

# Hepatitis Screening

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[➔ Instructions for Use](#)

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Related Medical Management Guideline
<ul style="list-style-type: none"> <li><a href="#">Preventive Care Services</a></li> </ul>

## Coverage Rationale

Hepatitis screening is proven and medically necessary for hepatitis C virus (HCV) infection in adults aged 18 to 79 years whether or not risk factors have been identified.

Hepatitis screening is proven and medically necessary for high risk individuals with the following indications:

- Blood transfusion prior to 1992
- Birth or travel to high or moderate endemic regions with prevalence of hepatitis A virus (HAV) or hepatitis B virus (HBV) infection
- Chronic or long-term liver disease with elevated liver enzymes (abnormal ALT/AST)
- Clotting- factor disorders, such as hemophilia
- Current and past use of injection drug use; this includes those who injected once or a few times many years ago
- Donors of blood, plasma, organs, tissue, or semen
- Exposure to individuals with HBV infection through household, secondary contacts or needle sharing
- Health-care workers, emergency medical, and public safety personnel after needle sticks, sharps or mucosal exposures to HCV-positive blood
- Hemodialysis
- Hepatitis C virus(HCV) positive
- High-risk sexual behavior, multiple partners, intercourse with trauma, and sexually transmitted diseases (STD)
- HIV-positive infection, and those who are high risk of HIV acquisition
- Immunosuppression due to immunosuppressive therapy for rheumatologic or gastroenterologic disorders, chemotherapy, and organ transplantation
- Infants born in the US whose parents were born in regions with high rates of Hepatitis B
- Infants born to HBV or HCV infected mothers
- Men who have sexual relations with men(MSM)
- Pregnancy, except in settings where the prevalence of HCV infection is <0.1%
- Present sexual partners of HCV-infected individuals
- Prior to anti-TNF initiation
- Recipient of clotting factor concentrates made before 1987
- Recipients of blood or organs from a donor who later tested HCV positive

- Residents and Institutional care workers
- Those who work with non-human primates

Note: For additional information, refer to the Medical Management Guideline titled [Preventive Care Services](#).

## Definitions

**HCV Antibody Test:** The third-generation HCV EIA test is the most frequently used antibody test to initially screen for HCV infection. This test has high sensitivity, wide availability, and low cost. However, antibody is not detected for many months after infection.

**Hepatitis A:** A highly contagious viral condition that causes inflammation affecting the liver's ability to function. Hepatitis A virus (HAV) infection is primarily transmitted by the fecal-oral route, by either person-to-person contact or consumption of contaminated food or water. Although viremia occurs early in infection and can persist for several weeks after onset of symptoms, bloodborne transmission of HAV is uncommon. HAV has an incubation period of approximately 28 days (range: 15–50 days). HAV replicates in the liver and is shed in high concentrations in feces from 2 weeks before to 1 week after the onset of clinical illness. HAV infection produces a self-limited disease that does not result in chronic infection or chronic liver disease.

**Hepatitis A Antibody Test:** Also known as HAV IgM antibody, is the preferred test for diagnosis of acute hepatitis A infection because it rises early and persists only 3 to 12 months.

**Hepatitis B:** Hepatitis B virus (HBV) is transmitted through exposure to infective blood, semen, and other body fluids. HBV can be transmitted from infected mothers to infants at the time of birth or from family member to infant in early childhood. Transmission may also occur through transfusions of HBV-contaminated blood and blood products, contaminated injections during medical procedures, and through injection drug use. HBV also poses a risk to healthcare workers who sustain accidental needle stick injuries while caring for infected-HBV patients. Among persons with chronic HBV infection, the risk for premature death from cirrhosis or hepatocellular carcinoma is 15% to 25%.

**Hepatitis B Core Antibody Test:** Also known as HBV Core IgM Antibody (HBcAb, IgM), is detectable during acute but not chronic HBV infection.

