

Hepatic Encephalopathy: Current Pathway for Care Resolution and Best Practices for 2025...What Every Case Manager Should Know.

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Learning Objectives




- Explain the physical and psychosocial impacts that a diagnosis of hepatic encephalopathy (HE) imparts on the patient, family and caregivers as well as all healthcare delivery systems.
- Consider how frequent recurrences of HE may cause nonreversible patient organ dysfunction resulting in both reduced patient quality of life and an increased economic burden for both patients and healthcare delivery systems.
- Review established Standards for Transitions of Care and avenues for implementing those Standards in patients diagnosed with HE to minimize the number of potentially avoidable readmissions.

- This presentation was not developed by and is not sponsored by any pharmaceutical entity.
- The content of the program supports information included in the Case Management Adherence and Transition of Care Guide: Hepatic Encephalopathy.
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- The guide is available for download
<https://cmsa.org/hepatic-encephalopathy-cmag/>



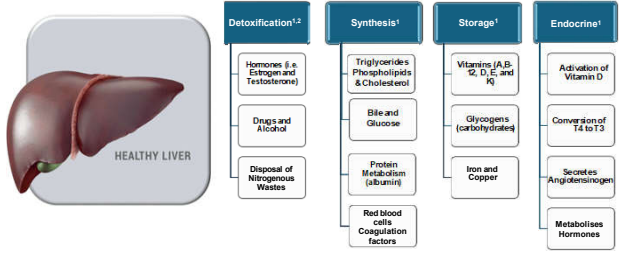
It All Starts with the LIVER



Some functions of the Liver

- Performs many critical metabolic functions including producing bile
- Converts glucose to glycogen
- Regulates blood clotting
- Produces cholesterol
- Regulates levels of amino acids in blood
- Processes drugs and other toxic substances
- Converts ammonia, made during digestion, to urea

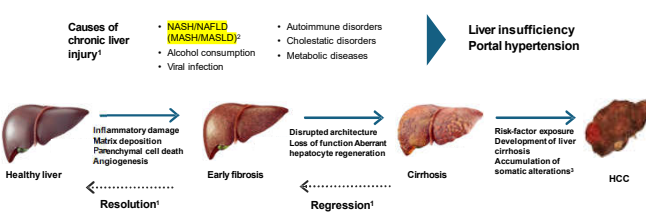
Normal Healthy Liver Functions



| Detoxification ^{1,2} | Synthesis ¹ | Storage ¹ | Endocrine ¹ |
|--|--|---|---|
| <ul style="list-style-type: none"> • Hormones (e.g. Estrogen and Testosterone) • Drugs and Alcohol • Disposal of Nitrogenous Wastes | <ul style="list-style-type: none"> • Triglycerides, Phospholipids & Cholesterol • Bile and Glucose • Protein Metabolism (albumin) • Red blood cells • Coagulation factors | <ul style="list-style-type: none"> • Vitamins (A, B₁₂, D, E, and K) • Glycogens (carbohydrates) • Iron and Copper | <ul style="list-style-type: none"> • Activation of Vitamin D • Conversion of T₄ to T₃ • Secretes Angiotensinogen • Metabolises Hormones |

¹ Coughlin. *Int J Res Pharm Biosci* 2017;8(8):13-24. ² Trefts et al. *Curr Biol* 2017; 27(21): R1142-R1151.

