

Fellowship Training Program in Digestive Diseases

Yale University School of Medicine

Curriculum

Goals and Objectives

Policies and Procedures

Revised March 2017 (A. Imaeda and PEC)

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Curriculum Overview

Introduction

The training program in Digestive Diseases at Yale University School of Medicine began over 50 years ago when Dr. Gerald Klatskin started a training program in Hepatology and Dr. Howard Spiro established a similar program in Gastroenterology. In 1982 the Gastroenterology and Hepatology programs were combined in the Section of Digestive Diseases under the leadership of Dr. James Boyer. From 1996-2002, Dr. James Anderson was the Section Chief, followed by Dr. Michael Nathanson who has been the Section Chief since 2003. Our program ranks in the top training programs for placing its fellows in academic positions.

The comprehensive training program in Digestive Diseases consists of a three-year period of training. Three hospitals participate in the program including Yale-New Haven Hospital, the VA Connecticut Health Care System Hospital and the Hospital of St. Raphael. At these hospitals fellows participate in the care of patients with a wide range of clinical problems in all stages of illness. Clinical fellows receive 36 months of clinical training. Advanced clinical training in biliary-pancreatic endoscopy (ERCP) is offered to selected clinical fellows in their second or third year.

Research fellows receive research training as well as clinical training. Two National Institutes of Health (NIH) training grants support fellows during their research training. Research fellows have the option to pursue an additional fourth year to complete their research training.

Throughout the traditional 3-year program, all fellows maintain a continuity of care clinic experience and continue to participate in the didactic educational activities of the section.

Key Personnel involved in Administration of the Training Program

| | |
|----------------------------|--|
| Avlin Imaeda, MD, PhD | GI Fellowship Program Director Site Director, VA CT Health Care System |
| Amir Masoud MD | Associate GI Fellowship Program Director Site Director, Yale New Haven Hospital |
| Michael Nathanson, MD, PhD | Chief, Section of Digestive Diseases |
| Karen Lawhorn | GI Fellowship Coordinator |
| Sidney Bogartus, MD | St. Raphael's Hospital Site Director |
| Guadalupe Garcia-Tsao, MD | Section Chief, VA CT Health Care System |
| Priya Jamidar, MD | Director, Y-NHH GI Procedure Center |
| Mark Siegel, MD | Internal Medicine Residency Program Director |
| Stephen Huot, MD | Director, Graduate Medical Education |

Overall Goals and Objectives

Our broad, overall goals and objectives are to provide a scholarly training environment for fellows to develop into academic subspecialty consultants, clinical investigators, or clinical gastroenterologists and/or hepatologists. In addition to providing outstanding clinical training, we strive to provide the scientific foundation necessary to foster the development of our trainees into independent physician-scientists. To attain these goals the program is structured for trainees to achieve appropriate medical knowledge and procedural skills in the field of digestive diseases, as well as to develop the interpersonal and communication skills and professional attitudes necessary to function as highly competent subspecialists in this field. The program additionally strives to foster in collaboration with the training sites a supportive and safe learning environment as well as an environment of patient safety and high quality and continually improving care. To this end the fellows are trained in and will participate in patient safety and quality improvement projects and measures and the program undergoes a yearly self-evaluation of its curriculum and outcomes.

General Goals and Objectives

Fellows are expected to conduct themselves in a courteous and professional manner throughout their fellowship at all times. Attendance at section conferences is mandatory; there are no exceptions except for vacation, medical or scientific conferences, and illness. Attendance at medical and scientific conferences is expected, especially if the topic is related to gastroenterology or hepatology.

When responding to a consultation request, the fellow is expected to provide a comprehensive evaluation of a patient's gastrointestinal or hepatic illness in a prompt and concise manner, formulate a prioritized differential diagnosis, and outline the proposed evaluation. The fellow should be able to enter a clear document into the patient's records. The fellow should be able to communicate his/her evaluation in a clear, concise and effective manner to the requesting physician and provide acceptable follow-up. Interactions with colleagues and allied personnel should be conscientious, respectful, responsible, punctual (24 hours at maximum but generally during the same working day) and appropriate. The fellow must exhibit humanistic qualities when interacting with patients and demonstrate integrity, respect, and compassion. The fellow will be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues. The fellow will be ethical and honest.

The following are general guidelines that all fellows must adhere to:

1. All fellows must answer their pages promptly. You should answer your pager as soon as you get the page, unless you are busy with patient care activities, such as performing procedures. In this case, you should politely ask someone who is in the room with you to answer your pager while you continue to do the procedure.
2. Email must be checked and answered promptly. Email is used to send general messages to all fellows and specific messages to individual fellows.
3. Fellows must return evaluations promptly.

Goals and Objectives for Months 1-3

At the end of this period, the fellow will be expected to exhibit competency in the following areas:

1. Patient Care

- A. Demonstrate a caring and respectful attitude and behavior towards patients and families.
- B. Perform all components of the gastrointestinal and liver examination, including history (present, past, family and social history), review of systems, and physical examination within an appropriate time frame.
- C. Begin to be able to formulate a diagnostic and therapeutic decision based on available evidence, sound judgment, and patient preference.
- D. Begin to be able to develop and implement management plans and modify plans as new information becomes available.
- E. Be able to perform discharge planning, including arranging outpatient follow up clinic visits and procedures.
- F. Be able to demonstrate proper knowledge and technique in obtaining informed consent, and the indications and contraindications for endoscopic procedures.
- G. Be able to demonstrate proper knowledge for screening procedures.
- H. Begin to be able to recognize complications.
- I. Have the rudimentary ability to manipulate the scope for upper and lower endoscopies (GI services). See Procedures on page 97.
- J. Demonstrate the ability to perform paracentesis.
- K. Demonstrate the ability to work within a team.
- L. Be able to practice health promotion and disease prevention.

2. Medical Knowledge

- A. Demonstrate medical knowledge, presentation, evaluation and treatment for the most common digestive disease emergencies including the following:
 - i. Acute gastrointestinal bleeding from the upper or lower gastrointestinal tract
 - ii. Caustic ingestion and foreign body extraction
 - iii. The acute abdomen and abdominal pain
 - iv. Intestinal obstruction and pseudo-obstruction.
 - v. Severe diarrhea including acute presentations of inflammatory bowel disease
 - vi. Intestinal ischemia
 - vii. Acute pancreatitis
 - viii. Biliary tract obstruction and cholangitis, gallstones and acute and chronic cholecystitis
 - ix. Acute hepatic failure
- B. Demonstrate critical thinking and knowledge of established and evolving biomedical, clinical, and social sciences and apply this knowledge to gastroenterology. This includes appropriate interpretation of radiology and pathologic findings.
- C. Demonstrate a scholarly attitude and be committed to a life of learning.
- D. Demonstrate evidence-based decision making and the scientific method of problem solving.

E. Demonstrate an attitude of caring that is derived from humanistic and professional values.

3. Practice-Based Learning and Improvement

- A. Be able to evaluate and analyze his/her patient care practices using quality improvement methods and implement change with the goal of practice improvement.
- B. Accept and respond to constructive feedback, incorporate the feedback into improving activities, behavior, or attribute.
- C. Utilize scientific literature and information technology to improve patient care and facilitate life-long learning, e.g., perform medline searches on specific topics related to patient care.
- D. Facilitate, and participate in, the learning of others including students, residents and other health care professionals by presentation on rounds and at conferences.
- E. Recognize strengths, deficiencies, and limits in his or her knowledge and expertise.
- F. Set own learning and improvement goals.
- G. Facilitate, and participate in, the education of patients and families
- H. Participate in programmatic quality improvement and patient safety programs as requested by the second year class as well as supervising faculty
- I. Document as appropriate for programmatic monitoring of efficacy ie polypectomy and adenoma pathology in screening colonoscopy in procedure logs

4. Interpersonal and Communication Skills

- A. Listen well, show sensitivity to, and communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds.
- B. Provide effective and professional consultation to other physicians and members of the health care team.
- C. Be able to notify members of the health care team, the patient, and/or family members of endoscopic findings.
- D. Be able to generate endoscopic reports that are grammatically correct, accurate in content, and concise.
- E. Be able to compose effective chart notes, limiting cut and paste from other notes.
- F. Demonstrate the ability to teach effectively on rounds and at conferences.
- G. Work effectively as a member and leader of the health care team.

5. Professionalism

- A. Demonstrate a respectful and appropriate attitude to housestaff, medical students, and other members of the health care team.
- B. Be able to answer consults in a timely fashion depending on the urgency.
- C. Demonstrate respect, integrity, and compassion toward patients, families and all other people.
- D. Be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues, including respect for patient privacy and autonomy..
- E. Be ethical and honest.
- F. Demonstrate a responsible work ethic with regard to acceptance of responsibility, initiative, attendance at conferences, on-time attendance at clinics, and completion of

work assignments, personal demeanor, and modification of behavior in response to criticism.

G. Be responsive to patient needs superseding self-interests.

H. Demonstrate accountability to patients, society and our profession.

6. Systems-Based Practice

A. Begin to be able to apply evidence-based medicine and utilize cost-effective health care principles to provide optimal patient care.

B. Be an advocate for quality patient care and for his or her patient within the health care system.

C. Be able to use the data access system of the GI procedure center and the hospital computer system where he or she is doing a rotation.

D. Begin to be able to make appropriate suggestions for referrals to other subspecialties.

E. Work effectively within the health care system.

F. Incorporate considerations of cost awareness and risk-benefit analysis into their patient care.

G. Coordinate patient care within the health care system relevant to digestive diseases.

H. Work in multi-disciplinary teams to enhance patient safety and to improve patient care quality.

I. Participate in identifying system errors and implementing potential system solutions.

Goals and Objectives for Months 4-6

The fellow will continue to add to his or her knowledge base and goals and objectives as discussed above. Additionally, at the end of the second three months of clinical training, the fellow will be expected to exhibit competency in the following areas:

1. Patient Care

A. Demonstrate a caring and respectful attitude and behavior towards patients and families.

B. Demonstrate fluency in all components of the gastrointestinal and liver examination, including history (present, past, family and social history), review of systems, and physical examination within an appropriate time frame.

C. Formulate a more advanced diagnostic and therapeutic decision based on available evidence, sound judgment, and patient preference.

D. Develop and implement more advanced management plans and modify plans as new information becomes available.

E. Perform discharge planning, including scheduling clinic and procedure follow up appointments.

F. Be fluent in demonstrating proper knowledge and technique in obtaining informed consent, and the indications and contraindications for endoscopic procedures.

G. Be fluent in the proper knowledge for screening procedures.

H. Be able to independently administer appropriate conscious sedation.

I. Be more advanced in recognizing complications and the management of complications.

J. Have a more advanced ability to manipulate the scope for upper and lower endoscopies (GI services). See Procedures on page 97. Once the minimum number of

endoscopic procedures has been reached, the fellow will be evaluated in competency-based criteria for procedural competency. See Addendum 1.

K. Demonstrate the ability to perform paracentesis. See Procedures on page 97.

L. Demonstrate the ability to work within a team.

M. Be able to practice health promotion and disease prevention.

2. Medical Knowledge

A. Demonstrate medical knowledge for basic gastrointestinal and hepatic physiology including the following:

- i. Anatomy of the gastrointestinal tract including its blood supply
- ii. Gastrointestinal motility
- iii. The role of the stomach, pancreas, and bile with respect to digestion
- iv. The mechanisms and sites of nutrient and electrolyte absorption by the small intestine and colon
- v. The regulation of gastric, pancreatic, biliary, and intestinal secretion
- vi. The roles of the liver in the: i) synthesis and release of essential metabolic factors (such as albumin and prothrombin) into the blood, ii) metabolism and detoxification of a number of substances, iii) synthesis and secretion of bile
- vii. Normal and abnormal laboratory values relevant to digestive diseases, including the interpretation of abnormal liver chemistries
- viii. The natural history of digestive diseases.

B. demonstrate medical knowledge for the following common digestive diseases including the clinical manifestations, natural history, behavioral adjustment of patients to their diseases, pathophysiology, and treatment of the following:

- i. Disorders of the esophagus including esophagitis, esophageal spasm, and achalasia
- ii. Acid-peptic disease of the stomach, including *Helicobacter pylori* infection and various methods for testing and diagnosing *Helicobacter pylori* infection
- iii. Irritable bowel syndrome
- iv. Infectious diseases of viral, retroviral, bacterial, mycotic, or parasitic etiology
- v. Gastrointestinal and hepatic manifestations of HIV infections
- vi. Acute and chronic hepatitis
- vii. Jaundice, cholestasis and cholestatic syndromes
- viii. Pathophysiology and treatment of portal hypertension
- ix. Chronic liver disease, cirrhosis, and its systemic manifestations including ascites, encephalopathy, variceal bleeding, and spontaneous bacterial peritonitis
- x. Premalignant and malignant processes of the esophagus, gastrointestinal tract, pancreas, biliary tract and liver
- xi. Inflammatory bowel disease - Crohn's disease, ulcerative colitis, and indeterminate colitis
- xii. Vascular disorders of the gastrointestinal tract
- xiii. Alcoholic liver disease
- xiv. Abdominal pain
- xv. Nausea, vomiting and diarrhea, both acute and chronic
- xvi. Constipation

- xvii. Gastrointestinal bleeding – acute and chronic
 - xviii. Diverticular disease, including diverticulitis and diverticular bleeding
 - xix. Common laboratory tests pertinent to the GI tract or liver
 - xx. Women’s health issues in digestive diseases
 - xxi. Geriatric gastroenterology
 - xxii. Pharmacology of medications relevant to the treatment of digestive diseases, including bioavailability, indications, usage, complications, and interactions with other medications and organ systems, including conventional medications as well as complimentary and alterative medications.
 - xxiii. Prevention and screening relevant to digestive diseases, including colon cancer screening, smoking cessation and carcinogens.
- C. Begin to have a basic understanding of the gastrointestinal and hepatic histology and pathology, including recognizing normal tissue throughout the gastrointestinal tract and liver
 - D. Begin to have a basic understanding of the role of the imaging modalities in the diagnosis and therapy of digestive diseases, including the following procedures: barium contrast studies, ultrasonography, computed tomography, magnetic resonance imaging (including MRCP) and nuclear imaging.
 - E. Be more advanced in demonstrating critical thinking and knowledge of established and evolving biomedical, clinical, and social sciences and apply this knowledge to gastroenterology.
 - F. Continue to demonstrate a scholarly attitude and be committed to a life of learning.
 - G. Continue to demonstrate an attitude of caring that is derived from humanistic and professional values.

3. Practice-Based Learning and Improvement

- A. Be able to evaluate and analyze his/her patient care practices using quality improvement methods and implement change with the goal of practice improvement.
- B. Accept and respond to constructive feedback, incorporate the feedback into improving activities, behavior, or attribute.
- C. Continue to utilize scientific literature and information technology to improve patient care and facilitate life-long learning, e.g., perform Medline searches on specific topics related to patient care and discuss any new information on rounds.
- D. Facilitate, and participate in, the learning of others including students, residents and other health care professionals by presentation on rounds and at conferences.
- E. Recognize strengths, deficiencies, and limits in his or her knowledge and expertise.
- F. Set learning and improvement goals.
- G. Facilitate, and participate in, the education of patients and families
- H. Participate in programmatic quality improvement and patient safety programs as requested by the second year class as well as supervising faculty
- I. Document as appropriate for programmatic monitoring of efficacy ie polypectomy and adenoma pathology in screening colonoscopy in procedure logs

4. Interpersonal and Communication Skills

- A. Listen well, show sensitivity to, and communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds.

- B. Be fluent in providing effective and professional consultation to other physicians and members of the health care team by providing a broader differential diagnosis, and at the same time providing more concise consultative notes.
- C. Be able to notify members of the health care team, the patient, and/or family members of endoscopic findings.
- D. Be able to generate endoscopic reports that are grammatically correct, accurate in content, and concise.
- E. Compose effective chart notes limiting the use of cut and paste from other notes.
- F. Demonstrate the ability to teach effectively on rounds and at conferences.
- G. Work effectively as a member and leader of the health care team.

5. Professionalism

- A. Demonstrate a respectful and appropriate attitude to housestaff, medical students, and other members of the health care team.
- B. Answer consults in a timely, efficient, concise fashion.
- C. Demonstrate respect, integrity, and compassion toward patients, families and all other people.
- D. Be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues, including respect for patient privacy and autonomy..
- E. Be ethical and honest.
- F. Demonstrate a responsible work ethic with regard to acceptance of responsibility, initiative, attendance at conferences, on-time attendance at clinics, and completion of work assignments, personal demeanor, and modification of behavior in response to criticism.
- G. Be responsive to patient needs superseding self-interests.
- H. Demonstrate accountability to patients, society and our profession.

6. Systems-Based Practice

- A. Be more advanced in applying evidence-based medicine and utilizing cost-effective health care principles to provide optimal patient care.
- B. Be an advocate for quality patient care and for his or her patient within the health care system.
- C. Be fluent in using the data access system of the GI procedure center and the hospital computer system where he or she is doing a rotation.
- D. Be more advanced in making appropriate suggestions for referrals to other subspecialties.
- E. Work effectively within the health care system.
- F. Incorporate considerations of cost awareness and risk-benefit analysis into patient care.
- G. Coordinate patient care within the health care system relevant to digestive diseases.
- H. Work in multi-disciplinary teams to enhance patient safety and to improve patient care quality.
- I. Participate in identifying system errors and implementing potential system solutions.

Goals and Objectives for Months 7-12

The fellow will continue to add to his or her knowledge base as discussed above. The fellow must continue to demonstrate properly all of the above goals and objectives from the preceding six months of training. Additionally, at the end of the 12 months of clinical training, the fellow will be expected to exhibit competency in the following areas:

1. Patient Care

- A. At this stage the fellow should be performing consultations autonomously with minimal and only occasional additional attending input.
- B. At this stage the fellow should be able to manipulate the scope for diagnostic and therapeutic upper and lower endoscopies (GI) with very little additional input from the attending. See Procedures on page 97. Once the minimum number of endoscopic procedures has been reached, the fellow will be evaluated using competency-based criteria for procedural competency. (See Addendum 1).
- C. Demonstrate knowledge of the indications and contraindications for capsule endoscopy.
- D. At this stage the fellow should be able to autonomously perform paracentesis (liver service). See Procedures on page 97.
- E. Continue to perform discharge planning, including arranging outpatient follow up clinic visits and procedures.
- F. Continue to practice health promotion and disease prevention.

2. Medical Knowledge

- A. In addition to the acquisition of medical knowledge during the first six months, the fellow should demonstrate medical knowledge, presentation, evaluation and treatment for the following digestive diseases and diagnostic tests:
 - i. Gastric and intestinal motility disorders
 - ii. Malabsorption and mal-digestion including mucosal diseases and pancreatic insufficiency
 - iii. Disorders of nutrient assimilation and malnutrition
 - iv. Immunologically based diseases
 - v. Drug-induced hepatic injury, including herbal medicines and over the counter drug induced injury
 - vi. Pancreatic and biliary diseases, including gallstones and cholecystitis
 - vii. Gastric, pancreatic, and biliary secretory tests
 - viii. Genetic and inherited disorders
 - ix. Depression, neurosis, and somatization disorders
 - x. Surgical care of gastrointestinal and liver disorders and medical management of patients under surgical care for gastrointestinal disorders
 - xi. Pregnancy and the GI tract and liver
 - xii. Prevention, screening, and surveillance, including colon cancer screening, Barrett's esophagus, smoking cessation and carcinogens
 - xiii. Complimentary and alternative medicine (CAM) as it applies to GI and liver diseases including, but not limited to, the use of probiotics, herbal and over the counter medicines (OTC), vitamins and minerals, meditation, yoga, physical exercise, and patients' beliefs of treatment benefits.

- xiv. Ethics as it applies to gastrointestinal and hepatic diseases, including but not limited to, liver transplantation, malignancy and end-of-life issues, and the appropriate evaluation and management of patients with diverse ethnic, cultural, socioeconomic and gender issues
 - xv. General principles as they apply to liver transplantation
 - xvi. Medical genetics relevant to digestive diseases.
 - xvii. Knowledge and appropriate use of enteral and parenteral alimentation
 - xviii. Anatomy, physiology, pathology and molecular biology related to the gastrointestinal tract, including the liver, biliary tract and pancreas
 - xix. Indications and complications of surgical procedures relevant to digestive diseases.
- B. Demonstrate an understanding of gastrointestinal and hepatic histology and pathology, including recognizing inflammatory and neoplastic conditions, normal tissue, esophageal disorders, intestinal disorders leading to malabsorption, inflammatory bowel disease, hepatitis, cholestasis, and cirrhosis, and infectious etiologies.
- C. Demonstrate an understanding of the role of the imaging modalities in the diagnosis and therapy of digestive diseases, including the following procedures: barium contrast studies, ultrasonography, computed tomography, virtual colonography, vascular, pancreatic and biliary radiology, magnetic resonance imaging (including MRCP) and nuclear imaging and isotope based tests, invasive therapeutic techniques (including percutaneous biopsy and drainage, percutaneous cholangiography, pancreatic needle biopsy, percutaneous gastrostomy, embolization and TIPS placement), vascular, pancreatic and biliary radiology. The fellow should understand the utility of these radiologic procedures in specific clinical conditions, develop a detailed knowledge of the risk and benefits of these procedures, including interventional procedures, and have an appreciation of their cost.
- D. Demonstrate critical thinking and knowledge of established and evolving biomedical, clinical, and social sciences and apply this knowledge to gastroenterology.
- E. Continue to demonstrate a scholarly attitude and be committed to a life of learning.
- F. Continue to demonstrate an attitude of caring that is derived from humanistic and professional values.

3. Practice-Based Learning and Improvement

- A. Evaluate and analyze his/her patient care practices using quality improvement methods and implement change with the goal of practice improvement.
- B. Accept and respond to constructive feedback, incorporate the feedback into improving activities, behavior, or attributes.
- C. Continue to utilize scientific literature and information technology to improve patient care and facilitate life-long learning, e.g., perform pubmed searches on specific topics related to patient care and discuss any new information on rounds.
- D. Facilitate, and participate in, the learning of others including students, residents and other health care professionals by presentation on rounds and at conferences that reflects the level of knowledge and preparation that is expected at this level of training.
- E. Recognize strengths, deficiencies, and limits in his or her knowledge and expertise.
- F. Set learning and improvement goals.
- G. Facilitate, and participate in, the education of patients and families.

- H. Understand concepts in developing patient safety and quality improvement projects and initiatives
 - I. Participate in programmatic quality improvement and patient safety programs as requested by the second year class as well as supervising faculty. Document as appropriate for programmatic monitoring of efficacy ie polypectomy and adenoma pathology in screening colonoscopy in procedure logs and begin to participate in self-evaluation of efficacy such as monitoring adenoma detection rates, cecal intubation rates, colonoscopic withdrawal times and adherence to patient management guidelines such as immunization in patients with cirrhosis and inflammatory bowel disease
4. Interpersonal and Communication Skills
- A. Listen well, show sensitivity to, and communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds.
 - B. Be fluent in providing effective and professional consultation to other physicians and members of the health care team by providing a broader differential diagnosis, while becoming more concise with each consult.
 - C. Notify members of the health care team, the patient, and/or family members of endoscopic findings.
 - D. Generate endoscopic reports that are grammatically correct, accurate in content, and concise.
 - E. Compose effective chart notes minimizing cut and paste from other notes.
 - F. Demonstrate the ability to teach effectively on rounds and at conferences.
 - G. Work effectively as a member and leader of the health care team.
5. Professionalism
- A. Demonstrate a respectful and appropriate attitude to housestaff, medical students, and other members of the health care team.
 - B. Answer consults in a timely fashion depending on the urgency and be able to triage appropriately.
 - C. Demonstrate respect, integrity, and compassion toward patients, families and all other people.
 - D. Be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues, including respect for patient privacy and autonomy..
 - E. Be ethical and honest.
 - F. Demonstrate a responsible work ethic with regard to acceptance of responsibility, initiative, attendance at conferences, on-time attendance at clinics, and completion of work assignments, personal demeanor, and modification of behavior in response to criticism.
 - G. Be responsive to patient needs superseding self-interests.
 - H. Demonstrate accountability to patients, society and our profession.
6. Systems-Based Practice
- A. Be fluent in applying evidence-based medicine and utilizing cost-effective health care principles to provide optimal patient care.
 - B. Be an advocate for quality patient care and for his or her patient within the health care system.

- C. Be fluent in using the data access system of the GI procedure center and the hospital computer system where he or she is doing a rotation.
- D. Be fluent in making appropriate suggestions for referrals to other subspecialties.
- E. Work effectively within the health care system.
- F. Incorporate considerations of cost awareness and risk-benefit analysis into their patient care.
- G. Coordinate patient care within the health care system relevant to digestive diseases.
- H. Work in multi-disciplinary teams to enhance patient safety and to improve patient care quality.
- I. Participate in identifying system errors and implementing potential system solutions.

Goals and Objectives for Months 13-36

The fellow will obtain clinical training through continued participation on inpatient rotations, clinical elective, procedures, and ambulatory continuity clinics to continue enhancement of his or her clinical and endoscopic skills acquired during the first 12 months of training. By the end of the three year fellowship, the fellow will be expected to demonstrate fluency and the competency expected of a consultant gastroenterology and hepatologist in all areas of patient care, including procedural competency in diagnostic and therapeutic upper and lower endoscopies, capsule endoscopy, liver biopsies, and motility interpretation; medical knowledge; practice-based learning and improvement; interpersonal and communication skills; professionalism; and systems-based practice as they relate to digestive diseases. This will include participation in patient safety and/or quality improvement projects which are initiated for each class at the end of 12 months of training, participation on projects initiated by other fellowship classes as appropriate and participation in projects and initiatives that occur at training sites during the course of clinical rotations. Fellows will document as appropriate for programmatic monitoring of efficacy ie polypectomy and adenoma pathology in screening colonoscopy in procedure logs and participate in self-evaluation of efficacy such as begin monitoring adenoma detection rates, cecal intubation rates, colonoscopic withdrawal times and adherence to patient management guidelines such as immunization in patients with cirrhosis and inflammatory bowel disease.

Advanced Endoscopy-ERCP Training

All fellows will receive clinical training in the indications and mechanics of diagnostic and therapeutic ERCP including the interpretation of ERCP radiographs, recognition and treatment of complications, and long-term management of patients with biliary and pancreatic diseases. This will be through didactic lectures, presentation of cases at conferences, and the care of patients pre-and post ERCP.

In addition, clinical fellows who are selected prior to matriculation, will receive hands-on training during their third year in diagnostic and therapeutic ERCPs as part of their clinical training. See ERCP Training below on pages 51 (Y-NHH) and 69 (VA).

Clinical Elective

During months 13-36, selected fellows will receive three months of additional ambulatory clinical training including, but not limited to the following areas: nutrition,

pediatrics, radiology, motility and capsule endoscopy. See Clinical Elective description on page 82.

Liver Transplantation Rotation

During months 13-36, selected fellows will receive 6 weeks to three months of additional clinical training in liver transplantation at Y-NHH. See Y-NHH Liver Transplant Rotation description on page 39.

Throughout the second 24 months of training, the fellow will continue to add to his or her knowledge base and procedural competency as discussed above. At the end of clinical training, the fellow will be expected to exhibit fluency and competency in the following areas:

1. Patient Care

- A. The fellow should be performing all consultations autonomously.
- B. The fellow should be able to manipulate the scope for diagnostic and therapeutic upper and lower endoscopies (GI services) without additional attending input. See Procedures on page 97. The fellow should have met all competency-based criteria for procedural competency. (See Addendum 1.)
- C. The fellow should be able to autonomously interpret a capsule endoscopy. This will require independent study on the part of the fellow during clinical elective for clinical fellows and during research schedule for research fellows.
- D. The fellow should be able to autonomously perform paracentesis and may receive training in liver biopsy but this is not required (liver service). See Procedures on page 97.
- E. The fellow should be able to autonomously interpret motility tracings and 24-hour pH probes. This will require independent study for research fellows. Clinical fellows will pursue this training at a minimum during elective time.
- F. The fellow should be able to autonomously evaluate and treat patients for nutritional disorders. This will require some independent study in addition to didactic lectures, resources assigned through MedHub and resources through the AGA and ACG are also recommended.
- G. Fellows who have received training in ERCPs may or may not be able to meet the competency-based criteria for procedural competency in ERCP training but in most cases can seek additional training as a fourth year advanced fellow. (See Addendum 1.)

