

GASTROENTEROLOGY FELLOWSHIP PROGRAM
Goals of the Program and Rotations

Overall Program Goals:

The goal of our fellowship program is to recruit and train talented physicians who are committed to a career in academic gastroenterology and hepatology. Our program has three academic pathways, each with excellent faculty role models and mentors that allow trainees to develop their academic careers as: 1.) a basic laboratory researcher, 2.) a clinical researcher or 3.) a clinician/teacher.

A key measure of our success in this regard is the proportion of our graduates who enter academic medical practice after graduation and, more importantly, remain in academic practice over time.

Rotations - Fellow year 1

F1: In-Patient Consult Rotation

Description and Goals: The Gastroenterology Consult Service provides inpatient subspecialty consultations for patients with gastrointestinal and hepatic and biliary tract disorders. The primary responsibility of the service is to respond to requests for consultations in a timely and effective manner. Our goal is to provide a "same day" consultation service. In the case of non-urgent consultations that are forwarded to us late in the working day, it may be acceptable to see the patient the following morning.

It is expected that consult patients will be followed by the fellow until discharge or until resolution of their active gastrointestinal problems. Follow-up notes and recommendations should be made as indicated. If specialized investigations (e.g. endoscopic procedures) are recommended, the fellow will assist in those procedures whenever possible. When the GI attending physician determines that further follow-up by the GI service is no longer indicated, a note to this effect should be placed in the patient's medical record.

Objectives

Patient Care	Experience in patient evaluation by history, examination, laboratory, radiographic and special studies to provide sub-specialist diagnostic and management services across the spectrum of GI and hepatology disorders seen in the in-patient and ER settings.
Medical Knowledge	Acquisition of medical knowledge regarding the GI and hepatology disorders seen in the in-patient and ER settings (and as laid out in the curriculum).
Practice-Based Learning and Improvement	Continuous honing and improvement of clinical skills and practice through supervised patient evaluation, case presentation and feedback from experienced supervising clinicians.

Interpersonal Communication Skills	Effective and ongoing communication with patients, family members and with referring physicians regarding diagnosis, testing and management plans.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff, as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of patient care including the effective use of hospital and other healthcare resources, identification of potential safety concerns in the delivery of care, evaluation of negative or suboptimal outcomes and patient feedback to achieve continuous quality improvements.

F1. Out-Patient Continuity

Description and Goals: Fellows will attend at least one half day session of gastroenterology out-patient clinic weekly. Patients are referred to this clinic by their primary care physicians or by other specialists for consultation regarding diagnosis and management of a wide range of gastrointestinal and hepatobiliary disorders. The gastroenterology fellow will obtain a complete history, perform a physical examination, review the results of available studies and laboratory tests and then develop a diagnostic impression, investigation and management plan. Their findings will then be presented to the supervising faculty member. The supervising faculty member interviews the patient and corroborates the physical examination findings. The attending physician also provides feedback and instruction to the trainee on his/her evaluation of the patient and discusses the appropriateness of the trainees proposed plan for investigation and management. The trainee and supervising faculty then discuss the diagnostic impression and management plan with the patient.

Objectives

Patient Care	Experience in patient evaluation by history, examination, laboratory, radiographic and special studies to provide sub-specialist diagnostic and management services across the spectrum of GI and hepatology disorders seen in the out-patient setting.
Medical Knowledge	Acquisition of medical knowledge regarding the GI and hepatology disorders seen in the out-patient setting (and as laid out in the curriculum).
Practice-Based Learning and Improvement	Continuous honing and improvement of clinical skills and practice through supervised patient evaluation, case presentation and feedback from experienced supervising clinicians
Interpersonal Communication Skills	Effective and ongoing communication with patients, family members and with referring physicians regarding diagnosis, testing and management plans.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.

Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of patient care including the effective use of hospital and other healthcare resources, identification of potential safety concerns in the delivery of care, evaluation of negative or suboptimal outcomes and patient feedback to achieve continuous quality improvements
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F1. Endoscopy:

Description and Goals: Endoscopic training occurs during all three years of the fellowship and is an integral component of most rotations including:

- In-patient consult: Trainees assist in performing endoscopic procedures for the patients they see as in-patient consults.
- Out-patient continuity: Trainees assist in performing endoscopic procedures for the patients they see in their out-patient continuity clinics.
- Advanced sub-specialty out-patient clinics: Whenever their schedules allow trainees also assist in performing endoscopic procedures for the patients they see during their advanced sub-specialty out-patient clinics (IBD, motility, advanced hepatology & liver transplantation, advanced endoscopy and EUS, pancreatic disease, celiac disease).
- Advanced Endoscopy and EUS: During the 3rd year of training, 1.5- 3 months are devoted to advanced endoscopy, ERCP and EUS training.