Liver Damage Can Lead to Progressive Liver Disease



Causes of chronic liver injury¹

- **NASH/NAFD (MASH/MASLD)**
- Alcohol consumption
- Viral infection
- Autoimmune disorders
- Cholestatic disorders
- Metabolic diseases

Progression: Healthy liver → Inflammatory damage (Matrix deposition, Parenchymal cell death, Angiogenesis) → Early fibrosis → Disrupted architecture (Loss of function, Aberrant hepatocyte regeneration) → Cirrhosis → Risk-factor exposure (Development of liver cirrhosis, Accumulation of somatic alterations²) → HCC

Outcomes: Liver insufficiency, Portal hypertension

Reversibility: Resolution¹ (from Inflammatory damage to Healthy liver), Regression¹ (from Cirrhosis to Early fibrosis)

¹ NASH, metabolic dysfunction-associated steatohepatitis; MASLD, metabolic dysfunction-associated steatotic liver disease; HCC, hepatocellular carcinoma
² Pollock et al. *Nat Rev Gastroenterol Hepatol* 2014;10:118-130. ³ Trefts et al. *J Hepatol* 2023;78:1362-1380. ⁴ Yin et al. *Gastroenterology* 2023;145:766-782.

Defining MASLD/MASH – Metabolic Dysfunction–associated Steatotic Liver Disease and MASH - metabolic dysfunction-associated steatohepatitis - MASLD

- A buildup of fat in the liver that has become the most common liver disorder in the United States.
 - Two thirds of obese adults and one third of obese children have fatty livers¹.
- MASH**
- A leading cause of liver failure prompting an increasing need for transplant costing the United States health care system about \$100 billion annually.
 - It is estimated that nine to 15 million adults have MASH.

1. MASLD. <https://www.nhlbi.nih.gov/health-topics/metabolic-liver-disease-masld/>

MASLD/MASH/MetALD

- MASLD is asymptomatic and frequently undiagnosed.
- Diagnosis of MASLD requires liver steatosis together with at least one out of five cardiometabolic criteria, e.g. presence of impaired glucose regulation, type 2 diabetes, overweight or obesity, hypertension or dyslipidemia¹.
- MASH may prompt scarring of the liver, cirrhosis and liver failure.
- MetALD describes those with MASLD who consume greater amounts of alcohol per week
- REZDIFFRA (resmetirom) tablet thyroid hormone receptor-beta (THR-beta) agonist indicated in conjunction with diet and exercise for the treatment of adults with noncirrhotic nonalcoholic steatohepatitis (NASH) with moderate to advanced liver fibrosis (consistent with stages F2 to F3 fibrosis. Avoid use of REZDIFFRA in patients with decompensated cirrhosis².
- Additional resources are available at www.aasld.org

1. Hagström, et al. 99% of patients with NAFLD meet MASLD criteria and natural history is therefore identical. *Journal of Hepatology*, Volume 80, Issue 2, e76 - e77
 2. REZDIFFRA-PI-14Mar2024_Final-revised-clinical-SPLPP.pdf

Burden of Chronic Liver Disease (CLD) and Cirrhosis in the United States^{1,2}

PREVALENCE

- As of 2018, 4.5 million people, or 1.8% of US adults, were diagnosed with liver disease¹
- Prevalence of cirrhosis increased from 0.20% in 2006 to 0.45% in 2020²

HEALTHCARE UTILIZATION

- Over 1 million outpatient visits and 325,000 ED visits for CLD in 2014⁴
- Cirrhosis-related hospitalizations and related costs increased from \$4.8 billion in 2001 to \$9.8 billion in 2011^{4,5}
- CLD patients typically require more hospital-based care than those with other chronic disease⁶

HOSPITAL READMISSIONS

- High readmission rates in cirrhosis patients, particularly driven by HE (adjusted odds ratio 1.77 each for 30- and 90-day readmission)³

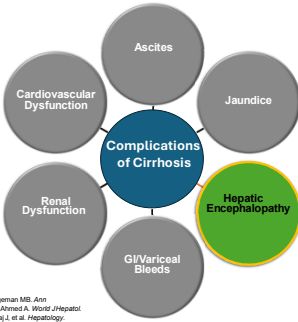
MORTALITY for CLD and Cirrhosis Combined

- Mortality increased from 11.0 per 100,000 persons in 2017 to 13.8 per 100,000 persons in 2020⁷
- 56,525 deaths annually, with 17.0 deaths per 100,000 persons in 2021¹
- 9th leading cause of death as of 2021¹
- Deaths associated with cirrhosis are expected to triple by 2030⁷