2. Medical Knowledge

- A. Demonstrate fluency in all aspects of medical knowledge as discussed under General Medical Knowledge in Digestive Diseases on page 4.
- B. Acquire knowledge about and understand the following as these areas relate to digestive diseases:
 - i. The behavioral adjustments of patients to their diseases
 - ii. The impact various modes of therapy will have on patients and their families, including cost
 - iii. Cost-containment issues, including the prudent, cost-effective, and judicious use of various tests, procedures, medications and other therapies as their use relates to the diagnosis and management of their patients with digestive diseases

- iv. Critical assessment of the medical literature, medical informatics, clinical epidemiology, and biostatistics
 - v. Quality assessment, quality improvement, patient safety, risk management, pain management, and physician impairment
 - vi. Ethical conduct
 - vii. Research design and statistics for patient-oriented studies, translational studies, and laboratory based studies
 - viii. Socio-economic, cultural, ethnic, gender and age related issues
 - ix. Medico-legal issues
- C. Demonstrate critical thinking and knowledge of established and evolving biomedical, clinical, and social sciences and apply this knowledge to gastroenterology.
- D. Demonstrate a scholarly attitude and be committed to a life of learning.
- E. Demonstrate evidence-based decision making and the scientific method of problem solving.
- F. Demonstrate an attitude of caring that is derived from humanistic and professional values.
- G. Know the indications, contraindications, risks, benefits and alternatives to endoscopic ultrasound, capsule endoscopy, ERCP, esophageal and ano-rectal motility, and 24 hour pH probes. The fellow should understand the utility of these procedures in specific clinical conditions, develop a detailed knowledge of the risk and benefits of these procedures, and have an appreciation of their cost.
- H. Acquire knowledge about, and understand the role of liver transplantation in patients with acute and chronic liver failure and the evaluation and management of patients in the pre-transplant, peri-transplant, and post-transplantation periods.

3. Practice-Based Learning and Improvement

- A. Be able to evaluate and analyze his/her patient care practices using quality improvement methods and implement change with the goal of practice improvement.
- B. Accept and respond to constructive feedback, incorporate the feedback into improving activities, behavior, or attribute.
- C. Continue to utilize scientific literature and information technology to improve patient care and facilitate life-long learning, e.g. perform Medline searches on specific topics related to patient care and discuss any new information on rounds.
- D. Facilitate, and participate in, the learning of others including students, residents and other health care professionals by presentation on rounds and at conferences that reflects the level of knowledge and preparation that is expected of an attending consultant.
- E. Recognize strengths, deficiencies, and limits in his or her knowledge and expertise.
- F. Will set learning and improvement goals.
- G. Facilitate, and participate in, the education of patients and families.

4. Interpersonal and Communication Skills

- A. Listen well, show sensitivity to, and communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds.
- B. Be fluent in providing consistently effective and professional consultation to other physicians and members of the health care team by providing a broad differential diagnosis and an effective treatment plan.

- C. Notify members of the health care team, the patient, and/or family members of endoscopic findings.
- D. Generate endoscopic reports that are grammatically correct, accurate in content, and concise.
- E. Compose effective chart notes limiting the use of cut and paste from other notes.
- F. Demonstrate the ability to teach effectively on rounds and at conferences.
- G. Work effectively as a member and leader of the health care team.

5. Professionalism

- A. Demonstrate a respectful and appropriate attitude to housestaff, medical students, and other members of the health care team.
- B. Answer consults in a timely fashion depending on the urgency and be able to triage appropriately.
- C. Demonstrate respect, integrity, and compassion toward patients, families and all other people.
- D. Be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues, including respect for patient privacy and autonomy..
- E. Be ethical and honest.
- F. Demonstrate a responsible work ethic with regard to acceptance of responsibility, initiative, attendance at conferences, on-time attendance at clinics, and completion of work assignments, personal demeanor, and modification of behavior in response to criticism.
- G. Be responsive to patient needs superseding self-interests.
- H. Demonstrate accountability to patients, society and our profession.

6. Systems-Based Practice

- A. Be fluent in applying evidence-based medicine and utilizing cost-effective health care principles to provide optimal patient care.
- B. Be an advocate for quality patient care and for his or her patient within the health care system.
- C. Be fluent in using the data access system of the GI procedure center and the hospital computer system where he or she is doing a rotation.
- D. Make appropriate suggestions for referrals to other subspecialties.
- E. Work effectively within the health care system.
- F. Incorporate considerations of cost awareness and risk-benefit analysis into patient care.
- G. Coordinate patient care within the health care system relevant to digestive diseases.
- H. Work in multi-disciplinary teams to enhance patient safety and to improve patient care quality.
- I. Participate in identifying system errors and implementing potential system solutions.

Procedure Goals and Objectives

The educational purpose of performing procedures is designed to enable the fellow to become skilled in the indications, contraindications, administration of moderate and conscious sedation, complications and limitations of all routine diagnostic and therapeutic GI and liver procedures, including, but not limited to the following: upper endoscopies; colonoscopies; flexible sigmoidoscopies; proctoscopies; liver biopsies; diagnostic and therapeutic paracentesis; esophageal dilatation procedures; percutaneous endoscopic gastrostomy tube placement; liver and mucosal biopsies; GI motility studies and 24-hour pH probe testing; banding, cautery, injection and sclerotherapy; capsule endoscopy; gastric, pancreatic and biliary secretory tests; and enteral and parenteral alimentation.

Fellows will participate in inpatient and outpatient GI procedures and liver biopsies (optional) during their rotations at each of the three hospitals and during the Clinical Elective. The patient mix and characteristics are representative of that mentioned under each specific location. Digestive Disease faculty directly supervises all procedures. Paracentesis may be performed without supervision if the fellow has been certified during residency. All technical procedures are documented by attending physicians' signatures and each trainee is required to maintain a procedure log including the patient identifier, indications, procedure, results, complications and name of the attending. Careful record keeping is essential both for the fellowship program as well as for documentation of completion of the minimum number of procedures as recommended by the American Society for Gastrointestinal Endoscopy (ASGE) to receive endoscopy privileges after fellowship training.

The teaching methods for procedural training include use of the simulator and direct one-on-one fellow/faculty directed learning at the bedside for each procedure. Additionally, attendance at one of the endoscopy courses offered by the GI societies, e.g., ASGE Clinical Skills Workshop, is encouraged.

The GI procedure experience in this program is designed to at least meet (and usually exceeds) the minimum requirements established by the ASGE guidelines and as required by most hospitals and procedure centers for credentialing. These include appropriate administration of moderate and conscious sedation, a minimum of 130 esophagogastroduodenoscopies (EGD), 20 esophageal dilations, 30 flexible sigmoidoscopies, 275 colonoscopies and 30 supervised polypectomies, 20 percutaneous liver biopsies (optional), 15 percutaneous endoscopic gastrostomy (PEG) tube placements, experience with biopsy of esophagus, stomach, small bowel and colonic mucosa, enteral intubation and dilation (including naso-gastric and oro-gastric tube placement), 15 GI high-resolution manometry studies and 24-hour pH monitoring, 25 non-variceal GI bleeders (both upper and lower endoscopies) including 10 active bleeders, and 20 cases of variceal hemostasis of which at least 5 are active bleeders, 25 capsule endoscopy tests. Fellows are responsible for arranging regular endoscopy time during periods of training grant research in order to maintain their skills and achieve adequate numbers of examinations. It is the fellow's responsibility to maintain a current

and complete record of all procedures and to provide the fellowship program director with up to date copies every six months.

Procedure specific competency-based forms are used for colonoscopy and this is a surrogate for competency in EGD. A separate evaluation is used to evaluate and determine competency for those fellows performing ERCP. In order to achieve procedural proficiency, the fellow must demonstrate that he/she has performed the minimum number of procedures AND has met the procedure-specific objective performance criteria for competency as set forth by the clinical faculty. This should occur by the third year.

The goals and objectives for procedural training are for the fellow to acquire the cognitive and motor skills to perform endoscopy of the upper and lower gastrointestinal tract and liver biopsies (optional).

The knowledge that should be gained includes, but is not limited to the following:

1. Appropriateness of procedures
 - a. The trainee should understand the indications for endoscopic procedures and liver biopsies and be able to estimate the risks and benefits of interventions performed for diagnostic and therapeutic reasons. Knowledge of co-morbid factors that increase the risk of a procedure should be demonstrated.
 - b. The fellow must understand screening and surveillance as they apply to different disease states.

2. Obtaining informed consent

The trainee should communicate the risks and benefits and alternatives of a procedure in a manner that is understood by the patient and address questions raised by the patient. In situations where the patient cannot give informed consent, the trainee should obtain consent from appropriate sources. Elective procedures will not be performed without valid consent.

3. Anesthesia and introducing and manipulating the instrument

- a. Know the pharmacology of medications used for moderate and conscious sedation, contraindications for their use, side effects, and the treatment of side effects.
- b. Develop the skills to make the patient comfortable during an examination, follow the degree of sedation, and recognize and treat complications.
- c. Master manipulation of the endoscope:
 - i. EGD and colonoscopy: by the end of the first year, the endoscopic instrument should enter the proximal small bowel during an upper endoscopy in 95% of cases and at the end of the training, 99% of cases. Likewise, by the end of the first year, the cecum should be reached during a colonoscopy in 85% of cases and at the end of training, 90% of cases, without the direct assistance of the attending physician. (See Addendum 1.)
 - ii. ERCP: by the end of ERCP training, the fellow should be entering the duct of interest 90% of the time, be able to extract stones, perform a sphincterotomy, and insert biliary and pancreatic stents. (See Addendum 1.)

4. Recognize pathology

The trainee should become familiar with the endoscopic appearance of inflammatory, vascular and neoplastic processes and know the characteristics that help to separate benign from malignant disease. The findings suggesting that varices or ulcers have recently bled and are at risk to re-bleed should be understood. By the end of the first year, the trainee should be able to identify and describe abnormalities with 95% concordance with the attending and by the end of the training, the concordance should be 99%.

5. Facility with specific endoscopic techniques

- a. Biopsies: knowledge of the site and number of biopsies required to make pathologic diagnosis and ability to manipulate the biopsy forceps should be demonstrated.
- b. Polypectomy: The trainee should be proficient in removing polyps from the colon both with a snare polypectomy as well as with cold and hot biopsy forceps.
- c. Treating bleeding: The trainee should demonstrate skill in treating variceal hemorrhage using banding or sclerosis and in treating other bleeding lesions of the upper and lower gastrointestinal tract using electrocautery, APC, clips, and injection with vasoconstrictors or sclerosing agents.
- d. Placement of nasogastric feeding tubes
- e. Percutaneous endoscopic gastrostomy: The trainee must understand the indications/contraindications and complications of the procedure and be able to perform all aspects of the procedure.

6. Capsule endoscopy: Clinical fellows will pursue this training during their 3 month clinical elective. Research fellows must arrange a meeting with Dr. Imaeda and develop a program of independent study using available teaching files and through further discussion of cases with Dr. Imaeda or other faculty who read capsule endoscopy.

- a. The fellow should know the risks, benefits, and alternatives to capsule endoscopy and be able to appropriately explain this procedure to the patient and families.
- b. The fellow should know how the procedure is performed.
- c. The fellow should know how to use the computer system to read the capsule endoscopy.
- d. The fellow should be able to correctly interpret the capsule endoscopy.

7. Liver biopsy (optional)

- a. The trainee should be able to localize the liver and the most appropriate site for liver biopsy using ultrasound and carefully instruct the patient on their role in the procedure (e.g. the patterns of breathing).
- b. Local anesthesia should be administered to prevent discomfort from the biopsy.
- c. The trainee should develop a rapid and efficient technique for obtaining a biopsy and be able to judge the adequacy of the sample.
- d. The fellow should be able to obtain adequate liver tissue in 90% of biopsies at the end of training.
- e. Following the biopsy, the trainee should position the patient to minimize the risk of hemorrhage and should be able to set monitoring parameters as well as identify the possibility of complications and the appropriate course of action.

(See also Reference Manual, Specific Procedures.)

f. Required: the fellow should know indications, contraindications, risks and benefits of percutaneous and trans-jugular liver biopsy.

8. Paracentesis

a. The trainee should be able to diagnose ascites using percussion or when necessary ultrasonography or other diagnostic techniques.

b. Local anesthesia should be adequate

c. The trainee should demonstrate proficiency obtaining fluid in both diagnostic paracentesis and large volume paracentesis (LVP)

(See also Reference Manual, Specific Procedures.)

9. Enteral intubation

a. The fellow should know how to place naso-gastric and oro-gastric tubes.

b. The fellow should know how to do esophageal dilations.

10. Motility and 24-hour pH probe studies: Clinical fellows will pursue this training during their 3 month clinical elective. Research fellows must arrange a meeting with Dr. Sanchez or Dr. Masoud and develop a program of independent study using available teaching files and through further discussion of cases with Dr. Sanchez or Dr. Masoud.

a. By the end of clinical training, the fellow should have a thorough knowledge of the clinical presentations of commonly seen motility disorders of the gastrointestinal tract, in particular those of the esophagus and anal sphincters, and their characteristic pressure tracings.

b. The fellow should be able to manage common motor disorders of the gastrointestinal tract and be familiar with the role of biofeedback in the treatment of disorders of the anal sphincter.

c. Evaluation of motility tracings

i. Gain familiarity with the technical aspects of motility studies.

ii. Recognize characteristic manometric findings in patients with common esophageal disorders such as achalasia and esophageal spasm. Recognize normal motility tracings.

iii. Recognize characteristic manometric findings in ano-rectal manometry in diseases such as short-segment Hirschsprung's disease, colonic atony, and irritable bowel syndrome.

d. Interpretation of 24-hour pH probes

i. The fellow will be able to correctly interpret 24-hour pH probes.

ii. The fellow will be able to recommend appropriate therapy based on the 24-hour pH probe findings.

11. Evaluating and treating complications

a. The trainee should have full knowledge of the complications of the endoscopic procedures, liver biopsy, and paracentesis listed above

b. The fellow should know the mechanisms for monitoring patients when a complication is suspected, and the treatment of complications.

Research Training Goals and Objectives

All fellows are required to participate in research activities and to present their research prior to graduation. Most fellows should have prepared a written manuscript of their research. Clinical fellows receive research training for approximately three months during their second or third years of fellowship. Research fellows receive at least 18 months of dedicated research training during their second and third years of fellowship.

In addition to excellent clinical training in Gastroenterology and Hepatology, the Section of Digestive Diseases also provides comprehensive research training that is designed to provide the basis for the development of an academic career in a Department of Medicine with emphasis on research, teaching and patient care. Training for research fellows is supported by one of two National Institutes of Health (NIH)-funded Research Training Grants in Investigative Gastroenterology and Hepatology. It is usual for such research trainees to spend four to five years (or more) in both clinical and research training. At the time of the initial application to the fellowship program trainees should indicate their interest in obtaining research training and applicants are accepted specifically to the research training track. Trainees usually enter their research training after the first year, but this may vary depending on the other trainees in the program. Trainees who are accepted to the research track after beginning their training may occasionally be able to switch to the clinical training track or may be requested to do so by the training program if their clinical skills are not felt to be on a trajectory to be ready for independent practice at the end of fellowship training. Occasionally, it may be possible for a trainee admitted to the clinical training track to switch to the research training track.

Research training emphasizes laboratory-based research, patient-oriented research or translational research reflecting the many interests of the faculty who are heavily involved with research. The research training program emphasizes didactic studies (see below) and preceptor-directed research. Research preceptors are often members of the Section of Digestive Diseases. However, a trainee may have more than one preceptor. It is possible for trainees to select a preceptor that is not a member of the Section of Digestive Diseases. Trainees with primary mentors outside of the Section of Digestive Diseases must have members of the section of digestive diseases (including the preceptor of the T32 grant itself) on their research committee.

Research training at Yale was enhanced in July 2000 by the establishment of the Investigative Medicine program. The Investigative Medicine program established in July 2000 is a Ph.D. training program for physician scientists in clinical departments and is an official graduate program of the Yale Graduate School of Arts and Sciences. Admission to the degree program is competitive, across multiple disciplines (i.e., clinical subspecialties), and with a focus on either patient-oriented research, disease-oriented research or basic "translational" laboratory research.

Trainees who are in the Investigative Medicine program as well as those who are not are required to complete a course in Bioethics. Those trainees who are focused on patient-oriented research training may enroll in supportive coursework. A master degree in

clinical research program is also available by application. **All fellows participating in clinical research will need to have a mentor and a project decided upon at least 6 months in advance of the assigned research block in order to write, submit and get approval through the IRB for any research protocols.**

The research interests of the faculty of the Section of Digestive Diseases are broad and include the following: the physiology, cell and molecular biology, and pathophysiology of digestive tract epithelial cells with a focus on the pancreas, large intestine, liver-biliary tract system, the genetics of colon cancer; mechanisms of liver fibrosis; immunology of the liver; genetic disorders of the liver; and hemodynamics of the liver, portal hypertension, complications of cirrhosis and inflammatory bowel disease.

It is anticipated that trainees pursuing research training will have twelve months of dedicated inpatient clinical training plus another three months of clinical assignments. During this fifteen month period, the trainee will devote 100% effort to his or her clinical training. The remaining three months of clinical training, for a total of 18 months of clinical training, will represent time devoted to the following: 1. coverage of inpatient rotations in the absence of other fellows, averaging 2-4 weeks per year; 2. endoscopy activities, usually one ½ day per week; 3. night-time and weekend on-call responsibilities; 4. Self-directed participation in training in capsule endoscopy and gastrointestinal motility. The trainee participates in endoscopy activities, call and continuity clinic throughout his or her fellowship.

The goals and objectives for the research fellow are to acquire the intellectual and technical skills to compete at the forefront of gastroenterology or hepatology research. To reach this goal the following objectives will be pursued:

1. Development of a strong scientific knowledge base

It is important to attain both a very broad perspective of modern biomedical science as well as those specific questions presently most relevant to gastroenterology and hepatology. A broad exposure is available through the many educational activities of the medical school and departmental lecture and lab courses designed for fellows in all sections. Sectional educational activities focus on research activities relevant to gastroenterology and hepatology.

2. Acquiring a questioning attitude

Human knowledge undergoes continual refinement and occasional revolution. In science asking the right question most often advances this process.

3. Understanding technical skills and their appropriate application

The third objective is to attain a working knowledge of the tools of science and how to appropriately apply them to a given problem.

4. Learning how to obtain support for research studies

Research success requires support for research studies. Competition for support requires knowledge of the variety of funding source and how and when to apply. The Digestive

Disease faculty has been highly successful in obtaining support and all are ready to help fellows understand this complicated process.

Evaluation Process – Research Fellows

Each fellow doing independent research is responsible for organizing a committee composed of a mentor, common investigators within the Section of Digestive Diseases or other sections as relevant to his or her research, and a basic scientist (for those interested in bench research) or clinician (in the case of fellows interested in a career as clinical investigators). The committee is responsible for assessing the trainee's progress, providing guidance for their investigative activities and career, and aiding in obtaining grant support. The trainee is expected to arrange meetings with the committee at least twice per year. Trainees are required to present their work both in sectional research conferences as well as regional and national meetings.

Evaluations

In order for the training program to assess its ability to meet its goals and objectives, formative and summative evaluations of the fellows, faculty, and the program are performed regularly. The faculty regularly evaluates the fellows throughout the training period. In turn, the fellows provide regular evaluations of the faculty and the training program to the section chief and the program director. The completed evaluation forms for the past years are available on request. The details of these evaluations follow.

Clinical Competency Committee: Institutional and Section Policy

All Accredited and GMEC Approved programs will form a Clinical Competency Committee (CCC) by July 1, 2013. All Phase I programs must use this committee for the purposes described herein effective July 1, 2013. All Phase II programs must use this committee for the purposes described herein effective July 1, 2013, with the exception of milestone reporting, which will commence on July 1, 2014.

Procedure:

The Program Director (PD) must appoint members of the CCC to assist him/her with the responsibilities outlined in this policy. At a minimum, the CCC must be composed of three members of the program faculty. Additional members may include faculty from other programs and non-physician members of the health care team. It is strongly recommended that the CCC include faculty that are not the PD or APD and that the PD is not the Chair of the CCC. The CCC must meet at a minimum on a semi-annual basis, and minutes must be taken of the proceedings.

The CCC must ensure that residents/fellows are evaluated fairly and honestly and that each resident/fellow receives consistent treatment. At all times, the policies and procedures of the CCC will comply with those of the Graduate Medical Education Committee (GMEC) and the sponsoring institution. The CCC must apply the GMEC evaluation, remediation, promotion, and due process protocols fairly and indiscriminately. Where circumstances warrant, the membership of the committee may be altered to avoid a potential conflict of interest, or to protect the privacy of the resident.

Responsibilities of the Clinical Competency Committee

Semi-Annual Evaluations and Milestones: In addition to global assessments, the CCC must review all other evaluation tools used by the program (e.g. OSCE, CEX, in-training exams, medical record audits, multisource, case logs, etc.).

The CCC will use data garnered from evaluation tools to prepare and assure the reporting of the Milestone evaluations of each resident semi-annually to the ACGME.

The CCC will provide a group perspective (narrative) on each resident's progress and will assist in early identification of areas of needed improvement.

Promotion: The CCC is expected to advise the PD regarding the promotion of each eligible resident. No resident may remain at the same level of training for more than 24 months exclusive of leave.

Remediation: If a CCC advises the PD that remediation is necessary for a resident, a remediation plan must be developed that is individualized, explicit and well documented. The DIO must be notified of all residents placed on written academic remediation.

Probation, Suspension and Dismissal: Program must follow the institutional Resident Probation, Suspension or Dismissal Policy. Probation, Suspension and Dismissal recommendations must be reviewed by the CCC and the Designated Institutional Official (DIO) prior to the action. Probation, Suspension and Dismissal documents must be reviewed and approved by the DIO before they are issued.

Programs must also adhere to all additional requirements as specified in the specialty-specific requirements.

The DIO and the GME Office will monitor the activities of the CCC of each program and may join a meeting of the CCC at the discretion of the DIO. Aggregate data from the CCC (as outlined in the Annual Report Template) will be reported in the Annual Program Report to the GME Office.

Clinical Competency committee: Section of Digestive Diseases

As of 7/1/2016 the members of the clinical competency committee are as follows:

Chair: Tamar Taddei

Members: Avlin Imaeda, Loren Laine, Amir Masoud, Alwin (Dale) Bernardo

The minutes of the meeting will be in the form of each of the fellows 6 month evaluations which will include both scores and written comments.

In the case of a dispute with the consensus evaluation created by the clinical competency committee the DIO Rosemarie Fisher will be contacted to attempt to adjudicate the issue and to if necessary activate the institutional grievance process.

1. Evaluation of the Fellow's Clinical Progress

The fellows are monitored for their success in meeting ACGME milestones developed for evaluation of internal medicine subspecialty fellows

(<http://acgme.org/acgmeweb/Portals/0/PDFs/Milestones/InternalMedicineSubspecialtyMilestones.pdf>). Fellows are also evaluated for meeting the requirements outlined in the curriculum (based-upon the multi-society gastroenterology curriculum for fellows) for patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Each of the core competencies will be evaluated by at least 2 different evaluation tools. These methods are outlined below. Additionally, a multi-society task force has developed 13 entrustable professional activities (EPAs) each with its own knowledge skills and attitudes. These can be thought of as a simplification of the curriculum. They focus on 13 key areas of gastroenterology and hepatology and encompass sub-specialty specific knowledge as well as the other elements of the 6 ACGME competencies. In addition to elements from the milestones these will serve as the basis of rotation specific evaluation. The EPAs are included in appendix 1.

- 1) Methods of Documenting Evaluation by Competency (all competencies also evaluated by direct observation and documented on global evaluation during clinical rotations).
 - a. Patient Care
 - i. Global evaluation (weekly to every 2 weeks each clinical rotation)
 - ii. Procedure logs (reviewed bi-annually by PD)
 - iii. Mayo clinic colonoscopy skills evaluation (every 1-2 month evaluation)
 - iv. Mini-Cex (in clinic and as inpatient, quarterly)
 - v. Multi-source Evaluation (clinic nurse twice yearly, endoscopy nurse twice yearly, peer twice yearly, patients monthly liver clinic)
 - b. Medical Knowledge
 - i. Global Evaluation (monthly each clinical rotation)
 - ii. In-training exam- (yearly must be completed at least 2 out of 3 years of fellowship)
 - iii. Mayo clinic colonoscopy skills evaluation (monthly evaluation during weekly endoscopy sessions or monthly at VA rotation or Yale GI rotation)
 - c. Practice-based learning and Improvement
 - i. Global Evaluation (monthly each clinical rotation)
 - ii. Trends on In-training exam (yearly must be completed at least 2 out of 3 years of fellowship)
 - iii. Fellow self-directed chart review with documentation (adenoma detection rate, cecal intubation rate, withdrawal time, meeting guidelines in patients with chronic liver disease and inflammatory bowel disease)
 - iv. Quality improvement project evaluation (after project proposal and at completion QIPAT7 ACGME)
 - v. Evaluation of journal clubs, lectures, case-conferences- verbal feedback
 - d. Interpersonal communication skills
 - i. Global Evaluation (monthly each clinical rotation)
 - ii. Mini-Cex (in clinic, quarterly)
 - iii. Multi-source evaluations (clinic nurse twice yearly, endoscopy nurse twice yearly, peer twice yearly, patients monthly liver clinic)
 - e. Professionalism
 - i. Global Evaluation (monthly each clinical rotation)
 - ii. Mini-Cex (in clinic, quarterly)

- iii. Multi-source evaluations (clinic nurse twice yearly, endoscopy nurse twice yearly, peer twice yearly, patients monthly liver clinic)
- f. Systems-Based Practice
 - i. Global Evaluation (monthly each clinical rotation)
 - ii. Quality improvement project evaluation (after project proposal and at completion)
 - iii. Multi-source Evaluations (clinic nurse twice yearly, endoscopy nurse twice yearly, peer twice yearly, patients monthly liver clinic)
- g. Research
 - i. Review of publication, abstracts bi-annual meeting with PD
 - ii. Committee meeting twice yearly with research evaluation
- h. Procedural Competence
 - i. Mayo clinic colonoscopy skills evaluation (monthly evaluation)
 - ii. Upper endoscopy verbal feedback during endoscopy with colonoscopy skills evaluation as an indicator
 - iii. Liver biopsy verbal feedback during biopsy as no clear evaluation tools available- If applicable as liver biopsy is now optional
 - iv. ERCP skills evaluation tool (selected fellows only)

2) Expectations: The milestones and the EPA's are newly developed. The milestones provide guidelines for expectations needed for independent practice. However the ACGME acknowledges that these are as yet untested. Therefore, currently decision to promote or not, graduate or not, or remediate is at the discretion of the clinical competency committee. Therefore specific goals for each milestone will not be listed in this document at this time. It is expected that fellows will be at a level currently listed at independent practice for all or most of the milestones at the time of graduation. Fellows with ratings of level 1 or critical deficiency for any milestone will likely be considered for remediation.

The faculty review at least one clinical examination done by the fellow during each inpatient and outpatient rotation. Faculty are encouraged to meet with the program director to discuss problems they may have encountered during the month so that remedial action may be taken. They are also required to give the fellows verbal feedback during and at the end of the rotation.

B. Monthly Faculty Meetings

At monthly faculty meetings, the faculty discuss in-depth the clinical or research performance of fellows at the discretion of the program director. Notes taken from these meetings may be included in the fellow's file.

C. Meetings with the Program Director

The fellowship program director, Dr. Avlin Imaeda, meets with each fellow every six months (or more frequently if needed) to formally review his/her performance and progress in the program and to counsel the fellow as needed. These meetings have the following objectives:

- i. Review the evaluations received from the clinical competency committee as well as the various attending physicians and comments given at the monthly faculty meetings. All evaluations are reviewed and discussed with the fellow focusing on the six areas identified by the ACGME, including: patient care (including procedural proficiency), medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Any areas that are unsatisfactory or below the fellow's expected level of competency will be reviewed in detail and remedial action will be recommended.
- ii. Review procedural logs to see if they are being kept up to date and to note if an individual fellow may be in need of additional procedures of a given type.
- iii. To allow the fellow to air problems they may have encountered or suggestions they may have for improvement. The Fellowship Director will respect the fellow's confidentiality in the event they have problems with a faculty member.
- iv. Discuss with the fellow regarding future career directions.

D. Summative Evaluations

The fellow receives a summative evaluation of his/her performance at the end of each year and at the conclusion of his/her training period in the program. This will be created by the clinical competency committee.

At the end of the training program all procedure numbers and written evaluations as well as the summative evaluations are included in the fellow's file for future reference.

E. Fellow Dysfunction

If issues are raised concerning a fellow's level of stress, psychological condition, or drug or alcohol-related dysfunction is detected, the fellow is asked to meet with the fellowship program director. Once the problem is identified, the program director in conjunction with other appropriate persons or counselors then meets with the fellow to determine an appropriate course of action, which could involve psychosocial, drug or alcohol-related counseling, or remedial rotations. There is an Employee Assistance Program with counselors at both Yale University and Y-NHH that are available for counseling.

2. Disputed Evaluations

If the fellow disputes an evaluation, he/she should first discuss the evaluation with the relevant faculty member. If there is no resolution, then the program director meets with both the trainee as well as the faculty member to attempt to reach a resolution. If this is not possible, then the clinical competency committee is convened and a plan of action is agreed upon. This might include independent observation of the reported deficiency, reassignment of clinical responsibilities, and/or extra clinical training.

Please see below for discussion of the process by which a fellow may pursue dispute of a clinical competency committee evaluation.

If the fellow believes that he/she has been discriminated against on the basis of race, color, sex, age, religion, national or ethnic origin, handicap, or status as a Vietnam era veteran, they may use the formal grievance procedure set up by Yale University. See Grievance Policy in the Reference Manual; the Grievance Policy is also available on the Yale University website.