It is expected that first year fellows will require continuous supervision as well as frequent advice and assistance in performing endoscopic procedures.

The educational goals:

Objectives of this rotation are to provide training in all key elements of endoscopy including knowledge, experience and competency in:

Patient Care	Patient evaluation by history, examination, laboratory, radiographic and special studies to determine indications, contra-indications and procedure planning including appropriate anesthesia for diagnostic and therapeutic endoscopic procedures.
Medical Knowledge	Knowledge regarding the appropriate indications, contra-indications, preparations and techniques for each endoscopic procedures.
Practice-Based Learning and Improvement	Endoscopic techniques and skills acquired through continuous supervised practice and experience
Interpersonal Communication Skills	Effective communication with patients, family members and with referring physicians regarding the indications, risks, benefits, alternatives, findings and management implications of endoscopic procedures.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff, as well as thoughtful, timely and complete communications with

	patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of endoscopic services including the effective use of resources, identification of potential safety concerns in the delivery of endoscopic services, evaluation of negative outcomes, “near misses” and patient feedback to achieve continuous quality improvements.

F1: Hepatology:

Description and Goals: The Hepatology Service provides inpatient and out-patient subspecialty consultation and attending physician care for patients with hepatic disorders. In general, we aim to provide a "same day" consultation service for in-patient consults. In the case of non-urgent consultations that are forwarded to us late in the working day, it may be acceptable to see the patient the following morning.

It is expected that consult patients will be followed by the fellow until discharge or until resolution of their active hepatic problems. Follow-up notes and recommendations should be made as indicated. If specialized investigations (e.g. endoscopic procedures or liver biopsy) are recommended the fellow will assist in those procedures whenever possible. When the hepatology attending physician determines that further follow-up by the hepatology service is no longer indicated a note to this effected should be placed in the patient’s medical record.

Fellows will also attend at least one half day session of hepatology out-patient clinic weekly. Patients are referred to this clinic by their primary care physicians or by other specialists for consultation regarding diagnosis and management of a wide range of hepatobiliary disorders. The gastroenterology fellow will obtain a complete history, perform a physical examination, review the results of available studies and laboratory tests and then develop a diagnostic impression, investigation and management plan. Their findings will then be presented to the supervising faculty member. The supervising faculty member interviews the patient and corroborates the physical examination findings. The attending physician also provides feedback and instruction to the resident or fellow on his/her evaluation of the patient and discusses the appropriateness of the trainees proposed plan for investigation and management. The trainee and supervising faculty then discuss the diagnostic impression and management plan with the patient.

Objectives

Patient Care	Experience in patient evaluation by history, examination, laboratory, radiographic and special studies to provide sub-specialist diagnostic and management services in liver disease.
Medical Knowledge	Acquisition of medical knowledge regarding the management of liver disorders (and as laid out in the curriculum).
Practice-Based Learning and Improvement	Acquisition of and improvement of clinical skills and practice through supervised patient evaluation, case presentation and

	feedback from experienced supervising clinicians.
Interpersonal Communication Skills	Effective and ongoing communication with patients, family members and with referring physicians regarding diagnosis, testing and management plans.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of patient care including the effective use of hospital and other healthcare resources, identification of potential safety concerns in the delivery of care, evaluation of negative or suboptimal outcomes and patient feedback to achieve continuous quality improvements

F1. Research:

Description and Goals: Fellows are provided with 2 weeks of protected research time (only clinical roles are ½ day out-patient clinic and scheduled call). Clinical responsibilities are covered by FY3 colleagues. Fellows meet with the PD and/or an Associate PD prior to the research weeks to optimize use of time during this short rotation. The goal of the rotation is to identify a mentor and begin to formulate a research question. For fellows who have already identified a mentor and have a project in mind, the goal of this 2 week rotation is to begin to navigate an IRB or Animal Use Protocol and to consider advanced research training opportunities.

Objectives:

Patient Care	Projects are identified that will lead to improved patient care through a better understanding of pathophysiology, current therapeutic options or the development of new methods of care.
Medical Knowledge	Fellows will gain a deep understanding of their general topic of study. In the process, they will develop a hypothesis driven project to further the current knowledge base either from a clinical, translation or basic science standpoint. They will learn the process of preparing and submitting a protocol for approval by the Institutional Review Board or Animal Care and Use Committee as appropriate. Fellows will learn necessary statistics for their project with a particular focus on understanding methods used to prove statistical significance. Collaboration with a statistician to gain deeper insights is recommended where possible.
Practice-Based Learning and Improvement	Primary literature relevant to the project will be researched to access gaps in current knowledge and provide a background for study. Fellows will present their work at our regular research conference both to educate the division (peers and faculty) and to gain useful feedback on their progress.
Interpersonal Communication Skills	Fellows will have the opportunity to operate within the structure of a research team and/or one on one with a mentor depending on the