¹ National Center for Health Statistics. https://www.cdc.gov/nchs/data/health_statistics.html. Accessed April 14, 2023. 2. Wong et al. Prevalence of Chronic Liver Disease in the United States. *Journal of Hepatology*. 2020;72(5):1111-1118. 3. Li et al. Hospital readmission rates in cirrhosis patients. *Journal of Hepatology*. 2019;71(5):1111-1118. 4. Li et al. Hospital readmission rates in cirrhosis patients. *Journal of Hepatology*. 2019;71(5):1111-1118. 5. Li et al. Hospital readmission rates in cirrhosis patients. *Journal of Hepatology*. 2019;71(5):1111-1118. 6. Li et al. Hospital readmission rates in cirrhosis patients. *Journal of Hepatology*. 2019;71(5):1111-1118. 7. Li et al. Hospital readmission rates in cirrhosis patients. *Journal of Hepatology*. 2019;71(5):1111-1118.

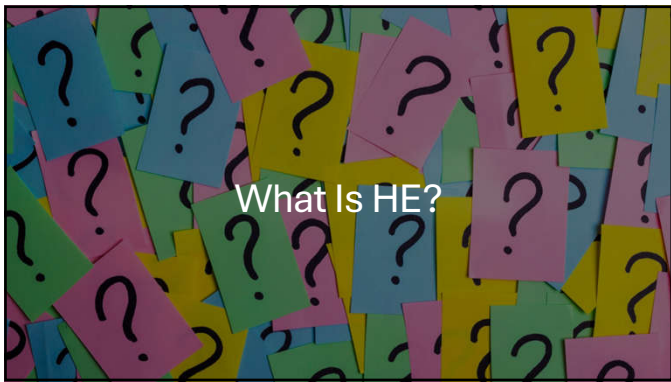
Complications of Decompensated Cirrhosis

- Decompensated cirrhosis is associated with serious complications due to hepatic insufficiency and portal hypertension¹
- Hepatic encephalopathy (HE) is a primary complication of decompensated cirrhosis¹⁻⁴



• Up to 80% of patients will develop HE, ranging from minimal to overt^{2,5,6}

1. James J, Liu W. Med Clin North Am. 2015;99(5):913-933. 2. Janssen T, Yang A, Dixit D, Bridgeman MB. Ann Pharmacother. 2016;50(7):988-973. 3. Liu A, Pinarajand RB, Kumar R, Yuvaraj S, Wang N, Ahmed A, Wong J. Hepatol. 2015;7(2):287-1-2879. 4. Saab S. Int J Gen Med. 2015;8:165-173. 5. Vilarup H, Amodeo P, Bajaj J, et al. Hepatology. 2014;60(2):715-725. 6. Flamm SL. Am J Manag Care. 2018;24(4)(Suppl):S1-S61.



Overview of HE

Hepatic encephalopathy (HE) is a progressive cognitive disorder caused by liver insufficiency or portosystemic shunting (PSS), which manifests as a wide range of neurological or psychiatric impairments¹

Reversible neuropsychiatric syndrome encountered in patients with cirrhosis of the liver.

- OHE may occur in **30% to 45%** of patients with cirrhosis²
- Among patients with cirrhosis, the rate of overt HE (OHE) in the United States increased from **11.8%** in 2006 to **21.4%** in 2020, with an estimated **200,000 adults with OHE in 2020**³
- Cognitive impairment results in utilization of more health care resources in adults than other manifestations of liver disease.



