I. Educational Purpose

Gastrointestinal and liver diseases comprise a large proportion of the general internist practice. Many patients present to general internists for evaluation and management of chronic abdominal pain, gastroesophageal reflux disease, inflammatory bowel disease, gastrointestinal bleeding, or require colon cancer screening. In addition, the competent internist must also be trained in the care of patients with liver diseases including chronic viral hepatitis and cirrhosis. The Division of Gastroenterology and Hepatology is committed to providing an educational environment for residents that provides the opportunity to learn the clinical skills related to gastroenterology and hepatology necessary to become a competent physician in internal medicine. This rotation will provide experience and training in providing services for patients with gastrointestinal and liver disorders. Residents are expected to achieve a level of competency appropriate for an internist.

II. Principal Teaching Methods

1. Faculty

Lorenzo Rossaro, M.D., Chief of Division
Christopher Bowlus, M.D., Fellowship Program Director
Juan Carlos Garcia, M.D., Clinic Director
Amar Al-Juburi, M.D.
Charles Halsted, M.D.
Joseph Leung, M.D.
Nirmal Mann, M.D.
Surinder Mann, M.D.
Valentina Medici, M.D.
Thomas Prindiville, M.D.
Otis Stephen, M.D.
Celcilia Terrado, M.D.
Natalia Torok, M.D.
Walter Trudeau, M.D.
Shiro Urayama, M.D.
Mark Zern, M.D.

2. Direct Supervised Patient Care Activities. Residents will learn to care for gastroenterology and hepatology patients through seeing patients independently in clinics. Residents will present their history and findings and preliminary evaluation and treatment plans to supervising
attendings. Together, they will develop a final treatment plan. Residents work directly under faculty in the outpatient setting.

3. **Conferences and Journal Club.** Residents will attend GI Grand Rounds, Endoscopy Conference, Radiology Conference, Pathology Conference, and Journal Club, where didactic components will be delivered. (See schedule of conferences below)

4. **Self-Directed Learning.** Residents are expected to read independently about problems and questions that arise in the care of the patients on the rotation.

### III. Educational Content

1. **Mix of Diseases and Conditions:** Patients with gastrointestinal and liver disease in the outpatient setting are diverse. The underlying diseases cover the spectrum of gastrointestinal and liver disorders and include the relatively routine as well as the complex cases referred to a tertiary center. During the course of the rotation, residents will have formal instruction and clinical experience in the evaluation and management of some of the following disorders and conditions:

   a. Diseases of the esophagus  
   b. Acid peptic disorders of the gastrointestinal tract  
   c. Motor disorders of the gastrointestinal tract  
   d. Disorders of nutrient assimilation  
   e. Inflammatory bowel diseases  
   f. Vascular disorders of the gastrointestinal tract  
   g. Gastrointestinal infections, including retroviral, mycotic, and parasitic diseases  
      i. Gastrointestinal and pancreatic neoplasms  
      j. Gastrointestinal diseases with an immune basis  
   k. Gallstones and cholecystitis  
   l. Hepatobiliary neoplasms  
   m. Gastrointestinal manifestations of HIV infections  
   n. Gastrointestinal neoplastic disease  
   o. Biliary and pancreatic diseases  
      a. Dysphagia  
      b. Abdominal pain  
      c. Acute abdomen  
   d. Nausea and vomiting  
   e. Diarrhea  
   f. Gastrointestinal bleeding  
   g. Jaundice  
   h. Genetic/inherited disorders  
      l. Depression, neurosis, and somatization syndromes  
   m. Surgical care of gastrointestinal disorders  
   n. Acute/Chronic Hepatitis-viral, autoimmune, and other etiologies  
   o. Cirrhosis  
   p. Irritable bowel syndrome

2. **Patient Characteristics:** The majority of patients are aged 18 to 85, but some adolescents and very elderly are seen as well. The patients are referred to the Gastroenterology and Hepatology from within the UC Davis Health System, and from outside health providers requesting tertiary care. The patients have a large mix of socioeconomic and ethic
backgrounds.

