

Program Requirements for Fellowship Education in Gastroenterology

For sections I. through X., see Program Requirements for Fellowship Education in the Subspecialties of Internal Medicine.

XI. Educational Program

- A. A subspecialty educational program in gastroenterology must be organized to provide training and experience at a sufficient level for the fellow to acquire the competency of a specialist in the field.
- B. It must be 3 years in duration.
- C. A minimum of 18 months must be devoted to clinical experiences. Hepatology should comprise at least 5 months of this experience.
- D. The training program must provide opportunities for fellows to develop clinical competence in the field of gastroenterology, including hepatology, endoscopy, clinical nutrition, and gastrointestinal oncology.

XII. Faculty

- A. The program must provide a minimum of four institutionally based key clinical faculty members, including the program director.
- B. In programs with a total of more than six fellows enrolled, a ratio of key clinical faculty to fellows of at least 1:1.5 must be maintained.
- C. At least one key clinical faculty member should have demonstrated expertise and primary focus in hepatology and one or more in all aspects of endoscopy including advanced procedures.

XIII. Facilities and Resources

In addition to the facilities and resources outlined in the Program Requirements for Fellowship Education in the Subspecialties of Internal Medicine, each of the following must be present at the primary training site:

- A. Diagnostic Laboratory Services
 - 1. There must be a procedure laboratory completely equipped to provide modern capability in gastrointestinal procedures. This equipment must include an up-to-date array of complete diagnostic and therapeutic endoscopic instruments and accessories plus esophageal motility instrumentation.
 - 2. Facilities for parasitology testing should be provided.
- B. Imaging
 - No additional resources required.
- C. Surgery and Pathology

No additional resources required.

D. Other Facilities, Resources or Support Services

1. Supporting services including pathology, diagnostic radiology, interventional radiology, medical imaging and nuclear medicine, general surgery, and oncology also must be available.
2. Facilities for the intensive care of critically ill patients with gastrointestinal disorders must be provided, including a working relationship with surgery, oncology, pediatrics, radiology, and pathology services.

E. Patient Population

See Program Requirements for Fellowship Education in the Subspecialties of Internal Medicine

XIV. Specific Program Content

A. Clinical Experience

Fellows must have formal instruction, clinical experience, and demonstrate competence in the evaluation and management of the following disorders:

1. Diseases of the esophagus
2. Acid peptic disorders of the gastrointestinal tract
3. Motor disorders of the gastrointestinal tract
4. Irritable bowel syndrome
5. Disorders of nutrient assimilation
6. Inflammatory bowel diseases
7. Vascular disorders of the gastrointestinal tract
8. Gastrointestinal infections, including retroviral, mycotic, and parasitic diseases
9. Gastrointestinal diseases with an immune basis
10. Gallstones and cholecystitis
11. Alcoholic liver diseases
12. Cholestatic syndromes
13. Drug-induced hepatic injury
14. Hepatobiliary neoplasms
15. Chronic liver disease
16. Gastrointestinal manifestations of HIV infections
17. Gastrointestinal neoplastic disease
18. Acute and chronic hepatitis

19. Biliary and pancreatic diseases
20. Women's health issues in digestive diseases
21. Geriatric gastroenterology
22. Gastrointestinal bleeding
23. Cirrhosis and portal hypertension
24. Genetic/inherited disorders
25. Medical management of patients under surgical care for gastrointestinal disorders
26. Management of GI emergencies in the acutely ill patient

B. Technical and Other Skills

1. Fellows must have formal instruction, clinical experience and demonstrate competence in the performance of the following procedures. A skilled preceptor must be available to teach and to supervise the fellows in the performance of these procedures which must be documented in each fellow's record, giving indications, outcomes, diagnoses, and supervisor(s). Assessment of procedural competence should not be based solely on a minimum number of procedures performed, but by a formal evaluation process. These evaluations should include objective performance criteria, for example, rate of successful cecal intubation for colonoscopy.
 - a) Esophagogastroduodenoscopy; fellows must perform a minimum of 130 supervised studies.
 - b) Esophageal dilation; fellows must perform a minimum of 20 supervised studies.
 - c) Flexible sigmoidoscopy; fellows must perform a minimum of 30 supervised studies.
 - d) Colonoscopy with polypectomy; fellows must perform a minimum of 140 supervised colonoscopies and 30 supervised polypectomies.
 - e) Percutaneous liver biopsy; fellows must perform a minimum of 20 supervised studies.
 - f) Percutaneous endoscopic gastrostomy; fellows must perform a minimum of 15 supervised studies.
 - g) Biopsy of the mucosa of esophagus, stomach, small bowel, and colon

- h) Gastrointestinal motility studies and 24-hour pH monitoring
- i) Nonvariceal hemostasis (upper and lower); fellows must perform 25 supervised cases, including 10 active bleeders.
- j) Variceal hemostasis; fellows must perform 20 supervised cases, including five active bleeders.
- k) Other diagnostic and therapeutic procedures utilizing enteral intubation
- l) Moderate and conscious sedation

2. Fellows must have formal instruction and clinical experience in the interpretation of the following diagnostic and therapeutic techniques and procedures:

- a) Gastric, pancreatic, and biliary secretory tests
- b) Enteral and parenteral alimentation
- c) Pancreatic needle biopsy
- d) ERCP, in all its diagnostic and therapeutic applications
- e) Imaging of the digestive system, including:
 - (1) Ultrasound, including endoscopic ultrasound
 - (2) Computed tomography
 - (3) Magnetic resonance imaging
 - (4) Vascular radiography
 - (5) Contrast radiography
 - (6) Nuclear medicine
 - (7) Percutaneous cholangiography

C. Formal Instruction

The program must include emphasis on the pathogenesis, manifestations, and complications of gastrointestinal disorders, including the behavioral adjustments of patients to their problems. The impact of various modes of therapy and the appropriate utilization of laboratory tests and procedures should be stressed. In addition to formal instruction in the areas outlined above, specific content areas that must be included in the formal educational program (lectures, conferences, seminars, and journal clubs) include the following:

1. Anatomy, physiology, pharmacology, pathology and molecular biology related to the gastrointestinal system, including the liver, biliary tract and pancreas

2. The natural history of digestive diseases
3. Factors involved in nutrition and malnutrition
4. Surgical procedures employed in relation to digestive system disorders and their complications
5. Prudent, cost-effective, and judicious use of special instruments, tests, and therapy in the diagnosis and management of gastroenterologic disorders
6. Liver transplantation
7. Sedation and sedative pharmacology
8. Interpretation of abnormal liver chemistries

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