3. Evaluation of Faculty Members by Fellows

All trainees evaluate each faculty member's performance as well as each rotation/ clinical site at the end of each rotation. These evaluations are sent in confidence to the section chief, Dr. Michael Nathanson. Results of these evaluations are provided to the program director, Dr. Avlin Imaeda, without knowledge of the fellow's name and are used as a guide to improve the educational performance of the various faculty members or the rotation. Records of these reviews are maintained by the Section Chief's office and discussed with the respective attendings. These records are also forwarded to the Department Chair and considered in faculty promotions.

4. Evaluation of the Program by Fellows

a. Trainees confidentially evaluate their inpatient clinical rotations and their ambulatory clinical rotations at the completion of the rotation.

b. Annually, all trainees provide a confidential written evaluation of the fellowship program to the section chief, Dr. Michael Nathanson. These reviews are summarized and issues raised by the trainees are discussed at faculty meetings.

c. Dr. Avlin Imaeda, Dr. Amir Masoud meet approximately monthly with the fellows to maintain close faculty communication. The Section Chief, Dr. Michael Nathanson usually attends these meetings as well. The fellowship program and any other concerns are discussed. Minutes of this meeting are maintained. Relevant comments from this meeting are confidentially discussed at the monthly faculty meeting or individually with appropriate faculty members.

5. Evaluation of the Program by Faculty

The fellowship program is evaluated in an ongoing basis at regularly scheduled, monthly faculty meetings as well as by other discussions and meetings between the program director, site directors, section chief, various faculty members, and fellowship coordinator. Included in these discussions are the degree to which the program's goals are being met, the evaluation of the utilization of the resources available to the fellowship program, the contributions of each institution, the financial and administrative support, the variety and volume of patients, faculty member performances, and the quality of supervision of the fellows. Written program evaluations are sent to faculty on a yearly basis.

6. Evaluation of the Fellow's Research Progress – Research Fellows

Each fellow doing independent research is responsible for organizing a committee composed of a mentor, common investigators within the Section of Digestive Diseases or other sections as relevant to his or her research, and a basic scientist (for those interested in bench research) or clinician (in the case of fellows interested in a career as clinical investigators). The committee is responsible for assessing the trainee's progress, providing guidance for their investigative activities and career, and aiding in obtaining grant support. This is documented on a research evaluation form. The trainee is expected to arrange meetings with the committee at least twice per year. Trainees are required to present their work both in section research conferences as well as regional and national meetings. (See also Research Training, page 101.) Trainees are required to review their progress and publications with the program director in bi-annual meetings.

Fellow Supervision

1. Patient Evaluation and Management-throughout the fellowship and on all inpatient and outpatient rotations, the fellow will present each patient to the responsible faculty attending after he/she has initially evaluated the patient, reviewed the available data and formulated a diagnostic and therapeutic plan. The faculty in turn will evaluate the patient and write a chart note within 24 hours of the inpatient consult request or immediately after the fellow evaluation for ambulatory outpatients. As the level of training increases and the fellow reaches a higher level of competence, the fellow will be expected to formulate an increasingly more complex differential diagnosis and plan. The fellow will be expected to incorporate experience, readings, local availability and expertise, cost-effectiveness measures, as well as consideration of patient preferences into his/her management plan.
2. Procedures-The responsible faculty member will directly supervise the entire procedure, endoscopic or liver biopsy, for all fellows regardless of level of training. However, as the fellow's procedural proficiency increases, the level of independence in performing the procedure will increase accordingly. See also section on Procedures on page 97.
3. On-call Attending-there is always an attending who is on-call with the fellow. The GI attending covers the GI service at Y-NHH and the VA; the liver attending covers the liver service at Y-NHH; the liver transplant attending covers the liver transplant service at Y-NHH; there is a separate liver attending at the VA; the ERCP attending covers the ERCP service at Y-NHH and at the VA; one attending from each HSR service is on call with both their own private patients and "Gen-Med" patients being rotated between these two services. On-call schedules including both faculty and fellows are available through the Yale GI answering service and Amion. Attendings should be notified of change of status ie ICU transfer, significant decompensation, unexpected death of any patient on the consult or inpatient services. Attendings should round daily, typically by direct evaluation, or at least discuss all patients requiring ICU level care. All new consults must be discussed with the on-call attending.

Clinical Training

Inpatient Consult Services - General Information

The fellowship program is designed to provide a high level of clinical competence in the subspecialty of gastroenterology and hepatology. During an orientation session, new fellows are given a copy of the Fellows Manual (this manual) which includes goals and objectives by training period and rotation and all policies and procedures.

Clinical rotations are provided in three different inpatient settings, each of which provides a slightly different spectrum of clinical disorders in gastroenterology and hepatology. During their clinical training in the different settings, fellows will care for patients with a wide range of clinical problems in all stages of illness providing them with the full breadth, depth, and spectrum of diseases in gastroenterology and hepatology. As the fellow progresses in the fellowship, more and more independence will occur as the fellow advances towards competency which should occur by the end of clinical training.

The fellows do consults as well as procedures, as needed, on the inpatients. Since consults are called directly to the fellows from the primary team caring for the patient, the fellow is the initial gastroenterologist or hepatologist who will be asked to evaluate the patient. The fellow might be called by a physician associate or medical student, intern, resident, or attending physician. Fellows are required to respond to requests for consults immediately and see patients no later than during the same day as they are requested, depending upon the urgency. The fellow must perform an initial history and physical examination and formulate a differential diagnosis and plan for further evaluation and treatment prior to the attending's evaluation of the patient. It is the fellow's responsibility to inform the attending of consultations and the degree of urgency. Together, the fellow and attending will arrange a time to meet in order for the attending to fully review the fellow's evaluation of the patient and to supervise all necessary procedures. Attending rounds usually occur in the latter part of the afternoon, but an attending may be required to review the fellow's evaluation earlier than the regular time. The fellow is also responsible for communicating recommendations to the primary physicians and for collecting all relevant information during longitudinal follow-up. Fellow consult notes should be completed in the chart on the day of consult and evaluation.

The attending will be responsible for evaluating the patient with the fellow, ensuring accuracy of the available data and appropriateness of the diagnostic and therapeutic plan and will then write a consult note in the chart within 24 hours of the consult request that accompanies the fellow's note. Referral of patients with complex gastrointestinal or liver diseases from outside hospitals or practitioners is common. This occurs through the Y-Axis line. Consult attending may be asked to communicate with the referring physician to determine whether or not transfer is appropriate. Most patients will be transferred to a hospitalist team with gastrointestinal, biliary or hepatology consult. YNHH physicians are encouraged to accept transfer of patients in order to continue to build the reputation as a tertiary referral center.

Educational Purpose - Overview for Consult Services

The educational purpose of each of the different inpatient consult services taken separately and in aggregate is to expose the fellow to diverse patients with a wide range of clinical problems so that at the end of the fellowship, the fellow will have achieved appropriate medical knowledge and procedural skills in the field of digestive diseases, as well as to have developed the interpersonal and communication skills and professional attitudes necessary to function as highly competent subspecialists in this field.

At the end of each rotation, the fellow will be expected to exhibit competency in the following areas: patient care including procedural skills, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice, as further outlined below under each rotation.

Yale-New Haven Hospital - General Information

Yale-New Haven Hospital (Y-NHH) is a university hospital with over 1500 beds that functions as a tertiary care referral center for patients from northern New England to New Jersey with a regional catchment of over 1,000,000 individuals; a university teaching hospital; and a local, community hospital for 300,000 people living in New Haven County. Patients ages 18 and older with a full breadth and depth of digestive diseases are evaluated and treated here. The patient population is ethnically diverse and includes Caucasian, African-American, Hispanic, Asian, Indian and Middle Eastern populations. Approximately thirty percent of the patients are referred from other hospitals in Connecticut and surrounding states because of the specific expertise of the faculty, giving fellows an opportunity to evaluate and treat unusual as well as common digestive diseases. The patient mix is diverse and represents the diverse community of New Haven and surrounding communities. The gender mix is representative of the general population. Fellows at Yale-New Haven Hospital rotate on separate liver and gastroenterology consult services for three months at a time. Clinical fellows rotate on a separate ERCP consult service during their ERCP training. Second and third year fellows rotate on a separate liver transplant service during their liver transplant training.

Yale-New Haven Hospital - GI Consult Service Goals and Objectives

The educational purpose of the Y-NHH GI rotation is to provide the fellow with an opportunity to evaluate and treat inpatients with a wide spectrum, breadth and depth of gastrointestinal diseases from patients who are hospitalized and treated at Y-NHH, the mix of diseases and patient characteristics as discussed above under Yale-New Haven Hospital-General Information. Fellows are the initial contact person and will be paged for the consult. The consult service takes inpatient consult calls from 8:00 am until 5:00 pm, Monday-Friday. The on-call fellow answers consult pages from 5:00 p.m. until 8:00 am, Monday-Friday and 8:00 am until 6:00 pm Saturday, Sunday and holidays.

There are two fellows on this service at all times and each fellow will evaluate approximately 15-30 new consult patients each week. Longitudinal follow-up of consult patients while they are still hospitalized will occur as is appropriate.

During the three month rotation on this service the fellow will be called to evaluate and treat patients with disorders of the esophagus, stomach, small intestine, colon, pancreas, and biliary system.

The mix of diseases seen during the Y-NHH inpatient consult service include: diseases of the esophagus including dysphagia, esophageal dysmotility, GERD, Barrett's esophagus and esophageal cancer; diseases of the stomach including peptic ulcer diseases, upper GI bleeding from ulcers and varices, gastric outlet obstruction and gastroparesis, gastric neoplasms; infections of the GI track, diseases of the biliary tract including acute cholecystitis, cholangitis, hepato-biliary neoplasms; diseases of the pancreas including acute and chronic pancreatitis, pancreatic cancer; inpatient diseases including diarrhea, GI bleeding in critical care patients, post-operative ileus, nausea and vomiting and post-operative intestinal obstruction; inflammatory bowel disease including Crohn's disease and ulcerative colitis, acute diverticulitis and ischemic bowel; acute and chronic GI bleeding; graft vs host disease; acute and chronic abdominal pain; colonic polyps and malignancies; and other gastrointestinal neoplasms.

Examples of diseases and clinical problems the fellow will be called to evaluate include, but are not limited to the following:

Esophagus: learn the pathophysiology of diseases of the esophagus and the ability to use and interpret diagnostic tests with relation to the following diseases including dysphagia, gastro-esophageal reflux disease, achalasia, scleroderma, Barrett's esophagus and esophageal cancer. Learn the approach to treatment of bleeding disorders of the esophagus including ulcers and varices.

Stomach: learn the pathophysiology and pathology and treatment of diseases of the stomach. Learn the indications, usefulness and interpretation of tests used to diagnose and treat stomach diseases including peptic ulcer, H. pylori infection, non-ulcer dyspepsia, gastric malignancies, gastroparesis, nausea and vomiting, stress gastropathy and gastric varices.

Abdominal pain: learn mechanisms of abdominal pain, including visceral and referred pain. Describe and differentiate the etiology and presentation of acute abdominal pain, chronic abdominal pain and a surgical abdomen. Identify the presence of urgent and serious conditions requiring immediate referral to surgery. Describe the diagnostic approach to the evaluation of abdominal pain, including laboratory testing, radiological imaging and referral for urgent endoscopic evaluation.

GI bleeding: learn the indications and contraindications of endoscopy in patients with acute and chronic upper and lower GI bleeding. Understand the pathophysiology, use and interpretation of tests in patients with acute variceal bleeding, peptic ulcer bleeding, small intestinal angiodysplastic bleeding, diverticular bleeding and bleeding from an intestinal malignancy.

Small intestine: learn the pathology and pathophysiology with indications, interpretation, availability and outcome of tests used in diagnosis and treatment of the following disorders: maldigestion including lactose intolerance, malabsorption including celiac sprue and secretory diarrheas, protein losing enteropathies, inflammatory diseases including Crohn's disease, radiation injury, small bowel tumors, motility disorders

including ileus and pseudo-obstruction, irritable bowel syndrome, and surgical issues including obstruction, perforation and ileus.

Pancreatic diseases: understand the pathology and pathophysiology of acute and chronic pancreatitis. Learn the diagnostic approach and severity staging of patients with acute pancreatitis. Learn to manage the patient with acute pancreatic necrosis including the use of antibiotics and enteral feeding. Learn the etiologies and diagnostic approach to chronic pancreatitis and management of pancreatic pain and malabsorption. Understand the approach to pancreatic cancer staging and management including use of ERCP and EUS.

Biliary diseases: learn the pathophysiology and approach to interpretation and usefulness of tests for acute and chronic cholecystitis, biliary colic, cholangitis and cholangiocarcinomas.

Large intestinal diseases: learn the pathology, pathophysiology and understand and interpret tests used in the diagnosis and treatment relevant to the following disorders: diverticulosis and its complications, inflammatory disorders including ulcerative colitis and indeterminate colitis, infections diseases including C. difficile, shigella and campylobacter. Motility disorders including constipation, irritable bowel syndrome, and pseudo-obstruction. Malignancies including adenocarcinoma, lymphoma and carcinoid and FAP. Rectal disorders including hemorrhoids and fissures.

Abnormal radiologic findings: barium studies, CT scan, ultrasound, MRI/MRCP, nuclear imaging, and interventional radiology.

The fellow will closely interact with physicians from other services, including other internal medicine specialists and subspecialists, surgery, ob-gyn, radiology, and pathology.

Procedural Skills and Endoscopy

The fellow will do approximately 80 procedures on this rotation, including upper endoscopies, PEG tube placement, colonoscopies, and flexible sigmoidoscopies. Procedures will be both diagnostic and therapeutic with procedural skills including the following:

Competence in the indications, contraindication to upper and lower endoscopy and management of complications.

Competence in the approach to moderate conscious sedation.

Competence in the approach and management of anticoagulation, risk assessment and use of antibiotics in endoscopy.

Competence in the approach to endoscopy in the elderly.

Competence in upper endoscopy including removal of ingested foreign bodies, routine biopsy, treatment of upper GI bleeding with use of sclerotherapy, variceal banding ligation, BICAP cautery, hemo-clips. Dilation using Savary dilators and balloons.

Competence in diagnostic sigmoidoscopy and colonoscopy including polypectomy, submucosal resection, dilatation of colonic strictures and use of sclerotherapy and cautery for management of colonic bleeding.

Competence in the use of Argon Plasma Coagulation (APC) and capsule endoscopy in the management of GI bleeding

The teaching methods on this rotation will include direct patient care, weekly didactic lectures (see Conference schedule on page 104) and small group attending rounds and twice monthly Professor rounds given by Henry Binder and Loren Laine. There is direct mentoring of the fellows by the GI consult attending and during endoscopy. During endoscopic procedures the fellows are always supervised by an endoscopy attending. Procedures are first demonstrated by the attending, following which the fellow will perform the endoscopy by themselves under supervision of an attending who is in the endoscopy room. Fellows acquire the skills of a gastroenterology consultant through direct patient care, self-directed learning, and through directed discussions with attendings on rounds. More advanced fellows are expected to achieve higher proficiency in endoscopic procedures, advanced clinical knowledge, more independence in ability to act as a consultant physician, including more complete but succinct patient assessments and enhanced differential diagnosis. Attending rounds usually occur in the latter part of the afternoon and will include a discussion of all new consults and pertinent discussions on longitudinal follow-up patients. Attending rounds function as both work rounds as well as teaching rounds. The attending and fellows discuss each patient, review pertinent data, and discuss the literature as it pertains to the patient and/or disease state. During attending rounds, teaching occurs directed at specific diseases and patients that fellows have evaluated on the consult service, radiology viewing, and review of pathologic material.

Clinical encounters include emergent, urgent and routine detailed and comprehensive inpatient consultation. Consultation occurs in the emergency room, intensive care units, medical, surgical and ob-gyn floors, and endoscopy units. Longitudinal follow up encounters occur on a daily basis until the consultation is no longer required for the medical management of the patient. Fellows are responsible for arriving early enough to round on ICU patients and seriously ill patients prior to attending other activities such as clinics and endoscopy.

Teaching will occur regularly for each patient evaluated and will be directed at the disease which that particular patient has.

Fellows will review their patients' radiologic studies daily with an attending radiologist. Radiology studies are also available through the hospital computer system.

Fellows will review their patients' biopsies and other pertinent pathologic material on a regular basis at least once per week, with the GI pathologists. Additionally, pathology is regularly reviewed at the weekly multi-disciplinary conference which occurs on Friday afternoons.

At the end of this rotation fellows are expected to exhibit competency in the following areas:

1. Patient Care

- a. The fellow is able to perform an accurate and complete history and physical examination and review all available data within an appropriate time frame, depending

upon the urgency of the consult. The fellow is able to formulate a diagnostic and therapeutic decision based on available evidence, sound judgment, and patient preference. The fellow is able to develop and implement management plans and modify plans as new information becomes available. The fellow is able to perform discharge planning including arranging follow up outpatient clinic visits and procedures.

- b. The fellow will have a caring and respectful attitude and behavior towards patients and families.
- c. The fellow will be able to demonstrate proper knowledge and technique in performing endoscopic procedures including informed consent, indications and contraindications, indications for screening procedures, appropriate administration of conscious sedation, recognize and manage complications. After three months, the fellow should have performed approximately 80 procedures including upper endoscopy, PEG tube placement, colonoscopy, and flexible sigmoidoscopy. After performing 80 procedures, the fellow should be intubating the esophagus at least 75% of the time and the duodenum at least 50% of the time. The fellow should be reaching the cecum at least 50% of the time. See also Procedures on page 97.
- d. The fellow is able to work within a team.
- e. The fellow will practice health promotion and disease prevention.

2. Medical Knowledge

- a. The fellow is able to demonstrate critical thinking and knowledge of established and evolving biomedical, clinical, epidemiological and social sciences as discussed under General Medical Knowledge in Digestive Diseases and apply this knowledge to gastroenterology. This includes appropriate interpretation of radiology and pathologic findings.
- b. The fellow is scholarly and committed to a life of learning.
- c. The fellow is able to demonstrate evidence-based decision making and the scientific method of problem solving.
- d. The fellow demonstrates an attitude of caring that is derived from humanistic and professional values.

3. Practice-Based Learning and Improvement

- a. The fellow systematically analyzes and evaluates his/her own patient care practices using quality improvement methods and implements change with the goal of practice improvement.
- b. The fellow will accept and respond to constructive and formative feedback, incorporate the feedback into improving activities, behavior, or attribute.
- c. The fellow will utilize scientific literature and information technology to improve patient care and facilitate life-long learning, e.g., perform Pubmed searches on specific topics related to patient care.
- d. The fellow will facilitate, and participate in, the education of others, including patients, families, students, residents and other health care professionals.
- e. The fellow will recognize strengths, deficiencies, and limits in his/her own knowledge and expertise
- f. The fellow will set learning and improvement goals.

4. Interpersonal and Communication Skills

- a. The fellow will listen well, show sensitivity to, and communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds.
- b. The fellow will provide effective and professional consultation to other physicians and members of the health care team. The fellow will notify members of the health care team, the patient, and/or family members of endoscopic findings.
- c. The fellow will generate endoscopic reports that are grammatically correct, accurate in content, and concise.
- d. The fellow will write effective chart notes avoiding copying and pasting from other notes.
- e. The fellow will demonstrate the ability to teach effectively.
- f. The fellow will work effectively as a member and leader of the health care team.

5. Professionalism

- a. The fellow is respectful and appropriate to housestaff, medical students, and other members of the health care team.
- b. The fellow will answer consults in a timely fashion.
- c. The fellow will demonstrate respect, integrity, and compassion toward patients, families and all other people.
- d. The fellow will be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues, including respect for patient privacy and autonomy.
- e. The fellow is ethical and honest.
- f. The fellow will demonstrate a responsible work ethic with regard to acceptance of responsibility, initiative, attendance at conferences, completion of work assignments, personal demeanor, and modification of behavior in response to criticism.
- g. The fellow will be responsive to patient needs that supercedes self-interests.
- h. The fellow will demonstrate accountability to patients, society and our profession.

6. Systems-Based Practice

- a. The fellow applies evidence-based medicine and utilizes cost-effective health care principles to provide optimal patient care.
- b. The fellow is an advocate for quality patient care and for his or her patient within the health care system.
- c. The fellow will be able to use the data access system of the GI procedure center and the hospital computer system.
- d. The fellow will be able to make appropriate suggestions for referrals to other subspecialties.
- e. The fellow will work effectively within the health care system.
- f. The fellow will incorporate considerations of cost awareness and risk-benefit analysis into their patient care.
- g. The fellow will coordinate patient care within the health care system relevant to digestive diseases.
- h. The fellow will work in inter-professional teams to enhance patient safety and to improve patient care quality.

- i. The fellow will participate in identifying system errors and implementing potential system solutions.

Evaluations: throughout the rotation the following competencies and milestones will be evaluated as discussed above including: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Faculty will also evaluate fellows progress in knowledge, skills and attitudes on EPA's relevant to the rotation. The evaluation will be discussed with the fellow so as to provide appropriate feedback and identify areas for improvement. Evaluations will also be provided in a written format (Medhub).

Reading List

1. Textbooks

- a. Sleisenger and Fordtran textbook: Eds. Feldman, Friedman, and Sleisenger: Sleisenger & Fordtran's Gastrointestinal and Liver Disease, 8th edition, 2006. Saunders, Philadelphia.
- b. Yamata's Textbook of Gastroenterology

2. Journals (pertinent articles)

- a. The fellow is expected to join one of the national organizations, e.g., AGA, ASGE, ACG, and/or AASLD in order to receive a monthly journal and attend national conferences. Most organizations either waive the membership fee or require a minimal fee for trainees to join. The fellow may request payment for this membership fee from the educational fund allotted to each fellow for educational activities.

Gastroenterology

Clinical Gastroenterology and Hepatology

Hepatology

American Journal of Gastroenterology

Gastrointestinal Endoscopy

Journal of Clinical Gastroenterology

New England Journal of Medicine

Educational Resources

Medical library resources of the Yale University School of Medicine

Digestive Diseases library with textbooks in internal medicine, gastroenterology and hepatology

Uptodate

Pubmed

Ovid

Yale-New Haven Hospital - Liver Consult Service and Klatskin Inpatient Service Goals and Objectives

The educational purpose of the Y-NHH Liver rotation is to provide the fellow with an opportunity to evaluate and treat inpatients and outpatients with a wide spectrum, breadth and depth of hepatologic diseases from patients who are hospitalized and treated at Y-NHH, the mix of diseases and patient characteristics as discussed above under Yale-New Haven Hospital-General Information. See also Y-NHH Liver Service – Logistical Considerations, page 44.

During the three month rotation on this service the fellow will be called to evaluate and treat patients with disorders of the liver. There are two fellows on this service at all times – one fellow is the consult fellow and one fellow is the Klatskin fellow and they switch after six weeks. However the consult service may at times be very busy so the Klatskin fellow should follow 3-5 consult patients with preference to ICU patients that have transferred from or will transfer back to Klatskin. The Klatskin fellow should participate in consult rounds to discuss these patients. Each fellow will evaluate approximately 5-15 new consults and/or admissions on inpatients each week.

In addition to the inpatient consults the fellows evaluate, they may if they have time attend liver specific faculty and fellow clinics. The inpatient services must be considered the priority over Attending clinics and fellows must evaluate all ICU patients prior to going to Attending clinics.

The mix of diseases seen during the Y-NHH inpatient liver consult and Klatskin service include: acute and chronic liver diseases, e.g., viral hepatitis, autoimmune hepatitis, metabolic and inherited liver disease, PBC, PSC, and drug induced liver disease; abnormal liver tests; liver masses and other diagnostic imaging abnormalities; neoplastic liver disease; cirrhosis; complications of acute and chronic liver diseases; and patients listed for liver transplantation, in the preoperative period or greater than 3 months post-tranplant.

Examples of diseases and clinical problems the fellow will evaluate and treat include, but are not limited to the following:

Learn the pathology, pathophysiology and interpretation of liver tests and their relationship to diagnosis of liver diseases.

Learn the pathology and pathophysiology with indications and interpretation of diagnostic and therapeutic tests in the management of acute liver failure.

Learn the pathology and pathophysiology with indications and interpretation of tests in the management of acute viral hepatitis including acute hepatitis A, B and C.

Learn the pathology and pathobiology with indications and interpretation of tests in the management of patients with cirrhosis and its complications.

Learn the management of a patient with cirrhosis and renal failure including hepato-renal syndrome.

Learn the appropriate work up and listing of a patient for liver transplant evaluation.

Learn the appropriate follow up and management of a patient post-liver transplantation.

Learn the pre-operative and post-operative evaluation and management of a patient with chronic liver disease.

Learn the pathology, pathophysiology, work-up and management of a patient with hepatocellular carcinoma or cholangiocarcinoma.

Learn the pathology, pathophysiology, interpretation of liver tests and management of patients with cholestatic and metabolic liver diseases.

The fellow will closely interact with physicians from other services, including other internal medicine specialists and subspecialists, surgery, ob-gyn, radiology, and pathology.

The fellow will do approximately 10 procedures on this rotation, including liver biopsies and paracenteses (including large volume paracentesis).

Acquisition of procedural skills will include the following:

Competency in liver biopsy including indications, contraindications and management of complications and interpretation of results. This is optional.

Competency in diagnostic and therapeutic abdominal paracentesis, including indications, contraindications and management of complications and interpretation of results.

Fellows will supervise residents when a large volume paracentesis is performed using a Barcelona needle.

Competency in interpretation of a hepatic wedge pressure gradient.

The teaching methods on this rotation will include direct patient care, weekly didactic lectures (see Conference schedule), small group attending rounds and teaching during clinics. There is direct mentoring of the fellow by liver attending physicians. Liver biopsies are always performed under supervision of an attending. Fellows acquire the skills of a hepatology consultant through direct patient care, self-directed learning, and through directed discussions with attendings on rounds. Inpatient attending rounds usually occur in the latter part of the afternoon and will include a discussion of all new consults and pertinent discussions on longitudinal follow-up patients. Attending rounds function as both work rounds as well as teaching rounds. The attending and fellows discuss each patient, review pertinent data, and discuss the literature as it pertains to the patient and/or disease state. During attending rounds, teaching occurs directed at specific diseases and patients that fellows have evaluated on the consult service and includes radiology viewing, and review of pathologic material. Fellows will lead teaching rounds once per week on the Klatskin service utilizing an AASLD guideline as a teaching topic.

Clinical encounters include emergent, urgent and routine detailed and comprehensive inpatient and outpatient consultations. Consultation occurs in the emergency room, intensive care units, medical, surgical and ob-gyn floors. Longitudinal follow up encounters occur on a daily basis until the consultation is no longer required for the medical management of the patient. Fellows are responsible for arriving early enough to round on ICU patients and seriously ill patients prior to attending other activities such as clinics and endoscopy.

Teaching will occur regularly for each patient evaluated and will be directed in disease specific manner.

Fellows will review their patients' radiologic studies daily with an attending radiologist. Radiology studies are also available through the hospital computer system.

Fellows will review their patients' biopsies and other pertinent pathologic material on a regular basis at least once per week, with the GI and liver pathologists. Additionally, liver pathology is reviewed regularly twice weekly at the liver biopsy conference on Monday afternoon at 4:00 pm and at the multi-disciplinary conference which occurs on Friday afternoons.

At the end of this rotation fellows are expected to exhibit competency in the following areas:

1. Patient Care

- a. The fellow is able to perform an accurate and complete history and physical examination and review all available data within an appropriate time frame, depending upon the urgency of the consult. The fellow is able to formulate a diagnostic and therapeutic decision based on available evidence, sound judgment, and patient preference. The fellow is able to develop and implement management plans and modify plans as new information becomes available. The fellow is able to perform discharge planning including arranging follow up outpatient clinic visits and procedures.
- b. The fellow will have a caring and respectful attitude and behavior towards patients and families.
- c. The fellow will be able to demonstrate proper knowledge and technique in performing procedures including informed consent, indications and contraindications, indications for procedures, appropriate administration of conscious sedation, recognition and management of complications. After three months, the fellow should have performed or supervised (residents doing paracentesis or thoracentesis) approximately 10 procedures including liver biopsies (optional) and paracenteses. See also Procedures on page 97.
- d. The fellow is able to work within a team.
- e. The fellow will practice health promotion and disease prevention.

2. Medical Knowledge

- a. The fellow is able to demonstrate critical thinking and knowledge of established and evolving biomedical, clinical, epidemiological and social sciences as discussed under General Medical Knowledge in Digestive Diseases and apply this knowledge to hepatology, including appropriate interpretation of radiology and pathologic findings.
- b. The fellow is scholarly and committed to a life of learning.
- c. The fellow is able to demonstrate evidence-based decision making and the scientific method of problem solving.
- d. The fellow demonstrates an attitude of caring that is derived from humanistic and professional values.

3. Practice-Based Learning and Improvement

- a. The fellow systematically analyzes and evaluates his/her own patient care practices using quality improvement methods and implements change with the goal of practice improvement.

