Gastroenterology Fellowship Program

Educational Goals and Objectives

I. Overview

A. Curricular Components

The overall educational goals of the Penn gastroenterology program will be distributed to fellows and faculty annually. Competency-based goals and objectives for each assignment at the Hospital of the University of Pennsylvania (HUP), Penn Presbyterian Medical Center (PPMC), the Philadelphia VA Medical Center (PVAMC), and The Perelman Center for Advanced Medicine (CAM) will be distributed in either written or electronic format to fellows and faculty annually. Teaching faculty of the Penn gastroenterology program will review the goals of each rotation with the fellow at the beginning of each rotation. Both fellows and faculty will evaluate each rotation at its conclusion. The written goals and objectives will address the education purpose, teaching methods, variety of gastrointestinal, pancreaticobiliary, and liver diseases, patient characteristics, and types of clinical inpatient and outpatient encounters, procedures and services that the fellow will likely experience. Additionally, other educational methods including reading lists and pathologic material pertaining to gastroenterology, pancreaticobiliary diseases, and hepatology will be discussed. Competency-based goals and objectives for each assignment will define the level of fellow supervision by faculty members in inpatient and outpatient settings. The Penn program will schedule regular didactic sessions pertaining to gastroenterology and hepatology. These sessions will cover basic and clinical sciences relevant to these disciplines. The overall goals of the Penn program will address fellow responsibilities for inpatient and outpatient care, progressive responsibility for patient management, and fellow supervision during the 3 year fellowship. The information below is a brief overview of the educational initiative of the Penn Gastroenterology Fellowship Program. Other documents in this handbook, and the Division of Gastroenterology and University of Pennsylvania Health System (UPHS) websites provide more specific information about the fellowship program and policies and procedures within the health system.
B. ACGME Competencies

The ACGME competencies are patient care, medical knowledge, practice-based learning and improvement (PBLI), interpersonal and communications skills, professionalism, and systems-based practice. All competencies will be integrated into the 3 year Penn program.

Patient care: Gastroenterology fellows will provide care that is compassionate, appropriate, and effective for the treatment of a variety of gastrointestinal, pancreaticobiliary, and liver diseases. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care, and treatment of men and women with these diseases from adolescence to old age, during health and all stages of illness.

Medical knowledge: Fellows will demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to caring for patients with gastrointestinal, pancreaticobiliary, and liver diseases. Fellows will be expected to learn the scientific method of problem solving pertaining to gastroenterology and hepatology, evidence-based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Practice-based learning and improvement (PBLI): Fellows will demonstrate the ability to investigate and evaluate their care of patients with gastrointestinal, pancreaticobiliary, and liver diseases, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Fellows will develop skills and habits that identify strengths, weaknesses, and limits in one’s knowledge and expertise. Moreover, fellows will set learning and improvement goals, identify and perform appropriated learning activities, and systematically analyze the practice of gastroenterology and hepatology using quality improvement methods and implement changes with the goal of practice improvement. Fellows will incorporate formative evaluation feedback into the daily practice of gastroenterology and hepatology. Fellows will locate, appraise, and assimilate evidence from scientific studies related to their patients with gastrointestinal, pancreaticobiliary, and liver diseases. Fellows will utilize information technology pertaining to gastroenterology and hepatology to optimize learning and participate in education of patients with gastrointestinal, pancreaticobiliary, and liver diseases and their families, medical students, house officers, and other healthcare personnel.

Interpersonal and communication skills: Fellows will demonstrate interpersonal and communication skills that result in effective exchange of information and collaboration with patients and their families, and health professionals. Fellows will be expected to communicate effectively with patients
who have gastrointestinal, pancreaticobiliary, and liver diseases, their families, and the public across a broad range of socioeconomic and cultural backgrounds. Fellows must communicate effectively with other physicians, allied personnel, and health-related agencies. Fellows must act as effective members or leaders of gastroenterology and hepatology teams. Fellows will act in a consultative role to others and maintain comprehensive, timely, and legible medical records, if applicable.

**Professionalism:** Fellows will commit to carrying out professional responsibilities and adherence to ethical principles. Fellows must demonstrate compassion, integrity, and respect for others. Fellows must be responsive to patient needs that supersede self-interest. Furthermore, fellows must respect patient privacy and autonomy. Fellows must be held accountable to patients, society, and the profession. Fellows must be sensitive and responsive to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

**Systems-based practice:** Fellows will demonstrate awareness and responsiveness to healthcare systems at HUP, PPMC, PVAMC, and CAM. Moreover, fellows will be able to call effectively on other resources in the broader healthcare system to provide optimal health care. Fellows will work effectively in different health care delivery settings relevant to gastroenterology and hepatology, coordinate patient care within the health care system relevant to the subspecialty, and incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate. Fellows must advocate for quality care in gastroenterology and hepatology and for systems that promote high quality care. Fellows will work in interprofessional teams to enhance patient safety and improve patient care quality pertaining to the subspecialty, and participate in identifying system errors and implementing potential systems solutions.

