriate**
  - 3.1. Describe the learning principles relevant to medical education.
  - 3.2. Collaboratively identify the learning needs and desired learning outcomes of others.
  - 3.3. Select effective teaching strategies and content to facilitate others' learning.
  - 3.4. Deliver an effective lecture or presentation.
  - 3.5. Assess and reflect on a teaching encounter.
  - 3.6. Provide effective feedback.
  - 3.7. Describe the principles of ethics with respect to teaching.
  
4. **Contribute to the development, dissemination, and translation of new knowledge and practices**
  - 4.1. Describe the principles of research and scholarly inquiry.
  - 4.2. Describe the principles of research ethics.
  - 4.3. Pose a scholarly question.
  - 4.4. Conduct a systematic search for evidence.
  - 4.5. Select and apply appropriate methods to address a question.
  - 4.6. Appropriately disseminate the findings of a study.

## Professional

### Definition

As Professionals, gastroenterologists are committed to the health and well-being of individuals and society through ethical practice, profession-led regulation, and high personal standards of behavior.

Key Competencies: Gastroenterologists are able to...

1. Demonstrate commitment to their patients, profession, and society through ethical practice
2. Demonstrate commitment to their patients, profession, and society through participation in profession-led regulation;
3. Demonstrate commitment to physician health and sustainable practice;
4. Demonstrate commitment to upholding the highest standards of ethical and professional behavior as regards research;
5. Demonstrate commitment to upholding the highest standards of ethical and professional behavior as regards industry.

### Enabling Competencies

Gastroenterologists are able to...

1. **Demonstrate commitment to their patients, profession, and society through ethical practice**
  - 1.1. Practice respect for patient autonomy, confidentiality, and the need for consent for all dealings with the patient.
  - 1.2. Prioritize the rights, needs, and interests of the patient, while respecting professional obligations to society in matters related to healthcare planning and resource allocation.

- 1.3. Exhibit appropriate professional behaviors in practice, including honesty, integrity, disclosure, commitment, compassion, respect, and altruism.
  - 1.4. Demonstrate a commitment to delivering the highest quality care and maintaining competence.
  - 1.5. Demonstrate respect for others, including refraining from harassment or discrimination based on race, religion, ethnicity, gender, sexual orientation, disability, illness, or age, and all forms of harassment and discrimination
  - 1.6. Provide continuity of care once professional responsibility has been accepted, until such care is no longer required or alternative arrangements have been made.
  - 1.7. Maintain appropriate relations with patients and avoid all forms of sexual exploitation of patients, including abuse, harassment, or impropriety, and avoid taking physical, emotional, or financial advantage of patients.
  - 1.8. Display the principles of beneficence, non-maleficence, patient autonomy, and honesty in one's dealings with patients.
  - 1.9. Abstain from use of illicit drugs and avoid inappropriate use of medication, mood-altering drugs, or alcohol.
2. **Demonstrate commitment to their patients, profession, and society through participation in profession-led regulation**
- 2.1. Demonstrate knowledge and understanding of the professional, legal, and ethical codes of practice, including physician-industry interaction.
  - 2.2. Fulfill the regulatory and legal obligations required in current practice.
  - 2.3. Demonstrate accountability to professional regulatory bodies.
  - 2.4. Recognize and respond to others' unprofessional behaviors in practice.
  - 2.5. Participate in peer review.
  - 2.6. Recognize the principles and limits of patient confidentiality as defined by professional practice standards and the law.
  - 2.7. Recognize and appropriately respond to ethical issues encountered in practice.
  - 2.8. Avoid taking advantage of real or perceived inequality in relationships with students, trainees, or employees.
  - 2.9. Manage conflicts of interest.
3. **Demonstrate commitment to physician health and sustainable practice**
- 3.1. Balance personal and professional priorities to ensure personal health and sustainable practice.
  - 3.2. Strive to heighten personal and professional awareness and insight.
  - 3.3. Recognize other professionals in need and respond appropriately.
  - 3.4. Recognize the limitations of one's own competence and continually strive to improve one's knowledge, skills, and competence as a physician, seeking help from others when needed.
4. **Demonstrate commitment to upholding the highest standards of ethical and professional behavior as regards research**
- 4.1. Apply integrity and honesty in collecting, interpreting, and reporting data.
  - 4.2. Develop research in scientifically and ethically valid ways, ensuring it has received appropriate consent and approval.
  - 4.3. Apply the standards and rules of any sponsoring agencies and of the journals in which the results of research studies are published.
  - 4.4. Ensure all research is free of scientific misconduct, misrepresentation, or falsification of data.

- 4.5. Adhere to the highest standards of integrity and avoid real or perceived conflicts of interest in conducting clinical trials and evaluating drugs, medical devices, or other diagnostic and therapeutic modalities. Also avoid taking undue financial or other advantage of information gained from or by reporting on such studies.
5. **Demonstrate commitment to upholding the highest standards of ethical and professional behavior as regards industry**
  - 1.1. Critique any real or potential conflict of interest or commitment with industry, and seek to resolve any such conflicts that may exist, ensuring that the physician's primary objective is patient welfare.
  - 1.2. Justify participation in CME activities, surveillance studies, etc., and comply consistently with the CME guidelines governing physicians and the pharmaceutical industry.

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### III. TRAINING LEVEL OBJECTIVES: FIRST YEAR

#### General Objectives

The first year of training emphasizes *knowledge and experience* in Clinical Gastroenterology. The trainee is expected to fulfill all of the CanMEDS Roles described in section II above.

#### Specific Objectives

Additional goals and objectives specific to the first year of training in Adult Gastroenterology include:

##### **Medical Expert**

*The trainee must be able to:*

- Perform a consultation, including the presentation of well-documented assessments and recommendations in written and/or verbal form, in response to a request from another healthcare professional.
- Identify and appropriately respond to relevant ethical issues arising in patient care.
- Demonstrate knowledge of the anatomy, embryology, physiology, pharmacology, pathology, and molecular biology related to the GI system, including the liver, biliary tract, and pancreas.
- Demonstrate knowledge of the surgical procedures employed in relation to digestive system disorders, including their complications.
- Demonstrate competence in preventing, evaluating, and managing common diseases affecting the digestive system, pancreas, and liver (epidemiology, pathophysiology, methods of diagnosis, management, and prognosis). This will include both primary GI disorders (acid peptic disorders of the GIT, achalasia, celiac disease, inflammatory bowel disease, irritable bowel syndrome, infectious gastroenteritis, angiodysplasia, hemorrhoids, anal fissures, GI malignancy, acute and chronic pancreatitis, cholelithiasis, acute and chronic liver diseases) and systemic disorders involving the GIT (diabetes mellitus, scleroderma).
- Demonstrate knowledge of the indications, contraindications, limitations, complications, techniques, and interpretation of results of the diagnostic and therapeutic procedures performed on the digestive tract, including the appropriate indications for and use of screening tests/procedures.
- Take a history that is relevant, concise, and accurate to context.
- Perform a focused physical exam that is relevant and accurate.
- Select medically appropriate investigative methods in a resource-effective and ethical manner, including:
  - Laboratory investigations
  - Imaging modalities (barium studies, ultrasound, CT, MRI, radioisotope scan, ERCP, EUS, capsule endoscopy);
  - Tests commonly employed in GI function laboratories (breath tests, motility studies);
  - Biopsies of the GIT and liver;
  - Diagnostic and therapeutic endoscopy of the upper and lower GIT.
- Recognize, evaluate, and manage GI emergencies (e.g., acute GI hemorrhage, acute abdominal pain, fulminant colitis, biliary obstruction, liver failure, ingested foreign bodies).
- Implement an effective management plan in collaboration with patients, families, and healthcare professionals.
- Demonstrate proficiency in the performance of basic diagnostic endoscopy under supervision, including:
  - Upper GI endoscopy with biopsy;

- Flexible sigmoidoscopy with biopsy.
- Demonstrate proficiency in diagnostic and therapeutic paracentesis.
- Recognize the limits of their expertise and seek help appropriately.