- b. The fellow will accept and respond to constructive and formative feedback, incorporate the feedback into improving activities, behavior, or attribute.
- c. The fellow will utilize scientific literature and information technology to improve patient care and facilitate life-long learning, e.g., perform Pubmed searches on specific topics related to patient care.
- d. The fellow will facilitate, and participate in, the education of others, including patients, families, students, residents and other health care professionals.
- e. The fellow will recognize strengths, deficiencies, and limits in his or her own knowledge and expertise
- f. The fellow will set learning and improvement goals.

4. Interpersonal and Communication Skills

- a. The fellow will listen well, show sensitivity to and communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds.
- b. The fellow will provide effective and professional consultation to other physicians and members of the health care team. The fellow will notify members of the health care team, the patient, and/or family members of normal and abnormal findings.
- c. The fellow will generate procedure reports that are grammatically correct, accurate in content, and concise.
- d. The fellow will write effective chart notes avoiding copying and pasting from other notes.
- e. The fellow will demonstrate the ability to teach effectively.
- f. The fellow will work effectively as a member and leader of the health care team.

5. Professionalism

- a. The fellow is respectful and appropriate to housestaff, medical students, and other members of the health care team.
- b. The fellow will answer consults in a timely fashion.
- c. The fellow will demonstrate respect, integrity, and compassion toward patients, families and all other people.
- d. The fellow will be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues, including respect for patient privacy and autonomy.
- e. The fellow is ethical and honest.
- f. The fellow will demonstrate a responsible work ethic with regard to acceptance of responsibility, initiative, attendance at conferences, completion of work assignments, personal demeanor, and modification of behavior in response to criticism.
- g. The fellow will be responsive to patient needs superseding self-interests.
- h. The fellow will demonstrate accountability to patients, society and our profession.

6. Systems-Based Practice

- a. The fellow applies evidence-based medicine and utilizes cost-effective health care principles to provide optimal patient care.
- b. The fellow is an advocate for quality patient care and for his or her patient within the health care system.

- c. The fellow will be able to use the data access system of the GI procedure center and the hospital computer system.
- d. The fellow will be able to make appropriate suggestions for referrals to other subspecialties.
- e. The fellow will work effectively within the health care system.
- f. The fellow will incorporate considerations of cost awareness and risk-benefit analysis into their patient care.
- g. The fellow will coordinate patient care within the health care system relevant to digestive diseases.
- h. The fellow will work in multi-disciplinary teams to enhance patient safety and to improve patient care quality.
- i. The fellow will participate in identifying system errors and implementing potential system solutions.

Evaluations: throughout the rotation the following competencies will be evaluated as discussed above including: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Faculty will also evaluate the fellow's progress in knowledge, skills and attitudes on EPA's relevant to the rotation. The evaluation will be discussed with the fellow so as to provide appropriate feedback and identify areas for improvement. Evaluations will also be provided in a written format (Medhub).

Reading List

1. Textbooks

- a. Sleisenger and Fordtran textbook: Eds. Feldman, Friedman, and Sleisenger: Sleisenger & Fordtran's Gastrointestinal and Liver Disease, 8th edition, 2006. Saunders, Philadelphia.
- b. Yamata's Textbook of Gastroenterology
- c. Textbook of Hepatology: From Basic Science to Clinical Practice. Eds Rodes, Benhamou, Blei, Reichen, Rizzetto, 3rd edition, 2007. Blackwell, MA

2. Journals (pertinent articles)

- a. The fellow is encouraged to join one of the national organizations, e.g., AGA, ASGE, ACG, and/or AASLD in order to receive a monthly journal and attend national conferences. Most organizations either waive the membership fee or require a minimal fee for trainees to join. The fellow may request payment for this membership fee from the educational fund allotted to each fellow for educational activities

Gastroenterology

Clinical Gastroenterology and Hepatology

Hepatology

American Journal of Gastroenterology

Gastrointestinal Endoscopy

Journal of Clinical Gastroenterology

New England Journal of Medicine

Educational Resources

Medical library resources of the Yale University School of Medicine

Digestive Diseases library with textbooks in internal medicine, gastroenterology and hepatology

Uptodate

Pubmed

Ovid

Yale-New Haven Hospital - Liver Transplantation Rotation Goals and Objectives

Second or third year fellows will spend six weeks to three months on the liver transplantation service learning both inpatient and outpatient management of patients in the pre-transplant and peri-transplant period. This will include follow-up and management of routine care and complications post-transplantation under the direct supervision of both transplant hepatologists and surgeons. The patient mix represents patients referred from the geographic area, including Connecticut, southern Massachusetts, and western New York state, who are in need of liver transplantation. Approximately 20-50 liver transplantations are performed each year at the Y-NHH.

The educational purpose of the Y-NHH liver transplantation rotation is to provide the fellow with an opportunity to evaluate and treat patients who require liver transplantation; the mix of diseases and patient characteristics is discussed above under Yale-New Haven Hospital-General Information. Fellows will be part of the liver transplantation team and will work directly with transplant hepatologists and surgeons. See also Y-NHH Liver Services – Logistical Considerations, page 44.

During the rotation on this service the fellow will evaluate and manage patients with acute and chronic liver failure who are in the pre-transplant, peri-transplant, and post-transplant period. The fellow will be involved in both inpatient evaluation and management and outpatient follow-up in clinic. The fellow will become familiar with immunosuppressive regimens post-transplantation, and become familiar with various topics in transplantation, as appropriate based on clinical issues that arise on the floors and in the clinics. The fellow will closely interact with physicians from other services, including other internal medicine specialists and subspecialists, surgery, ob-gyn, radiology, and pathology.

The mix of diseases the fellow will evaluate and treat during the Y-NHH liver transplant rotation include, but are not limited to the following: acute and chronic liver diseases, e.g., viral hepatitis, autoimmune hepatitis, metabolic and inherited liver disease, PBC, PSC, and drug induced liver disease; abnormal liver tests; liver masses and other diagnostic imaging abnormalities; neoplastic liver disease; cirrhosis; complications of acute and chronic liver diseases.

Examples of diseases and clinical problems the fellow will evaluate and treat include, but are not limited to the following, particularly as they relate to patients in the transplant setting:

Learn the pathology, pathophysiology and interpretation of liver tests and their relationship to diagnosis of liver diseases.

Learn the pathology and pathophysiology with indications and interpretation of diagnostic and therapeutic tests in the management of acute liver failure.

Learn the pathology and pathophysiology with indications and interpretation of tests in the management of acute viral hepatitis including acute hepatitis A, B and C.

Learn the pathology and pathobiology with indications and interpretation of tests in the management of patients with cirrhosis and its complications.

Learn the management of a patient with cirrhosis and renal failure including hepato-renal failure.

Learn the appropriate work up and listing of a patient for liver transplant evaluation.

Learn the appropriate follow up and management of a patient in the pre-transplant, peri-transplant, and post-transplant period.

Learn the pre-operative and post-operative evaluation and management of a patient with chronic liver disease.

Learn the pathology, pathophysiology, work-up and multi-disciplinary management of a patient with hepatocellular carcinoma.

Learn the pathology, pathophysiology, interpretation of liver tests and management of patients with cholestatic and metabolic liver diseases.

The fellow will closely interact with physicians from other services, including other internal medicine specialists and subspecialists, surgery, ob-gyn, radiology, and pathology.

The fellow may do approximately 10 liver biopsies (optional) and paracenteses as indicated on the patients, and should observe at least one liver replacement “skin to skin”.

Acquisition of procedural skills will include the following:

Competency in liver biopsy including indications, contraindications and management of complications and interpretation of results (performance of the biopsy itself is optional, the knowledge portions are required).

Competency in diagnostic and therapeutic abdominal paracentesis, including indications, contraindications and management of complications and interpretation of results.

Competency in interpretation of a hepatic wedge pressure gradient.

The teaching methods on this rotation will include direct patient care, weekly didactic lectures (see Conference schedule) and small group attending rounds. Attendance at the interdisciplinary meetings is required as well as at the liver clinic meetings. Fellows acquire the advanced consultant skills on this rotation through direct patient care, self-directed learning, and through directed discussions with attendings on rounds and at conferences. However, UNOS certification will not be achieved during this rotation. Attending rounds usually occur twice daily-in the morning and in the latter part of the afternoon-and will include a discussion of all new referrals and pertinent discussions on longitudinal follow-up patients. Attending rounds function as both work rounds as well as teaching rounds. The attending and fellows discuss each patient, review pertinent data, and discuss the literature as it pertains to the patient and/or disease state. During attending rounds, teaching occurs directed at specific diseases and patients that fellows

have evaluated on the transplant service and includes radiology viewing, and review of pathologic material.

Fellows will review their patients' radiologic studies daily with an attending radiologist. Radiology studies are also available through the hospital computer system.

Fellows will review their patients' biopsies and other pertinent pathologic material on a regular basis at least once per week, with the GI and liver pathologists. Additionally, pathology is regularly reviewed at the weekly multi-disciplinary conference which occurs on Friday afternoons at Yale University.

Longitudinal continuity of care will be a specific aim of this teaching activity. The fellow will have the opportunity to follow the same cohort of patients in the transplant clinic and on the inpatient liver transplant service.

At the end of this rotation, fellows are expected to exhibit competency in the following areas:

1. Patient Care

- a. The fellow is able to perform an accurate and complete history and physical examination and review all available data within an appropriate time frame, depending upon the urgency of disease in the patient, both inpatients and outpatients. Fellows are responsible for arriving early enough to round on ICU patients and seriously ill patients prior to attending other activities such as clinics and endoscopy. The fellow is able to formulate a diagnostic and therapeutic decision based on available evidence, sound judgment, and patient preference. The fellow is able to develop and implement management plans and modify plans as new information becomes available. The fellow is able to perform discharge planning including arranging follow up outpatient clinic visits and procedures.
- b. The fellow will have a caring and respectful attitude and behavior towards patients and families.
- c. The fellow will be able to demonstrate proper knowledge and technique in performing procedures including informed consent, indications and contraindications, indications for procedures, appropriate administration of conscious sedation, recognize and manage complications. After the end of this rotation, the fellow should have performed approximately 10 procedures including liver biopsies (optional) and paracenteses. See also Procedures on page 97.
- d. The fellow is able to work within a team.
- e. The fellow will practice health promotion and disease prevention.

2. Medical Knowledge

- a. The fellow is able to demonstrate critical thinking and knowledge of established and evolving biomedical, clinical, epidemiologic and social sciences as discussed under General Medical Knowledge in Digestive Diseases on page 4 and apply this knowledge to transplant hepatology, including appropriate interpretation of radiology and pathologic findings.
- b. The fellow is scholarly and committed to a life of learning.

- c. The fellow is able to demonstrate evidence-based decision making and the scientific method of problem solving.
- d. The fellow demonstrates an attitude of caring that is derived from humanistic and professional values.

3. Practice-Based Learning and Improvement

- a. The fellow systematically analyzes and evaluates his/her own patient care practices using quality improvement methods and implements change with the goal of practice improvement.
- b. The fellow will accept and respond to constructive and formative feedback, incorporate the feedback into improving activities, behavior, or attribute.
- c. The fellow will utilize scientific literature and information technology to improve patient care and facilitate life-long learning, e.g., perform Pubmed searches on specific topics related to patient care.
- d. The fellow will facilitate, and participate in, the education of others, including patients, families, students, residents and other health care professionals.
- e. The fellow will recognize strengths, deficiencies, and limits in his/her own knowledge and expertise
- f. The fellow will set learning and improvement goals.

4. Interpersonal and Communication Skills

- a. The fellow will listen well, show sensitivity to, and communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds.
- b. The fellow will provide effective and professional consultation to other physicians and members of the health care team. The fellow will notify members of the health care team, the patient, and/or family members of normal and abnormal findings.
- c. The fellow will generate procedure reports that are grammatically correct, accurate in content, and concise.
- d. The fellow will write effective chart notes avoiding copying and pasting from other notes.
- e. The fellow will demonstrate the ability to teach effectively both in small group sessions, on rounds, and at the Transplant Clinical Conferences and Liver-Biliary-Pancreas Conferences.
- f. The fellow will work effectively as a member and leader of the health care team.

5. Professionalism

- a. The fellow is respectful and appropriate to housestaff, medical students, and other members of the health care team.
- b. The fellow will answer consults in a timely fashion.
- c. The fellow will demonstrate respect, integrity, and compassion toward patients, families and all other people.

- d. The fellow will be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues, including respect for patient privacy and autonomy.
- e. The fellow is ethical and honest.
- f. The fellow will demonstrate a responsible work ethic with regard to acceptance of responsibility, initiative, attendance at conferences, completion of work assignments, personal demeanor, and modification of behavior in response to criticism.
- g. The fellow will be responsive to patient needs that superseding self-interests.
- h. The fellow will demonstrate accountability to patients, society and our profession.

6. Systems-Based Practice

- a. The fellow applies evidence-based medicine and utilizes cost-effective health care principles to provide optimal patient care.
- b. The fellow is an advocate for quality patient care and for his or her patient within the health care system.
- c. The fellow will be able to use the data access system of the GI procedure center and the hospital computer system.
- d. The fellow will be able to make appropriate suggestions for referrals to other subspecialties.
- e. The fellow will work effectively within the health care system.
- f. The fellow will incorporate considerations of cost awareness and risk-benefit analysis into their patient care.
- g. The fellow will coordinate patient care within the health care system relevant to digestive diseases.
- h. The fellow will work in multi-disciplinary teams to enhance patient safety and to improve patient care quality.
- i. The fellow will participate in identifying system errors and implementing potential system solutions.

Evaluations: throughout the rotation the following competencies will be evaluated as discussed above including: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Faculty will also evaluate fellows progress in knowledge, skills and attitudes on EPA's relevant to the rotation. The evaluation will be discussed with the fellow so as to provide appropriate feedback and identify areas for improvement. Evaluations will also be provided in a written format (Medhub).

Reading List

1. Textbooks

- a. Sleisenger and Fordtran textbook: Eds. Feldman, Friedman, and Sleisenger: Sleisenger & Fordtran's Gastrointestinal and Liver Disease, 8th edition, 2006. Philadelphia.
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2. Journals (pertinent articles)

- a. The fellow is encouraged to join one of the national organizations, e.g., AGA, ASGE, ACG, and/or AASLD in order to receive a monthly journal and attend national conferences. Most organizations either waive the membership fee or require a minimal fee for trainees to join. The fellow may request payment for this membership fee from the educational fund allotted to each fellow for educational activities
- b. Transplant Hepatology, Transplant Proceedings, Hepatology, Gastroenterology, Clinical Gastroenterology and Hepatology, American Journal of Gastroenterology, Journal of Clinical Gastroenterology, New England Journal of Medicine

Educational Resources

Medical library resources of the Yale University School of Medicine

Digestive Diseases library with textbooks in internal medicine, gastroenterology and hepatology; Uptodate; Pubmed; and Ovid

Yale-New Haven Hospital Liver Services – Logistical Considerations

INPATIENT (KLATSKIN) LIVER SERVICE – LOGISTICAL CONSIDERATIONS

In-patient (Klatskin) liver service consists of:

- 1 attendings (hepatologist)
- 1 fellow (primarily in the morning from 7:30 to 12:30)
- 2 residents
- 2 interns
- 1-2 physician assistants

- The service admits daily.
- The aim is to be a liver service
- Liver patients are admitted to the liver attending
- Residents are responsible for dictation of discharge summaries
- Fellows supervise residents doing procedures
- Fellows should take on a junior attending role and may be asked by attendings to lead either teaching or clinical rounds on occasion

Criteria for admission to the liver service – any *non-ICU* patient who is:

1. Seen in the ER at YNHH or HSR with known or suspected acute or chronic liver disease (for example, elevated transaminases, non-obstructive jaundice, hepatic vein thrombosis, etc. If there is uncertainty regarding appropriate assignment of a patient to the liver service, the ER staff will discuss the patient with the liver consult fellow). Of particular note all efforts will be made to focus liver patients at YNHH rather than HSR given the expertise of this service.
2. A known cirrhotic with decompensation – regardless of the cause of decompensation
3. Being worked up for transplant or on the transplant list – regardless of the cause of admission
4. More than three months post-transplant – with a non-surgical cause for admission

Who do we anticipate being admitted to this service?

Our goal is to be the referral service for all patients with end-stage liver disease. We anticipate that, initially, the following will be some of the patients admitted to our service:

- a) All patients currently managed by liver attendings
- b) Referrals for transplant evaluation
- c) Patients more than three months post-transplant
- d) Hill Health Center/Fair Haven Clinic/PCC patients with cirrhosis – many of whom have been underserved
- e) Patients with ESLD whose private GI would like us to manage in-house patients

Criteria for transfer to the liver service:

1. A consultation for acute or chronic liver disease in which the liver-associated problems clearly predominate.
2. Outside hospital transfers that meet admission criteria.

Daily work-flow:

1. Attending commences work rounds with house-staff at 7:30 am daily – liver patients should be rounded on first. (*clinics for attendings on service should not begin until 9:30 am.*)
2. The fellow pre-rounds on ICU consult patients (3-5) that they are covering to help the consult fellow
3. The fellow on in-patient service is present for 7:30 work rounds
4. The fellow then manages the in-patient service (post-rounds questions and in-patient procedures) until 12:30
5. There are attending teaching rounds 3 times a week the fellow teaches an AASLD guideline once per week
6. The fellow rounds with the consult service on the patients they are covering
7. There should be informal (card-flipping) sign-out rounds at 4:30 pm daily (the in-patient fellow is expected to participate if not in clinic). (*Attendings on service should see their last clinic patient at 3:00.*)
8. The fellow is also responsible for keeping abreast of each case managed by the house-staff. If the in-patient fellow is in clinic in the afternoon, the consult fellow may help out on Klatskin service and vice versa for the morning.

NB: Norms of written sign-out should be established early. Ideally fellows should supervise sign-out particularly when new residents rotate on service and whenever possible.

Expectations for each member of the service should be set forth at the beginning of each month. Mid-month and end-of-rotation feedback should be provided for each house-officer.

NB: Following morning work-rounds, the in-patient fellow should leave a reasonable priority “to-do” list for the consult fellow for the afternoon. Following morning triage

rounds, the consult fellow should leave a reasonable priority “to-do” list for the in-patient fellow for the morning. This should be done by phone. That is the Klatskin fellow and consult fellow should have open flow of communication and collaborate throughout the day depending on clinic rather than strictly dividing duties by service.

Weekend workflow:

The attending should round with the house-staff team or covering team at a time decided upon between the attending and the team’s resident (typically around 8:00 am). Rounds should be kept brief and direct. On the weekends, the liver transplant fellow will round with the attending on all Klatskin service patients. The transplant fellow should have a sign-out from the in-patient fellow at all times for ease of communication.

LIVER CONSULT SERVICE – LOGISTICAL CONSIDERATIONS

Service consists of:

- 1 fellow (primarily in the afternoon from 12:30 to 5:00)
- 1 attending (may also be covering the in-patient liver service)

- The service sees new consults daily.
- The service handles liver patients in critical care settings.

Criteria for consultation/continuation of care:

1. Any ICU patient who is a known cirrhotic with decompensation – regardless of the cause of decompensation and not currently being considered for transplantation.
2. A consultation for acute or chronic liver disease in which the liver-associated problems are not central but require the attention of a consultant.

Who do we anticipate being admitted to this service?

1. Patients from the in-patient service who acutely decompensate and require ICU care
2. All other usual consultations that we currently see
3. Outside hospital transfers that meet admission criteria for ICU who are not transplant candidates

Daily work-flow:

1. The consult fellow should round briefly on all ICU patients from 7:00 to 8:00 am prior to reporting to clinic and call the attending for any acute issues. The attending should address the acute issues after work-rounds on the in-patient service.
2. Consult rounds and evening ICU rounds should commence promptly at 3:30 pm. Rounds break for the attending to be present at in-patient service sign-out at 4:30

and reconvene if necessary immediately following sign-out or didactics on Tuesday and Thursday.

3. The fellow should prioritize new consults first and follow-up notes second.

NB: Following morning work-rounds, the in-patient fellow should leave a reasonable priority “to-do” list for the consult fellow for the afternoon. Following morning triage rounds, the consult fellow should leave a reasonable priority “to-do” list for the in-patient fellow for the morning. This should be done by phone. That is the Klatskin fellow and consult fellow should have open flow of communication and collaborate throughout the day depending on clinic rather than strictly dividing duties by service.

Lines of communication:

From 8:00am to 5:00pm

Consults are called to the consult fellow. If urgent AM consultation is required, the in-patient fellow should see the patient. Any time acute liver failure is suspected, the consultation should be called directly to the transplant fellow without delay.

From 5:00pm to 8:00am

Consults are called to the on-call fellow. All new consults should be discussed with the attending.

NB: The in-patient and consult fellows will need to remain in fairly steady communication throughout the day and there can be no shifting of responsibility. Disputes should be arbitrated by the attending.

For better evening continuity, the consult fellow should inform the on-call fellow of any active patients.

Weekend workflow:

The weekend fellow should round on any consult patients deemed necessary to be seen by the daily consult fellow’s weekend sign-out and then touch base with the attending (as is currently the norm for the GI service). It would be ideal for the attending to round with the fellow on these patients, but the attending should be cognizant of the demands of the weekend fellow and the many services covered by that fellow.

TRANSPLANT SERVICE – LOGISTICAL CONSIDERATIONS

Consultations for evaluation for liver transplant or for transplant related care and issues will be offered by our staff of attending transplant hepatologists, transplant surgeons, and nursing coordinators. A member of the transplant staff will always be on call and available for contact by attendings, fellows, house-staff or physician assistants for any care related issues.

Pre-transplant patients (in evaluation or listed for transplant) and post-transplant patients who are more than three months post-op will be admitted to the in-patient liver service.

Transplant hepatology should be consulted at the discretion of the inpatient attending for patients pre- or post-liver transplant or if the patient is admitted to a different service (ICU, etc.).

The transplant hepatology fellow should be contacted first for all consultations to be seen by the transplant hepatology attending. The fellow should notify the attending on service of the consultation in a timely fashion. The patient should be seen and evaluated within 24 hours of the initial contact.

When not in clinic or performing procedures, the transplant fellow should offer to help the in-patient and consult fellows and should act as a “chief.” The fellow should efficiently direct workflow and foster communication. When there are both a 4th year transplant fellow and a transplant fellow they will alternate between inpatient and outpatient care as directed by the transplant attending.

The liver transplant surgical fellow should be contacted first for all consultations to be seen by the liver transplant surgeon on service. The fellow should notify the attending on service or covering attending of the consultation in a timely fashion. The patient should be seen and evaluated within 24 hours of the initial contact.

Contact information will be provided for each of the members of the transplant team. Schedules for coverage will be made by the transplant hepatologists and will be maintained and distributed by the Digestive Diseases Section. An attending and a backup attending will be assigned for each day.

The following conferences should be attended while on this rotation and are optional for fellows with an interest and time during other portions of their training:

Mon 4:30-5:30 journal club alternating with M&M

Wed 8 am radiology conf

Wed 4pm recipient review committee

Wed 5pm grand rounds

Living donor conferences once a month or so no clear schedule

OUTPATIENT CLINICS – LOGISTICAL CONSIDERATIONS

The transplant fellow covers transplant clinics and should alternate between attendings that have a clinic schedule conflict, this includes Strazzabosco hepatoma clinic Tues and Wed pm

PROCEDURES – LOGISTICAL CONSIDERATIONS

All outpatient procedures (paracenteses, liver biopsy) should be scheduled in YPB 4 (688-4404). Procedures should be performed by the fellow in clinic (YPB or Dana) with supervision by the patient’s attending.

In-patient procedures should be done at the bedside by the fellow or by house-staff with fellow supervision where appropriate. The in-patient fellow will assist in the morning; the consult fellow will assist in the afternoon.

CURRICULUM FOR TEACHING ROUNDS

The following core topics should be taught during teaching rounds – preferably in the context of a pertinent case, not in lecture format.

- Interpretation of liver tests
- Fibrosis/portal hypertension/bleeding
- Fluid retention, ascites, and “the nephrology of liver disease”
- Portal systemic encephalopathy
- Acute liver failure
- Hepatocellular carcinoma/follow-up and surveillance of the cirrhotic patient

- **Yale-New Haven Hospital - ERCP Consult Service Goals and Objectives**

The educational purpose of the Y-NHH ERCP rotation is to provide the fellow with an opportunity to evaluate and treat inpatients with a wide spectrum, breadth and depth of gastrointestinal/biliary diseases from patients who are hospitalized and treated at Y-NHH, the mix of diseases and patient characteristics as discussed above under Yale-New Haven Hospital-General Information.

Those fellows who have entered the fellowship program in the clinical tract and who are to be exposed to biliary and pancreatic endoscopy will participate in this training during their second or third year. Research fellows may also have an opportunity to participate on the consult/inpatient portion of this rotation.

During the three to six month rotation on this service the fellow will be called to evaluate and treat patients with disorders of the pancreato-biliary system. There are 1-2 fellows on this service at all times. When there are 2 fellows there will be an ERCP rounder and an ERCP procedure fellow. Fellows, usually in their third year, that desire this advanced exposure will have the opportunity to participate in both the ERCP rounder and the ERCP procedure roles. Selected research fellows and clinical fellows who do not wish to receive ERCP exposure will have the opportunity to learn the management of biliary disease and interpretation of biliary radiographs by rotating on the ERCP rounder rotation. The 4th year fellow will typically rotate on the ERCP procedure service for the first 6 months of each year.

ERCP Rounder

The ERCP rounder fellow is the initial contact person and will be paged for new consults. The consult service takes inpatient consult calls from 8:00 am until 5:00 pm, Monday-

Friday. The on-call fellow for the GI service answers consult pages from 5:00 p.m. until 8:00 am, Monday-Friday and 8:00 am until 8:00 am Saturday, Sunday and holidays. When an ERCP consult is called after hours and on the weekends, the GI fellow on-call will do the initial evaluation and then notify the ERCP fellow on-call. The ERCP fellow on-call is responsible for discussing the consult with the ERCP attending and for arranging the logistics of the ERCP procedure. Fellows are responsible for arriving early enough to round on ICU patients and seriously ill patients prior to attending other activities such as clinics and endoscopy.

The rounder fellow will evaluate approximately 10-20 new ERCP consults each week. Longitudinal follow-up of consult patients while they are still hospitalized will occur as is appropriate.

The mix of diseases seen during the ERCP service rotation include: acute and chronic biliary diseases, e.g., strictures and gallstone disease; acute and chronic pancreatitis; sphincter of Oddi dysfunction; and pancreatic and biliary neoplasms, both benign and malignant.

Examples of diseases and clinical problems the fellow will be called to evaluate include, but are not limited to the following:

Learn the indications, usefulness and interpretations of liver tests as they relate to biliary obstruction.

Learn the management of gallstone disease including biliary colic, acute cholecystitis, and ascending cholangitis.

Learn the approach to acute and chronic pancreatitis, including pancreatic pain, pancreatic strictures and pancreatic pseudocysts.

Learn the pathology and pathophysiology of sphincter of Oddi dysfunction.

Learn the pathology and management of biliary and pancreatic tumors including cholangiocarcinoma and pancreatic cancer.

Learn the approach to management of post-operative biliary complications.

Learn the approach to the management of biliary strictures.

Learn to interpret normal and abnormal radiographic findings.

The fellow will closely interact with physicians from other services, including other internal medicine specialists and subspecialists, surgery, ob-gyn, radiology, and pathology. For inpatient consults, the fellow is responsible for discussing the consult with the ERCP attending. During weekends and 5pm to 8am the on-call ERCP fellow will also be responsible for arranging the logistics of the ERCP procedure, including notifying the GI endoscopy suite, the patient's nurse and ward, writing appropriate orders, arranging radiology time and space, and anesthesia, if needed. The ERCP rounder will facilitate admission for patients that require admission following a procedure. The ERCP rounder will facilitate transfers from outside hospitals in coordination with the ERCP nurse practitioner. The ERCP rounder will manage the recovery of outpatient ERCP patients when the procedure fellow is not available. The ERCP rounder may have the opportunity to participate and learn to do advanced

procedures such as esophageal and duodenal stent placement. The rounder should learn to pass a side-viewing endoscope.

In addition to the inpatient consults, the ERCP rounder fellow will attend the ERCP attending's, Dr. Priya Jamidar, Dr. Harry Aslanian and Dr. James Farrell, weekly clinics at Y-NHH. Teaching will be directed at the patient specific problem or disease.

ERCP Procedure Fellow

The procedure fellow will do approximately 100 inpatient and outpatient ERCPs per three months and 200 ERCPs per six months, on this rotation. The procedure fellow will be responsible for arranging the logistics of the ERCP procedure, including notifying the GI endoscopy suite, the patient's nurse and ward, writing appropriate orders, arranging radiology time and space, and anesthesia, if needed as well as doing pre-procedure evaluation and obtaining informed consent. The procedure fellow will manage outpatients during recovery and will contact the ERCP rounder and facilitate admission for patients that require admission or return to an inpatient bed following a procedure.

Procedures will be both diagnostic and therapeutic with procedural skills including the following:

Competency in moderate and conscious sedation.

Competency in the indications, contraindications, and management of complications and interpretation of diagnostic ERCP.

Competency in the indications, contraindications, and management and complications of biliary sphincterotomy

Competency in the indications, contraindications, and management and complications of pancreatic sphincterotomy.

Competency in the indications, contraindications, and management and complications of biliary strictures.