3. **Learning Venues**: Residents will primarily be at the J Street Clinic (2825 J Street, Suite 400) for all of the UC Davis Health System Gastroenterology and Hepatology clinics. Depending upon their schedule, residents will have the opportunity to observe various diagnostic and therapeutic procedures on a weekly basis at the Med Center.

4. **Procedures and Diagnostic Imaging**: Residents will have the opportunity to learn and/or observe the following diagnostic and therapeutic techniques and procedures:

   a. Imaging of the digestive system, including
      1. Ultrasound
      2. Computed tomography
      3. Magnetic resonance imaging
      4. Vascular radiography
      5. Nuclear medicine
   b. Upper endoscopy
   c. Colonoscopy
   d. Percutaneous cholangiography
   e. Percutaneous endoscopic gastrostomy
   f. ERCP, including papillotomy and biliary stent placement

5. **Structure of Rotation**: 2 to 4 residents will be assigned to 2 or 4-week rotations. The rotation will consist of experiences in the outpatient clinics.

   a. **Clinic Experiences**: Because of the variability in each resident’s continuity clinic schedule, the outpatient experience will be tailored to each resident. (See below schedules)

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   b. **Educational Conferences**: Residents are expected to attend all educational conferences.

   **Educational Conference Schedule**
   - Tuesday GI Grand Rounds (7:30 AM, LaBou)
   - Wednesday Evening Journal Club (monthly, location varies)
   - Thursday Conferences*
     - Radiology (9-10 AM, Radiology Classroom)
     - Pathology (10-11 AM, Pathology Building)
     - Board Review (11-12 AM, Pathology Building)
     - Clinical Case Conference (12-1 PM, ASU Auditorium)
     - Residents doing a 4 week rotation will be expected to present 1 case at the Thursday Case Conference
*Conferences are on hiatus during July and August. Check with Julie Rossi-Otremba to confirm schedule.

c. **Call Duty:** The residents will not have after hour call responsibilities.

**IV. Educational Goals and Objectives**

1. In addition to the goals related to the accumulation of medical knowledge, the rotation will provide exposure to the importance of the multidisciplinary nature of providing outpatient care and strengthens the resident’s ability to communicate with other physicians, health care providers and the patient. The resident should be able to recognize the criteria for the appropriate indications for referral to a gastroenterologist and/or hepatologist.

2. **Formal Instruction:** The program will include emphasis on the pathogenesis, manifestations, and complications of gastrointestinal disorders, including the behavioral adjustments of patients to their problems. The impact of various modes of therapy and the appropriate utilization of laboratory tests and procedures will be stressed. Additional specific content areas that will be included in lectures, conferences, and seminars will include the following:
   
a. Anatomy, physiology, pharmacology, and pathology related to the gastrointestinal system, including the liver  
b. The natural history of digestive diseases  
c. Factors involved in nutrition and malnutrition  
d. Surgical procedures employed in relation to digestive system disorders and their complications  
e. Prudent, cost-effective, and judicious use of special instruments, tests, and therapy in the diagnosis and management of gastroenterological disorders  
f. Sedation and sedative pharmacology

3. **Responsibilities of the residents:**
   
   - To be physically present at the UC Davis Medical Center and/or Clinic from no later than 0800 until no earlier than 1700 unless attending a conference or continuity clinic.  
   - To see and evaluate 2-4 new consultations or follow up patients in each assigned clinic.  
   - To communicate to the referring physician and/or other medical team members, both verbally and in notes, the assessment and recommendations developed in collaboration with the GI attending.  
   - Attend and Participate in Educational Conferences  
   - Present 1 case at the Thursday Case Conference (4 week rotations only)

4. **Responsibilities of the faculty:** A faculty attending will supervise the resident at the assigned clinic. The assigned faculty attending is expected:
   
   - To provide an environment conducive to learning  
   - To respond to questions appropriately  
   - To engage in informal discussions and provide formal discussions of pertinent
• To meet with the resident for teaching which may be patient-related or didactic during the clinic time
• To provide a final written and verbal evaluation of the resident at the end of the rotation

5. GI and Hepatology Rotation Specific Competency Objectives

This rotation is open to Residents at all levels, and is expected to be taken only once over the course of 3 years. Thus, there are no PGY-year specific competencies.