**Communicator**

*The trainee must be able to:*

- Establish positive therapeutic relationships with patients and their families, characterized by understanding, trust, respect, honesty, and empathy.
- Understand the principles of patient-centered care by considering patient's beliefs, concerns, expectations, and illness experience, and by synthesizing relevant information from other sources, such as the patient's family, caregivers, and other professionals.
- Accurately and effectively convey information about diagnosis, prognosis, and the risks/benefits of tests and treatment options to patients and families, colleagues, and other professionals.
- Engage patients, families, and members of the multidisciplinary healthcare team in shared decision-making to optimize patient care.
- Compose succinct, accurate, and comprehensive consultation letters, discharge summaries, progress notes, and test reports, with appropriate support from the supervising consultant.

**Collaborator**

*The trainee must be able to:*

- Understand and implement multidisciplinary care of patients with GI diseases, with appropriate input and support from allied health professionals (e.g., surgeons, radiologists, pathologists, nurses, dietitians, social workers, occupational therapists, physical therapists, speech-language pathologists, pain control services, primary care physicians).
- Participate effectively in interdisciplinary team meetings contributing to the collaborative investigation, management, and disposition of patients.
- Demonstrate a respectful attitude towards other colleagues and members of an interprofessional team.
- Establish effective and successful collaborations in research.

**Manager**

*The trainee must be able to:*

- Understand the structure and function of regional, provincial, and federal healthcare systems.
- Show confidence and competence in directing the management of urgent and emergent clinical scenarios.
- Demonstrate skills in negotiating, allocating, and managing finite healthcare resources (e.g., bed booking, referral triaging, pharmacy budgets).
- Set priorities and manage time to balance patient care, practice requirements, outside activities, and personal life
- Access and apply information technology appropriately for patient care.
- Institute efficient management plans for patients with GI disease by utilizing available resources.
- Participate effectively in interprofessional team meetings

**Health Advocate**

*The trainee must be able to:*

- Identify opportunities for advocacy, health promotion, and disease prevention with the individual patients that they serve.
- Understand the role of screening and surveillance tests (colorectal cancer, hepatocellular carcinoma, Barrett’s esophagus, portal hypertension).
- Understand the key determinants of health in common GI diseases (e.g., socioeconomic, psychosocial, lifestyle-induced, and biologic).
- Be able to assess the impact of GI disease on individual patients’ social function, relationships, productivity, and access to health services.
- Understand the gastroenterologist’s role in advocating for patients’ access to care through private insurers, hospital/provincial formularies, and wait lists.

**Scholar**

*The trainee must be able to:*

- Recognize the importance of self-assessment to identify knowledge gaps.
- Demonstrate efficiency and competence in searching for, appraising, and applying medical literature to address a clinical question.
- Demonstrate effective teaching of students, junior house staff, and allied health professionals.
- Understand the role of research in advancing understanding of GI disease.
- Pose a scholarly question and develop a research proposal.

**Professional**

*The trainee must be able to:*

- Exhibit appropriate professional behaviors in practice. This includes maintaining appropriate professional boundaries and relationships with other physicians and healthcare team members, and avoiding conflicts of interests.
- Balance personal and professional priorities to ensure personal health and sustainable practice.
- Evaluate one’s own abilities, knowledge, skills, and professional competence limitations.
- Participate in peer review.
- Recognize and respond to others’ unprofessional behaviors in practice, taking into account local and provincial regulations.



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## IV. TRAINING LEVEL OBJECTIVES: SECOND AND THIRD YEAR

### General Objectives

The second and third year of training *consolidates and extends experiences* gained in the first year, and allows the trainee to *gain confidence* to progress to the level of independent of a consultant in Gastroenterology. The trainee is expected to fulfill all of the CanMEDS Roles described in section II above. In addition, the trainee is expected to assimilate knowledge gained in the first year to function as a consultant gastroenterologist.

### Specific Objectives

Goals and objectives specific to the second and third year of training in Adult Gastroenterology include:

#### **Medical Expert**

*The trainee must be able to:*

- Recognize and respond to the ethical dimensions of medical decision-making.
- Demonstrate medical expertise in situations other than patient care (e.g., presentations, medico-legal cases).
- Recognize common problems affecting children and adolescents in transition (inflammatory bowel disease, celiac disease, cystic fibrosis, functional abdominal pain, irritable bowel syndrome, chronic liver diseases) and special technical aspects of pediatric endoscopy, including special needs for sedation. (NB. Adult Gastroenterology residents are **not** expected to possess the cognitive database of a resident in a pediatric program and are **not** expected to be expert in pediatric endoscopy).
- Recognize women's health issues in digestive diseases
- Discuss and integrate new advances in the management of GI disorders (biologic therapies, organ transplantation, therapeutic endoscopy).
- Critically assess controversies in the management of GI disorders, integrating the available best evidence and best practices.
- Discuss the performance (accuracy/efficacy), risks, and complications of GI tests and procedures, recognizing current controversies and alternative approaches.
- Implement a personal program to keep up-to-date and continually enhance areas of professional competence.
- Demonstrate effective problem-solving skills and judgment to address patient problems. This includes interpreting available data and integrating information to generate extensive differential diagnosis for presenting problems and comprehensive management plans for GI diseases.
- Demonstrate effective, appropriate, and timely application of preventive and therapeutic interventions relevant to Gastroenterology, including, but not limited to:
  - Screening colonoscopy;
  - Upper endoscopy for Barrett's esophagus;
  - Upper endoscopy for portal hypertension;
  - Surveillance for hepatobiliary malignancy.
- Demonstrate proficiency in advanced diagnostic and therapeutic endoscopy under supervision, including:
  - Colonoscopy and polypectomy;
  - Endoscopic hemostasis (including injection, thermal therapy, clips, and band ligation);

- Luminal dilation;
- Foreign body removal;
- Percutaneous endoscopic gastrostomy.
- Identify and interpret endoscopic findings with confidence, including those that are uncommon or elusive (Dieulafoy lesions, eosinophilic esophagitis, celiac disease, gastric antral vascular ectasia, solitary rectal ulcers, and discrimination of Crohn's disease from ulcerative colitis).
- Demonstrate effective, appropriate, and timely consultation of another health professional as needed, recognizing the limits of their expertise

### **Communicator**

*The trainee must be able to:*

- Communicate with patients and/or families independently, without immediate supervision by the consultant.
- Communicate and cooperate effectively and independently with physicians, allied health professionals, and health-related agencies in the care of individual patients.
- Demonstrate effective consultation skills in presenting well-documented assessment and recommendations in written and/or verbal form including:
  - Procedural and specialty test reports;
  - Responses to requests by other health professionals and health parties.
- Demonstrate skills in providing effective medical information to the general public and scientific communities about GI illness.

### **Collaborator**

*The trainee must be able to:*

- Demonstrate confidence in leading a multidisciplinary healthcare team.
- Employ collaborative negotiation to resolve conflicts with and between other members of the healthcare team.
- Establish effective and successful collaborations in research, educational work, program review, or administrative responsibilities.
- Understand how healthcare governance influences patient care, research, and educational activities at a local, provincial, regional, and national level.

### **Manager**

*The trainee must be able to:*

- Demonstrate leadership (e.g., in organizing junior trainees) to maximize clinical care and educational opportunities.
- Demonstrate understanding of the principles of healthcare financing, including physician remuneration, budgeting, and organizational funding.
- Understand the operational aspects of an endoscopy unit, such as planning, budgeting and evaluation.
- Understand the administrative aspects of an outpatient practice and inpatient hospital service.
- Make career decisions related to:
  - Practice environment (academic vs. private, location);

- Practice emphasis (advanced endoscopy, specific disorders, motility);
- Teaching;
- Research.
- Tailor the structure and content of the second-year electives and/or research rotations to accommodate and facilitate career decisions.
- Demonstrate the ability to advocate for individual patients, yet recognize societal needs when monitoring and allocating resources
- Demonstrate leadership in administrative roles (education, clinical, research, educational work, or program review).

### **Health Advocate**

*The trainee must be able to:*

- Identify opportunities for advocacy, health promotion, and disease prevention in the practice communities they serve.
- Understand current public policies that affect GI health.
- Identify key controversies in the Saudi healthcare system that affect GI illness, and advocate for policies that reduce the burden of illness.
- Understand the advocacy roles of professional societies, patient groups, and private organizations in reducing the burden of GI disease.
- In their role as a health advocate for a patient or community, appreciate the inherent possibility of conflict with managers.
- Understand the cost-benefit relationship of emerging therapies for chronic GI disorders (e.g., inflammatory bowel disease, viral hepatitis).