CMS implemented HE-specific ICD-10 code K76.82 on October 1, 2022⁴

CMS, Centers for Medicare & Medicaid Services; ICD, International Classification of Diseases.
1. Vilarup et al. Hepatology. 2014;60(2):715-725. 2. Pooled. Aliment Pharmacol Ther. 2007;21(suppl 1):3-9. 3. Wong et al. Poster presented at: Digestive Disease Week, May 6-9, 2022, Chicago, IL. 4. News. AHA/ACC. www.aha.org/2022/09/12/newsroom/2022-09-12-cms-icd-10-code-alpha-to-provide-more-accuracy-hepatic-encephalopathy. Accessed May 8, 2023.

Healthcare Resource Patterns With OHE

Adults with OHE commonly experience long-term care (LTC) stays and inpatient admissions, representing substantial healthcare resource burden

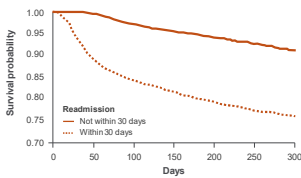
- Among adult patients with OHE in a Medicare population
 - 63% had ≥1 LTC stay
 - 95% were transferred to a skilled nursing facility from an inpatient stay
 - After a skilled nursing facility stay, 19% were admitted to an inpatient hospital stay
 - Inpatient readmissions within 30 days of skilled nursing facility discharge were commonly related to OHE (36%)



OHE, oral health emergency; LTC, long-term care. Heffernan et al. Poster presented at Digestive Disease Week, May 6-8, 2023, Chicago, IL.

OHE Is Associated With Increased Mortality

Calendar-Year Survival of Patients Readmitted Within 30 Days in the Nationwide Readmission Database²



CI, confidence interval; HE, hepatic encephalopathy; HR, hazard ratio; OHE, oral HE. 1. Bajaj et al. Clin Gastroenterol Hepatol. 2017;15:555-574. 2. Roger et al. Ann Hepatol. 2019;18:310-317.

- In a study of hospitalized patients with cirrhosis, grade III/IV OHE had significantly higher 30-day mortality (38%) vs grade I/II HE (8%) or no HE (7%)¹
- Among 24,473 patients with cirrhosis hospitalized with HE, 32% were readmitted within 30 days:
 - Early readmission was a highly significant predictor of calendar-year mortality

Readmission Rates With OHE



Recurrent HE underlies elevated rates of hospital readmission

- 53% of patients with cirrhosis experienced ≥1 readmission within 90 days, with HE as the primary reason for readmission (NACSELD cohort)
- 36% of patients with ≥3 complications of cirrhosis were readmitted within 90 days, with HE as a significant predictor of 30- and 90-day readmissions (State Inpatient Databases)²
- HE as a significant predictor of 30- and 90-day readmissions (State Inpatient Databases)²

Factors contributing to HE-related readmission include^{3,4}

- Failure to refill prescription
- Lack of follow-up
- Limited social support
- Limited access to transitional education
- Other disease factors (eg, hypertension)

HE, hepatic encephalopathy; HE, hepatic encephalopathy; HR, hazard ratio; OHE, oral HE. 1. Bajaj et al. Clin Gastroenterol Hepatol. 2017;15:555-574. 2. Roger et al. Ann Hepatol. 2019;18:310-317. 3. Bajaj et al. Clin Gastroenterol Hepatol. 2017;15:555-574. 4. Bajaj et al. Clin Gastroenterol Hepatol. 2017;15:555-574.

Clinical Features of Hepatic Encephalopathy (HE)

HE manifests a wide spectrum of neurological or psychiatric abnormalities ranging from subclinical alterations to coma

- Attention Alterations
- Working memory
- Psychomotor speed and visuospatial ability
- Personality changes (Apathy, irritability and disinhibition)
- Alterations in consciousness and motor function (Asterixis, disorientation to time and space, coma)
- Disturbances of the sleep-wake cycle with daytime sleepiness (Complete reversal less common)

Wernip, H. et al. Hepatology. 2014;60(2):715-735.

