

**University of Michigan Health System
Internal Medicine Residency
Outpatient Liver Curriculum**

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Rotation Goals and Educational Purpose

The field of hepatology encompasses an understanding of the liver, biliary tree, and gallbladder and the management of their disorders. It also requires an understanding of the extra-hepatic manifestations of these disorders. Important elements include the structure and function of the liver; the study of viral, alcoholic, and autoimmune hepatitis, and cirrhosis. This includes the pre- and post-transplant evaluation and care of patients with liver disease.

Residents rotating through the outpatient liver clinics should be able to evaluate symptoms of liver disease, and diagnose acute and chronic hepatitis. He or she should also begin to understand the evaluation of transplant candidates and post-transplant management. This includes the indications, complications, and prognosis for liver transplantation.

This rotation is a 2-week elective for residents at the HO2/3 levels.

Rotation Competency Objectives

In supplement to the University of Michigan Longitudinal Learning Objectives, the following provide an overview of the knowledge, skills, and behaviors promoted in this rotation.

- I. Patient Care and Medical Knowledge
 - a. By completion of the rotation, senior residents will
 - i. obtain a problem-focused history and physical exam for common outpatient liver diseases
 - ii. independently generate a hypothesis based on signs and symptom complex
 - iii. develop a differential diagnosis and diagnostic plan
 - iv. integrate patient preferences, evidence-based practice, and cost-effectiveness to develop a patient-centered treatment plan
 - v. initiate and monitor longitudinal plans of care for patients with chronic liver disease

- vi. implement a diagnostic and treatment plan efficiently and effectively in an outpatient setting
- vii. assess acuity of problem and determine plan for continued outpatient monitoring versus inpatient admission

II. Interpersonal and Communication Skills

- a. By completion of the rotation, senior residents will
 - i. conduct interviews with patients and their families in a compassionate and patient-centered manner
 - ii. create therapeutic relationships with patients and their families
 - iii. communicate respectfully with allied staff and peers
 - iv. create thorough and accurate written documentation that is timely, and congruent with medical standards
 - v. establish rapport with patients from diverse cultural backgrounds
 - vi. with supervision, engage patients in shared decision making for management of chronic illness

III. Professionalism

- a. Throughout the rotation, all senior residents will
 - i. avoid judgmental behavior in patient interactions
 - ii. provide empathic and compassionate patient care, weighing all decisions with patient values
 - iii. complete dictations in a timely manner
 - iv. follow-up on tests and lab results in a timely manner and discuss with attending physician
 - v. respond to pages, phone calls, and emails about patient care in a timely manner.

IV. Practice-Based Learning and Improvement

- a. During this rotation, senior residents will
 - i. utilize information resources to formulate and support patient care decisions
 - ii. utilize practice guidelines and published evidence to evaluate patients
 - iii. incorporate concepts of prior probability and likelihood ratios in the ordering and interpretation of diagnostic tests
 - iv. independently apply knowledge of study designs and statistics to critical appraisal of relevant literature in this clinical setting

V. Systems-Based Practice

- a. By completion of this rotation, senior residents will
 - i. collaborate with nurses, medical assistants, physician assistants, social workers, and other allied professional staff in the clinic setting to provide comprehensive medical care
 - ii. communicate with scheduling coordinators and referral coordinators to facilitate necessary medical care
 - iii. generate patient care documentation that accurately reflects provided, medically necessary services, and that reflects CPT coding requirements
 - iv. incorporate cost-effective considerations into care approaches

- v. under supervision, provide coordinated care as an ambulatory consultant for patients with complex conditions, supporting the primary care relationship while activating subspecialty care systems
- vi. identify and participate in systems-based improvement opportunities

Teaching Methods

- I.** Supervised Patient Care (including mix of diseases, patient characteristics, types of clinical encounters, procedures, pathological material, services, the level of faculty supervision for all resident patient-care activities)
 - a. The emphasis of the rotation is on experiential learning through outpatient management of patients. Residents are under the full supervision of a liver specialist. Each patient case is reviewed in discussion with faculty.
 - b. Patients present from a broad geographic range and socioeconomic background, with a spectrum of local to quaternary care needs.
 - c. Residents interact with patients with diagnoses of viral hepatitis, alcoholic hepatitis, autoimmune hepatitis, cirrhosis, and/or liver cancer.
 - d. Clinical encounters range from acute, subacute, or chronic liver disease.
 - e. All endoscopy procedures are referred to the Medical Procedures Unit (MPU).
 - f. Residents will interact with medical and non-medical specialists during this rotation and should consider all of these encounters as educational opportunities.

- II.** Structured Didactics and Small Group Learning
 - a. Liver conference weekly (Thurs AM)
 - b. Liver transplant evaluation conference (Thurs PM)

- III.** Independent study (including reading lists and other educational resources)
 - a. Textbooks:
 - i. The Textbook of Hepatology: From Basic Science to Clinical Practice, 3rd edition – 2007, Wiley Blackwell; available through online subscription to Wiley InterScience

 - b. Professional Society guidelines/Websites:
 - i. AASLD (American Association for the Study of Liver Disease) – Practice guidelines - <http://www.aasld.org/practiceguidelines/Pages/default.aspx>

 - ii. eMedicine - <http://emedicine.com>

 - iii. CDC guidelines on viral hepatitis –

<http://www.cdc.gov/hepatitis/index.htm>

iv. Journal of Hepatology –
<http://www.jhep-elsevier.com/>

v. Up-to-date website

Rotation Schedule

First day protocol: arrive at designated clinic and introduce yourself to an attending

Call: no overnight or weekend call duties

Continuity Clinic: Your continuity clinic will continue as per regular schedule.

	Monday	Tuesday	Wednesday	Thursday	Friday
AM	Liver txp clinic – (Taubman 2F, pod F)	No clinic.	Hepatology clinic – (Taubman 3F, pod D)	7:30am – Liver Conference ----- No clinic.	Liver txp clinic – (Taubman 2F, pod F)
PM	12:30 transplant conference (optional) ----- Hepatology clinic – (VA outpatient clinics, station 6)	Liver txp clinic – (Taubman 3F, pod D)	Hepatology clinic – (Taubman 3F, pod D)	2pm – liver transplant evaluation conference	Liver Tumor Clinic or Wilson’s clinic

Evaluation Methods

Formative face-to-face feedback to residents by attendings occurs at the end of the 2-week rotation. Attendings complete online competency-based evaluations of each resident. The evaluation is shared with the resident, is available for on-line review by the resident at his/her convenience, and is sent to the residency office for internal review. The evaluation is part of the resident file and is incorporated into semiannual performance reviews for directed resident feedback. Residents also complete a service evaluation of the rotation faculty at the end of the elective.