### **Scholar**

*The trainee must be able to:*

- Develop and demonstrate strategies for implementing life-long continuing education and personal practice auditing.
- Integrate advanced critical appraisal skills into clinical care.
- Synthesize and present knowledge to local rounds and provincial/national symposia through effective teaching strategies and content to facilitate others' learning.
- Critically analyze and disseminate the findings of a research study in oral and written format by presenting in local rounds and at provincial/national symposia, and preparing a manuscript suitable for journal submission.

### **Professional**

*The trainee must be able to:*

- Demonstrate strategies to maintain and advance professional competence.
- Recognize and appropriately respond to ethical issues in practice (e.g., informed consent, patient confidentiality, PEG placement).
- Understand the professional, legal, and ethical codes of practice to which physicians are bound.
- Strive to heighten personal and professional awareness and insight.

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## V. ENDOSCOPIC TRAINING

### Overview

Endoscopic training occurs continuously throughout the three years of the fellowship; at whatever site the trainee is based for their rotation. All residents receive orientation to the Endoscopy Unit in the first month of residency. An introductory simulation course is mandatory to all new trainees at the beginning of their training, held in the first week of March each academic year. The simulation course is compulsory: full attendance is required as the course is considered part of the training. The course includes instruction on patient preparation, safety, antibiotic prophylaxis, equipment maintenance, and disinfecting instruments. In addition to performing the endoscopic procedure, appropriate patient care includes thorough explanation of the procedure, reviewing the appropriateness of the indication, assessing contraindications, explaining risks, informed consent, appropriate conscious sedation, recovery, discharge planning, and communicating findings and management plans to patients, families, and referring health professionals. Endoscopy is provided as part of a comprehensive Gastroenterology service in cooperation with physicians, surgeons, radiologists, pathologists, and allied health personnel.

### Training expectations

Trainees attend a minimum of one endoscopy session each week over their three years of training. Generally, the minimum number of procedures are completed under direct supervision. Because therapeutic endoscopy is considered more hazardous, it is taught only after satisfactory completion of basic training in diagnostic endoscopy. During all endoscopic training, the complementary roles of histology, radiology, and surgery are emphasized.

Competency in diagnostic upper GI endoscopy is achieved well before the end of the first year, during which residents also become competent in flexible sigmoidoscopy and are introduced to colonoscopy. During the second year of training, the resident focuses on the therapeutic aspects of upper endoscopy and becomes competent in colonoscopy, including polypectomy. Training in urgent endoscopy, including interventions for acute GI bleeding is acquired largely through participation in a regional call schedule. All endoscopies are performed under direct supervision of the on-call consultant.

Competency in upper GI endoscopy is expected to include diagnostic assessment, biopsy, brushing, injection therapies, thermal coaptive therapies (e.g., heater probe, BiCAP), mechanical hemostatic techniques (e.g., hemo-clip), injection sclerotherapy, variceal band ligation, argon plasma coagulation, foreign body removal, polypectomy, bougie and balloon dilatation, and percutaneous endoscopic gastrostomy. Competency in lower GI endoscopy is expected to include diagnostic assessment, including terminal ileal intubation, biopsy, polypectomy, injection therapy, thermal coaptive therapies, mechanical hemostatic techniques, and balloon dilation. Endoscopy unit personnel provide training in equipment set-up, maintenance, cleaning, and disinfection.

Trainees in the core three-year program are offered exposure to endoscopic retrograde cholangiopancreatography (ERCP) and endoscopic ultrasound (EUS), but competency in diagnostic/therapeutic ERCP and EUS is not an objective of the program. Core trainees are expected to gain a thorough understanding of the techniques, indications, contraindications, complications, and interpretation of related radiography, and to gain early experience with intubation of a side-viewing endoscope.

Trainees interested in therapeutic biliary endoscopy (including endoscopic sphincterotomy and biliary stent placement) or endoscopic ultrasound are encouraged to consider a separate fellowship in advanced endoscopic training. Trainees in the core program may undertake electives in biliary endoscopy upon identifying an appropriate supervisor.

**Table 1: Minimum numbers of procedures the trainee must perform during fellowship training**

Procedure	Minimum numbers required		
	First-Year Fellow (F1)	Second-Year Fellow (F2)	Third-Year Fellow (F3)
<b>The trainee is expected to PERFORM the stated minimum number of each outlined procedure by the end of the academic year.</b>			
1. Diagnostic Upper GIT Endoscopy with Biopsy	150	200	200
2. Diagnostic Colonoscopy with Biopsy	50	100	100
3. Peritoneal Paracentesis	20	20	20
<b>The trainee is expected to PERFORM the stated minimum number of each outlined procedure by the end the fellowship program.</b>			
4. Endoscopic Polypectomy	20		
5. Variceal Bleeding: Banding	20		
6. Variceal Bleeding: Sclerotherapy	20		
7. Non-Variceal: Clipping	20		
8. Non-Variceal: Thermal /Injection	10		
9. Dilatation: Pneumatic or Savory Esophageal/Pyloric/Colonic	20		
10. Percutaneous gastrostomy tube insertion (PEG– Tube)	20		
11. Capsule Endoscopy	10		
12. Liver Fibroscan	20		
13. Motility Upper GI	10		
14. Motility Lower GI	5		
15. pH study	10		
<b>The trainee is expected to OBSERVE the stated minimum number of each outlined procedure by the end of the fellowship program.</b>			
16. ERCP	10		
17. EUS	10		
<b>The trainee is expected to regularly record details of their performance or observance (as applicable) of the above procedures in their logbook and review their progress with the local program director.</b>			

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## VI. STRUCTURE OF THE TRAINING PROGRAM

### Scope of activities

#### Patient care

- Outpatient care: All trainees must spend at least two clinics per week throughout the entire three-year period in an ambulatory care clinic, and at least two half-days or one full day of elective endoscopy session each week, in which both gastroenterological and hepatic disease are managed. These activities serve to complement inpatient activities by providing comprehensive experience in assessing and managing patients in the ambulatory care environment.
- Inpatient services: Trainees will directly attend inpatients with GI and liver disease admitted directly under GI/Liver care through daily rounds. The trainee will work as a junior attending physician, with their decisions supervised by the attending consultant.
- Consultation services: The trainee will cover GI consultation services will review the history, physical examination, and investigations, and present the case, and discuss clinical problems and decisions with the attending consultant

#### Non-patient care activities

In addition to patient care, the trainee should have extensive exposure to other academic activities, including:

- Self-education by reading current textbooks and relevant scientific literature;
- Gastroenterology Journal Club: once a month;
- Gastroenterology/Hepatology meetings;
- Regional Gastroenterology Club;
- One national meeting per year (attendance is MANDATORY for two days per year, and will be deducted from the trainee's educational leave);
- One international meeting during the training period (optional);
- Presentation of GI clinical cases or topics;
- Departmental Educational Activities:
  - The trainee is expected to attend morning reports, bedside rounds, grand rounds, diagnostic and therapeutic rounds, pathology, and radiology rounds.
  - Research Activity: During the training period, the trainee is required to produce a minimum of one original publication before graduation. Research accounts for 7.5% of the annual evaluation of each trainee. Milestones of research progress through the fellowship training will be monitored. Research must be presented at the Annual National Meeting. The trainee is entitled to eight weeks (two blocks) for the research elective throughout their training.
  - Teaching experiences: The trainee must participate actively in teaching medical students, medical residents, and junior GI trainees whenever possible.
  - Mortality and Morbidity Rounds: Objectives: The mortality review is intended to identify and examine medical errors and to encourage trainees to pursue a research project in quality improvement. The process allows improvement of patient care by implementing preventative strategies for further errors. A review of medical literature related to medical errors and medico-legal issues is mandatory.
  - Format: Trainees are required to present a case-based theme review on a monthly basis during the academic half-day. Using PowerPoint, a short case presentation is followed by identification and description of the medical error.