Competency in the indications, contraindications, and management of pancreatic strictures.

Competency in the indications, contraindications, and management of biliary and pancreatic calculi.

Competency in the indications, contraindications, and performance of biliary and pancreatic stent placement.

Competency in the indications, contraindications, and performance of biliary and pancreatic malignancies.

Competency in the management and complications of benign biliary disease.

Competency in advanced endoscopic procedures including pneumatic dilatation of post-op strictures, EMR, APC, and pseudocyst drainage.

The teaching methods on these rotations, including rounder and procedure fellow, will include direct patient care, weekly didactic lectures (see Conferences on page 104), small group attending rounds and teaching during clinics. Fellows acquire the skills of a gastroenterology/ERCP consultant through direct patient care, self-directed learning, and through directed discussions with attendings on rounds. There is direct mentoring of the

fellows by the ERCP attending. All ERCP and advanced endoscopic procedures are performed under supervision of an attending in the endoscopy room. Attending rounds usually occur in the latter part of the afternoon and will include a discussion of all new consults and pertinent discussions on longitudinal follow-up patients. Attending rounds function as both work rounds as well as teaching rounds. The attending and fellow discuss each patient, review pertinent data, and discuss the literature as it pertains to the patient and/or disease state. During attending rounds, teaching occurs directed at specific diseases and patients the fellow has evaluated on the consult service and includes radiology viewing, and review of pathologic material.

Clinical encounters include emergent, urgent and routine detailed and comprehensive inpatient and outpatient consultations. Consultation occurs in the emergency room, intensive care units, medical, surgical, and ob-gyn floors and in the endoscopy unit. Longitudinal follow up encounters occur on a daily basis until the consultation is no longer required for the medical management of the patient.

The fellow will review the patients' radiologic studies daily with an attending radiologist. Radiology studies are also available through the hospital computer system.

The fellow will review the patients' biopsies and other pertinent pathologic material on a regular basis at least once per week, with the GI pathologists. Pathology is also regularly reviewed at the weekly multi-disciplinary conference which occurs on Friday afternoons.

At the end of this rotation fellows are expected to exhibit competency in the following areas:

1. Patient Care

- a. The fellow is able to perform an accurate and complete history and physical examination and review all available data within an appropriate time frame, depending upon the urgency of the consult. The fellow is able to formulate a diagnostic and therapeutic decision based on available evidence, sound judgment, and patient preference. The fellow is able to develop and implement management plans and modify plans as new information becomes available. The fellow is able to perform discharge planning including arranging follow up outpatient clinic visits and procedures.
- b. The fellow will have a caring and respectful attitude and behavior towards patients and families.
- c. The fellow will be able to demonstrate proper knowledge and technique in performing endoscopic procedures including informed consent, indications and contraindications, indications for screening procedures, appropriate administration of conscious sedation, recognize and manage complications. After three months, the procedure fellow should have performed approximately 100 ERCPs. After performing 100 ERCPs, the fellow should be able to intubate the duct of interest at least 50% of the time. After six months of ERCP training, the fellow should have performed at least 200 ERCPs, and should be able to intubate the duct of interest 95% of the time, extract biliary stones, place stents as needed and perform dilations as needed. See also Procedures on page 97 and the

American Society for Gastrointestinal Endoscopy guidelines for determining competency.

- d. The fellow is able to work within a team.
- e. The fellow will practice health promotion and disease prevention.

2. Medical Knowledge

- a. The fellow is able to demonstrate critical thinking and knowledge of established and evolving biomedical, clinical, epidemiological and social sciences as discussed under General Medical Knowledge in Digestive Diseases on page 4 and apply this knowledge to gastroenterology and ERCP. This includes appropriate interpretation of radiology and pathologic findings.
- b. The fellow is scholarly and committed to a life of learning.
- c. The fellow is able to demonstrate evidence-based decision making and the scientific method of problem solving.
- d. The fellow demonstrates an attitude of caring that is derived from humanistic and professional values.

3. Practice-Based Learning and Improvement

- a. The fellow systematically analyzes and evaluates his/her own patient care practices using quality improvement methods and implements change with the goal of practice improvement.
- b. The fellow will accept and respond to constructive and formative feedback, incorporate the feedback into improving activities, behavior, or attribute.
- c. The fellow will utilize scientific literature and information technology to improve patient care and facilitate life-long learning, e.g., perform Pubmed searches on specific topics related to patient care.
- d. The fellow will facilitate, and participate in, the education of others, including patients, families, students, residents and other health care professionals.
- e. The fellow will recognize strengths, deficiencies, and limits in his/her own knowledge and expertise
- f. The fellow will set learning and improvement goals.

4. Interpersonal and Communication Skills

- a. The fellow will listen well, show sensitivity to, and communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds.
- b. The fellow will provide effective and professional consultation to other physicians and members of the health care team. The fellow will notify members of the health care team, the patient, and/or family members of endoscopic findings.
- c. The fellow will generate endoscopic reports that are grammatically correct, accurate in content, and concise.
- d. The fellow will write legible and effective chart notes.
- e. The fellow will demonstrate the ability to teach effectively.
- f. The fellow will work effectively as a member and leader of the health care team.

5. Professionalism

- a. The fellow is respectful and appropriate to housestaff, medical students, and other members of the health care team.
- b. The fellow will answer consults in a timely fashion.
- c. The fellow will demonstrate respect, integrity, and compassion toward patients, families and all other people.
- d. The fellow will be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues, including respect for patient privacy and autonomy.
- e. The fellow is ethical and honest.
- f. The fellow will demonstrate a responsible work ethic with regard to acceptance of responsibility, initiative, attendance at conferences, completion of work assignments, personal demeanor, and modification of behavior in response to criticism.
- g. The fellow will be responsive to patient needs superseding any self-interests.
- h. The fellow will demonstrate accountability to patients, society and our profession.

6. Systems-Based Practice

- a. The fellow applies evidence-based medicine and utilizes cost-effective health care principles to provide optimal patient care.
- b. The fellow is an advocate for quality patient care and for his or her patient within the health care system.
- c. The fellow will be able to use the data access system of the GI procedure center and the hospital computer system.
- d. The fellow will be able to make appropriate suggestions for referrals to other subspecialties.
- e. The fellow will work effectively within the health care system.
- f. The fellow will incorporate considerations of cost awareness and risk-benefit analysis into their patient care.
- g. The fellow will coordinate patient care within the health care system relevant to digestive diseases.
- h. The fellow will work in multi-disciplinary teams to enhance patient safety and to improve patient care quality.
- i. The fellow will participate in identifying system errors and implementing potential system solutions.

Evaluations: on a monthly basis the following competencies will be evaluated as discussed above including: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Faculty will also evaluate fellow's progress in knowledge, skills and attitudes on EPA's relevant to the rotation. The evaluation will be discussed with the fellow so as to provide appropriate feedback and identify areas for improvement. Evaluations will also be provided in a written format (Medhub).

Reading List

1. Textbooks

- a. Sleisenger and Fordtran textbook: Eds. Feldman, Friedman, and Sleisenger: Sleisenger & Fordtran's Gastrointestinal and Liver Disease, 8th edition, 2006. Saunders, Philadelphia.
- b. Yamata's Textbook of Gastroenterology

2. Journals (pertinent articles)

- a. The fellow is encouraged to join one of the national organizations, e.g., AGA, ASGE, ACG, and/or AASLD in order to receive a monthly journal and attend national conferences. Most organizations either waive the membership fee or require a minimal fee for trainees to join. The fellow may request payment for this membership fee from the educational fund allotted to each fellow for educational activities

Gastroenterology
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Educational Resources

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VA Connecticut Health Care System - General Information

The VA Connecticut Health Care System Hospital is a 196 bed facility serving 52,000 veterans. It is the only Veteran's Hospital in the geographic area with an emphasis on digestive diseases. The patient mix is approximately 85% male and 15% female, but more and more women patients are being evaluated and treated at the VA hospital each year. Adult patients, who are eligible for VA benefits, with a full range of digestive diseases are seen and evaluated here. In addition, there is a wide spectrum of ethnic, cultural, racial, and socioeconomic differences in the patients who are treated here. Fellows spend six weeks each on separate hepatology and gastroenterology services during this rotation. Advanced clinical fellows rotate on a separate ERCP consult service during their ERCP training.

VA Connecticut Health Care System - GI Consult Service Goals and Objectives

The educational purpose of the VA GI rotation is to provide the fellow with an opportunity to evaluate and treat inpatients with a wide spectrum, breadth and depth of gastrointestinal diseases from patients who are hospitalized and treated at the VA hospital. The mix of diseases and patient characteristics are discussed above under VA Connecticut Health Care System-General Information. Fellows are the initial contact person and will be paged for the consult. The consult service takes inpatient consult calls from 8:00 am until 5:00 pm, Monday-Friday. The on-call fellow answers consult pages from 5:00 p.m. until 8:00 am, Monday-Friday and 8:00 am until 8:00 am Saturday, Sunday and holidays.

There is one fellow on the GI service at all times who evaluates approximately 10 new consult patients each week. Longitudinal follow-up of consult patients while they are still hospitalized will occur as is appropriate. In addition to the inpatient consults the fellows evaluate, they will also attend GI specific clinics at the VA. Clinic attendance is expected.

During the six week rotation on this service the fellow will be called to evaluate and treat patients with disorders of the esophagus, stomach, small intestine, colon, pancreas, and biliary system.

The mix of diseases seen in the VA inpatient consult and outpatient endoscopy clinic include: diseases of the esophagus including dysphagia, esophageal dysmotility, GERD, Barrett's esophagus and esophageal cancer; diseases of the stomach including peptic ulcer diseases, upper GI bleeding from ulcers and varices, gastric outlet obstruction and gastroparesis, and gastric polyps and malignancies; diseases of the biliary tract including acute cholecystitis, cholangitis, hepato-biliary neoplasms; diseases of the pancreas including acute and chronic pancreatitis, pancreatic neoplasms; colonic polyps and malignancies; other gastrointestinal neoplasms; inpatient diseases including diarrhea, GI bleeding in critical care patients, post-operative ileus, nausea and vomiting and post-operative intestinal obstruction; inflammatory disease including Crohn's disease and ulcerative colitis, acute diverticulitis and ischemic bowel; acute and chronic GI bleeding; and acute and chronic abdominal pain.

The patient characteristics are elderly with a mean age of 70 and a predominance of white males (85%).

Examples of diseases and clinical problems the fellow will be called to evaluate include, but are not limited to the following:

Esophagus: learn the pathophysiology of diseases of the esophagus and the ability to use and interpret diagnostic tests with relation to the following diseases including dysphagia, gastro-esophageal reflux disease, achalasia, scleroderma, Barrett's esophagus and esophageal cancer. Learn the approach to treatment of bleeding disorders of the esophagus including ulcers and varices.

Stomach: learn the pathophysiology and pathology and treatment of diseases of the stomach. Learn the indications, usefulness and interpretation of tests used to diagnose and treat stomach diseases including peptic ulcer, H. pylori infection, non-ulcer

dyspepsia, gastric malignancies, gastroparesis, nausea and vomiting, stress gastropathy and gastric varices.

Abdominal pain: learn mechanisms of abdominal pain, including visceral and referred pain. Describe and differentiate the etiology and presentation of acute abdominal pain, chronic abdominal pain and a surgical abdomen. Identify the presence of urgent and serious conditions requiring immediate referral to surgery. Describe the diagnostic approach to the evaluation of abdominal pain, including laboratory testing, radiological imaging and referral for urgent endoscopic evaluation.

GI bleeding: learn the indications and contraindications of endoscopy in patients with acute and chronic upper and lower GI bleeding. Understand the pathophysiology, use and interpretation of tests in patients with acute variceal bleeding, peptic ulcer bleeding, small intestinal angiodysplastic bleeding, diverticular bleeding and bleeding from an intestinal malignancy.

Small intestine: learn the pathology and pathophysiology with indications, interpretation, availability and outcome of tests used in diagnosis and treatment of the following disorders: maldigestion including lactose intolerance, malabsorption including celiac sprue and secretory diarrheas, inflammatory diseases including Crohn's disease, radiation injury, small bowel tumors, motility disorders including ileus and pseudo-obstruction, irritable bowel syndrome, and surgical issues including obstruction, perforation and ileus.

Pancreatic diseases: understand the pathology and pathophysiology of acute and chronic pancreatitis. Learn the diagnostic approach and severity staging of patients with acute pancreatitis. Learn to manage the patient with acute pancreatic necrosis including the use of antibiotics and enteral feeding. Learn the etiologies and diagnostic approach to chronic pancreatitis and management of pancreatic pain and malabsorption. Understand the approach to pancreatic cancer staging and management including use of ERCP and EUS.

Biliary diseases: learn the pathophysiology and approach to interpretation and usefulness of tests for acute and chronic cholecystitis, biliary colic, cholangitis and cholangiocarcinomas.

Large intestinal diseases: learn the pathology, pathophysiology and understand and interpret tests used in the diagnosis and treatment relevant to the following disorders: diverticulosis and its complications, inflammatory disorders including ulcerative colitis and indeterminate colitis, infections diseases including C. difficile, shigella and campylobacter, motility disorders including constipation, irritable bowel disease and pseudo-obstruction, malignancies including adenocarcinoma, lymphoma, carcinoid and FAP, rectal disorders including hemorrhoids and fissures.

Abnormal radiologic findings: barium studies, CT scan, ultrasound, MRI/MRCP, nuclear imaging, and interventional radiology will also be learned.

Procedural Skills and Endoscopy

The first year fellow will do approximately 40 procedures on this rotation, on both their inpatient consults and outpatients referred for procedures. Attendance at endoscopic sessions is expected and will enhance the fellow's procedural skills. Procedures will be performed four mornings per week and four afternoons per week with one of the VA attending. Second and third year fellows assigned to GI/Liver consult service or ERCP

service at the VA are expected to perform more procedures, 60-80 for second years and 80-120 for third years and improve their endoscopy skills significantly during this rotation. Third year fellows should achieve competence for independent endoscopic practice during this rotation.

Procedures will be both diagnostic and therapeutic with procedural skills including the following:

Competence in the indications, contraindication to upper and lower endoscopy and management of complications.

Competence in the approach to moderate and conscious sedation.

Competence in the approach and management of anticoagulation, risk assessment and use of antibiotics in endoscopy.

Competence in the approach to endoscopy in the elderly.

Competence in upper endoscopy including removal of ingested foreign bodies, routine biopsy, treatment of upper GI bleeding with use of sclerotherapy, variceal banding ligation, BICAP cautery, hemo-clips, dilatation using bougie and balloon.

Competence will also be obtained in diagnostic sigmoidoscopy and colonoscopy including polypectomy, submucosal resection, dilatation of colonic strictures, use of sclerotherapy and cautery for management of colonic bleeding.

Competence in the use of Argon Plasma Coagulation (APC) and capsule endoscopy in the management of GI bleeding will also be acquired.

The teaching methods on this rotation will include direct patient care, weekly didactic lectures (see Conference schedule), small group attending rounds and during clinic sessions. There is direct mentoring of the fellows by the GI consult attending and the endoscopy attending. During endoscopic procedures the fellows are always supervised by an endoscopy attending. Procedures are first demonstrated by the attending following which the fellow will perform the endoscopy by themselves under supervision of an attending who is in the endoscopy room. Fellows acquire the skills of a gastroenterology consultant through direct patient care, self-directed learning, and through directed discussions with attendings on rounds. Attending rounds usually occur in the latter part of the afternoon and will include a discussion of all new consults and pertinent discussions on longitudinal follow-up patients. Attending rounds function as both work rounds as well as teaching rounds. The attending and fellows discuss each patient, review pertinent data, and discuss the literature as it pertains to the patient and/or disease state. During attending rounds, teaching occurs directed at specific diseases and patients that fellows have evaluated on the consult service and include radiology viewing, and review of pathologic material.

Teaching will occur regularly for each patient evaluated and will be directed at the patient's specific disease.

Clinical encounters include emergent, urgent and routine detailed and comprehensive inpatient consultation. Consultation occurs in the emergency room, intensive care units, medical and surgical floors, endoscopy units and rehabilitation facility at the VA. Longitudinal follow up encounters occur on a daily basis until the consultation is no

longer required for the medical management of the patient. Fellows also encounter patients in the endoscopy unit for routine outpatient procedures. Fellows are responsible for arriving early enough to round on ICU patients and seriously ill patients prior to attending other activities such as clinics and endoscopy.

Fellows will review their patients' radiologic studies daily with an attending radiologist. Radiology studies are also available through the hospital computer system.

Fellows will review their patients' biopsies and other pertinent pathologic material on a regular basis at least once per week, with the GI pathologists. Additionally, pathology is regularly reviewed at the GI pathology conference on Wednesday afternoon at the VA and weekly multi-disciplinary conference which occurs on Friday afternoons.

Educational meetings and conferences at the VA hospital include the following:

Luminal tumor board: conference on the management of patients with GI and surgical illnesses and malignancies on Wednesday afternoon 4-5:00 pm.

Liver tumor board: multidisciplinary conference held twice a month on Friday morning 9:30-11:00 am.

Endoscopy safety conference (offered 1-2 times per year) to review and discuss complications of endoscopy and other patient care.

At the end of this rotation fellows are expected to exhibit competency in the following areas:

1. Patient Care

- a. The fellow is able to perform an accurate and complete history and physical examination and review all available data within an appropriate time frame, depending upon the urgency of the consult. The fellow is able to formulate a diagnostic and therapeutic decision based on available evidence, sound judgment, and patient preference. The fellow is able to develop and implement management plans and modify plans as new information becomes available. The fellow is able to perform discharge planning including arranging follow up outpatient clinic visits and procedures.
- b. The fellow will have a caring and respectful attitude and behavior towards patients and families.
- c. The fellow will be able to demonstrate proper knowledge and technique in performing endoscopic procedures including informed consent, indications and contraindications, indications for screening procedures, appropriate administration of conscious sedation, recognize and manage complications. After six weeks, the first year fellow should have performed approximately 40 procedures including upper endoscopy, PEG tube placement, colonoscopy, and flexible sigmoidoscopy. Advanced fellows, second and third years, will be expected to complete significantly more procedures 60-80 for second years and 80-120 for third years. Advanced fellows should significantly improve endoscopic technique. Third year fellows completing a rotation at the VA should be competent to perform routine endoscopy independently. See also Procedures on page 97.
- d. The fellow is able to work within a team.
- e. The fellow will practice health promotion and disease prevention.

2. Medical Knowledge

- a. The fellow is able to demonstrate critical thinking and knowledge of established and evolving biomedical, clinical, epidemiological and social sciences as discussed under General Medical Knowledge in Digestive Diseases on page 4 and apply this knowledge to gastroenterology.
- b. The fellow is scholarly and committed to a life of learning.
- c. The fellow is able to demonstrate evidence-based decision making and the scientific method of problem solving.
- d. The fellow demonstrates an attitude of caring that is derived from humanistic and professional values.

3. Practice-Based Learning and Improvement

- a. The fellow systematically analyzes and evaluates his/her own patient care practices using quality improvement methods and implements change with the goal of practice improvement.
- b. The fellow will accept and respond to constructive and formative feedback, incorporate the feedback into improving activities, behavior, or attribute.
- c. The fellow will utilize scientific literature and information technology to improve patient care and facilitate life-long learning, e.g., perform Pubmed searches on specific topics related to patient care.
- d. The fellow will facilitate, and participate in, the education of others, including patients, families, students, residents and other health care professionals.
- e. The fellow will recognize strengths, deficiencies, and limits in his/her own knowledge and expertise
- f. The fellow will set learning and improvement goals.

4. Interpersonal and Communication Skills

- a. The fellow will listen well, show sensitivity to, and communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds.
- b. The fellow will provide effective and professional consultation to other physicians and members of the health care team. The fellow will notify members of the health care team, the patient, and/or family members of endoscopic findings.
- c. The fellow will generate endoscopic reports that are grammatically correct, accurate in content, and concise.
- d. The fellow will compose effective chart notes.
- e. The fellow will demonstrate the ability to teach effectively.
- f. The fellow will work effectively as a member and leader of the health care team.

5. Professionalism

- a. The fellow is respectful and appropriate to housestaff, medical students, and other members of the health care team.
- b. The fellow will answer consults in a timely fashion.
- c. The fellow will demonstrate respect, integrity, and compassion toward patients, families and all other people.

- d. The fellow will be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues, including respect for patient privacy and autonomy.
- e. The fellow is ethical and honest.
- f. The fellow will demonstrate a responsible work ethic with regard to acceptance of responsibility, initiative, attendance at conferences, completion of work assignments, personal demeanor, and modification of behavior in response to criticism.
- g. The fellow will be responsive to patient needs superceding any self-interests.
- h. The fellow will demonstrate accountability to patients, society and our profession.

6. Systems-Based Practice

- a. The fellow applies evidence-based medicine and utilizes cost-effective health care principles to provide optimal patient care.
- b. The fellow is an advocate for quality patient care and for his or her patient within the health care system.
- c. The fellow will be able to effectively use the hospital computer system including aspects related to quality care such as setting appropriate reminder prompts (clinical reminders) for follow-up endoscopy, setting the system up to receive prompts for all tests and diagnostic studies on their patients
- d. The fellow will be able to make appropriate suggestions for referrals to other subspecialties.
- e. The fellow will work effectively within the health care system.
- f. The fellow will incorporate considerations of cost awareness and risk-benefit analysis into their patient care.
- g. The fellow will coordinate patient care within the health care system relevant to digestive diseases.
- h. The fellow will work in multi-disciplinary teams to enhance patient safety and to improve patient care quality.
- i. The fellow will participate in identifying system errors and implementing potential system solutions.

Evaluations: on a monthly basis the following competencies will be evaluated as discussed above including: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Faculty will also evaluate fellows progress in knowledge, skills and attitudes on EPA's relevant to the rotation. The evaluation will be discussed with the fellow so as to provide appropriate feedback and identify areas for improvement. Evaluations will also be provided in a written format (Medhub).

Reading List

1. Textbooks
 - a. Sleisenger and Fordtran textbook: Eds. Feldman, Friedman, and Sleisenger: Sleisenger & Fordtran's Gastrointestinal and Liver Disease, 8th edition, 2006. Saunders, Philadelphia.
 - b. Yamata's Textbook of Gastroenterology
2. Journals (pertinent articles)

a. The fellow is encouraged to join one of the national organizations, e.g., AGA, ASGE, ACG, and/or AASLD in order to receive a monthly journal and attend national conferences. Most organizations either waive the membership fee or require a minimal fee for trainees to join. The fellow may request payment for this membership fee from the educational fund allotted to each fellow for educational activities

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Journal of Clinical Gastroenterology
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Other Educational Resources

Medical library resources of the Yale University School of Medicine
Digestive Diseases library with textbooks in internal medicine, gastroenterology and hepatology
Uptodate
PubMed
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VA Connecticut Health Care System - Liver Consult Service Goals and Objectives

The educational purpose of the VA Liver rotation is to provide the fellow with an opportunity to evaluate and treat inpatients and outpatients with a wide spectrum, breadth and depth of hepatologic diseases from patients who are hospitalized and treated at the VA hospital. The mix of diseases and patient characteristics are as discussed above under the VA Connecticut Health Care System-General Information. Fellows are the initial contact person and will be paged for the consults. The consult service takes inpatient consult calls from 8:00 am until 5:00 pm, Monday-Friday. The on-call fellow answers consult pages from 5:00 p.m. until 8:00 am, Monday-Friday and 8:00 am until 8:00 am Saturday, Sunday and holidays.

During the six week rotation on this service the fellow will be called to evaluate and treat patients with disorders of the liver. There is one fellow on this service at all times who evaluates approximately 2-6 new consults on inpatients each week. Longitudinal follow-up of consult patients while they are still hospitalized will occur as is appropriate. In addition to the inpatient consults the fellows evaluate, they will also attend the VA liver clinic. The VA liver fellow will attend the high risk Hepatitis C and hepatoma clinic once a week and learn the approach and management of high risk (coincident substance, psychiatric or HIV disease) patients with chronic Hepatitis C and hepatoma. Clinic attendance is mandatory.

The mix of diseases evaluated and treated during the VA Hospital liver consult service include: acute and chronic liver diseases, e.g., alcoholic liver disease, viral hepatitis, autoimmune hepatitis, metabolic and inherited liver disease, PBC, PSC, and drug induced liver disease; abnormal liver tests; liver masses and other diagnostic imaging abnormalities; neoplastic liver disease; cirrhosis; and complications of acute and chronic liver diseases.

Examples of diseases and clinical problems the fellow will evaluate and treat include, but are not limited to the following:

Learn the pathology, pathophysiology and interpretation of liver tests and their relationship to diagnosis of liver diseases.

Learn the pathology and pathophysiology with indications and interpretation of diagnostic and therapeutic tests in management of acute liver failure.

Learn the pathology and pathophysiology with indications and interpretation of tests in the management of acute viral hepatitis including acute hepatitis A, B and C.

Learn the pathology and pathobiology with indications and interpretation of tests in the management of patients with cirrhosis and its complications.

Learn the management of a patient with cirrhosis and renal failure including hepato-renal failure.

Learn the appropriate work up and listing of a patient for liver transplant evaluation.

Learn the appropriate follow-up and management of a patient post-liver transplantation.

Learn the pre-operative and post-operative evaluation and management of a patient with chronic liver disease.

Learn the pathology, pathophysiology, work up and management of a patient with hepatocellular carcinoma.

Learn the pathology, pathophysiology, interpretation of liver tests and management of patients with cholestatic and metabolic liver diseases.

The fellow will closely interact with physicians from other services, including internal medicine specialties and subspecialties, surgery, ob-gyn, radiology, and pathology.

In addition to endoscopy, the fellow will do approximately 10-20 liver disease related procedures on this rotation, including liver biopsies (optional) and paracenteses.

Acquisition of procedural skills will include the following:

Competency in liver biopsy including indications, contraindications and management of complications and interpretation of results.

Competency in diagnostic and therapeutic abdominal paracentesis, including indications, contraindications and management of complications and interpretation of results.

Competency in interpretation of a hepatic wedge pressure gradient.

Liver biopsies and paracentesis will be performed under the supervision of the VA Hospital attendings, Dr. Guadalupe Garcia-Tsao, Dr. Chuhan Chung, Dr. Joseph Lim.

The teaching methods on this rotation will include direct patient care, weekly didactic lectures (see Conference schedule), small group attending rounds and teaching during clinics. There is direct mentoring of the fellows by VA liver attending physicians. Liver

biopsies are always performed under supervision of a VA attending. Fellows acquire the skills of a hepatology consultant through direct patient care, self-directed learning, and through directed discussions with attending physicians on rounds. Inpatient attending rounds usually occur in the latter part of the afternoon and will include a discussion of all new consults and pertinent discussions on longitudinal follow-up patients. Attending rounds function as both work rounds as well as teaching rounds. The attending and fellows discuss each patient, review pertinent data, and discuss the literature as it pertains to the patient and/or disease state. During attending rounds, teaching occurs directed at specific diseases and patients that fellows have evaluated on the consult service and includes radiology viewing, and review of pathologic material.

Clinical encounters include emergent, urgent and routine detailed and comprehensive inpatient and outpatient consultations. Consultation occurs in the emergency room, intensive care units, medical and surgical floors. Longitudinal follow up encounters occur on a daily basis until the consultation is no longer required for the medical management of the patient. Fellows are responsible for arriving early enough to round on ICU patients and seriously ill patients prior to attending other activities such as clinics and endoscopy.

Teaching will occur regularly after each patient evaluated and will be directed at the disease that particular patient has.

Fellows will review their patients' radiologic studies daily with an attending radiologist. Radiology studies are also available through the hospital computer system. Fellows should be present in radiology during hepatic wedge pressure measurements and learn the interpretation of these results.

Fellows will review their patients' biopsies and other pertinent pathologic material on a regular basis at least once per week, with the GI and liver pathologists. Additionally, liver pathology is reviewed regularly at the multi-disciplinary conference which occurs on Friday afternoons at Yale University.

Tumor Board: Liver tumor board is held every other Friday morning and the Liver consult fellow is expected to attend.

At the end of this rotation fellows are expected to exhibit competency in the following areas:

1. Patient Care

a. The fellow is able to perform an accurate and complete history and physical examination and review all available data within an appropriate time frame, depending upon the urgency of the consult. The fellow is able to formulate a diagnostic and therapeutic decision based on available evidence, sound judgment, and patient preference. The fellow is able to develop and implement management plans and modify plans as new information becomes available. The fellow is able to perform discharge planning including arranging follow up outpatient clinic visits and procedures.

- b. The fellow will have a caring and respectful attitude and behavior towards patients and families.
- c. The fellow will be able to demonstrate proper knowledge and technique in performing procedures including informed consent, indications and contraindications, indications for procedures, appropriate administration of conscious sedation, recognize and manage complications. After six weeks, the fellow should have performed approximately 10 procedures including liver biopsies and paracenteses. See also Procedures on page 97.
- d. The fellow is able to work within a team.
- e. The fellow will practice health promotion and disease prevention.