Symptoms of HE

- Anxiety or irritability
- Cognitive impairment
- Shortened attention span; difficulty concentrating
- Flapping hand motions (asterixis)
- Muscle twitching (myoclonus)
- Reduced alertness
- Sleep problems
- Slurred speech
- Bizarre or inappropriate behavior
- Coma

<https://cmsa.org/hepatic-encephalopathy-cmag/>

Common Triggers for HE

- Binge drinking alcohol
- Constipation
- GI bleeding
- Infection
- Kidney disease
- Portosystemic shunting
- Primary hepatocellular cancer
- Medication nonadherence
- Electrolyte imbalance
- Thrombosis in the portal vein
- Respiratory distress
- Medications that impact the nervous system (opiates, benzodiazepines, antidepressants, and antipsychotic agents)
- Sudden change in diet

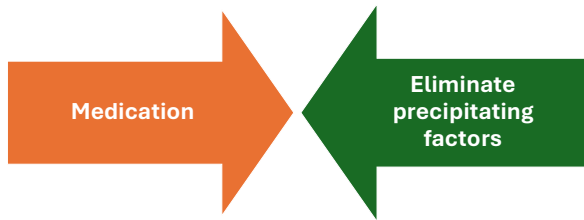
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West Haven Criteria

| COVERT HE | | OVERT HE | | |
|---|---|--|--|--|
| Minimal | Grade I | Grade II | Grade III | Grade IV |
| <ul style="list-style-type: none"> ✓ No observable symptoms ✓ Detectable solely by psychometric testing | <ul style="list-style-type: none"> ✓ Trivial lack of awareness ✓ Euphoria or anxiety ✓ Shortened attention span ✓ Impairment of addition or subtraction ✓ Altered sleep rhythm | <ul style="list-style-type: none"> ✓ Lethargy or apathy ✓ Disorientation for time ✓ Obvious personality change ✓ Inappropriate behavior ✓ Asterixis | <ul style="list-style-type: none"> ✓ Somnolence to semi-stupor ✓ Responsive to stimuli ✓ Confused ✓ Gross disorientation ✓ Bizarre behavior | <ul style="list-style-type: none"> ✓ Coma |

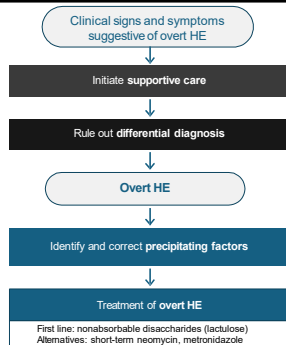
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Treatment of HE

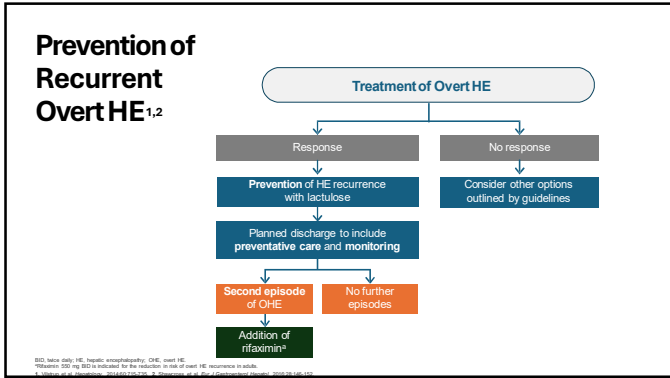


<https://cmsa.org/hepatic-encephalopathy-cmg/>

Management of an Overt HE Episode^{1,2}




¹ Valleron et al. Hepatology. 2014;60:732-735.
² Chhabra et al. JAMA. 2014;311:1000-1008.