- Contributing factors, preventative strategies, and any relevant medico-legal issues should be discussed, followed by one or two slides describing an idea or design for a quality improvement project. These rounds are not intended to be punitive in any way.
- Journal Club:
  - Objectives: This activity will enable the trainee to critically appraise the literature and develop an approach to analyzing the various types of articles (harm, diagnosis, prognosis, and treatment). It will enable the trainee to understand the basis of hypothesis testing (Type I and II errors, p values, 95% confidence intervals, sample size) and to understand the basis of diagnostic testing (prevalence, sensitivity, specificity, positive and negative predictive values, likelihood ratios). The trainee will become familiar with sources of bias and understand how study results can be used in clinical practice.
  - Format: On a monthly basis, trainees are assigned an article relevant to gastroenterology. Using PowerPoint, the trainee presents the background of the topic and the relevant article, followed by interactive article analysis and critical appraisal.
- Academic half-day: Trainees are entitled to a protected academic half-day (three hours) once a month. Attendance is mandatory and should be monitored. The schedule will be prepared by the local program director and hosted by one institution participating in the training. Time will be divided as follows:
  - 40 minutes: Mortality and Morbidity Rounds
  - 40 minutes: Journal Club
  - 40 minutes: GI pathology/Radiology
  - 60 minutes: dedicated to the leadership module, the content of which will be supervised by the program mentor.

### Rotations

- The academic year starts in March each year and comprises thirteen blocks of four weeks.
- Rotations are city-based and are devised at four blocks rotations; each rotation block is 16 weeks.
- All trainees should undertake a rotation in all approved institutions within the same city.
- The trainee is entitled to eight weeks for electives throughout their training (see elective list).
- The trainee is entitled to eight weeks for research activity throughout their training.
- The trainee should spend at least eight months in the inpatient/consultation service under the supervision of gastroenterology consultants
- The trainee should attend at least two supervised clinics per week.
- The trainee should attend at least two half-days of supervised elective endoscopy per week.
- The trainee should spend at least one month in the Hepatology service in institutions where it is separate from the Gastroenterology service.

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## VII. ELECTIVES

Electives are intended to provide flexibility and opportunities to explore career possibilities, to gain experience in aspects of medicine beyond the core curriculum, and to study certain areas in greater depth. Knowledge, skills, and attitudes are further developed in a self-directed choice of area across the curriculum.

Trainees are entitled to one month for elective experience. Trainees are free to identify and choose specific electives consistent with their individual training objectives, subject to approval by the Program Director and Fellowship Program Committee. For each elective, trainees must identify a supervisor responsible for monitoring their experience and evaluating their performance. Both the resident and the supervisor are responsible for ensuring a clear, mutual understanding of the learning activities designed to meet the elective objectives. Electives are only accepted in programs accredited and accepted by the Scientific Committee.

An **Elective Request** must be submitted to the Program Director at least three months prior to beginning an elective. Using this form, the trainee is expected to provide: (1) a summary of the elective experience; (2) a statement of goals and objectives for the elective experience; and (3) a schedule of activities and responsibilities they will undertake during the elective. This document must be signed by the Program Director, the elective supervisor, and the trainee. The following table lists some appropriate electives:

**Table 2: Electives**

Hepatology	Colorectal Surgery	Psychiatry
GI motility	GI oncology	Pain management
Clinical nutrition	GI radiology	Pediatric Gastroenterology
GI anatomical pathology	Endoscopic ultrasound	Biliary endoscopy



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## VIII. GENERAL REGULATIONS

### Admission requirements

To be admitted to the Saudi Gastroenterology and Hepatology Fellowship Program, a candidate must:

- 1) The candidate must fulfill all the requirements as per SCFHS Admission Requirements for postgraduate Training Programs ([scfhs.org.sa](http://scfhs.org.sa)).
- 2) Possess a Saudi Specialty Certificate in Internal Medicine or its equivalent (approved by the SCFHS), or have at least successfully completed the written component of the Saudi Specialty Certificate in Internal Medicine.
- 3) Be licensed to practice medicine in Saudi Arabia.
- 4) Provide written permission from the sponsoring institution, allowing the candidate to participate in full-time training for the entire three-year program.
- 5) Sign an undertaking to abide by the rules and regulations of the Training Program and the SCFHS.
- 6) Successfully pass the interview for the particular subspecialty.
- 7) Provide three letters of recommendation from consultants with whom the candidate has recently worked.
- 8) Register as a trainee at the SCFHS.

### Vacations, holidays, and on-call

- 1) The program shall comply with SCFHS policy on duty hours and vacation entitlement for postgraduate Training Programs ([scfhs.org.sa](http://scfhs.org.sa)).
- 2) Trainees are entitled to four weeks' vacation annually and a maximum of ten days for both Eid holidays and emergency leave. Vacation requests should be submitted six months in advance.
- 3) Trainees shall compensate for sick and maternity leave either during or at the end of their training.
- 4) Home-call duty shall, on average, be one in every three to four nights (minimum of six per month). Fellows are expected to perform regular duties the day after home-call duty and ensure continuity of care for their patients.
- 5) All elective requests should be submitted at least three months prior to the rotation start date.
- 6) Trainees are entitled to undertake their third-year training outside Saudi Arabia in a recognized center approved by the Gastroenterology Scientific Committee; any requests should be submitted at least six months before the start of the rotation.

### Certification

Upon successful completion of the required training and the final examination, a Saudi Certificate of the subspecialty will be conferred on the graduating trainee.

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## IX. HEALTH PROMOTION AND LEADERSHIP MODULE

### Introduction

Healthcare in Saudi Arabia is facing several challenges, ranging from a rapidly increasing population to healthcare cost restraints and limited resources. Efficient utilization of resources is an utmost priority for our national healthcare system. The need for leadership skills in the next generation of gastroenterologists will be thoroughly addressed in this training program. Most gastroenterologists are involved in management roles early in their practice, especially at the level of endoscopy unit management and development. Combining the Saudi context with the CanMEDS objectives, the Scientific Committee has developed this leadership module in collaboration with the Saudi Gastroenterology Association (SGA) and Saudi Association for the Study of Liver diseases and Transplantation (SASLT). This is a longitudinal program that incorporates leadership skills into the training of GI trainees, eventually progressing to the delivery of health promotion activities.

### Objectives

By the end of this module, trainees will be able to:

1. Create a healthcare promotion program relevant to community needs;
2. Assemble data on healthcare problems relevant to their community;
3. Prepare scientific-based patient educational materials;
4. Prioritize goals and translate them into action;
5. Analyze a situation and discriminate between competing variables;
6. Organize meetings with an efficient and constructive attitude;
7. Operate in a team and demonstrate conflict resolution techniques;
8. Develop reports on progress and measure performance.

### Program description

This is an annual and longitudinal training module intended provide a practical, hands-on approach to developing basic leadership skills. The module/program starts in March each year and concludes in October of the same year. Sponsorship and mentoring will alternate each year between the SGA and SASLT.

Trainees will meet each month for one hour as part of their academic half-day. Each meeting will be chaired by a trainee and aided by a scribe (a dedicated trainee responsible for writing the meeting minutes). Roles rotate and local program directors will ensure fair distribution of responsibilities and monitor the group's progress. In each site/region, a mentor will be nominated by the association to aid trainees to reach required outcomes and ensure that module objectives are met.

The following (non-exhaustive) sets of leadership skills will be included:

- Goal setting;
- Priority analysis and construction;
- Meeting management;
- Time management;
- Concepts of project management;
- Team work;
- Conflict resolution;
- SWOT Analysis;
- Gantt chart;
- Key performance indicator (KPI) construction and measurement.

### **Assessment of Trainees**

In collaboration, the local program director and site program mentor will monitor trainees' progress and assess their interaction. Progress will be recorded through a specific form and ratings will be awarded throughout the module. Punctuality and constructive participation will both be emphasized. At the end of the module, trainees will be assessed on the quality of the product and their role. This will account for 5% of the trainee's annual evaluation score.