	<p>project.</p> <p>Data will be recorded as per institutional standards and shared with collaborating providers.</p> <p>Study findings will be disseminated through meeting presentations and ideally through a published manuscript at the conclusion.</p>
Professionalism	<p>Professionalism will be practiced at all times when conducting research.</p> <p>Research will be conducted within the highest ethical standards and in keeping with all regulations of the Institutional Review Board or Animal Care and Use Committee.</p>
Systems Based Practice	<p>While conducting research, fellows will gain a better understanding of the various elements that impact research funding whether it be from government, foundation or private grants. Trainees will also gain an understanding of the benefits and limitations of human subject enrollment as well as animal use in research.</p>

Rotations – Fellow year 2

F2: In-Patient Consult

Description and goals: The Gastroenterology Consult Service provides inpatient subspecialty consultations for patients with gastrointestinal and hepatic and biliary tract disorders. The primary responsibility of the service is to respond to requests for consultations in a timely and effective manner. In general, we aim to provide a "same day" consultation service. In the case of non-urgent consultations that are forwarded to us late in the working day, it may be acceptable to see the patient the following morning.

It is expected that consult patients will be followed by the fellow until discharge or until resolution of their active gastrointestinal problems. Follow-up notes and recommendations should be made as indicated. If specialized investigations (e.g. endoscopic procedures) are recommended the fellow will assist in those procedures whenever possible. When the GI attending physician determines that further follow-up by the GI service is no longer indicated a note to this effect should be placed in the patient's medical record.

It is expected that the medical care and management plans developed by second year fellows will require little revision by the attending physician.

Objectives:

Patient Care	Experience in patient evaluation by history, examination, laboratory, radiographic and special studies to provide sub-specialist diagnostic and management services across the spectrum of GI and hepatology disorders seen in the in-patient and ER settings.
Medical Knowledge	Acquisition of medical knowledge regarding the GI and hepatology disorders seen in the in-patient and ER settings (and as laid out in the curriculum).
Practice-Based Learning and Improvement	Continuous honing and improvement of clinical skills and practice through supervised patient evaluation, case presentation and feedback from experienced supervising clinicians.
Interpersonal Communication Skills	Effective and ongoing communication with patients, family members and with referring physicians regarding diagnosis, testing and management plans.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff, as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of patient care including the effective use of hospital and other healthcare resources, identification of potential safety concerns in the delivery of care, evaluation of negative or suboptimal outcomes and patient feedback to achieve continuous quality improvements.

F2. Out-patient Continuity

Description: Fellows will attend at least one half day session of gastroenterology out-patient clinic weekly. Patients are referred to this clinic by their primary care physicians or by other specialists for consultation regarding diagnosis and management of a wide range of gastrointestinal and hepatobiliary disorders. The gastroenterology fellow will obtain a complete history, perform a physical examination, review the results of available studies and laboratory tests and then develop a diagnostic impression, investigation and management plan. Their findings will then be presented to the supervising faculty member. The supervising faculty member interviews the patient and corroborates the physical examination findings. The attending physician also provides feedback and instruction to the resident or fellow on his/her evaluation of the patient and discusses the appropriateness of the trainees proposed plan for investigation and management. The trainee and supervising faculty then discuss the diagnostic impression and management plan with the patient.

Goal: It is expected that the medical care and management plans developed by second year fellows will require little revision by the attending physician.

Objectives:

Patient Care	Experience in patient evaluation by history, examination, laboratory, radiographic and special studies to provide sub-specialist diagnostic and management services across the spectrum of GI and hepatology disorders seen in the out-patient setting.
Medical Knowledge	Acquisition of medical knowledge regarding the GI and hepatology disorders seen in the out-patient setting (and as laid out in the curriculum).
Practice-Based Learning and Improvement	Continuous honing and improvement of clinical skills and practice through supervised patient evaluation, case presentation and feedback from experienced supervising clinicians.
Interpersonal Communication Skills	Effective and ongoing communication with patients, family members and with referring physicians regarding diagnosis, testing and management plans.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of patient care including the effective use of hospital and other healthcare resources, identification of potential safety concerns in the delivery of care, evaluation of negative or suboptimal outcomes and patient feedback to achieve continuous quality improvements.

F2. Endoscopy:

Description: Endoscopic training occurs during all three years of the fellowship and is an integral component of most rotations including:

- In-patient consult: Trainees assist in performing endoscopic procedures for the patients they see as in-patient consults.
- Out-patient continuity: Trainees assist in performing endoscopic procedures for the patients they see in their out-patient continuity clinics.
Advanced sub-specialty out-patient clinics: Whenever their schedules allow trainees also assist in performing endoscopic procedures for the patients they see during their advanced sub-specialty out-patient clinics (IBD, motility advanced hepatology & liver transplantation, advanced endoscopy and EUS, pancreatic disease, celiac disease).
- Advanced endoscopy and EUS: During the 3rd year of training, 1.5-3 months are devoted to advanced endoscopy, ERCP and EUS training.