Treatment of HE

- **First-line medical treatment: lactulose**
 - Lowers ammonia levels by causing bowel movements
 - Elimination of ammonia-producing bacteria from the intestines
 - Lowers the absorption time of ammonia
 - Administered orally or per rectum (enema) during an acute episode
- **Rifaximin for breakthrough episodes**
 - Minimally absorbed antibiotic that decreases the risk for additional episodes
 - Decreases ammonia production in the intestine
 - AASLD/EASL* Guidelines state Rifaximin is an effective add-on therapy to lactulose to reduce the risk of another overt HE recurrence



* American Association for the Study of Liver Diseases/European Association for the Study of Liver Disease
<https://cmsa.org/hepatic-encephalopathy-cmag>

+ . The Role of the Case Manager
 ° in Supporting a Patient Diagnosed with HE

**The Case Management Process
for the Management of HE:
Client Selection**

- Would a patient who is diagnosed with cirrhotic liver disease benefit from case management intervention with education about liver disease and the serious complications associated with that disease including hepatic encephalopathy?
- Provide information to family and caregivers regarding the symptoms of hepatic encephalopathy.
- Review medications to determine if lactulose was previously prescribed.



<https://cmsa.org/hepatic-encephalopathy-cmag>

**The Case Management Process
for the Management of HE:
Comprehensive Assessment**

Conduct a biopsychosocial assessment

- Physical conditions(s) and symptoms
- Presence of psychological challenges
- Social and health system challenges

Concerns and preferences

- What worries the patient and family/caregiver?
- What is most important to them?

Health experiences

- How has liver disease impacted their lives?
- What do they know about liver disease?
- What do they want to know?



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**The Case Management Process
for the Management of HE:
Comprehensive Assessment**

Current and past treatment

- What treatment has been recommended?
- What was the response to the prescribed treatments?

Other barriers or concerns

- Presence of behavioral or mental health symptoms or disorders

Presence of health-related social needs

- Financial
- Living environment



<https://cmsa.org/hepatic-encephalopathy-cmag>

The Case Management Process for the Management of HE: Comprehensive Assessment

- Readily available social supports
- Trusted providers
- Ability to obtain medications
- Nutritional status
- Ability to drive
- Triggers
- Adherence to prescribed treatment regime
- Level of engagement
- Primary decision maker



The Case Management Process for the Management of HE: Comprehensive Assessment

The CAGE questionnaire is a four-question screening tool used to identify potential alcohol use disorder in adults:

- C: utting down on drinking
- A: nnoyance by criticism of drinking
- G: ility feeling about drinking
- E: arly-morning drink (eye-opener)

To score the questionnaire, you assign one point for each "yes" answer. A higher score indicates a greater risk for alcohol misuse. A total score of two or more is considered clinically significant.

file:///Users/nancykramer/Downloads/CAGE_questionnaire.pdf

The Case Management Process for the Management of HE:

Development of a Case Management Plan of Care

- Define the patient/family/caregiver challenges
- What challenges are most important to the patient/family/caregiver?
- What is the primary goal the patient/family/caregiver wish to achieve
- Develop interventions to achieve identified goals
- Evaluate the results of the care plan at regular intervals



https://cmsa.org/hepatoc-encephalopathy-cmg

The Case Management Process for the Management of HE

Implementation and Coordination of the Case Management Plan of Care

- Consult with hepatologist or transplant center
- Availability of prescribed medications
 - Part D annual out-of-pocket drug spending cap is \$2,000
- Physical and Occupational therapy
- Consult to registered dietician
- Counseling
- Home health care
- Assisted living or skilled nursing facility
- Advancing adherence



<https://cmsa.org/hepatoc-encephalopathy-cmg>

Important Safety Considerations

Outpatient Management

- Monitor for the patient's capability to manage their care.

Capacity to drive

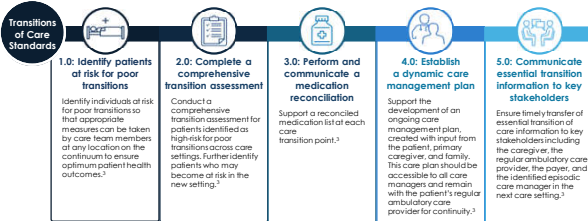
- Increased risk of driving accidents in the presence of cognitive deficits.
- Restrict driving for those whose condition suggests the patient is at risk.
- Neuropsychiatric testing may be required to determine fitness to drive.
- With disease progression, re-evaluation to drive may be necessary.