## X. TRAINING ASSESSMENT

- A. Performance will be monitored throughout the year. Within two weeks of the end of each rotation, the site program director in charge of the rotation shall submit a written evaluation. The end-of-rotation evaluation should be discussed with and signed by the trainee. The trainee is also entitled to receive verbal mid-rotation feedback from their site program director.
- B. The trainee will be assessed by the local program director at the end of each year. This may include a written or clinical examination, or both. The trainee will be promoted to the next level if they pass the evaluation. Any failure in the end-of-year evaluation will be handled in accordance with the rules and regulations set by SCFHS.
- C. Longitudinal assessment of each trainee’s progress will be regularly reviewed by the local program director. The following tools will be used to assess their progress.

**Table 3: Assessment methods**

Assessment Tool	Evaluator	Timing and Frequency	Subject of Assessment
<b>Rotation evaluation</b>	Site program director/local program director	At the End of each rotation, Collected at the end of the year and averaged	Global performance, Attitude
<b>Mini clinical evaluation exercise (Mini-CEX)</b>	Site program director/Site consultant	Once a month (10 Sets in total)	Clinical skills: problem-solving; data interpretation; history-taking; physical examination
<b>Direct observation of procedural skills (DOPS)</b>	Site program director	At the end of each rotation (every four months, totaling three times per year)	Endoscopy-related skills
<b>Portfolio</b>	Site program director	Once-monthly review	Procedure competency; reflections
<b>Research</b>	Scientific Committee	Oral/poster presented at annual meeting	Data collection; analysis; synthesis; research skills
<b>Academic half days</b>	Local program director	Once monthly at least	Communication skills, knowledge, attitude, team work
<b>Leadership module evaluation</b>	Mentors/local program directors	March – October each year	Leadership skills
<b>Annual written promotion examination: Multiple choice questions (MCQs)</b>	SCFHS examination committee	End of academic year	Knowledge

- D. Annual Promotion: The decision on promotion is based on a comprehensive assessment based on individual assessment tool evaluation. To be promoted from first-year level to second-year level, and from second-year level to third-year level, the trainee is required to:
- a. Achieve a minimum of **Borderline Pass** in each assessment tools
  - b. In situations where the trainee achieved borderline failure in a maximum three assessment tools, he should has received at least three clear passes in a minimum three other assessment tools.
- E. Final Examinations:
- a. The final written examination comprises:
    - i. MCQs; and
    - ii. Clinical data interpretation.The trainee must pass the final written examination to become eligible for the final clinical examination.
  - b. The final clinical examination may include all of the following:
    - i. Long case: structured oral format;
    - ii. Objective structured clinical examination (OSCE).
  - c. The trainee must pass every part of the final examinations; failures will be handled in accordance with the rules and regulations set by SCFHS.
  - d. Eligibility: To be eligible to sit the final board examination, the trainee must:
    - i. Pass and complete all rotations successfully.
    - ii. Achieve a minimum of **Borderline Pass** in each assessment tools
    - iii. In situations where the trainee achieved borderline failure in a maximum three assessment tools, he should has received at least three clear passes in a minimum three other assessment tools.

## XI. SUGGESTED TEXTBOOKS, JOURNALS, AND PROFESSIONAL SOCIETIES

### Suggested Textbooks

Name of Book	Authors	ISBN
<b>Cotton and Williams' Practical Gastrointestinal Endoscopy: The Fundamentals</b>	Edited by Adam Haycock, Jonathan Cohen, Brian P. Saunders, Peter B. Cotton, and Christopher B. Williams	ISBN: 9781118406465
<b>Sleisenger and Fordtran's Gastrointestinal and Liver Disease Pathophysiology, Diagnosis, Management (10th Edition)</b>	Edited by Mark Feldman, Lawrence S. Friedman, and Lawrence J. Brandt	ISBN 978-1-4557-4692-7
<b>Yamada's Textbook of Gastroenterology, 2 Volume Set (6th Edition)</b>	Edited by Daniel K. Podolsky, Michael Camilleri, J. Gregory Fitz, Anthony N. Kalloo, Fergus Shanahan, and Timothy C. Wang	ISBN-10: 1118512065
<b>Yamada's Atlas of Gastroenterology (5th Edition)</b>	Edited by Daniel K. Podolsky, Michael Camilleri, J. Gregory Fitz, Anthony N. Kalloo, Fergus Shanahan, and Timothy C. Wang	ISBN-10: 1118496434
<b>Zakim and Boyer's Hepatology: A Textbook of Liver Disease (7th Edition)</b>	Edited by Arun J. Sanyal MBBS MD, Thomas D. Boyer MD, Norah A Terrault MD MPH, and Keith D Lindor MD	ISBN-13: 978-0323375917

### Professional Societies

Professional Societies	
<b>Saudi Gastroenterology Association (SGA)</b>	<a href="https://www.saudigastro.com">https://www.saudigastro.com</a>
<b>Saudi Association for the Study of Liver diseases and Transplantation (SASLT)</b>	<a href="http://www.saslt.org">http://www.saslt.org</a>
<b>American Association for the Study of Liver Diseases (AASLD)</b>	<a href="http://www.aasld.org">http://www.aasld.org</a>
<b>American College of Gastroenterology</b>	<a href="http://www.acg.gi.org/">http://www.acg.gi.org/</a>
<b>American Gastroenterological Association (AGA)</b>	<a href="http://www.gastro.org/">http://www.gastro.org/</a>
<b>American Society for Gastrointestinal Endoscopy (ASGE)</b>	<a href="http://www.asge.org/">http://www.asge.org/</a>
<b>Canadian Association of Gastroenterology</b>	<a href="http://www.cag-acg.org/">http://www.cag-acg.org/</a>
<b>European Association for the Study of the Liver</b>	<a href="http://www.easl.eu/">http://www.easl.eu/</a>
<b>European Crohn's and Colitis</b>	<a href="https://www.ecco-ibd.eu/">https://www.ecco-ibd.eu/</a>

Professional Societies	
<b>Organization (ECCO)</b>	
<b>World Gastroenterology Organisation (WGO)</b>	<a href="http://www.worldgastroenterology.org/">http://www.worldgastroenterology.org/</a>
<b>British Association for Parenteral and Enteral Nutrition (BAPEN)</b>	<a href="http://www.bapen.org.uk/">http://www.bapen.org.uk/</a>
<b>British Dietetic Association</b>	<a href="http://www.bda.uk.com/">http://www.bda.uk.com/</a>

## Suggested Journals

Suggested Gastroenterology Journals	
Top Journals	Website
Gastroenterology	<a href="http://www.gastrojournal.org">http://www.gastrojournal.org</a>
American Journal of Gastroenterology	<a href="http://www.nature.com/ajg/index.html">http://www.nature.com/ajg/index.html</a>
Gut	<a href="http://gut.bmj.com">http://gut.bmj.com</a>
Gastroenterology Clinics of North America	<a href="http://www.gastro.theclinics.com">http://www.gastro.theclinics.com</a>
Alimentary Pharmacology Therapeutics	<a href="http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-2036/issues">http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-2036/issues</a>
Clinical Gastroenterology and Hepatology	<a href="http://www.cghjournal.org">http://www.cghjournal.org</a>
Saudi Journal of Gastroenterology	<a href="http://www.saudijgastro.com">http://www.saudijgastro.com</a>
Other Journals	
Acta Gastro-Enterologica	<a href="http://www.acta-gastroenterologica.be">http://www.acta-gastroenterologica.be</a>
American Journal of Physiology-Gastrointestinal and Liver Physiology	<a href="http://ajpgi.physiology.org">http://ajpgi.physiology.org</a>
Colorectal Disease	<a href="http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1463-1318/issues">http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1463-1318/issues</a>
Current Opinion in Gastroenterology Digestion	<a href="http://journals.lww.com/co-gastroenterology/pages/default.aspx">http://journals.lww.com/co-gastroenterology/pages/default.aspx</a>
The Canadian Journal of Gastroenterology	<a href="https://www.hindawi.com/journals/cjgh/">https://www.hindawi.com/journals/cjgh/</a>
Digestion	<a href="https://content.karger.com/Journal/Home/223838">https://content.karger.com/Journal/Home/223838</a>
Digestive Diseases	<a href="https://content.karger.com/Journal/Home/224231">https://content.karger.com/Journal/Home/224231</a>
Diseases of the Colon Rectum	<a href="https://www.fascrs.org/diseases-colon-rectum">https://www.fascrs.org/diseases-colon-rectum</a>
Diseases of the Esophagus	<a href="http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1442-2050/issues">http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1442-2050/issues</a>
European Journal of Gastroenterology & Hepatology	<a href="http://journals.lww.com/eurojgh/pages/default.aspx">http://journals.lww.com/eurojgh/pages/default.aspx</a>
Helicobacter	<a href="http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1523-5378/issues">http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1523-5378/issues</a>
Inflammatory Bowel Diseases	<a href="http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1536-4844">http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1536-4844</a>
Inflammatory Bowel Disease Monitor	<a href="http://www.remecajournals.com/Inflammatory-Bowel-Disease-Monitor/">http://www.remecajournals.com/Inflammatory-Bowel-Disease-Monitor/</a>
International Journal of	<a href="https://link.springer.com/journal/384">https://link.springer.com/journal/384</a>