Goal: It is expected that second year fellows will require minimal assistance in performing routine diagnostic endoscopic procedures but will require frequent advice and assistance for advanced and therapeutic procedures.

Objectives of this rotation are to provide training in all key elements of endoscopy including knowledge, experience and competency in

Patient Care	Patient evaluation by history, examination, laboratory, radiographic and special studies to determine indications, contra-indications and procedure planning including appropriate anesthesia for diagnostic and therapeutic endoscopic procedures.
Medical Knowledge	Knowledge regarding the appropriate indications, contra-indications, preparations and techniques for each endoscopic procedures.
Practice-Based Learning and Improvement	Endoscopic techniques and skills acquired through continuous supervised practice and experience
Interpersonal Communication Skills	Effective communication with patients, family members and with referring physicians regarding the indications, risks, benefits, alternatives, findings and management implications of endoscopic procedures.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of endoscopic services including the effective use of resources, identification of potential safety concerns in the delivery of endoscopic services, evaluation of negative outcomes, "near

	misses” and patient feedback to achieve continuous quality improvements.
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F2: Hepatology:

The Hepatology Service provides inpatient and out-patient subspecialty consultation and attending physician care for patients with hepatic disorders. In general, we aim to provide a "same day" consultation service for in-patient consults. In the case of non- urgent consultations that are forwarded to us late in the working day, it may be acceptable to see the patient the following morning.

It is expected that consult patients will be followed by the fellow until discharge or until resolution of their active hepatic problems. Follow-up notes and recommendations should be made as indicated. If specialized investigations (e.g. endoscopic procedures or liver biopsy) are recommended the fellow will assist in those procedures whenever possible. When the hepatology attending physician determines that further follow-up by the hepatology service is no longer indicated a note to this effected should be placed in the patient’s medical records. Fellows will also attend at least one half day session of hepatology out-patient clinic weekly. Patients are referred to this clinic by their primary care physicians or by other specialists for consultation regarding diagnosis and management of a wide range of hepatobiliary disorders. The gastroenterology fellow will obtain a complete history, perform a physical examination, review the results of available studies and laboratory tests and then develop a diagnostic impression, investigation and management plan. Their findings will then be presented to the supervising faculty member. The supervising faculty member interviews the patient and corroborates the physical examination findings. The attending physician also provides feedback and instruction to the resident or fellow on his/her evaluation of the patient and discusses the appropriateness of the trainees proposed plan for investigation and management. The trainee and supervising faculty then discuss the diagnostic impression and management plan with the patient.

It is expected that the medical care and management plans developed by second year fellows will require little revision by the attending physician.

Objectives

Patient Care	Experience in patient evaluation by history, examination, laboratory, radiographic and special studies to provide sub-specialist diagnostic and management services in liver disease.
Medical Knowledge	Acquisition of medical knowledge regarding the management of liver disorders (and as laid out in the curriculum).
Practice-Based Learning and Improvement	Acquisition of and improvement of clinical skills and practice through supervised patient evaluation, case presentation and feedback from experienced supervising clinicians.
Interpersonal Communication Skills	Effective and ongoing communication with patients, family members and with referring physicians regarding diagnosis, testing and management plans.

Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of patient care including the effective use of hospital and other healthcare resources, identification of potential safety concerns in the delivery of care, evaluation of negative or suboptimal outcomes and patient feedback to achieve continuous quality improvements.

F2. Research:

Description and Goals: All fellows engage in research (basic, translational or clinical) during the second year of fellowship. This consists of a mentored program of training tailored to each individual fellow's career goals. There are over 30 full-time research staff and a current year research budget in excess of \$5 million. Thus, there is ample opportunity and mentorship for rigorous research training. For those interested in a career in clinical research, we offer access to masters programs through Harvard University (Masters in Medical Sciences & Masters in Public Health). Our faculty members encompass a broad range of clinical and research interests and expertise and provide one-to-one mentoring for candidates wishing to pursue careers in any of the three majors academic tracks i.e. clinician/educator, clinical investigator, or laboratory investigator.

Individual Projects are developed by fellows in conjunction with a faculty mentor(s). The mentor and trainee together determine the specific aims of each individual research project. However, the general educational goals are to familiarize trainees with:

- Generation of a research hypothesis
- Formulation of a research proposal including background literature, preliminary data when available and a research plan including materials and methods, experimental protocol and data analysis plan
- Acquiring and recording research data
- Data analysis
- Presentation of research findings
- The ethical conduct of research including compliance with FDA, IRB, Animal Use Committee and institutional guidelines and requirements.