By the end of the rotation, residents are expected to have developed the following competencies:

• **Patient Care**
  o Resident must be able to obtain an accurate comprehensive history appropriate for gastrointestinal and hepatologic conditions through medical interviews, physical examination, and medical records review.
  o Must be able perform a detailed GI oriented physical examination.
  o Must demonstrate ability to synthesize data and formulate an appropriate differential diagnosis for common gastrointestinal disorders.

• **Medical Knowledge**
  o Must be able to work up common gastrointestinal problems, including GI bleeding, jaundice, alteration in bowel habits, abdominal pain, inflammatory bowel disease, pancreatic insufficiency, pancreatitis, biliary disease, acute and chronic hepatitis, and cirrhosis.
  o Learn and understand the indications, contraindications, risks and benefits of common gastrointestinal and hepatologic procedures, including colonoscopy, flexible sigmoidoscopy, upper endoscopy, and ERCP.
  o Resident will develop knowledge about the use of common gastrointestinal drugs.
  o Applies an open-minded and analytical approach to acquiring knowledge.
  o Accesses and critically evaluates current medical information and scientific evidence.

• **Practice-Based Learning and Teaching**
  o Critiques own performance.
  o Receptive to constructive criticism.
  o Admits to and learns from errors.
  o Uses errors to improve patient care on both a personal and system-wide level.
  o Resident will engage in self-directed learning on daily patient issues.
  o Will be able to locate, critically appraise and appropriately apply evidence from scientific studies.
  o Uses information sources effectively to support patient care decisions and to educate self, patients and other physicians.

• **Interpersonal and Communication Skills**
  o Develops a good working relationship and rapport and communicates clearly with other physicians, health professionals and patients.
  o Presents cases concisely and in a well-thought out manner.
  o Maintains comprehensive, timely and legible medical records.

• **Professionalism**
- Demonstrates respect, compassion and integrity in working with patients, families, colleagues and other health professionals regardless of their background.
- Adheres to principles of confidentiality, scientific and academic integrity and informed consent.
- Recognizes and identifies deficiencies in peer performance in a constructive manner.
- Takes responsibility for patient care; acknowledges mistakes.

- **System-Based Practice**
  - Able to work with and within the local, regional and national medical system to deliver optimal patient care.
  - Will demonstrate ability to communicate effectively with other members of care team throughout the hospital in order to facilitate teamwork in care of patients.
  - Participates actively in improving the health systems to optimize patient care.

V. Ancillary Educational Materials

1. Gastroenterology reference books are located in the GI Endoscopy Unit and in the GI Fellows office in PSSB. They include:


2. Additionally, on-line access for literature searches and Up-to-Date is available on computers in the GI Endoscopy Unit and in the GI Fellows office in PSSB. Online access to UpToDate, GI and Hepatology texts, and PubMed is available for all residents from any Internet-connected computer via the Clinical Resources Center.

VI. Methods of Evaluation

1. Resident Performance:
   a. Written Feedback: faculty will complete a web-based, competency-based evaluation in E-Value at the end of the rotation. This evaluation should be shared verbally by the faculty with the resident at the end of the rotation. Evaluations will be based upon:
      - Observed clinical practice
      - Participation during teaching rounds
      - Evidence of independent study and thought
      - Interactions with patients and staff
      - Interactions with colleagues, residents, students and faculty

   b. Residents will be given verbal feedback during the rotation from the attending and fellows on a regular basis.

2. Rotation and Faculty Performance:
   a. Residents will be asked to complete an on-line evaluation of the rotation commenting on faculty, facilities, and service experience. These evaluations are reviewed regularly by Program leadership, and feedback is provided to the Rotation Director on at least an annual basis.