**C. Inpatient and Outpatient Clinical Rotations**

The inpatient and outpatient clinical rotations at HUP, PPMC, PVAMC, and CAM will provide fellows with exposure to patients with a variety of gastrointestinal, pancreaticobiliary, and liver diseases that will meet the ACGME competency requirements above. Fellows will acquire expertise in evaluating laboratory tests, imaging studies, and pathology related to these diseases. Fellows will have intense exposure to disorders including but not limited to acute and chronic abdominal pain, benign and malignant esophageal diseases, dyspepsia, nausea and vomiting, diarrhea, intestinal gas, fecal incontinence, constipation, variceal and non-variceal gastrointestinal bleeding, jaundice, nutritional assessment, eating disorders, obesity, food allergies, gastrointestinal malignancies, vascular lesions of the gastrointestinal tract, gastrointestinal and hepatic diseases in the pregnant patient, radiation injury, complications of gastrointestinal endoscopy,
GERD, gastrointestinal motor disorders, gastric secretion, helicobacter pylori, gastritis and gastropathies, peptic ulcer disease, pancreatic secretion, acute and chronic pancreatitis, pancreatic neoplasms, bile secretion, gallstone and gallbladder disorders, small bowel and colonic secretion, water and electrolyte transport, malabsorption and malabsorption, short bowel syndrome, celiac sprue, Whipple’s disease, infectious diarrhea, inflammatory bowel disease, appendicitis, diverticular disease, irritable bowel syndrome, intestinal obstruction and ileus, acute and chronic pseudoobstruction, intestinal polyps, diseases of the anorectum, liver function tests, viral hepatitis, autoimmune liver diseases, metabolic liver diseases, alcoholic liver disease, non-alcoholic fatty liver disease, benign and malignant neoplasms of the liver, vascular diseases of the liver, liver diseases of pregnancy, drug/toxin-induced liver injury, cholestatic liver diseases, acute liver failure, hepatic malignancies, complications of portal hypertension, and liver transplantation. Fellows will be required to attend outpatient continuity clinic ½ day per week throughout their 3 year fellowship experience. These clinics will occur at CAM, PPMC, and PVAMC. Details regarding inpatient and outpatient clinic rotations may be found elsewhere in this handbook and on the Division of Gastroenterology website.

D. Scholarly pursuits

Fellows will participate in scholarly activity during the 3 year program that will meet the ACGME requirements. As per ACGME requirements, the scholarly pursuit will not interfere with required inpatient and outpatient clinical rotations. The program will ensure a meaningful, supervised experience. Fellows will be supervised and advised by qualified faculty members. Fellows will be expected to learn the standards of ethical conduct of research in gastroenterology and hepatology, design and interpretation of research studies, the use of informed consent, research methodology and interpretation of data. It is anticipated that fellows will demonstrate evidence of productivity through publication of original work as abstracts or manuscripts, presentation at national meetings, or publication of review articles in journals or textbooks. Second and third year fellows will receive funded formal research training through NIH T-32 training grants. Fellows will pursue research training in either the basic science or Master’s of Science in Clinical Epidemiology (MSCE) tracks which are NIH-funded through the training grants. The Penn GI fellowship program will follow the requirements set forth by these training grants regarding hours devoted to research and protected time for meaningful research to develop. Other information about research during fellowship training may be found in other portions of this handbook, the Division of Gastroenterology website, or from Drs. Anil Rustgi (Division chief) and Jonathan Katz (Associate Program Director for the fellowship program).
**E. Conferences and Seminars**

Conferences and seminars will be conducted regularly as scheduled and must be attended by faculty and fellows. These didactic sessions will meet the ACGME requirements above. There will be weekly journal club, hepatology conference, pathology conference, clinical case conference, GI grand rounds, core curriculum conference, hepatobiliary tumor conference, and liver transplant selection committee conference. A variety of other clinical and research conferences are offered within the Division of Gastroenterology and UPHS. Additional information may be found in the Division of Gastroenterology and UPHS web sites. Fellows will be expected to assist in planning and conducting conferences (e.g. clinical and core curricula, journal clubs, or research conferences). However, the major focus will be on the education of fellows, and fellows will not be expected to prepare an excessive number of conferences to the detriment of their education.

**F. Interdisciplinary Topics**

Fellows will become proficient in the critical assessment of medical literature pertinent to gastroenterology and hepatology. Fellows will be exposed to medical informatics, clinical epidemiology, and biostatistics. Fellows can also take advantage of the Penn’s Center for Clinical Epidemiology and Biostatistics (CCEB) within the Department of Biostatistics and Epidemiology (DBE). Fellows will also be exposed to clinical ethics, quality assessment, quality improvement, patient safety, risk management, preventive medicine, pain management, end-of-life care, and physician impairment. The interdisciplinary topics will meet the ACGME requirements.