



SYNOPSIS AND RELEVANCE

The goal of this module is to allow participants to determine if HCV testing (serologic, viral load, and genotyping) is being appropriately performed in their laboratory and if needed, to apply intervention(s) that will improve utilization. Potential assessments include:

1. Are positive serologic HCV assays being unnecessarily repeated?
2. Are all initially serologically positive patients receiving an HCV RNA test (ie, HCV viral load) and a genotype assessment?
3. Are repetitive HCV genotyping tests being performed on the same patient without evidence of a new infection?

INSIGHTS

The diagnostic assessment of a patient with suspected HCV infection, who has never been previously infected by HCV, should:

- Begin with serologic studies, in most instances.
- Include a sensitive HCV RNA test for the initial assessment, if the patient is immunocompromised.

Notes:

- A. Repeat the HCV serologic studies or HCV RNA testing for persons suspected of having liver disease if the initial serologic studies are negative and the exposure occurred within the past six months.
- B. Perform primary HCV RNA testing, rather than HCV serologic studies, for individuals at risk for re-infection after either spontaneous or treatment-related viral clearance, since the anti-HCV serologic assays are expected to remain positive regardless of the infection status.
- C. Perform HCV viral load (ie, RNA test) to determine the presence of active HCV replication and to obtain a baseline prior to therapy.

Perform HCV genotyping to guide therapy, upon discovery of an initial, active infection (ie, positive HCV serology and/or positive HCV RNA test).

BACKGROUND

Joint guidelines for the testing, management and treatment of patients with HCV infections are available from the American Association for the Study of Liver Diseases and the Infectious Diseases Society of America.¹ These recommendations are consistent with those provided by the Centers for Disease Control and Prevention.² The recommendations from these guidelines concerning HCV testing for diagnosis and management are summarized below.

Individuals with behaviors, exposures and conditions associated with an increased risk of HCV should be tested. It has also been recommended that individuals born between 1945 and 1965, who have not had prior testing, should be tested.^{3,4} Annual testing is recommended for individuals who continue to participate in high-risk activities.

Serologic studies are the initial tests that should be performed in most instances. These are used to detect individuals who have been infected by HCV. Positive serologic studies should be confirmed by a sensitive HCV RNA test (ie, HCV viral load testing).

A repeat HCV serologic study or HCV RNA testing is recommended for persons suspected of having liver disease, if the initial serologic studies were negative and the exposure occurred within the past six months. HCV RNA testing should be considered, rather than or in addition to serologic studies, in immunocompromised individuals.

Primary HCV RNA testing is also recommended for individuals at risk for reinfection after either spontaneous or treatment-related viral clearance, since the anti-HCV serologic assays are expected to remain positive.

It is recommended that a baseline HCV viral load be obtained prior to the initiation of therapy. HCV genotyping is also recommended to guide therapy.

Individuals who have had positive serologic studies for HCV, but a negative HCV RNA test (ie, viral load) should be informed that they do not have evidence of current (active) HCV infection.

The uniform implementation of these guidelines will produce substantial benefits for the laboratory, the medical facility, and patients:

- Fewer patients will be lost to follow up and remain untreated.
- More patients with HCV will receive a baseline viral load prior to the initiation of therapy.
- More patients with HCV will receive HCV genotyping to guide therapy.

REFERENCES

1. HCV guidance: recommendations for testing, managing, and treating hepatitis C. AASLD-IDS. Page updated October 24, 2022. Accessed April 14, 2023. <http://www.hcvguidelines.org>
2. Hepatitis C questions and answers for health professionals. Centers for Disease Control and Prevention. Page last reviewed: August 7, 2020. Accessed April 14, 2023. <http://www.cdc.gov/hepatitis/hcv/hcvfaq.htm#section3>
3. Hepatitis C. Centers for Disease Control and Prevention. Page reviewed July 28, 2020. Accessed April 14, 2023. <http://www.cdc.gov/hepatitis/hcv/>
4. Smith BD, Morgan RL, Beckett GA, et al. Recommendations for the identification of chronic hepatitis C virus infection among persons born during 1945-1965 [published correction appears in MMWR Recomm Rep. 2012 Nov 2;61(43):886]. MMWR Recomm Rep. 2012;61(RR-4):1-32. Accessed April 14, 2023. <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6104a1.htm>
5. Smith BD, Yartel AK, Krauskopf K, et al. Hepatitis C virus antibody positivity and predictors among previously undiagnosed adult primary care outpatients: cross-sectional analysis of a multisite retrospective cohort study. *Clin Infect Dis*. 2015;60(8):1145-1152. doi:10.1093/cid/civ002