2. Medical Knowledge

- a. The fellow is able to demonstrate critical thinking and knowledge of established and evolving biomedical, clinical, epidemiological and social sciences as discussed under General Medical Knowledge in Digestive Diseases on page 4 and apply this knowledge to hepatology, including appropriate interpretation of radiology and pathologic findings.
- b. The fellow is scholarly and committed to a life of learning.
- c. The fellow is able to demonstrate evidence-based decision making and the scientific method of problem solving.
- d. The fellow demonstrates an attitude of caring that is derived from humanistic and professional values.

3. Practice-Based Learning and Improvement

- a. The fellow systematically analyzes and evaluates his/her own patient care practices using quality improvement methods and implements change with the goal of practice improvement.
- b. The fellow will accept and respond to constructive and formative feedback, incorporate the feedback into improving activities, behavior, or attribute.
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- c. The fellow will generate procedure reports that are grammatically correct, accurate in content, and concise.
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VA Connecticut Health Care System - Advanced fellow and ERCP Consult Service Goals and Objectives

The educational purpose of the VA advanced fellow rotation is to provide the fellow with an opportunity to evaluate and treat inpatients with a wide spectrum, breadth and depth of gastrointestinal/biliary diseases from patients who are hospitalized and treated at the VA hospital, the mix of diseases and patient characteristics as discussed above under the VA Connecticut Health Care System-General Information. The clinical volume on this service is expected to be quite low so outpatient clinics and outpatient endoscopy will be assigned during this rotation. Additionally, fellows will have the ability to work on and develop clinical research projects with Loren Laine or other mentors during this rotation. They are also expected to hone their basic endoscopy skills during this rotation. Many will achieve competency in routine endoscopy as second year fellows doing this rotation, but definitely should achieve competency as third year fellows doing this rotation.

The fellow is the initial contact person and will be paged for the consult. The consult service takes inpatient consult calls from 8:00 am until 5:00 pm, Monday-Friday. The on-call fellow for the GI service answers consult pages from 5:00 p.m. until 8:00 am, Monday-Friday and 8:00 am until 8:00 am Saturday, Sunday and holidays. When an ERCP consult is called after hours and on the weekends, the GI fellow on-call will do the initial evaluation and then notify the ERCP fellow on-call. The ERCP fellow on-call will be responsible for discussing the consult with the ERCP attending and for arranging the ERCP procedure that needs to be done.

During the three month rotation on this service the fellow will be called to evaluate and treat patients with disorders of the pancreato-biliary system. The fellow will evaluate approximately 1-2 new ERCP consults each week. Longitudinal follow-up of consult patients while they are still hospitalized will occur as is appropriate.

The mix of diseases evaluated and treated during the VA Hospital ERCP Consult Service rotation include: acute and chronic biliary diseases, e.g., strictures and gallstone disease; acute and chronic pancreatitis; sphincter of Oddi dysfunction; and pancreatic and biliary neoplasms, both benign and malignant.

Examples of diseases and clinical problems the fellow will be called to evaluate include, but are not limited to the following:

Learn the indications, usefulness and interpretations of liver tests as they relate to biliary obstruction.

Learn the management of gallstone disease including biliary colic, acute cholecystitis, and ascending cholangitis.

Learn the approach to acute and chronic pancreatitis, including pancreatic pain, pancreatic strictures and pancreatic pseudocysts.

Learn the pathology and pathophysiology of sphincter of Oddi dysfunction.

Learn the pathology and management of biliary and pancreatic tumors including cholangiocarcinoma and pancreatic cancer.

Learn the approach to management of post-operative biliary complications.

Learn the approach to the management of biliary strictures.

Learn to interpret normal and abnormal radiographic findings.

The fellow will closely interact with physicians from other services, including other internal medicine specialties and subspecialties, surgery, radiology, and pathology. The fellow will be responsible for notifying and arranging radiology time and space, and anesthesia, as needed.

In addition to the inpatient consults, the ERCP fellow will attend the weekly VA GI clinic. Fellows may also attend the weekly VA liver clinic and the weekly VA HCRC/Hepatoma clinic. Additional outpatient clinic responsibilities may be assigned during some rotations. The remainder of time will be spent doing general endoscopy and ongoing research projects. Teaching will be directed at the patient specific problem or disease.

The fellow who chooses to learn to do ERCP procedures will do approximately 15 inpatient and outpatient ERCPS per three months and 30 ERCPS per six months, on this rotation with the VA Hospital ERCP attending Dr. Anil Nagar.

Procedures will be both diagnostic and therapeutic with procedural skills including the following:

Competency in moderate and conscious sedation.

Competency in the indications, contraindications, and management of complications and interpretation of diagnostic ERCP.

Competency in the indications, contraindications, and management and complications of biliary sphincterotomy

Competency in the indications, contraindications, and management and complications of pancreatic sphincterotomy.

Competency in the indications, contraindications, and management and complications of biliary strictures.

Competency in the indications, contraindications, and management of pancreatic strictures.

Competency in the indications, contraindications, and management of biliary and pancreatic calculi.

Competency in the indications, contraindications, and performance of biliary and pancreatic stent placement.

Competency in the management and complications of benign biliary disease.

Competency in advanced endoscopic procedures including pneumatic dilatation of post-op strictures, EMR, APC, and pseudocyst drainage.

The teaching methods on this rotation will include direct patient care, weekly didactic lectures (see Conference schedule), small group attending rounds and teaching during clinics. There is direct mentoring of the fellows by the ERCP attending. All ERCP and advanced endoscopic procedures are performed under supervision of an attending in the endoscopy room. Fellows acquire the skills of a gastroenterology/ERCP consultant through direct patient care, self-directed learning, and through directed discussions with the attending on rounds. Attending rounds usually occur in the latter part of the afternoon and will include a discussion of all new consults and pertinent discussions on longitudinal follow-up patients. Attending rounds function as both work rounds as well as teaching rounds. The attending and fellow discuss each patient, review pertinent data, and discuss the literature as it pertains to the patient and/or disease state. During attending rounds, teaching occurs directed at specific diseases and patients the fellow has evaluated on the consult service and includes radiology viewing, and review of pathologic material.

Clinical encounters include emergent, urgent and routine detailed and comprehensive inpatient and outpatient consultations. Consultation occurs in the emergency room, intensive care units, medical and surgical floors and in the endoscopy unit. Longitudinal follow up encounters occur on a daily basis until the consultation is no longer required for the medical management of the patient. Fellows are responsible for arriving early enough to round on ICU patients and seriously ill patients prior to attending other activities such as clinics and endoscopy.

The fellow will review the patients' radiologic studies daily with an attending radiologist. Radiology studies are also available through the hospital computer system.

The fellow will review the patients' biopsies and other pertinent pathologic material on a regular basis at least once per week, with the VA pathologists. Additionally, pathology is regularly reviewed at the weekly multi-disciplinary conference on Wednesday afternoons at the VA Hospital and on Friday afternoons at Yale University.

At the end of this rotation fellows are expected to exhibit competency in the following areas:

1. Patient Care

- a) The fellow is able to perform an accurate and complete history and physical examination and review all available data within an appropriate time frame, depending upon the urgency of the consult. The fellow is able to formulate a diagnostic and therapeutic decision based on available evidence, sound judgment, and patient preference. The fellow is able to develop and implement management plans and modify plans as new information becomes available. The fellow is able to perform discharge planning including arranging follow up outpatient clinic visits and procedures.
- b. The fellow will have a caring and respectful attitude and behavior towards patients and families.
- c. The fellow will be able to demonstrate proper knowledge and technique in performing endoscopic procedures including informed consent, indications and contraindications, indications for screening procedures, appropriate administration of conscious sedation, recognize and manage complications. After performing 100 ERCPs, the fellow should be able to intubate the duct of interest at least 50% of the time. After the fellow has performed at least 200 ERCPs, he/she should be able to intubate the duct of interest 95% of the time, extract biliary stones, place stents as needed and perform dilations as needed. After performing 200 procedures, the fellow will be evaluated for competency. No formal evaluation of procedural competency will occur if this rotation is the first ERCP rotation for the fellow. See also Procedures on page 97 and the American Society for Gastrointestinal Endoscopy (ASGE) guidelines for determining competency.
- d. The fellow is able to work within a team.
- e. The fellow will practice health promotion and disease prevention.

2. Medical Knowledge

- a. The fellow is able to demonstrate critical thinking and knowledge of established and evolving biomedical, clinical, epidemiological and social sciences as discussed under General Medical Knowledge in Digestive Diseases on page 4 and apply this knowledge to gastroenterology and ERCP. This includes appropriate interpretation of radiology and pathologic findings.
- b. The fellow is scholarly and committed to a life of learning.
- c. The fellow is able to demonstrate evidence-based decision making and the scientific method of problem solving.
- d. The fellow demonstrates an attitude of caring that is derived from humanistic and professional values.

3. Practice-Based Learning and Improvement

- a. The fellow systematically analyzes and evaluates his/her own patient care practices using quality improvement methods and implements change with the goal of practice improvement.
- b. The fellow will accept and respond to constructive and formative feedback, incorporate the feedback into improving activities, behavior, or attribute.
- c. The fellow will utilize scientific literature and information technology to improve patient care and facilitate life-long learning, e.g., perform Pubmed searches on specific topics related to patient care.
- d. The fellow will facilitate, and participate in, the education of others, including patients, families, students, residents and other health care professionals.
- e. The fellow will recognize strengths, deficiencies, and limits in his/her own knowledge and expertise
- f. The fellow will set learning and improvement goals.

4. Interpersonal and Communication Skills

- a. The fellow will listen well, show sensitivity to, and communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds.
- b. The fellow will provide effective and professional consultation to other physicians and members of the health care team. The fellow will notify members of the health care team, the patient, and/or family members of endoscopic findings.
- c. The fellow will generate endoscopic reports that are grammatically correct, accurate in content, and concise.
- d. The fellow will write legible and effective chart notes.
- e. The fellow will demonstrate the ability to teach effectively.
- f. The fellow will work effectively as a member and leader of the health care team.

5. Professionalism

- a. The fellow is respectful and appropriate to housestaff, medical students, and other members of the health care team.
- b. The fellow will answer consults in a timely fashion.
- c. The fellow will demonstrate respect, integrity, and compassion toward patients, families and all other people.
- d. The fellow will be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues, including respect for patient privacy and autonomy.
- e. The fellow is ethical and honest.
- f. The fellow will demonstrate a responsible work ethic with regard to acceptance of responsibility, initiative, attendance at conferences, completion of work assignments, personal demeanor, and modification of behavior in response to criticism.
- g. The fellow will be responsive to patient needs superseding any self-interests.
- h. The fellow will demonstrate accountability to patients, society and our profession.

6. Systems-Based Practice

- a. The fellow applies evidence-based medicine and utilizes cost-effective health care principles to provide optimal patient care.
- b. The fellow is an advocate for quality patient care and for his or her patient within the health care system.
- c. The fellow will be able to use the data access system of the GI procedure center and the hospital computer system.
- d. The fellow will be able to make appropriate suggestions for referrals to other subspecialties.
- e. The fellow will work effectively within the health care system.
- f. The fellow will incorporate considerations of cost awareness and risk-benefit analysis into their patient care.
- g. The fellow will coordinate patient care within the health care system relevant to digestive diseases.
- h. The fellow will work in multi-disciplinary teams to enhance patient safety and to improve patient care quality.
- i. The fellow will participate in identifying system errors and implementing potential system solutions.

Evaluations: on a monthly basis the following competencies will be evaluated as discussed above including: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Faculty will also evaluate fellow's progress in knowledge, skills and attitudes on EPA's relevant to the rotation. The evaluation will be discussed with the fellow so as to provide appropriate feedback and identify areas for improvement. Evaluations will also be provided in a written format (Medhub).

Reading List

1. Textbooks

- a. Sleisenger and Fordtran textbook: Eds. Feldman, Friedman, and Sleisenger: Sleisenger & Fordtran's Gastrointestinal and Liver Disease, 8th edition, 2006. Saunders, Philadelphia.
- b. Yamata's Textbook of Gastroenterology

2. Journals (pertinent articles)

- a. The fellow is encouraged to join one of the national organizations, e.g., AGA, ASGE, ACG, and/or AASLD in order to receive a monthly journal and attend national conferences. Most organizations either waive the membership fee or require a minimal fee for trainees to join. The fellow may request payment for this membership fee from the educational fund allotted to each fellow for educational activities.

Gastroenterology

Clinical Gastroenterology and Hepatology

Hepatology

American Journal of Gastroenterology

Gastrointestinal Endoscopy

Journal of Clinical Gastroenterology

New England Journal of Medicine

Educational Resources

Medical library resources of the Yale University School of Medicine

Digestive Diseases library with textbooks in internal medicine, gastroenterology and hepatology

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Hospital of St. Raphael - General Information

Hospital of St. Raphael (HSR) is a 500 bed, major community, teaching hospital where the fellows are exposed to a broad range of general gastroenterology and hepatology as seen by our community physicians. The patient mix reflects the New Haven County diverse community. Fellows rotate at HSR for three months at a time on two separate services. The hospital is now owned by YNHH.

HSR Consult Service Goals and Objectives

The educational purpose of the HSR rotation is to provide the fellow with an opportunity to evaluate and treat inpatients with a wide spectrum, breadth and depth of gastrointestinal and liver diseases from patients who are hospitalized and treated at HSR, the mix of diseases and patient characteristics as discussed above under Hospital of St. Raphael-General Information. Fellows are the initial contact person and will be paged for the consult. The consult service takes inpatient consult calls from 8:00 am until 5:00 pm, Monday-Friday. The on-call fellow answers consult pages from 5:00 p.m. until 8:00 am, Monday-Friday and 8:00 am until 8:00 am Saturday, Sunday and holidays.

There are two fellows on this service at all times and each fellow will evaluate approximately 15 new consult patients each week. Each fellow rotates with one of two groups for six weeks and then the fellows switch groups. Longitudinal follow-up of consult patients while they are still hospitalized will occur as is appropriate. ICU or other patients with urgent medical needs should be seen first in the morning prior to attending clinics or other responsibilities or signed out to the other fellow as appropriate.

During the three month rotation on this service the fellow will be called to evaluate and treat patients with disorders of the esophagus, stomach, small intestine, colon, pancreas, liver, and biliary system. As most patients with primary diagnosis of liver disease should now be directed towards YNHH it is expected that the number of liver disease consults seen during this rotation will be reduced.

The mix of diseases seen during the HSR inpatient consult service include: diseases of the esophagus including dysphagia, esophageal dysmotility, GERD, Barrett's esophagus and esophageal cancer; diseases of the stomach including peptic ulcer diseases, upper GI bleeding from ulcers and varices, gastric outlet obstruction and gastroparesis, gastric

polyps and malignancies; diseases of the biliary tract including acute cholecystitis, cholangitis, hepato-biliary neoplasms; diseases of the pancreas including acute and chronic pancreatitis, pancreatic neoplasms; colonic polyps and malignancies; other gastrointestinal neoplasms; inpatient diseases including diarrhea, GI bleeding in critical care patients, post-operative ileus, nausea and vomiting and post-operative intestinal obstruction; inflammatory disease including Crohn's disease and ulcerative colitis, acute diverticulitis and ischemic bowel; acute and chronic GI bleeding; acute and chronic abdominal pain; acute and chronic liver disease and the management of complications from these diseases.

Examples of diseases and clinical problems the fellow will be called to evaluate include, but are not limited to the following:

Esophagus: learn the pathophysiology of diseases of the esophagus and the ability to use and interpret diagnostic tests with relation to the following diseases including dysphagia, gastro-esophageal reflux disease, achalasia, scleroderma, Barrett's esophagus and esophageal cancer. Learn the approach to treatment of bleeding disorders of the esophagus including ulcers and varices.

Stomach: learn the pathophysiology and pathology and treatment of diseases of the stomach. Learn the indications, usefulness and interpretation of tests used to diagnose and treat stomach diseases including peptic ulcer, H. pylori infection, non-ulcer dyspepsia, gastric malignancies, gastroparesis, nausea and vomiting, stress gastropathy and gastric varices.

Abdominal pain: learn mechanisms of abdominal pain, including visceral and referred pain. Describe and differentiate the etiology and presentation of acute abdominal pain, chronic abdominal pain and a surgical abdomen. Identify the presence of urgent and serious conditions requiring immediate referral to surgery. Describe the diagnostic approach to the evaluation of abdominal pain, including laboratory testing, radiological imaging and referral for urgent endoscopic evaluation.

GI bleeding: learn the indications and contraindications of endoscopy in patients with acute and chronic upper and lower GI bleeding. Understand the pathophysiology, use and interpretation of tests in patients with acute variceal bleeding, peptic ulcer bleeding, small intestinal angiodysplastic bleeding, diverticular bleeding and bleeding from an intestinal malignancy.

Small intestine: learn the pathology and pathophysiology with indications, interpretation, availability and outcome of tests used in diagnosis and treatment of the following disorders: maldigestion including lactose intolerance, malabsorption including celiac sprue and secretory diarrheas, inflammatory diseases including Crohn's disease, radiation injury, small bowel tumors, motility disorders including ileus and pseudo-obstruction, irritable bowel syndrome, and surgical issues including obstruction, perforation and ileus.

Pancreatic diseases: understand the pathology and pathophysiology of acute and chronic pancreatitis. Learn the diagnostic approach and severity staging of patients with acute pancreatitis. Learn to manage the patient with acute pancreatic necrosis including the use of antibiotics and enteral feeding. Learn the etiologies and diagnostic approach to chronic pancreatitis and management of pancreatic pain and malabsorption. Understand the approach to pancreatic cancer staging and management including use of ERCP.

Biliary diseases: learn the pathophysiology and approach to interpretation and usefulness of tests for acute and chronic cholecystitis, biliary colic, cholangitis and cholangiocarcinomas.

Large intestinal diseases: learn the pathology, pathophysiology and understand and interpret tests used in the diagnosis and treatment relevant to the following disorders: diverticulosis and its complications, inflammatory disorders including ulcerative colitis and indeterminate colitis, infections diseases including *C. difficile*, shigella and campylobacter, motility disorders including constipation, irritable bowel disease and pseudo-obstruction, malignancies including adenocarcinoma, lymphoma and carcinoid and FAP, rectal disorders including hemorrhoids and fissures.

Abnormal radiologic findings: barium studies, CT scan, ultrasound, MRI/MRCP, nuclear imaging, and interventional radiology.

The fellow will closely interact with physicians from other services, including other internal medicine specialists and subspecialists, surgery, ob-gyn, radiology, and pathology.

Procedural Skills and Endoscopy

The fellow will do approximately 40-80 procedures on this rotation, including upper endoscopies, PEG tube placement, colonoscopies, and flexible sigmoidoscopies.

Procedures will be both diagnostic and therapeutic with procedural skills including the following:

Competence in the indications, contraindication to upper and lower endoscopy and management of complications.

Competence in the approach to moderate and conscious sedation.

Competence in the approach and management of anticoagulation, risk assessment and use of antibiotics in endoscopy.

Competence in the approach to endoscopy in the elderly.

Competence in upper endoscopy including removal of ingested foreign bodies, routine biopsy, treatment of upper GI bleeding with use of sclerotherapy, variceal banding ligation, BICAP cautery, hemo-clips, dilatation using bougie and balloon, competence in diagnostic sigmoidoscopy and colonoscopy including polypectomy, submucosal resection, dilatation of colonic strictures and use of sclerotherapy and cautery for management of colonic bleeding.

The teaching methods on this rotation will include direct patient care, weekly didactic lectures (see Conference schedule) and small group attending rounds. There is direct mentoring of the fellows by the GI consult attending and during endoscopy. During endoscopic procedures the fellows are always supervised by an endoscopy attending. Procedures are first demonstrated by the attending, following which the fellow will perform the endoscopy by themselves under supervision of an attending whom is in the endoscopy room. Fellows acquire the skills of a gastroenterology consultant through direct patient care, self-directed learning, and through directed discussions with attendings on rounds. Fellows typically complete this rotation in 3 consecutive months in their first year of training. Occasionally fellows in second or third year may complete another 6 weeks to 3 months on this rotation. More advanced fellows are expected to

achieve higher proficiency in endoscopic procedures, advanced clinical knowledge, more independence in ability to act as a consultant physician, including more complete but succinct patient assessments and enhanced differential diagnosis. This should be reflected in evaluations of milestones. Attending rounds usually occur in the latter part of the afternoon and will include a discussion of all new consults and pertinent discussions on longitudinal follow-up patients. Attending rounds function as both work rounds as well as teaching rounds. The attending and fellows discuss each patient, review pertinent data, and discuss the literature as it pertains to the patient and/or disease state. During attending rounds, teaching occurs directed at specific diseases and patients that fellows have evaluated on the consult service, radiology viewing, and review of pathologic material.

Clinical encounters include emergent, urgent and routine detailed and comprehensive inpatient consultation. Consultation occurs in the emergency room, intensive care units, medical, surgical, ob-gyn floors, and endoscopy unit. Longitudinal follow up encounters occur on a daily basis until the consultation is no longer required for the medical management of the patient.

Teaching will occur regularly for each patient evaluated and will be directed at the disease which that particular patient has.

Fellows will review their patients' radiologic studies daily with an attending radiologist. Radiology studies are also available through the hospital computer system.

Fellows will review their patients' biopsies and other pertinent pathologic material on a regular basis at least once per week. Fellows will attend weekly multi-disciplinary conferences with the surgical service and will alternate presentation of cases at these meetings. Additionally, pathology is regularly reviewed at the weekly multi-disciplinary conference at Yale University which occurs on Friday afternoons.

At the end of this rotation fellows are expected to exhibit competency in the following areas:

1. Patient Care

- a. The fellow is able to perform an accurate and complete history and physical examination and review all available data within an appropriate time frame, depending upon the urgency of the consult. The fellow is able to formulate a diagnostic and therapeutic decision based on available evidence, sound judgment, and patient preference. The fellow is able to develop and implement management plans and modify plans as new information becomes available. The fellow is able to perform discharge planning including arranging follow up outpatient clinic visits and procedures.
- b. The fellow will have a caring and respectful attitude and behavior towards patients and families.
- c. The fellow will be able to demonstrate proper knowledge and technique in performing endoscopic procedures including informed consent, indications and contraindications, indications for screening procedures, appropriate administration of conscious sedation, recognize and manage complications. After three months, the fellow should have

performed approximately 80 procedures including upper endoscopy, PEG tube placement, colonoscopy, and flexible sigmoidoscopy. After performing 80 procedures, the fellow should be intubating the esophagus at least 75% of the time and the duodenum at least 50% of the time. The fellow should be reaching the cecum at least 50% of the time. See also Procedures on page 97.

- d. The fellow is able to work within a team.
- e. The fellow will practice health promotion and disease prevention.

2. Medical Knowledge

- a. The fellow is able to demonstrate critical thinking and knowledge of established and evolving biomedical, clinical, epidemiological and social sciences as discussed under General Medical Knowledge in Digestive Diseases and apply this knowledge to gastroenterology and hepatology. This includes appropriate interpretation of radiology and pathologic findings.
- b. The fellow is scholarly and committed to a life of learning.
- c. The fellow is able to demonstrate evidence-based decision making and the scientific method of problem solving.
- d. The fellow demonstrates an attitude of caring that is derived from humanistic and professional values.

3. Practice-Based Learning and Improvement

- a. The fellow systematically analyzes and evaluates his/her own patient care practices using quality improvement methods and implements change with the goal of practice improvement.
- b. The fellow will accept and respond to constructive and formative feedback, incorporate the feedback into improving activities, behavior, or attribute.
- c. The fellow will utilize scientific literature and information technology to improve patient care and facilitate life-long learning, e.g., perform Pubmed searches on specific topics related to patient care.
- d. The fellow will facilitate, and participate in, the education of others, including patients, families, students, residents and other health care professionals.
- e. The fellow will recognize strengths, deficiencies, and limits in his/her own knowledge and expertise
- f. The fellow will set learning and improvement goals.

4. Interpersonal and Communication Skills

- a. The fellow will listen well, show sensitivity to, and communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds.
- b. The fellow will provide effective and professional consultation to other physicians and members of the health care team. The fellow will notify members of the health care team, the patient, and/or family members of endoscopic findings.
- c. The fellow will generate endoscopic reports that are grammatically correct, accurate in content, and concise.
- d. The fellow will write legible and effective chart notes.

- e. The fellow will demonstrate the ability to teach effectively.
 - f. The fellow will work effectively as a member and leader of the health care team.
5. Professionalism
- a. The fellow is respectful and appropriate to housestaff, medical students, and other members of the health care team.
 - b. The fellow will answer consults in a timely fashion.
 - c. The fellow will demonstrate respect, integrity, and compassion toward patients, families and all other people.
 - d. The fellow will be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues, including respect for patient privacy and autonomy.
 - e. The fellow is ethical and honest.
 - f. The fellow will demonstrate a responsible work ethic with regard to acceptance of responsibility, initiative, attendance at conferences, completion of work assignments, personal demeanor, and modification of behavior in response to criticism.
 - g. The fellow will be responsive to patient needs superseding self-interests.
 - h. The fellow will demonstrate accountability to patients, society and our profession.
6. Systems-Based Practice
- a. The fellow applies evidence-based medicine and utilizes cost-effective health care principles to provide optimal patient care.
 - b. The fellow is an advocate for quality patient care and for his or her patient within the health care system.
 - c. The fellow will be able to use the data access system of the GI procedure center and the hospital computer system.
 - d. The fellow will be able to make appropriate suggestions for referrals to other subspecialties.
 - e. The fellow will work effectively within the health care system.
 - f. The fellow will incorporate considerations of cost awareness and risk-benefit analysis into their patient care.
 - g. The fellow will coordinate patient care within the health care system relevant to digestive diseases.
 - h. The fellow will work in multi-disciplinary teams to enhance patient safety and to improve patient care quality.
 - i. The fellow will participate in identifying system errors and implementing potential system solutions.

Evaluations: on a monthly basis the following competencies will be evaluated as discussed above including: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Faculty will also evaluate fellow's progress in knowledge, skills and attitudes on EPA's relevant to the rotation. The evaluation will be discussed with the fellow so as to provide appropriate feedback and identify areas for improvement. Evaluations will also be provided in a written format (Medhub).

Reading List

1. Textbooks

- a. Sleisenger and Fordtran textbook: Eds. Feldman, Friedman, and Sleisenger: Sleisenger & Fordtran's Gastrointestinal and Liver Disease, 8th edition, 2006. Saunders, Philadelphia.
- b. Yamata's Textbook of Gastroenterology
- c. Textbook of Hepatology: From Basic Science to Clinical Practice. Eds Rodes, Benhamou, Blei, Reichen, Rizzetto, 3rd edition, 2007. Blackwell, MA

2. Journals (pertinent articles)

- a. The fellow is encouraged to join one of the national organizations, e.g., AGA, ASGE, ACG, and/or AASLD in order to receive a monthly journal and attend national conferences. Most organizations either waive the membership fee or require a minimal fee for trainees to join. The fellow may request payment for this membership fee from the educational fund allotted to each fellow for educational activities.

Gastroenterology

Clinical Gastroenterology and Hepatology

Hepatology

American Journal of Gastroenterology

Gastrointestinal Endoscopy

Journal of Clinical Gastroenterology

New England Journal of Medicine

Educational Resources

Medical library resources of the Yale University School of Medicine

Digestive Diseases library with textbooks in internal medicine, gastroenterology and hepatology

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Clinical Elective Goals and Objectives

Fellows will participate in a three month Clinical Elective, usually during their second or third year of training. The educational purpose of the Clinical Elective is to provide fellows with an opportunity to receive dedicated ambulatory, outpatient training in digestive diseases and to hone their skills in capsule endoscopy, motility and nutrition. Additionally, the fellow will have the opportunity to receive training in the allied subspecialties of radiology and pediatrics. The fellowship program leadership recognizes that these are major independent subspecialties of their own, and have therefore set as the goal for our fellows the acquisition of basic knowledge and clinical skills that would be essential for a practicing gastroenterologist. The fellow should plan to meet with the

program director, Avlin Imaeda 1 to 2 months prior to the beginning of this rotation in order to discuss their schedule for this rotation.

Ambulatory, Outpatient Clinics – Yale University, 40 Temple Street Goals and Objectives

In order to enhance and complement the clinical training the fellow receives during his or her inpatient consult rotations and continuity clinic, during the Clinical Elective the fellow will participate in the outpatient clinics at Yale University, 40 Temple Street. The patient population and disease mix is ethnically and socio-economically diverse and represents the diverse community of New Haven and surrounding communities.

The goals and objectives for the fellow in the outpatient clinic training experience will be for the fellow to initially evaluate the patient, review the available data, formulate a diagnostic and therapeutic plan, and then present the patient to the responsible attending who will be present in clinic. The attending will be responsible for evaluating the patient, ensuring accuracy of the available data and appropriateness of the diagnostic and therapeutic plan and will then write a clinic note to accompany the fellow's note.

Examples of diseases the fellow will evaluate include, but are not limited to the following: GI bleeding- both upper and lower GI bleeding, dysphagia, odynophagia, chest pain, GERD, ulcer disease, abdominal pain, acute and chronic pancreatitis, IBD, IBS, evaluation for benign and malignant neoplasms, malnutrition and malabsorption, diarrhea, constipation, nausea, vomiting, inability to eat, colitis, chronic and acute liver disease, and abnormal laboratory, radiology and pathology findings.