The loss of independence may be very difficult- be supportive but firm in safety recommendations.



<https://cmsa.org/hepatoc-encephalopathy-cmg>

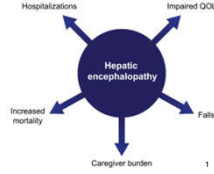
Transitions of Care



ED, emergency department; American Case Management Association. Transitions of care guiding principles. <https://www.aacm.org/transitions-of-care-guiding-principles/>. Accessed June 19, 2020.

Readmission Rates for Patients with HE

- 30-day readmission rates ranging from 10% to 50%, with a pooled estimate around 26%
- Patients experiencing hepatic encephalopathy are more likely to be readmitted to the hospital compared to other complications of cirrhosis¹.
- According to one study, the 30-day readmission rate for patients with hepatic encephalopathy (HE) is around 30-35%².



1. Frenette et al. Hepatic Encephalopathy-Related Hospitalizations in Cirrhosis: Transition of Care and Closing the Revolving Door. Dig Dis Sci. 2022 Jun;67(6):1994-2004. 2. Puzasteri et al. Randomized intervention and subsequent follow-up lowers 30-day readmission for patients with hepatic encephalopathy, decompensated cirrhosis. World J Hepatol. 2023 Jun 27;15(6):826-843

Reducing Readmissions

The primary cause of readmissions for patients diagnosed with overt hepatic encephalopathy is recurrence of the hepatic encephalopathy itself, often due to poor medication adherence or failure to manage precipitating factors like infections, electrolyte imbalances, or dietary indiscretions.

Frenette et al. Hepatic Encephalopathy-Related Hospitalizations in Cirrhosis: Transition of Care and Closing the Revolving Door. Dig Dis Sci. 2022 Jun;67(6):1994-2004.

Reducing Readmissions

- Or
- The patient, family or caregiver does NOT does not understand information regarding
- Their diagnosis
 - What they need to do about it
 - The value of adherence and the consequences of nonadherence

Based on HCAHPS data, only 52% of patients nationally indicated that they "Strongly Agree" they understood their care when they left the hospital.

www.medicare.gov/care-compare

Reducing Readmissions

Establish a multidisciplinary approach involving collaboration among

- Hepatologists, gastroenterologists, PCPs and transplant centers
- Physical and occupational therapists
- Dieticians
- Pharmacists across the care continuum
- Case managers in acute & post-acute care and managed care
- Social workers
- Behavioral health professionals
- Patient educators
- Support groups

In order to address potential contributing factors and optimize treatment plans

Patient Education Resources

Liver Health Now Tools *(requires registration)*

<https://liverhealthnow.com/health-tools>

The screenshot displays several educational modules from the Liver Health Now Tools website. Visible titles include:

- Discharge Instructions for Patients with Hepatic Encephalopathy
- Importance of Taking Medication
- High Risk Triggers for Liver Health Professionals
- Counseling Your Patients With Hepatic Encephalopathy About Driving
- Compassion: Your Patients' Best Friend
- The Importance of Patient Journaling
- Nurse Checklist for Patients With Hepatic Encephalopathy Who Are Transitioning to Another Care Setting
- Help Patients Set Goals Using Shared Decision Making
- I Have HE

Patient Education Resources

Hepatic Encephalopathy <https://www.hepatitis.va.gov/pdf/HE-fact-sheet.pdf>

The screenshot shows a fact sheet titled "Hepatic Encephalopathy" from the VA website. It includes sections such as:

- What is hepatic encephalopathy (HE)?
- How is HE diagnosed?
- What are the signs and symptoms of HE?
- What are the triggers for HE?
- How can HE be managed and treated?
- What are the long-term effects of HE?