**Hepatitis B Surface Antigen Test:** Also known as HBV Surface Antigen (HBsAg). Hepatitis B antigen is a protein on the surface of hepatitis B virus; it can be detected in high levels in serum during acute or chronic hepatitis B virus infection. The presence of HBsAg indicates that the person is infectious. The body normally produces antibodies to HBsAg as part of the normal immune response to infection. HBsAg is the antigen used to make hepatitis B vaccine.

**Hepatitis C:** Hepatitis C virus (HCV) is mostly transmitted through direct percutaneous exposure to blood. This may happen through transfusions of HCV-contaminated blood and blood products, contaminated injections during medical procedures, and through injection drug use. Sexual transmission is also possible, but is much less common. According to the Center for Disease Prevention and Control and Prevention (CDC) Hepatitis C Guideline, hepatitis C virus (HCV), is the most common chronic bloodborne pathogen in the United States; approximately 2.7-3.9 million persons are chronically infected.

**Hepatitis D:** Hepatitis D (HDV), also known as "delta hepatitis," is a serious liver disease caused by infection with the Hepatitis D virus. This is an RNA virus structurally unrelated to the Hepatitis A, B, or C viruses. Hepatitis D, which can be acute or chronic, is uncommon in the United States. HDV is an incomplete virus that requires the helper function of HBV to replicate and only occurs among people who are infected with the Hepatitis B virus (HBV). The dual infection of HDV and HBV can result in a more serious disease and worse outcome.

**Hepatitis E:** Hepatitis E virus (HEV) is mostly transmitted through consumption of contaminated water or food. HEV is a common cause of hepatitis outbreaks in developing parts of the world and is increasingly recognized as an important cause of disease in developed countries. HEV infection usually results in a self-limited, acute illness. When HEV infection does occur, it is usually the result of travel to a developing country where Hepatitis E is endemic. (CDC Division of Viral Hepatitis, 2018) (Quest Diagnostics, 2017)

## Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this guideline does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Guidelines may apply.

CPT Code	Description
86704	Hepatitis B core antibody (HBcAb); total
86705	Hepatitis B core antibody (HBcAb); IgM antibody
86706	Hepatitis B surface antibody (HBsAb)
86707	Hepatitis Be antibody (HBeAb)
86708	Hepatitis A antibody (HAAb)
86709	Hepatitis A antibody (HAAb); IgM antibody
86803	Hepatitis C antibody
86804	Hepatitis C antibody; confirmatory test (e.g., immunoblot)
87340	Infectious agent antigen detection by immunoassay technique, (eg, enzyme immunoassay [EIA], enzyme-linked immunosorbent assay [ELISA], fluorescence immunoassay [FIA], immunochemiluminometric assay [IMCA]) qualitative or semiquantitative; hepatitis B surface antigen (HBsAg)
87341	Infectious agent antigen detection by immunoassay technique, (eg, enzyme immunoassay [EIA], enzyme-linked immunosorbent assay [ELISA], fluorescence immunoassay [FIA], immunochemiluminometric assay [IMCA]) qualitative or semiquantitative; hepatitis B surface antigen (HBsAg) neutralization
87350	Infectious agent antigen detection by immunoassay technique, (eg, enzyme immunoassay [EIA], enzyme-linked immunosorbent assay [ELISA], fluorescence immunoassay [FIA], immunochemiluminometric assay [IMCA]) qualitative or semiquantitative; hepatitis Be antigen (HBeAg)
87902	Infectious agent genotype analysis by nucleic acid (DNA or RNA); Hepatitis C virus
87912	Infectious agent genotype analysis by nucleic acid (DNA or RNA); Hepatitis B virus

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HCPCS Code	Description
G0472	Hepatitis C antibody screening for individual at high risk and other covered indication(s)
G0499	Hepatitis B screening in nonpregnant, high-risk individual includes hepatitis B surface antigen (HBSAG), antibodies to HBSAG (anti-HBS) and antibodies to hepatitis B core antigen (anti-HBC), and is followed by a neutralizing confirmatory test, when performed, only for an initially reactive HBSAG result

### Diagnosis Code

[Hepatitis Screening: Diagnosis Code List](#)

## Description of Services

The word "hepatitis" means inflammation of the liver. Viral hepatitis is caused by infection with any of at least five distinct viruses: (A, B, C, D, and E). The most common types are Hepatitis A, Hepatitis B, and Hepatitis C. All of the major hepatotropic viruses can cause viral hepatitis but only hepatitis B with or without co-infection with hepatitis D and hepatitis C can cause liver disease. Chronic infection can lead to cirrhosis and hepatocellular carcinoma. All forms of viral hepatitis were listed on the documents on the CDC website. (CDC Division of Viral Hepatitis, 2020).