The fellow will closely interact with physicians from other services as needed, including other internal medicine specialists and subspecialists, surgery, ob-gyn, radiology, and pathology.

The teaching methods on this rotation will include direct patient care, weekly didactic lectures (see Conference schedule on page 104) and small group attending discussions during clinic. Fellows acquire the skills of a gastroenterology and hepatology consultant through direct patient care, self-directed learning, and through directed discussions with attendings in clinic.

Fellows will review their patients' radiologic studies through the hospital computer system and with an attending radiologist when necessary.

Fellows will review their patients' biopsies and other pertinent pathologic material on a regular basis with the GI and liver pathologists. Additionally, pathology is regularly reviewed at the weekly multi-disciplinary conference that occurs on Friday afternoons.

Reading List

1. Textbooks

a. Sleisenger and Fordtran textbook: Eds. Feldman, Friedman, and Sleisenger: Sleisenger & Fordtran's Gastrointestinal and Liver Disease, 8th edition, 2006. Saunders, Philadelphia.

b. Yamata's Textbook of Gastroenterology

2. Journals (pertinent articles)

a. The fellow is encouraged to join one of the national organizations, e.g., AGA, ASGE, ACG, and/or AASLD in order to receive a monthly journal and attend national conferences. Most organizations either waive the membership fee or require a minimal fee for trainees to join. The fellow may request payment for this membership fee from the educational fund allotted to each fellow for educational activities.

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Gastrointestinal Endoscopy

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Educational Resources

Medical library resources of the Yale University School of Medicine

Digestive Diseases library with textbooks in internal medicine, gastroenterology and hepatology

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Clinical Nutrition Goals and Objectives

After 12 months of training the fellow should have experience with assessing and planning the nutritional needs of patients. Didactic lectures on enteral and parenteral nutrition, malnutrition and other aspects of clinical nutrition are given throughout the three year clinical training program. To enhance this knowledge and skill, the fellow should attend clinics with nutrition expert Dr. Rosemarie Fisher and Obesity clinic with Dr. Wajahat Mehal. Individual inpatient and outpatient cases from Yale-New Haven Hospital and the ambulatory clinics will be discussed, including the presentation of disease, evaluation and assessment for nutritional needs, and treatment options. Enteral and parenteral nutrition, obesity, assessment of nutritional needs, vitamins, minerals, and micronutrients, and the needs of patients with specific diseases will be discussed.

The teaching methods on this rotation will include discussions with attendings and dietitians and primarily self-directed learning. Additional training is available from an electronic resource provided by the American College of Gastroenterology or the American Gastroenterological Association. Fellows on elective should complete the nutrition module assigned through Medhub.

The goals and objectives for medical knowledge acquisition during the clinical nutrition training include the following:

The fellow will be cognizant of and understand

1. The nutritional assessment of the patient
2. The role of micronutrients
3. Nutritional planning for the individual patient
4. Enteral access and commonly available enteral preparations
5. Indications and contraindications of peripheral parenteral nutrition
6. Total parenteral nutrition: indications, formulations, and complications
7. Vitamins, minerals and fiber
8. The special nutritional needs of the patient with inflammatory bowel disease.
9. Overfeeding syndrome and secondary organ failure
10. Obesity
11. The trainee will gain experience with the short-term needs of the hospitalized acutely ill patient as well as the chronically ill patient who needs long-term nutritional support.

Reading list: Medhub assignment; <https://www.nutritioncare.org> (ASPEN website)

Pediatric Gastroenterology Goals and Objectives

After 12 months of clinical training the fellows should be familiar with the clinical presentations, diagnosis and general aspects of therapy in the pediatric population. To enhance the fellow's experience with pediatric GI patients, the fellow will participate in the evaluation of pediatric patients in the clinics at Yale University. The patient population and disease mix is ethnically and socio-economically diverse and represents the diverse community of New Haven and surrounding communities. Direct supervision will be by the Yale University pediatric GI faculty, Dr. Dinesh Pashankar. The fellow will initially evaluate the pediatric patient and then present the patient to the pediatric GI attending. The fellow will formulate a diagnosis and management plan under the direct supervision of the attending.

The fellow will evaluate and be involved in the treatment plan of pediatric patients, ages 10 to 18 years, with GI or liver disease who are being evaluated in the GI pediatric clinic, under the direct supervision of a Yale University faculty GI pediatrician. The fellow will closely interact with physicians from other services, including other pediatric specialists and subspecialists, surgery, radiology, and pathology. The fellow will evaluate approximately five pediatric patients in the GI Pediatric clinic.

The teaching methods on this rotation will include direct patient care, weekly didactic lectures (see Conference schedule) and discussion with attendings in clinic. Fellows acquire the advanced skills on this rotation through direct patient care, self-directed learning, and through directed discussions with attendings in clinic. The attending and fellow will discuss each patient, review pertinent data, and discuss the literature as it pertains to the patient and/or disease state.

Fellows will review their patients' radiologic studies through the hospital computer system and with an attending radiologist when necessary.

The goals and objectives for medical knowledge acquisition during the pediatric clinical training are the following:

The fellow will be cognizant of and understand

1. Familiarity with the special features of gastrointestinal diseases afflicting adolescents, especially those diseases that are also common to adults such as inflammatory bowel disease and celiac sprue.
2. Differences in the approach to investigating common symptoms such as diarrhea, constipation, abdominal pain and vomiting in children, especially older children, compared to the investigation of the same symptoms in adults.
3. History taking in the adolescent patient.
4. Common liver diseases in children and the evaluation of jaundice in the pediatric patient.
5. Interpretation of pathologic specimens
 - a. Skills are mainly acquired during the gastroenterology and hepatology didactic conferences and extended during the pediatric gastroenterology clinical training and include evaluating slides of gastrointestinal and liver biopsies with the GI pediatrician and pathologist.
6. Diagnostic imaging - the goal is to become familiar with the interpretation of imaging studies in children.
7. Interpersonal relations, professionalism, and ethical conduct
 - a. To become sensitized to the emotional needs of the adolescent patient
 - b. Respecting confidentiality of the adolescent patient
 - c. The indications for seeking help from a pediatric psychiatrist
 - d. The legal role the parent or guardian has in the care of the pediatric patient and obtaining informed consent for procedures

Reading list

Hyams and Wyllie's Pediatric Gastrointestinal Disease: Pathophysiology/Diagnosis and Management

Walker and Durie's Pediatric Gastrointestinal Disease: Pathophysiology/Diagnosis and Management

Suchy's Liver Disease in Children

Gastrointestinal and Liver Diagnostic Imaging Goals and Objectives

After 12 months of training, the fellow should be familiar with the use of and interpretation of radiologic tests for gastrointestinal and hepatic diseases. This should be obtained through direct patient care as well as through attendance at didactic lectures and case conference. To supplement and enhance this clinical knowledge, the fellow will observe and participate in GI radiology procedures one to one-half day per week at Yale-New Haven Hospital during this three month rotation. The patient population and disease mix is ethnically and socio-economically diverse and represents the diverse community of New Haven and surrounding communities. Direct supervision will be provided by a Yale University faculty member, Dr. Gary Israel, who specializes in GI radiology.

The fellow will participate in performing and interpreting radiologic tests as they pertain to the GI tract and liver, including plain x-rays, barium studies, fluoroscopy, CT scans including virtual colonography, ultrasound, magnetic resonance imaging (MRI), angiography and other interventional radiology studies, and nuclear imaging studies.

The teaching methods on this rotation will include interpretation and discussion with attendings in radiology. Fellows acquire the advanced skills on this rotation through self-directed learning, and interpretation of studies and directed discussions with attendings. The attending and fellow will discuss each patient, review pertinent radiologic studies and discuss the literature as it pertains to the patient and/or disease state.

The goals and objectives for medical knowledge acquisition during the diagnostic imaging clinical training are the following:

The fellow will be familiar with and understand

1. The indications and limitations of plain X-rays of the abdomen, barium contrast studies, abdominal ultrasonograms, computed tomograms, magnetic resonance imaging, angiography, gastric emptying studies and other nuclear medicine scans.
2. The interpretation of plain X-rays of the abdomen and upper and lower barium contrast studies, recognize common disease processes such as ulcers and neoplasia, and identify findings indicative of gastrointestinal emergencies such as free air in the peritoneal cavity.
3. To be able in most instances to recognize commonly seen conditions such as gallstones, intrahepatic biliary tract dilatation and liver and abdominal abscesses on abdominal ultrasonography.
4. Attain moderate expertise recognizing commonly seen lesions on abdominal and pelvic computed tomography, such as pancreatic tumors, pancreatic inflammation and its sequelae, in addition to those conditions listed above for ultrasonography.
5. Become proficient in interpreting cholangiograms and pancreatograms and be able to recognize stones, strictures, neoplasms, and the signs of chronic pancreatitis.
6. To have some experience with images generated by ultrasonography, including endoscopic ultrasound (EUS).
7. The limitations for screening and interpretation of CT colonography for colon cancer.

Reading list

1. Eisenberg and Dennis's Comprehensive Radiographic Pathology
2. Haaga and Alfydi's CT text
3. Moss's CT text

Gastrointestinal Motility and Capsule Endoscopy Goals and Objectives (REQUIRED)

Gastrointestinal Motility

After 12 months of training, the fellow should be familiar with the use of and interpretation of motility tests for gastrointestinal diseases. This should be obtained through direct patient care as well as through attendance at didactic lectures and case conference. To supplement and enhance this clinical knowledge, the fellow will observe and participate in clinic and GI motility procedures at Yale University, 40 Temple Street,

during this three month rotation. The fellow should attend clinic 1-2 half-days per week with 2 half day sessions per week of observing manometry procedures (esophageal, pH, smartpill, anorectal/biofeedback) and will spend ½ day per week reading studies with Dr. Sanchez or Dr. Masoud. The patient population and disease mix is ethnically and socio-economically diverse and represents the diverse community of New Haven and surrounding communities. Direct supervision will be provided by Yale University faculty who specialize in GI motility. The fellow will observe and participate in the placement of (under the direct supervision of the GI motility nurse), and interpretation of 24-hour pH probes and motility tests as they pertain to the GI tract, including esophageal motility and ano-rectal manometry.

The teaching methods on this rotation will include interpretation of findings and discussion with the motility attendings. Fellows acquire the advanced skills on this rotation through self-directed learning and interpretation of studies and directed discussions with the attending and motility nurse. The attending and fellow will discuss each patient, review pertinent motility studies and 24-hour pH probes, and discuss the literature as it pertains to the patient and/or disease state.

The fellow will perform and interpret approximately 20 esophageal motility and 24-hour pH probes and 5 ano-rectal manometry examinations on new patients during this elective. In addition, the fellow will be expected to review prior normal and abnormal motility tracings available in the motility lab. Additional training is available from an electronic resource provided by the American College of Gastroenterology.

The goals and objectives for medical knowledge acquisition during the motility clinical training are the following:

The fellow will be cognizant of and understand

1. A thorough knowledge of the clinical presentations of commonly seen motility disorders of the gastrointestinal tract, in particular those of the esophagus and anal sphincters, and their characteristic pressure tracings.
2. The ability to manage common motor disorders of the gastrointestinal tract and be familiar with the role of biofeedback in the treatment of disorders of the anal sphincter.
3. Evaluation of motility tracings
 - a. Gain familiarity with the technical aspects of motility studies.
 - b. Recognize characteristic manometric findings in patients with common esophageal disorders such as achalasia and esophageal spasm. Recognize normal motility tracings.
 - c. Recognize characteristic manometric findings in ano-rectal manometry in diseases such as short-segment Hirschsprung's disease, colonic atony, and irritable bowel syndrome.

Reading list

Castell's Esophageal Motility Testing

Capsule Endoscopy

After 12 months of training, the fellow should be familiar with the use of and interpretation of capsule endoscopy for gastrointestinal diseases. This should be obtained

through direct patient care as well as through attendance at didactic lectures and case conference. To supplement and enhance this clinical knowledge, the fellow will observe the placement of and interpret capsule endoscopies one-half day per week at Yale University, 40 Temple Street and will review capsule studies from the West Haven VA teaching file during this three month rotation. The patient population and disease mix is ethnically and socio-economically diverse and represents the diverse community of New Haven and surrounding communities. Direct supervision will be provided by Yale University faculty who specialize in capsule endoscopy, Dr. Deborah Proctor, and Dr. Avlin Imaeda. The fellow will observe and participate in the placement of (under the direct supervision of the GI nurse) the capsule endoscopy and recording equipment.

The teaching methods on this rotation will include interpretation of findings and discussion with the attending. Fellows acquire the advanced skills on this rotation through self-directed learning, and interpretation of studies and directed discussions with the attending and nurse. The attending and fellow will discuss each patient, review the computerized video of the capsule endoscopy and discuss the literature as it pertains to the patient and/or disease state.

The fellow will interpret approximately 25 capsule endoscopy examinations with known diagnosis during this rotation in order to ensure that the fellow sees a broad range of capsule findings rather than reading many normal examinations. This can be accomplished by reading studies in the VA teaching file, reviewing images as part of a capsule endoscopy course or reviewing studies on the ACG Universe website.

The goals and objectives for medical knowledge acquisition during the capsule endoscopy clinical training are the following:

The fellow will be cognizant of and understand the following:

1. The indications and contraindications for capsule endoscopy
2. The technical aspects of capsule endoscopy and lead placement
3. Interpretation of esophageal, gastric, small intestinal and colonic images during capsule endoscopy
4. Make appropriate recommendations to the referring physician, based on capsule endoscopy findings.

Reading list

Given's Imaging Atlas, ACG Universe website

Evaluation for the Clinical Elective

The fellow will be evaluated mid-way through, and at the end of the Clinical Elective, and will be expected to exhibit competency in the following areas:

1. Patient Care
 - a. The fellow is able to perform an accurate and complete history and physical examination and review all available data within an appropriate time frame, depending

upon the urgency of the visit and/or consult. The fellow is able to formulate a diagnostic and therapeutic decision based on available evidence, sound judgment, and patient preference. The fellow is able to develop and implement management plans and modify plans as new information becomes available. The fellow is able to perform discharge planning including arranging follow up outpatient clinic visits and procedures.

- b. The fellow will have a caring and respectful attitude and behavior towards patients and families.
- c. The fellow will be able to demonstrate proper knowledge and technique in performing 24-hour pH probe and motility studies including informed consent, indications and contraindications, and recognize and manage complications. See Procedures on page 97.
- d. The fellow will be able to demonstrate proper knowledge and technique in performing capsule endoscopy. See Procedures on page 97.
- e. The fellow is able to work within a team.
- f. The fellow will practice health promotion and disease prevention.

2. Medical Knowledge

- a. The fellow is able to demonstrate critical thinking and knowledge of established and evolving biomedical, clinical, epidemiological and social sciences as discussed under General Medical Knowledge in Digestive Diseases on page 4, and apply this knowledge to gastroenterology as discussed in each section above under goals and objectives. This includes appropriate interpretation of radiology and pathologic findings.
- b. The fellow is scholarly and committed to a life of learning.
- c. The fellow is able to demonstrate evidence-based decision making and the scientific method of problem solving.
- d. The fellow demonstrates an attitude of caring that is derived from humanistic and professional values.

3. Practice-Based Learning and Improvement

- a. The fellow systematically analyzes and evaluates his/her own patient care practices using quality improvement methods and implements change with the goal of practice improvement.
- b. The fellow will accept and respond to constructive and formative feedback, incorporate the feedback into improving activities, behavior, or attribute.
- c. The fellow will utilize scientific literature and information technology to improve patient care and facilitate life-long learning, e.g., perform medline searches on specific topics related to patient care.
- d. The fellow will facilitate, and participate in, the education of others, including patients, families, students, residents and other health care professionals.
- e. The fellow will recognize strengths, deficiencies, and limits in his/her own knowledge and expertise
- f. The fellow will set learning and improvement goals.

4. Interpersonal and Communication Skills

- a. The fellow will listen well, show sensitivity to, and communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds.

- b. The fellow will provide effective and professional consultation to other physicians and members of the health care team. The fellow will notify members of the health care team, the patient, and/or family members of endoscopic findings.
- c. The fellow will generate endoscopic reports that are grammatically correct, accurate in content, and concise.
- d. The fellow will write legible and effective chart notes.
- e. The fellow will demonstrate the ability to teach effectively.
- f. The fellow will work effectively as a member and leader of the health care team.

5. Professionalism

- a. The fellow is respectful and appropriate to housestaff, medical students, and other members of the health care team.
- b. The fellow will answer consults in a timely fashion.
- c. The fellow will demonstrate respect, integrity, and compassion toward patients, families and all other people.
- d. The fellow will be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues, including respect for patient privacy and autonomy.
- e. The fellow is ethical and honest.
- f. The fellow will demonstrate a responsible work ethic with regard to acceptance of responsibility, initiative, attendance at conferences, attendance at clinics, completion of work assignments, personal demeanor, and modification of behavior in response to criticism.
- g. The fellow will be responsive to patient needs superseding self-interests.
- h. The fellow will demonstrate accountability to patients, society and our profession.

6. Systems-Based Practice

- a. The fellow applies evidence-based medicine and utilizes cost-effective health care principles to provide optimal patient care.
- b. The fellow is an advocate for quality patient care and for his or her patient within the health care system.
- c. The fellow will be able to use the data access system of the GI procedure center and the hospital computer system.
- d. The fellow will be able to make appropriate suggestions for referrals to other subspecialties.
- e. The fellow will work effectively within the health care system.
- f. The fellow will incorporate considerations of cost awareness and risk-benefit analysis into their patient care.
- g. The fellow will coordinate patient care within the health care system relevant to digestive diseases.
- h. The fellow will work in multi-disciplinary teams to enhance patient safety and to improve patient care quality.
- i. The fellow will participate in identifying system errors and implementing potential system solutions.

Continuity Clinic and Outpatient Ambulatory Clinics Goals and Objectives

The educational purpose of the continuity ambulatory clinics is to provide the fellow with an opportunity to evaluate and treat outpatients with a wide spectrum, breadth and depth of gastrointestinal and liver diseases from patients who are consulted and treated in the outpatient clinics. Fellows will be exposed to and treat outpatients from diverse ethnic, educational, socioeconomic and cultural backgrounds with a wide range of clinical problems so that at the end of the fellowship, the fellow will have achieved appropriate medical knowledge in the field of digestive diseases, as well as to have developed the interpersonal and communication skills and professional attitudes necessary to function as highly competent subspecialists in this field. The fellow is the primary digestive diseases consultant under the direct supervision of the faculty. By following their own panel of patients in a longitudinal fashion, the fellow will be able to gain expertise in disease progression, management, and response to therapy of different gastrointestinal and liver diseases.

Outpatient clinics exist in each of the three hospitals as well as the Hill Health Center. The patient population is representative of that which is evaluated and managed at each location as discussed above in the General Information for each location. Additionally, separate GI and liver clinics exist at Yale-New Haven Medical Center and the Veterans' Administration Connecticut Health Care System Hospital (VA CT HCS).

Each fellow spends one ½ day per week for the duration of their three year fellowship for their longitudinal, continuity of care clinic at one of four locations: 1. Yale-New Haven Medical Center; 2. VA CT Health Care System; 3. Hospital of St. Raphael; 4. Hill Health Center. Each fellow will spend at least six consecutive months at any given location and no more than 18 months of their total three year continuity clinic experience at the VA CT Health Care System. In their continuity of care clinic, fellows see 4-8 patients per week under the direct supervision of the Digestive Disease faculty.

In addition to their own weekly continuity of care clinic, fellows attend the VA liver clinic while on VA rotations and monthly throughout their training period. While at the VA CT HCS hospital on the GI and liver services, participation in outpatient clinics occurs. While on the ERCP service or the liver transplant service, the fellow will also spend time in clinics that evaluate and treat patients with these specialized problems. Clinical fellows will also spend time on an outpatient clinic rotation. This rotation will consist of several outpatient clinics in a variety of areas including luminal GI and hepatology and will occur at Yale-New Haven Medical Center and VA CT HCS. The schedule for each fellow will be designed depending on available clinics, the fellow's own continuity clinic and fellow's interests.

The goals and objectives for the fellow in the outpatient clinic training experience will be for the fellow to initially evaluate the patient, review the available data, formulate a diagnostic and therapeutic plan, and then present the patient to the responsible attending who will be present in clinic. The attending will be responsible for evaluating the patient,

ensuring accuracy of the available data and appropriateness of the diagnostic and therapeutic plan and will then write a clinic note to accompany the fellow's note.

Examples of diseases the fellow will be called to evaluate include, but are not limited to the following: GI bleeding- both upper and lower GI bleeding, dysphagia, odynophagia, chest pain, GERD, ulcer disease, abdominal pain, acute and chronic pancreatitis, IBD, IBS, evaluation for benign and malignant neoplasms, malnutrition and malabsorption, diarrhea, constipation, nausea, vomiting, inability to eat, colitis, chronic and acute liver diseases including viral hepatitis, alcoholic liver disease, autoimmune liver disease, metabolic, infiltrative and drug-related liver disease, and abnormal laboratory, radiology and pathology findings. The fellow will closely interact with physicians from other services, including other internal medicine specialists and subspecialists, surgery, ob-gyn, radiology, and pathology.

The teaching methods on this rotation will include direct patient care, weekly didactic lectures (see Conference schedule on page 104) and small group attending discussions during clinic. Fellows acquire the skills of a gastroenterology and hepatology consultant through direct patient care, self-directed learning, and through directed discussions with attendings in clinic.

Fellows will review their patients' radiologic studies through the hospital computer system and with an attending radiologist when necessary.

Fellows will review their patients' biopsies and other pertinent pathologic material on a regular basis with the GI and liver pathologists at the respective institution. Additionally, pathology is regularly reviewed at the weekly multi-disciplinary conference which occurs on Friday afternoons.

The fellow will be evaluated every three months as follows and is expected to exhibit competency in the following areas at the end of the three year fellowship training:

1. Patient Care

- a. The fellow is able to perform an accurate and complete history and physical examination and review all available data within an appropriate time frame, depending upon the urgency of the consult. The fellow is able to formulate a diagnostic and therapeutic decision based on available evidence, sound judgment, and patient preference. The fellow is able to develop and implement management plans and modify plans as new information becomes available. The fellow is able to perform discharge planning including arranging follow up outpatient clinic visits and procedures.
- b. The fellow will have a caring and respectful attitude and behavior towards patients and families.
- c. The fellow knows the indications and contraindications for procedures. The fellow knows appropriate screening methods, including screening for malignancies, e.g., colon cancer, and pre-malignant states, e.g., Barrett's esophagus
- d. The fellow is able to work within a team.
- e. The fellow will practice health promotion and disease prevention.

2. Medical Knowledge

- a. The fellow is able to demonstrate critical thinking and knowledge of established and evolving biomedical, clinical, and social sciences as discussed under General Medical Knowledge in Digestive Diseases on page 4 and apply this knowledge to gastroenterology, hepatology and nutrition. This includes appropriate interpretation of radiology and pathologic findings.
- b. The fellow is scholarly and committed to a life of learning.
- c. The fellow is able to demonstrate evidence-based decision making and the scientific method of problem solving.
- d. The fellow demonstrates an attitude of caring that is derived from humanistic and professional values.

3. Practice-Based Learning and Improvement

- a. The fellow systematically analyzes and evaluates his/her own patient care practices using quality improvement methods and implements change with the goal of practice improvement.
- b. The fellow will accept and respond to constructive and formative feedback, incorporate the feedback into improving activities, behavior, or attribute.
- c. The fellow will utilize scientific literature and information technology to improve patient care and facilitate life-long learning, e.g., perform Pubmed searches on specific topics related to patient care.
- d. The fellow will facilitate, and participate in, the education of others, including patients, families, students, residents and other health care professionals.
- e. The fellow will recognize strengths, deficiencies, and limits in his/her own knowledge and expertise
- f. The fellow will set learning and improvement goals.
- g. The fellow assesses patient compliance to ambulatory regimens and is able to accordingly modify prescribing practices.

4. Interpersonal and Communication Skills

- a. The fellow will listen well, show sensitivity to, and communicate effectively with patients and their families across a broad range of socioeconomic and cultural backgrounds.
- b. The fellow will provide effective and professional consultation to other physicians and members of the health care team. The fellow will notify members of the health care team, the patient, and/or family members of normal and abnormal findings.
- c. The fellow will generate reports that are grammatically correct, accurate in content, and concise.
- d. The fellow will write legible and effective consultation notes.
- e. The fellow will demonstrate the ability to teach effectively.
- f. The fellow will work effectively as a member and leader of the health care team.

5. Professionalism

- a. The fellow is respectful and appropriate to housestaff, medical students, and other members of the health care team.

- b. The fellow will answer consults in a timely fashion.
- c. The fellow will demonstrate respect, integrity, and compassion toward patients, families and all other people.
- d. The fellow will be sensitive to cultural, age, gender, religious, sexual preference, and disability differences and issues, including respect for patient privacy and autonomy.
- e. The fellow is ethical and honest.
- f. The fellow will demonstrate a responsible work ethic with regard to acceptance of responsibility, initiative, attendance at conferences, attendance at clinics, completion of work assignments, personal demeanor, and modification of behavior in response to criticism.
- g. The fellow will be responsive to patient needs superseding self-interests.
- h. The fellow will demonstrate accountability to patients, society and our profession.

6. Systems-Based Practice

- a. The fellow applies evidence-based medicine and utilizes cost-effective health care principles to provide optimal patient care.
- b. The fellow is an advocate for quality patient care and for his or her patient within the health care system.
- c. The fellow will be able to use the data access system and the hospital computer system.
- d. The fellow will be able to make appropriate suggestions for referrals to other subspecialties.
- e. The fellow will work effectively within the health care system.
- f. The fellow will incorporate considerations of cost awareness and risk-benefit analysis into their patient care.
- g. The fellow will coordinate patient care within the health care system relevant to digestive diseases. The fellow is able to effectively use community and clinic resources for successful patient care.
- h. The fellow will work in multi-disciplinary teams to enhance patient safety and to improve patient care quality.
- i. The fellow will participate in identifying system errors and implementing potential system solutions.
- j. The fellow is able to collaborate with payers to ensure that patients receive appropriate care.

Evaluations: on a twice yearly basis the following competencies will be evaluated as discussed above including: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Faculty will also evaluate fellows progress in knowledge, skills and attitudes on EPA's relevant to the rotation. The evaluation will be discussed with the fellow so as to provide appropriate feedback and identify areas for improvement. Evaluations will also be provided in a written format (Medhub). Fellows will also be evaluated with direct observation documented in the Mini-CEX format. Finally, fellows will be evaluated by clinic nurses and patients in outpatient clinics.

Reading List

1. Textbooks

- a. Sleisenger and Fordtran textbook: Eds. Feldman, Friedman, and Sleisenger: Sleisenger & Fordtran's Gastrointestinal and Liver Disease, 8th edition, 2006. Saunders, Philadelphia.
- b. Yamata's Textbook of Gastroenterology
- c. Textbook of Hepatology: From Basic Science to Clinical Practice. Eds Rodes, Benhamou, Blei, Reichen, Rizzetto, 3rd edition, 2007. Blackwell, MA

2. Journals (pertinent articles)

- a. The fellow is encouraged to join one of the national organizations, e.g., AGA, ASGE, ACG, and/or AASLD in order to receive a monthly journal and attend national conferences. Most organizations either waive the membership fee or require a minimal fee for trainees to join. The fellow may request payment for this membership fee from the educational fund allotted to each fellow for educational activities

Gastroenterology

Clinical Gastroenterology and Hepatology

Hepatology

American Journal of Gastroenterology

Gastrointestinal Endoscopy

Journal of Clinical Gastroenterology

New England Journal of Medicine

Educational Resources

Medical library resources of the Yale University School of Medicine

Digestive Diseases library with textbooks in internal medicine, gastroenterology and hepatology

Uptodate

PubMed

Ovid

Conferences

The scheduled conferences include the following (MA=mandatory attendance required):

1. Weekly multi-disciplinary clinical conference, Fridays, 2-3:30 in Fitkin Amphitheater, attended by Digestive Disease faculty, GI surgeons, pathologists, radiologists and GI pediatricians.

Different fellows prepare and present cases for general discussion. Fellows are responsible for presenting a case via a slide presentation at this conference throughout all years of fellowship. Fellows are responsible for notifying pathology and radiology physicians and surgeons about the cases they are presenting so that the appropriate additional material, e.g., x-rays and pathology slides, are available to be discussed at the conference. In addition to cases fellows will present a journal club, alternating between liver and GI topics at each conference. Fellows will approach a mentor, select an article with the mentor and use accepted methodology to evaluate the quality of the article. Fellows should engage the audience in discussion of the article. Finally, on at least a quarterly basis second or third year fellows will be assigned to present a case to discuss issues of quality of care, patient safety or complications. Fellows should present a case in which they were not directly involved and should select a mentor. Program directors are available for help in this process. (MA)

2. Dr. Binder and Dr. Laine YNHH 'Professor's Rounds' bi-monthly primarily with the fellows (and students, etc) on the Yale GI team and VA CT HCS rotations respectively though all others are always welcome. Emphasis is discussion of pathophysiology based on current patients in an informal setting. Time/day is determined monthly based on fellows' various clinic obligations. (MA for YNHH GI fellows).