Suggested Gastroenterology Journals	
Top Journals	Website
<b>Colorectal Disease</b>	
<b>Journal of Gastrointestinal and Liver Diseases</b>	<a href="http://www.jgld.ro/wp/">http://www.jgld.ro/wp/</a>
<b>Journal of Clinical Gastroenterology</b>	<a href="http://journals.lww.com/icge/pages/default.aspx">http://journals.lww.com/icge/pages/default.aspx</a>
<b>Journal of Gastroenterology and Hepatology</b>	<a href="http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1440-1746/issues">http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1440-1746/issues</a>
<b>Neurogastroenterology and Motility</b>	<a href="http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-2982/issues">http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-2982/issues</a>
<b>Pancreas</b>	<a href="http://journals.lww.com/pancreasjournal/pages/default.aspx">http://journals.lww.com/pancreasjournal/pages/default.aspx</a>
<b>Pancreatology</b>	<a href="https://content.karger.com/Journal/Home/224334">https://content.karger.com/Journal/Home/224334</a>
<b>Scandinavian Journal of Gastroenterology</b>	<a href="http://www.tandfonline.com/toc/igas20/current">http://www.tandfonline.com/toc/igas20/current</a>
Hepatology Journals	
<b>Hepatology</b>	<a href="http://aasldpubs.onlinelibrary.wiley.com/hub/journal/10.1002/(ISSN)1527-3350/">http://aasldpubs.onlinelibrary.wiley.com/hub/journal/10.1002/(ISSN)1527-3350/</a>
<b>Journal of Hepatology</b>	<a href="http://www.journal-of-hepatology.eu">http://www.journal-of-hepatology.eu</a>
<b>Journal of Viral Hepatitis</b>	<a href="http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-2893/issues">http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-2893/issues</a>
<b>Liver International</b>	<a href="http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1478-3231/issues">http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1478-3231/issues</a>
<b>Liver Transplantation</b>	<a href="http://aasldpubs.onlinelibrary.wiley.com/hub/journal/10.1002/(ISSN)1527-6473/">http://aasldpubs.onlinelibrary.wiley.com/hub/journal/10.1002/(ISSN)1527-6473/</a>
General Medical Journals	
<b>Annals of Internal Medicine</b>	<a href="http://annals.org/aim">http://annals.org/aim</a>
<b>British Medical Journal</b>	<a href="http://www.bmj.com">http://www.bmj.com</a>
<b>Nature</b>	<a href="http://www.nature.com/nature/index.html">http://www.nature.com/nature/index.html</a>
<b>Nature Medicine</b>	<a href="http://www.nature.com/nm/index.html">http://www.nature.com/nm/index.html</a>
<b>Science</b>	<a href="http://www.sciencemag.org">http://www.sciencemag.org</a>
<b>The Journal of the American Medical Association</b>	<a href="http://jamanetwork.com">http://jamanetwork.com</a>
<b>The Lancet</b>	<a href="http://www.thelancet.com">http://www.thelancet.com</a>
<b>The New England Journal of Medicine</b>	<a href="http://www.nejm.org">http://www.nejm.org</a>



## XII. APPENDICES

### Appendix A

**ADULT GASTROENTEROLOGY TRAINING PROGRAM**  
**SUMMATIVE DIRECT OBSERVATION**  
**OF PROCEDURES AND SKILLS (DOPS)**

الهيئة السعودية للتخصصات الصحية  
 Saudi Commission for Health Specialties



TRAINEE NAME:

DATE:

**Scale & Criteria Key:**  
 4 = highly skilled performers  
 3 = Competent & Safe throughout procedure, no uncorrected errors  
 2 = Some standards not yet met, aspects to be improved, some errors uncorrected  
 1 = acceptable standard not yet met frequent errors uncorrectable  
 N/A = Not Applicable

CRITERIA	SCORE				
SECTION 1: ASSESSMENT, CONSENT, COMMUNICATION	1	2	3	4	N/A
1.1 Obtains Informed consent using a structured approach					
1.1.a Satisfactory procedural information					
1.1.b Risk & complications explained					
1.1.c Co-morbidity					
1.1.d Sedation					
1.1.e Allows opportunity for questions					
1.2 Demonstrates respect for patient's views & dignity during the procedure					
1.3 Communicates clearly with patient, including outcome of procedure with appropriate management & follow up plan. Full endoscopy report					
SECTION 2: SAFETY AND SEDATION	1	2	3	4	N/A
2.1 Safe and secure IV access					
2.2 Gives appropriate dose of analgesia and sedation and ensures adequate oxygenation and monitoring of patient					
2.3 Demonstrates good communication with the nursing staff, including dosage and vital signs					
SECTION 3: DIAGNOSTIC UPPER GI ENDOSCOPY	1	2	3	4	N/A
<b>3.1 Endoscopy skills during insertion and procedure</b>					
3.1.1 Skillful endoscopy handling to enable diagnosis and treatment					
3.1.2 Maintain luminal view/ inserts in luminal direction					
3.1.3 Demonstrates awareness of patient's consciousness and comfort during the procedure and takes appropriate actions					
3.1.4 Uses torque steering and control knobs appropriately					
3.1.5 Use distension, suction and lens washing appropriately					
3.1.6 Completes procedure in reasonable time					
<b>3.2 Diagnostic ability</b>					
3.2.1 Farthest landmark the fellow reached without any hands-on assistance					
3.2.2 Scope tip control/advancement techniques (Esophageal intubation, traversing pylorus & duodenal sweep)					
3.2.3 Adequately visualized mucosa during withdrawal including retroflexion					
3.2.4 Pathology identification and interpretation					

OP1 Q1: perform diagnostic upper GI endoscopy adequately	OP2 Q1: perform therapeutic upper GI endoscopy adequately
OP1 Q2: perform sigmoidoscopy adequately	OP2 Q2: perform therapeutic colonoscopy adequately
OP1 Q3: perform diagnostic colonoscopy adequately	OP2 Q3: perform therapeutic upper & lower GI endoscopy adequately
OP1 Q4: perform therapeutic upper & lower GI endoscopy adequately	

Appendix A (Continued 2/3)

<b>SECTION 4: SIGMOIDSCOPY</b>					
<b>4.1 Endoscopy skills during insertion and procedure</b>	1	2	3	4	N/A
4.1.1 Checks endoscope function before intubation					
4.1.2 Performs PR					
4.1.3 Maintain luminal view/ inserts in luminal direction					
4.1.4 Demonstrates awareness of patient's consciousness and pain during the procedure and takes appropriate action					
4.1.5 Uses torque steering and control knobs appropriately					
4.1.6 Use distension, suction and lens washing appropriately					
4.1.7 Completes procedure in reasonable time					
<b>4.2 Diagnostic ability</b>					
4.2.1 Adequate mucosal visualization					
4.2.2 Recognizes Rectum, Recto-sigmoid & sigmoid landmarks					
4.2.3 Accurate identification of pathology					
4.2.4 Use biopsy forceps techniques appropriately and safely					