Objectives:

Patient Care	Projects are identified that will lead to improved patient care through a better understanding of pathophysiology, current therapeutic options or the development of new methods of care.
Medical Knowledge	Fellows will gain a deep understanding of their general topic of study. In the process, they will develop a hypothesis driven project to further the current knowledge base either from a clinical, translation or basic science standpoint. They will learn the process of preparing and submitting a protocol

	<p>for approval by the Institutional Review Board or Animal Care and Use Committee as appropriate.</p> <p>Fellows will learn necessary statistics for their project with a particular focus on understanding methods used to prove statistical significance. Collaboration with a statistician to gain deeper insights is recommended where possible.</p>
Practice-Based Learning and Improvement	<p>Primary literature relevant to the project will be researched to access gaps in current knowledge and provide a background for study.</p> <p>Fellows will present their work at our regular research conference both to educate the division (peers and faculty) and to gain useful feedback on their progress.</p>
Interpersonal Communication Skills	<p>Fellows will have the opportunity to operate within the structure of a research team and/or one on one with a mentor depending on the project.</p> <p>Data will be recorded as per institutional standards and shared with collaborating providers.</p> <p>Study findings will be disseminated through meeting presentations and ideally through a published manuscript at the conclusion.</p>
Professionalism	<p>Professionalism will be practiced at all times when conducting research.</p> <p>Research will be conducted within the highest ethical standards and in keeping with all regulations of the Institutional Review Board or Animal Care and Use Committee.</p>
Systems Based Practice	<p>While conducting research, fellows will gain a better understanding of the various elements that impact research funding whether it be from government, foundation or private grants. Trainees will also gain an understanding of the benefits and limitations of human subject enrollment as well as animal use in research.</p>

Rotations Fellow year 3

F3: In-Patient Consult

Description and goals: This consist of a brief exposure in FY3 (2 weeks plus night and weekend call and “sick- call”). The Gastroenterology Consult Service provides inpatient subspecialty consultations for patients with gastrointestinal and hepatic and biliary tract disorders. The primary responsibility of the service is to respond to requests for consultations in a timely and effective manner. In general, we aim to provide a "same day" consultation service. In the case of non-urgent consultations that are forwarded to us late in the working day, it may be acceptable to see the patient the following morning.

It is expected that consult patients will be followed by the fellow until discharge or until resolution of their active gastrointestinal problems. Follow-up notes and recommendations should be made as indicated. If specialized investigations (e.g. endoscopic procedures) are recommended the fellow will assist in those procedures whenever possible. When the GI attending physician determines that further follow-up by the GI service is no longer indicated a note to this effected should be placed in the patient’s medical record.

It is expected that the medical care and management plans developed by second year fellows will require little revision by the attending physician.

Objectives:

Patient Care	Experience in patient evaluation by history, examination, laboratory, radiographic and special studies to provide sub-specialist diagnostic and management services across the spectrum of GI and hepatology disorders seen in the in-patient and ER settings.
Medical Knowledge	Acquisition of more advanced medical knowledge regarding the GI and hepatology disorders seen in the in-patient and ER settings (and as laid out in the curriculum).
Practice-Based Learning and Improvement	Continuous honing and improvement of clinical skills and practice through supervised patient evaluation, case presentation and feedback from experienced supervising clinicians.
Interpersonal Communication Skills	Effective and ongoing communication with patients, family members and with referring physicians regarding diagnosis, testing and management plans.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of patient care including the effective use of hospital

	and other healthcare resources, identification of potential safety concerns in the delivery of care, evaluation of negative or suboptimal outcomes and patient feedback to achieve continuous quality improvements.
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F3. Out-Patient Continuity

Description and Goals: Fellows will attend at least one half day session of gastroenterology out-patient clinic weekly. Patients are referred to this clinic by their primary care physicians or by other specialists for consultation regarding diagnosis and management of a wide range of gastrointestinal and hepatobiliary disorders. The gastroenterology fellow will obtain a complete history, perform a physical examination, review the results of available studies and laboratory tests and then develop a diagnostic impression, investigation and management plan. Their findings will then be presented to the supervising faculty member. The supervising faculty member interviews the patient and corroborates the physical examination findings. The attending physician also provides feedback and instruction to the resident or fellow on his/her evaluation of the patient and discusses the appropriateness of the trainees proposed plan for investigation and management. The trainee and supervising faculty then discuss the diagnostic impression and management plan with the patient.

It is expected that the medical care and management plans developed by third year fellows will require minimal substantial revision by the attending physician.

