

A Brief Review of Hepatitis C Treatment in the Primary Care Setting

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Hepatitis C virus (HCV) is a bloodborne RNA virus that has the potential to cause acute or chronic liver infections. HCV has a high disease burden in our society. Maine's rate of HCV typically ranks in the top 10 in the United States. Although many patients are asymptomatic, they possess an elevated risk for adverse health outcomes such as hepatocellular carcinoma. Treatment of HCV can prevent adverse health outcomes and decrease mortality. Medication advancements have enabled the safe and effective treatment of HCV by primary care clinicians.

Identifying Populations to be Screened for HCV

Screening includes labs for HCV antibodies and when positive, RNA viral load. The current recommendations for patient screening are:

- Screen all individuals over 18 once in their lifetime
- Provide one time testing for individuals with the following conditions or exposures:
 - Any injection drug use, including a single episode
 - Pregnant individuals, with every pregnancy
 - HIV
 - Previous hemodialysis therapy
 - History of blood infusion or transplant prior to 1992
 - Recipient of clotting factors prior to 1987
 - Children born to mothers infected with HCV (test after 18 months of age)
 - History of incarceration
 - Tattoos in unlicensed facilities
- Routine testing should be provided for:
 - Individuals who inject drugs and share needles or injection paraphernalia
 - Individuals who routinely undergoing hemodialysis
- Recommended for any patient requesting HCV testing

Overlap of Substance Use Disorder and HCV

Substance use disorder (SUD), or more specifically, injection drug use, is the greatest risk factor for HCV infection according to CDC Surveillance data. A recent study identified HCV infection rates have increased alongside the opioid epidemic (1). Treatment of HCV is complicated by co-occurring SUD and injection drug use.

Patients who inject drugs can benefit greatly from one-to-one syringe exchange programs. Needle exchanges are evidence based in reducing transmission of bloodborne pathogens, cost effective, community-based programs that provide patients with unused needles and injection paraphernalia (“works”) (2,3).

Patients who inject drugs should be educated that HCV infection can be spread through any surface or equipment used to inject drugs. Examples include needles, cookers, cottons, water, breakdown, ties, and alcohol prep pads. It is also possible to contract HCV through nasal inhalation (snorting) of substances and patients should be counseled not to share straws to prevent transmission.

Initial Work-up for HCV Treatment

Prior to initiating treatment, a comprehensive laboratory work up is required. Laboratory results can guide as to whether focused ultrasonography is indicated. Multiple vaccines are recommended prior to initiating treatment. Pregnancy should be ruled out and reliable contraception should be provided.

Treatment Considerations

Before beginning HCV treatment in the primary care setting, assess the following:

- Capacity for patient medication adherence
 - Lack of adherence can result in a failed treatment and therapy resistance
- Current or previous drug use
 - Not an absolute contraindication, Maine has removed the barrier that patients must be 6 months in recovery for HCV treatment (4)
- Check drug interactions using the [HEP Drug Interactions](#) checker from the University of Liverpool

Refer patients who:

- Have advanced liver disease
- Are co-infected with Hepatitis B and/or HIV
- Have had a prior treatment failure

Available Medications

Compared to older interferon-based medications, Direct Acting Antiviral therapies (DAA's) have been effectively used to treat HCV, even in the setting of advanced fibrosis. Two pan-genotypic drug combinations are currently indicated for treatment in the simplified algorithm.

Evaluation and Follow-Up

During treatment monitoring includes:

- Regular in-person or virtual follow-up to assess for medication adherence, side effects, and provide patient support
- Laboratory monitoring is no longer recommended for most patients

After treatment, check:

- HVC RNA level at 12+ weeks after therapy completion-an undetectable viral load is defined as sustained virologic response (SVR)-refer if not achieved

References

All recommendations summarized herein are from the [CDC](#) and [AASLD](#) as of December 2020, Additional sources:

1. Zibbell et al. Increases in Acute Hepatitis C Virus Infection Related to a Growing Opioid Epidemic and Associated Injection Drug Use, United States, 2004 to 2014. *Am J Public Health*. 2018;108(2):175-181.
2. Hagan et al. Reduced injection frequency and increased entry and retention in drug treatment associated with needle-exchange participation in Seattle drug injectors. *J Subst Abuse Treat*. 2000;19(3):247-52.
3. Bernard et al. Estimation of the cost-effectiveness of HIV prevention portfolios for people who inject drugs in the United States: A model-based analysis. *PLoS Med*, 2017; 14(5).
4. Lawlor, Joe. "As Hepatitis C Surges, Maine Plans Action." *Portland Press Herald*, 24 Nov. 2019.