<b>SECTION 5: DIAGNOSTIC &amp; THERAPUTIC UPPER GI ENDOSCOPY</b>					
<b>5.1 Diagnostic ability</b>	1	2	3	4	N/A
5.1.1 Farthest landmark the fellow reached without any hands-on assistance					
5.1.2 Scope tip control/advancement techniques (Esophageal intubation, traversing pylorus & duodenal sweep)					
5.1.3 Adequately visualized mucosa during withdrawal including retroflexion					
5.1.4 Pathology identification and interpretation					
5.1.5 Use biopsy forceps techniques appropriately and safely					
<b>5.2 Therapeutic Upper GI Endoscopy</b>					
<b>5.2.1 Variceal Therapy</b>					
5.2.1.a Band Ligation					
5.2.1.b Variceal Injection					
<b>5.2.2 Non-Variceal Bleeding Therapy</b>					
5.2.2.a Submucosal injection: (Saline, Epinephrine, Other)					
5.2.2.b Hemostasis (Hemoclip, Electrocautery, etc.)					
5.2.2.c APC vascular lesion ablation: (GAVE, AVMs.)					
<b>5.2.3 PEG Insertion</b>					
<b>5.2.4 Stent Insertion</b>					
5.2.5 Dilatation Balloon / Savary					
Other					

OF1-Q1: perform diagnostic upper GI endoscopy adequately	OF2-Q1: perform therapeutic upper GI endoscopy adequately
OF1-Q2: perform sigmoidoscopy adequately	OF2-Q2: perform therapeutic colonoscopy adequately
OF1-Q3: perform diagnostic colonoscopy adequately	OF2-Q3: perform therapeutic upper & lower GI endoscopy adequately
OF3-Q1-3: perform therapeutic upper & lower GI endoscopy adequately	

Appendix A (Continued 3/3)

<b>SECTION 6: COLONOSCOPY</b>					
<b>6.1 Endoscopy skills during insertion and procedure</b>	1	2	3	4	N/A
6.1.1 Checks endoscope function before intubation					
6.1.2 Performs PR					
6.1.3 Maintain luminal view/ inserts in luminal direction					
6.1.4 Demonstrates awareness of patient's consciousness and pain during the procedure and takes appropriate action					
6.1.5 Uses torque steering and control knobs appropriately					
6.1.6 Use distension, suction and lens washing appropriately					
6.1.7 Recognizes and logically resolves loop formation					
6.1.8 Use position change and abdominal pressure to aid luminal views					
6.1.9 Completes procedure in reasonable time					
<b>6.2 Diagnostic ability</b>					
6.2.1 Adequate mucosal visualization					
6.2.2 Recognizes cecum/descending Colon landmarks or incomplete examination					
6.2.3 Accurate identification and management of pathology					
6.2.4 Use biopsy forceps techniques appropriately and safely					
6.2.5 Farthest landmark the fellow reached without any hands-on assistance					
6.2.6 Reached cecum but failed attempt at Terminal ileum intubation					
6.2.7 Successful intubation of Terminal ileum					
<b>6.3 Therapeutic Colonoscopy</b>					
6.3.1 Snare Polypectomy (With /without of endoloop techniques)					
6.3.2 APC Vascular Lesion ablation					
6.3.3 Hemostasis (Hemoclip, Electrocautery, etc.)					
6.3.4 Dilatation					
6.3.5 Stent insertion					
6.3.6 Sub mucosal injection (Lift, Epinephrine, Tattoo, etc.)					

<b>Global Score _____ / 20</b>			
Clear Pass	Borderline Pass	Borderline Fail	Clear Fail
>70%	60-69.4%	50-59.4%	< 50%

COMMENTS:

EVALUTOR NAME:

SIGNATURE:

CF1 Q1: perform diagnostic upper GI endoscopy adequately	CF2 Q1: perform therapeutic upper GI endoscopy adequately
CF1 Q2: perform sigmoidoscopy adequately	CF2 Q2: perform therapeutic colonoscopy adequately
CF1 Q3: perform diagnostic colonoscopy adequately	CF2 Q3: perform therapeutic upper & lower GI endoscopy adequately
CF1 Q1-3: perform therapeutic upper & lower GI endoscopy adequately	

## Appendix B

**ADULT GASTROENTEROLOGY TRAINING PROGRAM**  
**MINI-CLINICAL EVALUATION EXERCISE (CEX)**

 الهيئة السعودية للتخصصات الصحية  
 Saudi Commission for Health Specialties

**Name:** \_\_\_\_\_ **Level of Training:**  F1  F2  F3

**Hospital:** \_\_\_\_\_ **Rotation:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Setting:**  Ambulatory  In-patient  Other

**Patient:** Age: \_\_\_\_\_ Sex: \_\_\_\_\_  New  Follow-up  
**Complexity:**  Low  Moderate  High

**Focus:**  Data Gathering  Diagnosis  Therapy  Counseling

	UNSATISFACTORY	SATISFACTORY	SUPERIOR	Not Applicable		
<b>Medical Interviewing Skills</b>	1	2	3	4	5	N/A
<b>Physical Examination Skills</b>	1	2	3	4	5	N/A
<b>Humanistic Qualities/Professionalism</b>	1	2	3	4	5	N/A
<b>Clinical Judgment</b>	1	2	3	4	5	N/A
<b>Counseling Skills</b>	1	2	3	4	5	N/A
<b>Organization/Efficiency</b>	1	2	3	4	5	N/A
<b>Overall Clinical Competence</b>	1	2	3	4	5	N/A

**Mini-CEX Time:** Observing \_\_\_\_\_ Mins Providing Feedback: \_\_\_\_\_ Mins

Clear Pass >70%	Borderline Pass 60-69.4%	Borderline Fail 50-59.4%	Clear Fail < 50%

**Evaluator's Name & Signature**
**Fellow's Signature**
**RTP Director's Signature**

## Descriptions of competencies demonstrated during the Mini-CEX

**Descriptions of Competencies Demonstrated During the MINI-CEX**

1. **Medical Interviewing Skills:** Facilitates patient's telling of story; effectively uses questions/directions to obtain accurate adequate information needed; responds appropriately to affect, non-verbal cues.
2. **Physical Examination Skills:** Follows efficient, logical sequence; balances screening/diagnostic steps for problem; informs patient; sensitive to patient's comfort, modesty.
3. **Humanities Qualities/Professionalism:** Shows respect, compassion, empathy, establishes trust; attends to patient's needs of comfort, modesty confidentiality, information.
4. **Clinical Judgment:** Selectively orders/performs appropriate diagnostic studies, considers risks, benefits.
5. **Counseling Skills:** Explains rationale for test/treatment obtains patient's consent, educates/counsels regarding management.
6. **Organization/Efficiency:** Prioritizes, is timely, succinct.
7. **Overall Clinical Competence:** Demonstrates judgment, synthesis, caring, effectiveness, and efficiency.

## Appendix C

### Portfolio of Gastroenterology and Hepatology trainee

The contents of the portfolio are as follows:

1. Introduction
2. 10 tips for new GI fellows
3. Curriculum vitae: suggested template
4. Personal developmental plan
5. Educational training events
6. Evaluations
7. Logbook
8. Case write-ups
9. Reflections
10. Others:
  - Patient feedback
  - Clinical audits.

#### Introduction

A portfolio is a collection of a trainee's work that evidences their achievement of knowledge, skills, appropriate attitudes, and professional growth through a process of self-reflection over time. It differs from a curriculum vitae and career logs in that it must contain self-reflection on the contents considered key for professional development.

#### 10 tips for new GI fellows

Congrats on starting your GI fellowship! Here are the top 10 takeaways for a successful fellowship.

- 1. Make friends.** Connect on a personal level with your co-fellows and attending physicians. Not only will this make your fellowship more enjoyable but you will also need this network during your early post-fellowship years. It likely these will become lifelong friendships.
- 2. Stay flexible.** Be open to opportunities that allow you to learn a skill, meet people, or attend a workshop on a different topic. Take advantage of protected time to explore diverse topics in GI and attend hands-on courses.
- 3. Be a sponge.** Conversations with attending physicians and co-fellows may give you ideas about how to approach patients or research questions, or even prompt you to consider new areas of interest. Be a fly on the wall during physician-patient encounters, and absorb all of the verbal and non-verbal communication that makes this relationship successful.
- 4. Find a mentor (or two or three).** Identify potential mentors early in your fellowship. While it is important to have mentors with similar research and clinical interests to you, it is valuable to have a career mentor who operates outside your niche, who can advise on the trajectory or shape of your career path and help you to strike an appropriate work/life balance.
- 5. Have a plan.** Start thinking about a roadmap for your fellowship and career. Include specific goals you want to accomplish as you move through each year (or even half-year) of fellowship, whether gaining experience for certain types of procedures, submitting an institutional review board (IRB), or publishing research.