Objectives:

Patient Care	Experience in patient evaluation by history, examination, laboratory, radiographic and special studies to provide sub-specialist diagnostic and management services across the spectrum of GI and hepatology disorders seen in the out-patient setting.
Medical Knowledge	Acquisition of medical knowledge regarding the GI and hepatology disorders seen in the out-patient setting (and as laid out in the curriculum).
Practice-Based Learning and Improvement	Continuous honing and improvement of clinical skills and practice through supervised patient evaluation, case presentation and feedback from experienced supervising clinicians.
Interpersonal Communication Skills	Effective and ongoing communication with patients, family members and with referring physicians regarding diagnosis, testing and management plans.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of patient care including the effective use of hospital and other healthcare resources, identification of potential safety concerns in

	the delivery of care, evaluation of negative or suboptimal outcomes and patient feedback to achieve continuous quality improvements.
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F3. Endoscopy:

Description: Endoscopic training occurs during all 3 years of the fellowship and is an integral component of most rotations including:

- In-patient consult: Trainees assist in performing endoscopic procedures for the patients they see as in-patient consults.
- Out-patient continuity: Trainees assist in performing endoscopic procedures for the patients they see in their out-patient continuity clinics.
- Advanced sub-specialty out-patient clinics: Whenever their schedules allow trainees also assist in performing endoscopic procedures for the patients they see during their advanced sub-specialty out-patient clinics (IBD, motility, advanced hepatology & liver transplantation, advanced endoscopy and EUS, pancreatic disease, celiac disease).
- Advanced endoscopy and EUS: 1.5 - 3 months during the 3rd year of training are devoted to advanced endoscopy, ERCP and EUS training.

Goals: It is expected that third year fellows will require minimal assistance in performing routine diagnostic endoscopic procedures and over the course of this year will attain competence in performing advanced and therapeutic procedures.

Objectives of this rotation are to provide training in all key elements of endoscopy including knowledge, experience and competency in

Patient Care	Patient evaluation by history, examination, laboratory, radiographic and special studies to determine indications, contra-indications and procedure planning including appropriate anesthesia for diagnostic and therapeutic endoscopic procedures.
Medical Knowledge	Knowledge regarding the appropriate indications, contra-indications, preparations and techniques for each endoscopic procedures.
Practice-Based Learning and Improvement	Endoscopic techniques and skills acquired through continuous supervised practise and experience
Interpersonal Communication Skills	Effective communication with patients, family members and with referring physicians regarding the indications, risks, benefits, alternatives, findings and management implications of endoscopic procedures.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality

	of endoscopic services including the effective use of resources, identification of potential safety concerns in the delivery of endoscopic services, evaluation of negative outcomes, “near misses” and patient feedback to achieve continuous quality improvements.
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F3: Hepatology:

Description and goals: The Hepatology Service provides inpatient and out-patient subspecialty consultation and attending physician care for patients with hepatic disorders. In general, we aim to provide a "same day" consultation service for in-patient consults. In the case of non-urgent consultations that are forwarded to us late in the working day, it may be acceptable to see the patient the following morning.

It is expected that consult patients will be followed by the fellow until discharge or until resolution of their active hepatic problems. Follow-up notes and recommendations should be made as indicated. If specialized investigations (e.g. endoscopic procedures or liver biopsy) are recommended the fellow will assist in those procedures whenever possible. When the hepatology attending physician determines that further follow-up by the hepatology service is no longer indicated a note to this effect should be placed in the patient’s medical record.

Fellows will also attend at least one half day session of hepatology out-patient clinic weekly. Patients are referred to this clinic by their primary care physicians or by other specialists for consultation regarding diagnosis and management of a wide range of hepatobiliary disorders. The gastroenterology fellow will obtain a complete history, perform a physical examination, review the results of available studies and laboratory tests and then develop a diagnostic impression, investigation and management plan. Their findings will then be presented to the supervising faculty member. The supervising faculty member interviews the patient and corroborates the physical examination findings. The attending physician also provides feedback and instruction to the resident or fellow on his/her evaluation of the patient and discusses the appropriateness of the trainees proposed plan for investigation and management. The trainee and supervising faculty then discuss the diagnostic impression and management plan with the patient.

It is expected that the medical care and management plans developed by third year fellows will require minimal revision by the attending physician. Third year fellows will also acquire additional training and experience in liver transplantation.

Objectives:

Patient Care	Experience in patient evaluation by history, examination, laboratory, radiographic and special studies to provide sub-specialist diagnostic and management services in liver disease.
Medical Knowledge	Acquisition of medical knowledge regarding the management of liver disorders (and as laid out in the curriculum).
Practice-Based Learning	Acquisition of and improvement of clinical skills and

and Improvement	practice through supervised patient evaluation, case presentation and feedback from experienced supervising clinicians.
Interpersonal Communication Skills	Effective and ongoing communication with patients, family members and with referring physicians regarding diagnosis, testing and management plans.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of patient care including the effective use of hospital and other healthcare resources, identification of potential safety concerns in the delivery of care, evaluation of negative or suboptimal outcomes and patient feedback to achieve continuous quality improvements

F3. Research:

Description and Goals: All fellows engage in research (basic, translational or clinical) during the third year of fellowship. This consists of a continuation of the mentored program of training developed for the trainee during the second fellowship year. In many instances this includes completion of coursework and thesis for masters programs through Harvard University (Masters in Medical Sciences & Masters in Public Health).