 The document also features a diagram of the brain and the VA logo at the bottom.

Patient Education Resources

Understanding HE <https://www.understandinghe.com/he-resources/>

Managing Relationships & HE

When you find out you're diagnosed with Hepatic Encephalopathy (HE), you're not alone. You'll have a lot of questions and a lot of things to think about. We've put together some resources to help you understand HE and how it affects your relationships.

RELATIONSHIPS WITH YOUR LOVED ONE

1. **Understand HE and how it affects your loved one.** HE is a complex condition that can affect your loved one's behavior, mood, and ability to think clearly. It's important to understand what's going on so you can provide the best care possible.
2. **Communicate openly and honestly.** Let your loved one know you're there for them and that you're working together to manage the condition. Encourage them to share their feelings and concerns.
3. **Set boundaries and take care of yourself.** Caring for someone with HE can be challenging. It's important to set boundaries and take time for yourself to avoid burnout.

Caregiver Support Tip Sheet

As a caregiver, you have a lot of responsibilities. Here are some tips to help you manage your role and take care of yourself.

HELP YOUR LOVED ONE

1. **Understand HE and its symptoms.** Know what to expect and when to seek help.
2. **Monitor symptoms closely.** Keep track of changes in behavior, mood, and thinking.
3. **Encourage your loved one to eat a healthy diet.** A diet low in protein and high in branched-chain amino acids can help manage HE.
4. **Encourage your loved one to exercise.** Regular physical activity can improve mood and cognitive function.
5. **Encourage your loved one to get enough sleep.** Sleep deprivation can worsen HE symptoms.

HELP YOURSELF

1. **Take care of your own physical health.** Eat a healthy diet, exercise, and get enough sleep.
2. **Seek support from others.** Join a support group or talk to a counselor.
3. **Take breaks.** It's okay to step away from your caregiving duties for a moment.
4. **Practice self-compassion.** Be kind to yourself and recognize your own limitations.

Understanding Liver Disease and Hepatic Encephalopathy (HE)

30% of people with liver disease develop HE. **5.5 million** people in the U.S. have liver disease.

What is Hepatic Encephalopathy?

1. **Brain dysfunction.** HE is a brain disorder caused by liver failure.
2. **Confusion and personality changes.** Symptoms include difficulty concentrating, memory loss, and mood swings.

Liver Disease FAQ

Understanding HE requires a solid foundation of knowledge about liver disease.

WHAT IS LIVER DISEASE?

Liver disease is a condition that affects the liver, which is the largest organ in the body. It can be caused by a variety of factors, including alcohol consumption, viral infections, and fatty liver disease.

WHAT ARE THE TREATMENT OPTIONS FOR LIVER DISEASE?

Treatment options for liver disease depend on the type and severity of the condition. They may include lifestyle changes, medication, and surgery.

HOW CAN I PREVENT LIVER DISEASE?

Prevention strategies for liver disease include limiting alcohol consumption, maintaining a healthy weight, and getting vaccinated against hepatitis viruses.

HOW IS LIVER DISEASE DIAGNOSED?

Liver disease is typically diagnosed through a combination of blood tests, imaging studies, and a liver biopsy.

IS LIVER DISEASE CURABLE?

Some types of liver disease are curable, while others are not. Early diagnosis and treatment can improve outcomes.

HE Treatment Plan Checklist

Every patient with HE has been diagnosed with Hepatic Encephalopathy (HE) - "yes or no?" The team should provide education to every patient with Hepatic Encephalopathy (HE) and you should provide the support.

HEATMAP THE HISTORY, THE "10 10 10" ASSESSMENT OF HE AND HOW TO MANAGE LIVER DISEASE

10 10 10 HEATMAP: 10 symptoms, 10 signs, 10 questions to ask the patient.

HEATMAP THE HISTORY, SIGN & SYMPTOM

HEATMAP: 10 symptoms, 10 signs, 10 questions to ask the patient.