3. Weekly multi-disciplinary clinical conference also takes place at VA CT HCS and St. Raphael's Hospital (1 hour) where fellows are required to prepare and present case material. All pertinent endoscopy, radiology, laboratory and pathologic material are reviewed and discussed at these conferences. (MA while at the institution)

4. A weekly pathophysiology and core curriculum conference is held at Yale-New Haven Hospital, on Fridays at 1:00 pm. Didactic lectures by faculty are provided in the topics listed in the General Medical Knowledge Section. (MA)

During the latter six months of the academic year, each fellow will prepare and present one assigned topic in depth to his/her fellows once per year during this time period. The fellow will have a faculty mentor to review the slide presentation and guide him or her in the presentation. (MA)

6. Weekly basic and clinical research conference at Yale University on Tuesdays, 5-6:00 pm. (MA)

7. Three times per year conferences on biomedical ethics. (MA)

8. The Department of Pathology at Yale University provides a weekly liver biopsy conference and a weekly GI biopsy conference where faculty and fellows review current cases on a multi-headed microscope with video monitoring. It is the fellow's responsibility to attend these conferences and to develop appropriate skills in biopsy evaluation under the supervision of trained faculty in the Department of Pathology and Digestive Disease Section. The Klatskin Library has one of the most complete collections of liver biopsies in the world. Over 6,000 cases are catalogued according to

the history and pathologic findings and are available for review. Weekly pathology conferences are also held at HSR.

9. Morbidity and Mortality (M&M) conferences are held at YNHH several times per year; at the VA CT HCS every 6-12 months; and quarterly at HSR. In addition, surgical complications that occur at the VA CT HCS are discussed at the weekly GI-Surgery-Pathology Conference at the VA CT HCS. (MA)

10. Biweekly didactic teaching attending rounds, times vary at HSR (MA while at the institution)

11. Transplant Conferences: Please see section on Transplant Logistical Considerations (MA while on Transplant rotation).

12. VA liver tumor board, every other Fri am at the VA. (MA for liver fellow).

13. In addition to those listed above, there are other conferences that offer a broad spectrum of basic science and clinical research and clinical educational opportunities, i.e., Medical Grand Rounds, and participation is encouraged as time allows.

Fellows attend and participate in all of these conferences throughout the three year program. Attendance sheets are available at all of the conferences and the fellows are expected to sign in when they attend.

Other Policies:

Duty Hours and Monitoring and Moonlighting:

Fellows must adhere to all ACGME duty hour regulations. That is they must not exceed 80 hours per week averaged over a 4 week period including periods of time spent in the hospital during at-home call and moonlighting. The program does not feel that application for duty hour exception up to 88 hours is of any benefit to the trainees at this time. Fellows who wish to moonlight must submit their request in writing to the program director indicating where they intend to moonlight and approximate hours. The request must be approved by the program director. Time spent in moonlighting must not interfere with the ability of the fellow to achieve the goals and objectives of the educational program. Time spent in internal and external moonlighting must be counted toward the 80-hour maximum weekly hour limit and must not cause the trainee to violate any of the work-hour regulations. All moonlighting hours **MUST** be logged in Medhub with duty hours. First year fellows are not permitted to moonlight due to the demands of clinical rotations during the year in order to prevent fatigue and violation of work hour

regulations. Fellows must log their work hours on a weekly basis. This will be collected by the program coordinator and monitored on a monthly basis by the program director. The program coordinator will notify the program director of any violations immediately. All violations will be reviewed within the month by the program director or associate program director with interview of the fellow.

Fellows must be scheduled for a minimum of one day free of duty every week when averaged over four weeks and at-home call and moonlighting cannot be assigned on these free days. Fellows are never scheduled to a continuous period of duty exceeding 24 hours.

The program director and/or associate program director must approve at-home call schedule to ensure that frequency of call does not lead to excessive demands. The program director will set policy as to the number of calls fellows in each year may take in order to ensure optimal training while mitigating fatigue. This is not subject to every-third-night limitation but every effort is made to ensure that at-home call only rarely occurs more than once within a 72 hour period, with the exception of at-home call on the weekend when defined rest periods are mandated or weekend call at Hospital of St Raphael's when fellows are only rarely called into the hospital at night. Fellows are permitted to return to the hospital and all periods of return will be counted in the duty hour total but each return will not initiate a new duty period requiring 8 hours free of duty. The demands of these calls will be monitored with logged duty hours as described above. Fellows are encouraged to sleep when possible when taking at-home call. If fellows do not have 4 consecutive hours out of the hospital during at-home call they must leave by noon the next day. Faculty have been educated about this rule and are encouraged to routinely question fellows about whether they need to leave the hospital following call. Fellows should not rearrange their calls or be scheduled for call to occur the night before afternoon continuity clinic. In unusual circumstances, fellows, on their own initiative may remain beyond noon after a call without 4 consecutive hours out of the hospital but only to provide care to a single patient. Justifications of such extension are limited to reasons of required continuity for a severely ill or unstable patient, academic importance of the events transpiring, or humanistic attention to the needs of a patient or family. Under those circumstances the fellow must appropriately hand over the care of all other patients to their co-team member and document reasons for remaining to care for the patient. If a fellow stays under exceptions not felt to be valid by the program director in more than 3 instances they will need to obtain permission from the program director in the future to stay beyond noon in these circumstances. Fellows should routinely have 10 hours or more, but must have 8 hours free between scheduled duty periods. Leaving at noon after a difficult "at-home" call ensures the fellow will have more than 14 hours off after 24 hours of in-house duty. Exceptions to the 8 hours free between scheduled duty periods can be made for fellows as they are in their final years of education, however we do not feel this will be necessary. In the event that it is detected during duty hour review, circumstances will be discussed with the program director.

Transitions of Care:

Fellows must use the program's approved sign-out form and process for transitions of care to ensure that all vital information is included. Faculty should directly supervise the sign-out process by discussing patients to be signed out and reviewing sign-out sheet for the first week of each new clinical rotation in the first year. After the first week of supervised sign-out the faculty may allow the fellow progressive freedom ie discuss those patients to be signed-out without reviewing sign-out sheet, once the fellow is deemed competent in transition of care. By third year fellows should be expected to create appropriate sign-out with at most minimal supervision. During week night sign-out the fellow should sign out all active patients including telephone or face to face discussion of any patients that will require sign-out of urgent endoscopy or urgent follow-up of labs or unstable medical condition. During the weekend all patients on a service must be signed-out with identification of those patients who need to be examined and have chart notes written. Sign-out sheets should be emailed over secure email. The recipient fellow must confirm they have received the sign-out. After a call period the post-call fellow must email back up-dated sign-out to the regular service fellow or email that there are no changes. Each fellow receiving a sign-out must email back confirmation that they have received the sign-out. If confirmation is not received then the fellow sending sign-out must call the recipient fellow to ensure that sign-out is received.

Vacation and Leave Time:

Fellows may take 3 weeks of scheduled vacation per year. Vacations should be approved by the fellowship director, Avlin Imaeda at least 3 months in advance. Therefore, 1st year fellows should not take vacation in the first 2 months of the fellowship. Once approved, site directors or clinic attendings should be notified immediately (3 months in advance) so that clinic patients can be moved in a timely fashion. If a 3 month notice is not possible than the fellow should find coverage for his or her clinic. A research fellow will be assigned by the associate fellowship director to cover the clinical rotation of any fellows taking vacation while on selected clinical rotations.

Leave time for maternity leave, sick leave, or family care should be discussed and approved by the Fellowship director and discussed with the Associate Dean of Graduate Medical Education (paperwork must be filed for leave greater than 2 weeks). Federal and State law allows for job protection (not paid time) for up to 12 weeks in 12 months for qualified reasons. In order to complete fellowship requirements necessary to sit for USMLE Board Certification any leave time greater than 12 weeks during the 3 year training period must be made up.

Grievance Policy:

Yale University is committed to providing fair and consistent treatment to all staff of the School of Medicine and to providing a procedure for prompt consideration of their complaints. To this end, the following grievance procedures are available to postdoctoral fellows with appointments at the School of Medicine. Postdoctoral fellows may invoke

the following procedures whenever they believe they have been treated in a manner inconsistent with University policies or believe they have been discriminated against on the basis of race, color, sex, age, religion, national or ethnic origin, handicap, or status as a Vietnam era veteran or they believe that they have been inappropriately discharged, suspended or otherwise disciplined for misconduct. Decisions made by supervisors regarding professional assessments and judgments such as performance evaluations, salary, re-appointments, staffing or organization of department or allocation of its resources are not subject to review under this procedure unless it is alleged that the professional assessment or judgment resulted from unlawful discrimination. A grievance panel may have to inquire into the process by which professional judgments are made in reviewing a complaint of discrimination; but the grievance panel may not substitute its judgment for that of the supervisor.

Fellows may use this procedure without fear of reprisal or prejudice. If fellows feel that he or she has been retaliated against as a result of pursuing a grievance, a separate claim of retaliation may be pursued through this process.

It is suggested that complaints by women alleging sex discrimination or sexual harassment be brought to the attention of the Director of the Office for Women in Medicine.

Many complaints can be resolved informally. Fellows are encouraged to bring complaints covered by this procedure to the attention of the person or persons whose actions are the subject of the complaint in a constructive attempt to resolve the problem. Department heads are encouraged to meet with the concerned parties in order to work out a resolution. If these efforts are not successful or if the fellow has chosen not to discuss the matter with the persons directly involved, no later than ten (10) working days after the date of discipline or discharge or the date the fellow learns of the action that forms the basis of the complaint. This written complaint must describe in detail the substance of the claim, the issues raised, the facts underlying the complaint and the nature of the relief sought. The Dean, or an investigator appointed by the Dean, may informally meet with the concerned parties at this time in order to try to reach a resolution acceptable to both parties. If no settlement can be reached, the Dean will apprise the grievant of the right to a formal hearing and, if no settlement can be reached, the Dean will apprise the grievant of the right to a formal hearing and, if the grievant so requests, the Dean will schedule a formal hearing to take place normally within three weeks of the original filing of the written complaint. Both parties will be give at least one week's notice of the date of the hearing in order to allow time for preparation.

1. Formal Hearing

Composition of the Review Panel

The Review Panel shall consist of three members selected by the Dean from the faculty of the School of Medicine. The grievant may challenge for cause the Dean's appointments. The Dean will decide the disputed issues in case of challenge and his decision or subsequent appointments will not be subject to appeal.

2. Hearing by the Review Panel

The panel must be guided in its decision by stated University policy and practice and its commitment to compliance with federal statutes protecting equal opportunity regardless of race, color, sex, age, handicap, national origin, religion or status as a Vietnam era veteran. In cases of discipline or discharge the panel must determine whether or not there was just cause for the discipline or discharge the panel must determine whether or not there was just cause for the discipline or discharge and whether or not due process was observed in dealing with the events up to the official action. Due process is defined as notice to the grievant of the intent to discipline or discharge and an opportunity to respond to the charges upon which the discipline is based.

To ensure a fair hearing, the grievant and respondent will be given the opportunity to present all information and witnesses relevant to the issues, and to be present when contrary evidence is presented to the panel. Each party will be given an opportunity to rebut any charges made at the hearing.

The grievant and the respondent may have as an advisor any member of the medical school community who does not have legal training. The individuals directly involved are responsible for presenting their views and documentation. These advisors are present only to provide counsel and support and may not participate directly in the proceedings. These proceedings by their nature are non-adversarial and the introduction of legalistic procedures is not permitted.

The Panel, having conducted its inquiry, will then deliberate without the presence of the parties and will prepare a written report stating its findings of fact and recommendation to the Dean, including a summary of the substance of testimony that the Panel has relied on in reaching its recommendation.

3. Final Resolution of the Complaint by the Dean

The Panel will submit its report to the dean ordinarily within one week of the final hearing. The Dean will permit the grievant and the persons against whom the complaint was lodged to inspect the report of the Panel. Since the report is a confidential document advisory to the Dean, neither of the parties is entitled to a copy of it.

The Dean shall accept the Panel's findings of fact unless the Dean believes that the findings are not substantiated by the evidence presented to the Panel. The Dean may accept, modify or reject the conclusions of the Panel and any recommendations it might have made. However, in any case where the dean does not believe it is appropriate to follow the recommended actions of the Panel, the Dean will discuss the matter with the Panel and explain the reasons for not doing so. The Dean will then make a decision on the matter and convey his or her decision in writing to the grievant, the person against whom the grievance was lodged, and the Panel; the Dean's decision will include his or her conclusions about the issues raised in the complaint and the remedies and sanctions, if any, to be imposed.

The Dean's decision shall be final. The Dean's decision may be to take any actions as may be within his or her authority. If the remedy deemed appropriate by the Dean is

beyond the authority of the Dean, the Dean will recommend the initiation of such action (disciplinary or otherwise) in accordance with applicable University practices and procedures. The dean's decision should ordinarily be rendered within one month after the Dean receives the Committee's Report.

Time Guidelines

If the School of Medicine is not in session during part of these proceedings or in instances where additional time may be required because of the complexity of the case or unavailability of the parties or witnesses, any of the time periods specified herein may be extended by the Dean. If a period is extended, the complainant and the person against whom the complaint has been filed will be so informed.

General Responsibilities, Policies and Expectations:

1. Daytime responsibilities and duties

The duties and responsibilities of Digestive Diseases fellows' follow the general guidelines that are reviewed below. However, variations in the number of fellows within the program, clinical requirements, individual training goals, and sources of funding may result in some differences among fellows' training experience from year to year.

It is the responsibility of fellows to see in-patient consultations promptly (same day) and present them to the respective attendings (i.e., those on service, or other attendings who have been requested to see particular patients or who have patients in the hospital). Priority will be given to the service attending. Fellows will follow in-patients on a regular basis until the patients are discharged or the case has been "signed off" with the approval of the attending. Fellows will complete discharge summaries on in-patients of

Digestive Diseases faculty (at YNHH or VA CT HCS) and of the in-patients from the teaching groups (at HSR). Summaries for patients on general medical and surgical services etc. will be completed by the house staff.

When a request is received to transfer a patient from another hospital please refer the physician to the YNHH Y-access line. This number is **888-964-4233**. An attending physician **MUST** accept the patient for transfer once approved through the Y-access line. Fellows may not approve transfers. However Digestive Diseases attendings may be asked to approve a transfer which will go to an internal medicine service but require hepatology, gastroenterology or biliary consult.

A major component of your training is your weekly continuity of care clinic that you will attend during your entire fellowship including during research training. In the first and second year you will be assigned a continuity clinic at YNHH, VA, HSR or Hill Health Center. During your third year you may have the opportunity to choose to work in an attending's clinic. Your continuity of care clinic takes precedence over other activities.

In addition to your own continuity of care clinic all fellows attend the VA liver clinic approximately once a month throughout the fellowship. You will attend the VA liver clinic during your clinical as well as your research training period.

Fellows will perform inpatient and outpatient procedures, specifically various endoscopic procedures, liver biopsies and large volume paracentesis. Fellows will maintain a procedure log for all procedures on all patients.

Fellows will respond to telephone calls from out-patients, family members of patients, referring physicians, etc.

The fellowship training program is busy, but hopefully will be an enriching and varied experience for you, and one that will provide a solid foundation on which to build your career in Digestive Diseases. To make this busy and somewhat complex program work well for you, it is very important that you read and digest the instructions and schedules included in this manual and the curriculum and continue to use the manual and curriculum throughout your fellowship.

Where doubts arise with regard to in-patient care or immediate problems with your schedule, consult your attending. For more major problems with the schedule, for ideas that you may have with regard to improving the educational or clinical experience, or should problems of a personal nature arise that are likely to impact on your adherence to the schedule or cause difficulties with your functioning within the program, please feel free to talk to the program director or associate program directors at any time.

The program director will meet with you to review your progress in the program every six months or more frequently as needed.

The program director and associate program directors and other faculty administrators meet several times per year with the fellows during and you will be invited to air your

concerns, suggestions and ask questions. These issues will be brought confidentially to the attention of the Section Chief, Dr. Michael Nathanson and other faculty if not in attendance.

2. Night or weekend call:

You will take night call and weekend call throughout your fellowship training, both during your clinical training as well as during your research training period. One fellow is on call for YNH and will see all new GI, liver and ERCP consult patients and another fellow is on call for both the VA CT HCS and HSR. Weeknight calls will be distributed approximately equally between first, second and third year fellows. Second and third year fellows only will also take weekend call on a combination of the liver Klatskin, transplant, ERCP inpatient and procedure services. The total number of weekend calls will be distributed equally between the three years. Fellows will round on in-patients on weekends and holidays according to the schedule arranged and communicate on a daily basis with the appropriate attendings.

a. Outpatients requiring medical advice, treatment, or prescription refills

Patients followed by the digestive diseases faculty or HSR attendings may contact you while on call. If the patient is experiencing an emergency, refer them to the appropriate Emergency Department at YNH, VA CT HCS, or HSR. Alert the ED to the patient's arrival, and arrange to see the patient after they have been evaluated by the Emergency Department staff (YNH ED: 688-2222; VA ED: 932-5711, ext 4777; HSR ED:789-3464). If the patient is to be admitted speak to the medical resident on call at the respective hospital. Leave your name and beeper number and ask to be called after the patient has been seen.

If the patient's question or condition is not an emergency, reassure the patient and suggest an appropriate follow-up (clinic visit, future phone contact, or contact with the attending physician). Record each patient's problem, your response, and what, if anything, you expect the attending to do and notify the attending the following morning (phone call, page, or email).

If the patient requires a prescription refill that night, call it into the pharmacy of the patient's choice. Some pharmacies request your DEA number for identification even if the medication is not a controlled substance. If you do not have a DEA number, you may use the generic Yale DEA number. Provide prescription refills only for patients followed by a faculty member in the section. Do not provide any prescriptions for new medications.

b. Narcotic prescription requests

These may be filled only if you have your own DEA number as you may not use the hospital DEA for narcotic prescriptions. Do not fill narcotic prescriptions without first speaking directly to the patient's attending physician.

c. Emergency room or inpatient consultations while on call

If you are informed that a patient followed by one of the section's faculty members is in the ED with a digestive diseases-related problem, see the patient. After evaluating the patient, call the attending physician who follows the patient, regardless of whom is on call. Likewise, if a patient presents with a complication or potential complication of a recent GI procedure, call the attending physician who performed the procedure.

You **must** see all new consults (with the exception of PEG consults) when on call for the first 3 months of fellowship. This period of time allows the inexperienced fellow to get a better sense of which consults require urgent evaluation and advice and which can be delayed slightly until morning. Often health care providers calling consults may not have been involved in the decision process to call the consult, may not know the patient well or may otherwise not fully understand and convey the rationale and relative urgency of the issue. The more experienced fellow should be able to better tease out this information and determine urgency. After 3 months the faculty will discuss each fellow's readiness to triage urgency of consults such that they needn't see every consult overnight. Fellows deemed not ready may be asked to see all consults for a longer period of time. It is the expectation that fellows will not delay an excessive number of consults overnight as this may prove overwhelming to fellows returning to service during the daytime. If a fellow is uncertain whether or not a consult needs to be seen they should err on the side of seeing the consult or they may call the on-call attending to discuss the issue. After evaluating the patient and formulating a differential diagnosis and management plan, call the GI or liver attending on-call with you. Most patients are admitted to the medicine services. Do not admit a patient to the GI or liver service unless approved by the attending.

Routine admissions of cirrhotic patients to the Klatskin liver service at YNH are usually seen by the housestaff and do not need to be seen by the GI fellow on call. If you have any doubt, call the Klatskin attending for guidance or go see the patient.

If the patient is an ERCP consult, see the patient first and then call the ERCP attending. The ERCP attending will decide if the ERCP fellow needs to be involved at night or on the weekends.

If you are called to see a liver transplant patient, see the patient first and then call both the liver transplant fellow and the liver transplant attending.

In the rare circumstance that the attending on-call cannot be reached for an emergency, you should call another attending. A full listing of current phone and pager numbers for full-time and part-time faculty is provided on the monthly call schedule..

During July and August, a second or third year fellow will be on-call to provide back up, answer any procedural questions, and help with procedures. It is expected that the senior fellow will come in for any procedures and assist with consults if the volume of consults is high. If at any time the volume of consults is too high and the on call fellow feels overwhelmed, fatigued, ill, or otherwise impaired the fellow should discuss the situation

with the on call attending, notify the program director or the associate program director so an appropriate solution can be provided.

d. Invitation by a community gastroenterologist to assist with a procedure at Y-NHH
Any procedure performed after-hours is likely to be an excellent learning opportunity. In fact, the most difficult area to obtain an adequate number of procedures to obtain credentialing is often for urgent endoscopy to control upper GI bleeding and variceal banding or sclerosis. You are strongly encouraged, but NOT required, to join the clinical faculty member, and should offer to help set up the cart, clean the equipment afterwards, generate the report, and place it in the chart. If you decline his/her offer, he/she may not take the trouble to include you the next time.

e. Information inquiries

Inquiries can range from a house officer needing to know if ascites fluid can be stored overnight before sending it to cytology (yes, preferably refrigerated) to a high school student recognizing he needs a little more information on hepatitis for a paper due the next day. Answer the questions if you can. If you cannot, find the answer and call them back.

f. Changing call with another fellow

If you exchange your call with another fellow, notify the designated fellow by the 14th of the month preceding the call and that fellow will notify the appropriate clinical assistant (Jennifer.Horn@yale.edu) in digestive diseases and the attending on-call. If a call change is of an urgent nature please call the page operator and the answering service the day of the exchange (they have not reliably recorded these changes) as well as the program director to update amion. In addition to the schedule provided by the section, the answering service will have a copy of the attending call schedule.

Other policies and procedures

Order Writing Policy for Inpatients

Fellows are not expected to and should not write routine orders on inpatients at any of the hospitals, but should offer reasonable assistance if asked. The exception to this is that fellows may occasionally admit patients on the Klatskin service and will need to write orders in that setting. Fellows will write the medication orders for sedation for procedures and may also write procedure prep orders only after discussing the indication and timing of the procedure with the housestaff.

Occupational Safety and Health Administration (OSHA) and Health Care Regulations

Each year fellows will receive formal instruction in current OSHA regulations and universal precautions and protection of health-care workers as per Yale University and YNHH policy. Fellows must comply with training requirements at each of the hospitals.

Travel Policy and Funds for Support

Each fellow is allowed one week of CME per year (5 weekdays).

Priority to attend a conference will be given in the following order:

Fellow is first author and presenting his/her work done while fellow at Yale (oral or poster)

Fellow is first author and presenting his/her work done while not fellow at Yale

Fellow as co-author on abstract, but not presenter for his/her work done at Yale

Fellow as co-author on abstract, but not presenter for his/her work done while not at Yale

Fellow has no presentations at conference; 1. 3rd year fellow; 2. 2nd year fellow; 3. 1st year fellow

Notification must be given at least eight weeks in advance to the program director and other appropriate personnel in accordance with the Reference Manual for post-doctoral fellow training.

Each fellow will be responsible for switching (or canceling) their outpatient GI and/or liver clinics at least eight weeks prior to their absence.

Each fellow will arrange for their own call coverage (weekend and weekday) while away. Changes to the on-call schedule may not violate duty hour limitations.

At all times there will be at least one fellow, not at a conference, to cover one of the following services: Yale GI, Yale Liver, ERCP, VA (combined Liver and GI) & HSR.

Fellows who do not attend a particular conference, and stay behind to fulfill their clinical rotation obligations, may be pulled off their current assignment to cover a service that does not have sufficient support. Every effort will be made to limit the amount of cross-coverage time to 5 days.

Because we cannot guarantee full travel support from the Section, fellows should discuss travel support with the faculty PI co-authoring an abstract before its submission.

Below is a list of conference suggestions with approximate length and season, for fellows to choose from.

| | | |
|-------------------|--------|---------------|
| AASLD | Fall | 5 days |
| DDW/AGA | Spring | 4 days |
| ACG | Fall | 3 day weekend |
| ASGE-ERCP | Fall | 2 days |
| Harvard GI review | Spring | One week |
| Pancreas meetings | Fall | 3 day weekend |
| IBD conference | | |

GI/liver topic specific conferences - throughout the year and variable in length

The AASLD meetings in the fall and DDW in the spring are the preferred meetings for fellows to attend unless they are presenting at another meeting, i.e., Pancreas or Cell Biology meetings.

Holiday Policy

1. Rotations at Y-NHH, VA Hospital and HSR

The following holidays are recognized by Yale University, VA CT HCS Hospital and HSR:

- New Year's Eve
- New Year's Day
- Martin Luther King, Jr.'s Birthday
- Memorial Day
- Fourth of July
- Labor Day
- Thanksgiving Day
- Christmas Eve
- Christmas Day

When Yale University GI fellows are rotating at Yale-New Haven Hospital, VA CT HCS Hospital, and HSR the following policy will apply:

The days listed above will be treated as weekend days and thus all fellows have these days off except for the on-call fellow. He/she will be expected to cover the services per usual weekend coverage starting at 0800.

All other holidays that are not jointly observed by all hospitals will be treated as regular weekdays. All fellows will be expected to perform their regular duties on these days. Fellows rotating at a hospital with a holiday schedule may negotiate limited coverage ie 1 fellow to cover HSR or 1 fellow to cover VA CT HCS with their co-fellow, however fellows are not obligated to cover on these days. The on-call fellow assumes coverage of the GI and Liver services at Yale-New Haven Hospital or HSR and VA CT HCS starting at 5:00pm and may not assume coverage of all services prior to 5 pm.

Fellow Eligibility and Selection Policy

In accordance with Yale University School of Medicine and Yale-New Haven Medical Center policies, candidates will be selected for a fellowship in Digestive Diseases among eligible applicants who possess one of the following criteria:

1. Graduates of medical schools in the United States and Canada accredited by the Liaison Committee on Medical Education (LCME) AND who have successfully completed an ACGME accredited Internal Medicine residency program.
2. Graduates of colleges of osteopathic medicine in the United States accredited by the American Osteopathic Association (AOA) AND who have successfully completed an ACGME accredited Internal Medicine residency program.
3. Graduates of medical schools outside of the United States and Canada who meet one of the following qualifications:

a. Have received a currently valid certificate from the Educational Commission for Foreign Medical Graduates (ECFMG) or

b. Have a full and unrestricted license to practice medicine in a US licensing jurisdiction in which they are in training

AND who have successfully completed an ACGME accredited Internal Medicine residency program.

4. If the applicant is transferring to our fellowship program, the program director must have received and reviewed evaluations and letters of recommendations from the previous program and will have communicated with the candidate's former program director. The information will be given to the DIO prior to accepting the transferring fellow.

Candidates will be selected among eligible applicants on the basis of their preparedness, ability, aptitude, academic credentials, communication skills, and personal qualities such as motivation and integrity. Our program does not discriminate with regard to sex, race, age, religion, color, national origin, disability or veteran status.

Our fellowship selects applicants through the National Residency Matching Program/Specialty Matching Services.

Fellow Promotion Policy

It is the policy of the Section of Digestive Diseases that fellows will be promoted to higher levels of responsibility based on their accomplishments and achievements during the past year. Promotion will be based on written evaluations that clearly document the ability of the fellow to achieve the goals and objectives of each rotation as outlined in the written curriculum. The Clinical Competency Committee is responsible for making these decisions. The Program Director will review each trainee's performance with him/her at least semi-annually, or more frequently as necessary.

Fellow Dismissal Policy

The Section of Digestive Diseases follows procedures in accordance with the Yale-New Haven Medical Center policy for Clinical Competency Committee dated June 2013. The process is progressive and objective. The Clinical Competency Committee has the primary responsibility for probation, suspension and/or dismissal. The final decision for each phase must be reviewed and approved by the Section Chief and Chair of the Department of Internal Medicine and reported to the DIO prior to probation, suspension and/or dismissal. The Program Director must have records, in writing, of discussion with the fellow involving faculty, the Section Chief, and the Department Chair concerning the problems which have led to the probation and/or dismissal. A fellow involved in any of the actions of probation, suspension or dismissal has the right to appeal according to GMEC policy.

Support Services

Confidential services are available to fellows in need of counseling or treatment for issues such as depression, substance abuse and family related issues. Fellows can use the

appropriate numbers below to arrange services for themselves or they may contact program directors or the GMEC office confidentially. Fellows concerned that another fellow or staff member may be impaired due to substance use, medical, psychiatric or other conditions may confidentially report their concerns to program directors or the GMEC office.

Employee and Family Resources: confidential counseling and work/life support services for YNHHS employees and family members includes:

| | |
|--------------------------|---------------------------|
| Work/life balance | Financial stability |
| Fulfilling relationships | Stress/anxiety/depression |
| Healthy living | Professional success |
| Recovery | Child and elder care |

YNHH paid fellows 1-877-275-6226
University paid fellows (203) 432-0123

Anonymous Reporting

In case fellows feel they need to report certain issues but cannot report them directly to the Program Director, Associate Program Director or Section Chief the following mechanisms are in place:

- 1) Issues can be reported to the Chief fellows
- 2) Issues can be reported via anonymous phone line to the Yale New Haven Hospital Graduate Medical Education office (GME) by calling 203-688-2277 24 hours a day and leaving a message