**6. Publish.** Experience of the editorial process and scientific writing will be critical to your career. Start with low-hanging fruit, such as case reports, and work toward reviews and original research.

**7. Focus on quality, not quantity.** When it comes to endoscopy, focus on learning the right way to conduct procedures. You will perform enough colonoscopies and interventions over your fellowship to fulfill your numerical target. Long-term, it is most important to learn to perform high-quality procedures.

**8. Get involved in the GI community early.** Go to regional Gut Club activities and the SGA and SASLT annual meetings. These events allow you to meet others in the field and discuss topics to which you may not have access in the fellowship.

**9. Be generous.** Assist your co-fellows when they need your help or advice. This will improve your relationships with professionals you will likely encounter in the future as colleagues and friends.

**10. Have fun.** Fellowship provides a fantastic opportunity to learn from those around you and fine-tune your skills. Three years will fly by, so enjoy the ride.

**Trainee personal information form**

	Please affix the trainee's photograph in this space
<b>PERSONAL INFORMATION</b>	
<b>Trainee name</b>	
<b>Date of Birth (DD/MM/YY)</b>	
<b>Place and Country of Birth</b>	
<b>National ID</b>	
<b>Medical School/University of Graduation</b>	
<b>Country and Year of Graduation</b>	
<b>Internal medicine training (dates and Institution)*</b>	
<b>Start of training in Gastroenterology</b>	
<b>Name of tutor(s) and Supervisor(s)</b>	
<b>Trainee Contact Details: Address E-mail</b>	



**Curriculum vitae: suggested template**

The suggested curriculum vitae should contain the following information:

**Personal data**

1. Name
2. Gender
3. Date of Birth
4. Place of Birth
5. Nationality
6. Marital Status
7. Address
8. Mobile No.
9. Home phone No.
10. E-mail address

**Current Position**

**Education**

**Honor and Awards**

**Certification**

**Training and Experience**

**Extra-Curricular Activities**

**Symposia and Workshops**

**Research experience, Presentations, and Publications**

**Professional Memberships**

**Languages Known**

### **Personal developmental plan**

#### **What is a personal development plan (PDP)?**

- An individual plan to suit you.
- A systematic way of identifying and addressing your educational and professional development needs.
- Tools that can identify areas for further development and encourage lifelong learning. A PDP can identify goals for the forthcoming year and methods for achieving these goals.

#### **What makes a good PDP?**

- A product of time and thought;
- Identifies your learning needs: what you want to develop for either your current role or a future one;
- Is achievable;
- A product of reflection.

For each competency, ask yourself:

- What do I want/need to learn?
- What will I do to achieve it?
- What resources and/or support will I need?
- How will I know I have been successful? What are my learning outcomes?
- What are my target dates for completion and review?

#### **Tips for a useful PDP**

Your PDP must be:

- Personal to you;
- A working document: something you continuously update;
- Flexible (used as a guide only);
- Supported by evidence;
- Reviewed regularly

Good personal development planning will help you to achieve your potential by identifying your skills gaps and improvement areas/learning needs.

**Self-evaluation based on competencies and plan**

Competencies	Plan	Self-Evaluation Per rotation (Out of 100%)	
Medical Expert		1	
		2	
		3	
Communicator		1	
		2	
		3	
Collaborator		1	
		2	
		3	
Manager		1	
		2	
		3	
Health advocate		1	
		2	
		3	
Scholar		1	
		2	
		3	
Professional		1	
		2	
		3	
Others		1	
		2	
		3	
<p>Trainee Comments:</p>   <p>Supervisor Comments:</p>			

**Educational training events**

**Academic Half-Day Activities**

Num	Date	Topic	Supervisor
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

**Case and Oral Presentations**

Num	Date	Case	Supervisor
1			
2			
3			
4			
5			

**Journal Club Articles**

Num	Date	Article/Journal	Supervisor
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

**Courses, Conferences, and Meetings attended**

Num	Date	Name of activity	Supervisor
1			
2			
3			
4			
5			
6			
Total			

**Poster presentations**

Num	Date	Meeting	Title	Supervisor
1				
2				

**Publications**

Num	Journal	Title	Tutor
1			
2			

**Logbook**

1. The logbook for Gastroenterology and Hepatology trainees is intended to serve as a curriculum guide and a way to document appraisals and assessments.
2. The logbook is used to record the trainee's training experiences and the tutor's authentication of their trainee's competencies. It encompasses the number and types of procedures performed by the trainee, together with their level of competence and success rate pertinent to the procedures. In brief, this document will be used to prove that all competencies necessary for progress and, ultimately, certification have been completed.
3. Experience acquired in relation to individual patients must be verifiable through hospital records, when needed
4. The tutor will evaluate their trainee's logbook and overall progress at four-month intervals.
5. At the end of the logbook, the total number of procedures undertaken should be summarized by the trainee and signed-off by the tutor.



**Case write-ups (Selected)**Suggested Format (EPITOMISE): Dent, J. and Harden, R.M., *A Practical Guide for Medical Teachers*.

Patient Medical Record	
Date	
E – Enquiry	
P – Physical Examination	
I – Investigation	
T – Technical Procedures	
O – Options in Diagnosis	
M – Management	
I – Information Handling	
S – Sciences	
E – Education of Patient	
Others	
<b>Supervisor’s Comments:</b>	

**Reflections**

As your experience reflecting on your learning may be quite new, you may find this short guide to be useful.

Reflecting will aid your learning: the more you think about the concepts and issues in your role and connect them to what you know and see around you, the more you will remember and learn. Reflective writing is the expression of some of the mental processes of reflection. It is a technique that will be invaluable when completing your e-portfolio.

Reflective writing usually involves:

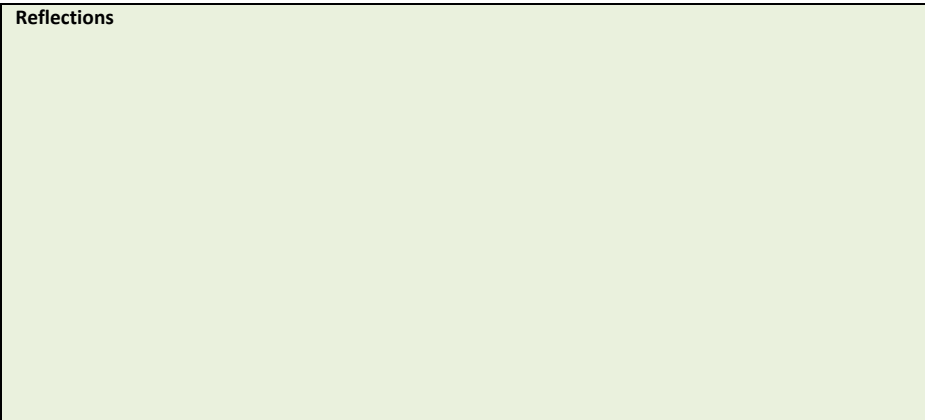
- Looking back at an event, for example, something that has happened at work, or at one of your assessments. It is often also useful to “reflect forward” to the future, as well as “reflecting back” on the past.
- Analyzing the event or idea: thinking in depth and from different perspectives and trying to explain them. It is an exploration and explanation of events, not just a description of them.
- Thinking carefully about what the event or idea means for you and your ongoing progress as a practicing professional. This includes what you would do differently, if anything, next time.

Reflective writing is, therefore, more personal than other types of academic writing.

Write your reflections as a:

- Clinician
- Communicator
- Collaborator
- Manager
- Health Advocate
- Scholar
- Professional
- Person

**Reflections**





**Others**

Patient Feedback:

Clinical Audit:

**Evaluations**

- Supervisor Comments
- Mini-Clinical Evaluation Exercise (CEX)
- Direct Observation of Procedures and Skills (DOPS).

**Supervisor comments:**