Objectives:

Patient Care	Projects are identified that will lead to improved patient care through a better understanding of pathophysiology, current therapeutic options or the development of new methods of care.
Medical Knowledge	Fellows will gain a deep understanding of their general topic of study. In the process, they will develop a hypothesis driven project to further the current knowledge base either from a clinical, translation or basic science standpoint. They will learn the process of preparing and submitting a protocol for approval by the Institutional Review Board or Animal Care and Use Committee as appropriate. Fellows will learn necessary statistics for their project with a particular focus on understanding methods used to prove statistical significance. Collaboration with a statistician to gain deeper insights is recommended where possible.
Practice-Based Learning and Improvement	Primary literature relevant to the project will be researched to access gaps in current knowledge and provide a background for study. Fellows will present their work at our regular research conference both to educate the division (peers and faculty) and to gain useful feedback on their progress.

Interpersonal Communication Skills	<p>Fellows will have the opportunity to operate within the structure of a research team and/or one on one with a mentor depending on the project.</p> <p>Data will be recorded as per institutional standards and shared with collaborating providers.</p> <p>Study findings will be disseminated through meeting presentations and ideally through a published manuscript at the conclusion.</p>
Professionalism	<p>Professionalism will be practiced at all times when conducting research.</p> <p>Research will be conducted within the highest ethical standards and in keeping with all regulations of the Institutional Review Board or Animal Care and Use Committee.</p>
Systems Based Practice	<p>While conducting research, fellows will gain a better understanding of the various elements that impact research funding whether it be from government, foundation or private grants. Trainees will also gain an understanding of the benefits and limitations of human subject enrollment as well as animal use in research.</p>

F3. Advanced Sub-Specialty Out-Patient:

Description: Fellows will attend at least one half day session of a specialized gastroenterology out-patient clinic weekly. This will incorporate a year long rotation between our Centers in IBD, Hepatology, Motility disorders, and Celiac disease. Patients are referred to these specialized clinics by their primary care physicians or by other specialists for advanced consultation regarding diagnosis and management of a wide range of gastrointestinal and hepatobiliary disorders.

The gastroenterology fellow will obtain a complete history, perform a physical examination, review the results of available studies and laboratory tests and then develop a diagnostic impression, investigation and management plan. Their findings will then be presented to the supervising faculty member. The supervising faculty member interviews the patient and corroborates the physical examination findings. The attending physician also provides feedback and instruction to the resident or fellow on his/her evaluation of the patient and discusses the appropriateness of the trainees proposed plan for investigation and management. The trainee and supervising faculty then discuss the diagnostic impression and management plan with the patient.

Goal: It is expected that the medical care and management plans developed by third year fellows will require minimal revision by the attending physician.

Objectives:

Patient Care	<p>Experience in patient evaluation by history, examination, laboratory, radiographic and special studies to provide advanced sub-specialist diagnostic and management services to patients with complex or rare GI and hepatology</p>
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	disorders seen in the out-patient setting
Medical Knowledge	Acquisition of in-depth medical knowledge regarding the GI and hepatology disorders seen in the out-patient setting (and as laid out in the curriculum).
Practice-Based Learning and Improvement	Continuous honing and improvement of clinical skills and practice through supervised patient evaluation, case presentation and feedback from experienced supervising clinicians.
Interpersonal Communication Skills	Effective and ongoing communication with patients, family members and with referring physicians regarding diagnosis, testing and management plans.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of patient care including the effective use of hospital and other healthcare resources, identification of potential safety concerns in the delivery of care, evaluation of negative or suboptimal outcomes and patient feedback to achieve continuous quality improvements.

F3 Pancreas Clinic (Goals and Objectives)

Description and Goals: The goal of this rotation is to gain an in depth understanding of how pancreatitis and pancreatic cancer presents, diagnostic approaches, and management strategies.

Objectives

Patient Care	Experience in patient evaluation based on history taking, examination, laboratory, radiographic and special studies to provide sub-specialist diagnostic and management services for patients with known or suspected exocrine pancreatic disease.
Medical Knowledge	Acquisition of medical knowledge regarding evaluation and treatment of pancreatitis, pancreatic cancer, and pancreatic masses.
Practice-Based Learning and Improvement	Continuous honing and improvement of clinical skills and practice through supervised patient evaluation, case presentation and feedback from experienced supervising pancreas attendings.
Interpersonal Communication Skills	Effective and ongoing communication with patients, family members and with referring physicians regarding diagnosis, testing and management plans for patients with known or suspected pancreatic disease.

Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff, as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of patient care including the effective use of hospital and other healthcare resources, identification of potential safety concerns in the delivery of care, evaluation of negative or suboptimal outcomes and patient feedback to achieve continuous quality improvements.

F3 Genetics Clinic

Goals:

Objectives:

Patient Care	
Medical Knowledge	
Practice-Based Learning and Improvement	
Interpersonal Communication Skills	
Professionalism	
Systems Based Practice	

F3. Genetics clinic (Goals and Objectives)

Description and Goals: The GI Cancer Genetics and Prevention clinic provides consultations to patients with hereditary GI syndromes who are at elevated risk for colon cancer, pancreatic cancer, and gastric cancer. Patients are referred by their PCP, primary GI, surgeon and/or other physician and first meet with a genetic counselor to consider genetic testing. Subsequently, a multidisciplinary consult and risk assessment occurs with the patient, genetic counselor, and GI CG&P attending physician to review the patients' medical background, social history, family pedigree, and any available tumor and/or genetic testing results.

It is expected that the participating learners take an active role in interviewing the patient, reviewing and updating the family history, and interpreting genetic testing results including germline and somatic evaluation. The patients should be followed until any ordered testing results return. Consult notes and recommendations should be made as indicated. Follow up reading and review of the literature is recommended.

Objectives

Patient Care	Experience in patient evaluation by history, laboratory, radiographic and special studies to provide sub-specialist diagnostic and management services across the spectrum of GI Cancer Genetics and Prevention.
Medical Knowledge	Acquisition of medical knowledge regarding the GI Cancer Genetics and Prevention clinic as laid out in the curriculum.
Practice-Based Learning and Improvement	Continuous honing and improvement of clinical skills and practice through supervised patient evaluation, case presentation and feedback from experienced supervising clinicians.
Interpersonal Communication Skills	Effective and ongoing communication with patients, family members, genetic counselors, research staff, and with referring physicians regarding diagnosis, testing and management plans.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with genetic counselors and other support staff, as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of patient care including the effective use of hospital and other healthcare resources, identification of potential safety concerns in the delivery of care, evaluation of negative or suboptimal outcomes and patient feedback to achieve continuous quality improvements.

F3. Advanced Endoscopy & EUS

Description: During the 3rd year of training, 1.5- 3 months may be devoted to advanced endoscopy, ERCP and EUS training.

Goal: The goal of this rotation is to provide interested third year fellows with an opportunity for intensive training in advanced endoscopic procedures.

The objectives of this rotation are to provide training in all elements of advanced endoscopy including knowledge, experience and competency in:

Patient Care	Patient evaluation by history, examination, laboratory, radiographic and special studies to determine indications, contra-indications and procedure planning including appropriate anesthesia for diagnostic and therapeutic endoscopic procedures.
Medical Knowledge	Knowledge regarding the appropriate indications, contra-indications, preparations and techniques for each endoscopic procedures.
Practice-Based Learning and Improvement	Endoscopic techniques and skills acquired through continuous supervised practice and experience
Interpersonal Communication Skills	Effective communication with patients, family members and with referring physicians regarding the indications, risks, benefits, alternatives, findings and management implications of endoscopic procedures.
Professionalism	Appropriate conduct in terms of respecting patient dignity, professional interaction with nursing and other support staff as well as thoughtful, timely and complete communications with patients, family members, referring physicians and other care providers.
Systems Based Practice	Awareness and contribution to the efficiency, safety and quality of endoscopic services including the effective use of resources, identification of potential safety concerns in the delivery of endoscopic services, evaluation of negative outcomes, "near misses" and patient feedback to achieve continuous quality improvements.

***Though the rotations and hours do vary between fellows (for instance, some third year fellows choose a longer Advanced Endoscopy rotation), the table below is meant to represent the general distribution of fellows' weekly hours:**

	hours/week	weeks/year
F1		
Continuity Clinic	4 hrs	52 (12 months)
In-Patient Consults	36 hrs	34 (8.5 months)
Endoscopy	10 hrs	52 (12 months)
Hepatology	36 hrs	12 (3 months)
Research	36 hrs	2 (0.5 months)
F2		
Continuity Clinic	4 hrs	52 (12 months)
Endoscopy	4 hrs	52 (12 months)
In-Patient Consults	42 hrs	6 (1.5 months)
Hepatology	42 hrs	6 (1.5 months)
Research	42 hrs	36 (9 months)
F3		
Advanced Endoscopy	46 hrs	6 (1.5 months)
Endoscopy	4 hrs	52 (12 months)
Advanced Hepatology	42 hrs	6 (1.5 month)
Advanced Subspecialty Outpatient	4 hrs	52 (12 months)
Continuity Clinic	4 hrs	52 (12 months)
In-Patient Consults	36 hrs	2 (0.5 months)
Research & Elective	38 hrs	36 (9 months)