In the United States, new cases of Hepatitis B virus (HBV) among adults are largely transmitted through injection drug use or sexual intercourse, but most prevalent cases of HBV infection are chronic infections from exposure occurring in infancy or childhood. Another major risk factor for HBV infection is country of origin. In the United States, adults with HBV born in high-prevalence countries were commonly infected during childhood. In children, the primary source of infection is perinatal transmission at birth.

Testing and diagnosis of hepatitis B and C infection is the gateway for access to both prevention and treatment services, and is a crucial component of an effective response to the hepatitis epidemic. Early identification of persons with chronic HBV or HCV infection enables them to receive the necessary care and treatment to prevent or delay progression of liver disease. Testing also provides an opportunity to link people to interventions to reduce transmission, through counselling on risk behaviors and provision of prevention commodities (such as sterile needles and syringes) and hepatitis B vaccination. (WHO, 2017)

## Regions with High Rates of Hepatitis B (USPSTF 2015)

- Africa: All countries
- Asia
- Australia and South Pacific: All countries except Australia and New Zealand
- Middle East: All countries except Cyprus and Israel
- Eastern Europe: All countries except Hungary
- Western Europe: Malta, Spain and indigenous populations of Greenland
- North America: Alaska natives and indigenous populations of northern Canada
- Mexico and Central America: Guatemala and Honduras
- South America: Ecuador, Guyana, Suriname, Venezuela, and Amazonian areas of Bolivia, Brazil, Colombia and Peru
- Caribbean: Antigua and Barbuda, Dominica, Grenada, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, Turks and Caicos

## Clinical Spectrum of Viral Hepatitis (Nichols, Updated 2017)

Hepatitis Virus	Transmission Route	Incubation Period	Mortality	Likelihood of Carrier State	Likelihood of Chronic Disease	Association with Hepatocellular Carcinoma
HAV	Fecal-oral	2-6 wk	1%	None	None	No
HBV	Parenteral, perinatal, sexual	4-26 wk	1%-2%	10% (adults) 90% (infants)	5%	Yes
HCV	Parenteral, perinatal, sexual	2-23 wk	1%-5%	50%-80%	50%-85%	Yes
HDV	Parenteral, perinatal, sexual	6-26 wk	2%-20%	Variable	90% in superinfection <sup>a</sup>	Yes <sup>b</sup>
HEV	Fecal-oral	2-9 wk	1% <sup>c</sup>	Rare	Rare <sup>c</sup>	No

HCC: HepatoCellular Carcinoma.

<sup>a</sup>Higher in immunocompromised patients.

<sup>b</sup>Requires coinfection with HBV. Simultaneous infection with HBV is associated with severe acute disease and low likelihood of chronic infection (< 5%); superinfection with HBV carries high likelihood of fulminant disease (2%-20%), chronic HDV infection (up to 80%), and cirrhosis (60%-70%), and may progress to hepatocellular carcinoma (HCC).

<sup>c</sup>10%-30% in pregnant women.

## Clinical Evidence

In 2020, U.S. Preventive Services Task Force (USPSTF) updated its recommendation for screening for HCV infection to apply broadly to all, to adults aged 18 to 79 years. In its Practice Considerations section of the updated recommendation, the USPSTF also clarifies that clinicians may want to consider screening in adolescents younger than 18 years and in adults older than 79 years who are at high risk (e.g., past or current injection drug use). It also concludes that because of the increasing

prevalence of HCV infection in women aged 15 to 44 years and in infants born to HCV infected mothers, clinicians may want to consider screening pregnant person younger than 18 years. Additionally, the USPSTF concludes that treatment of HCV continues to evolve, resulting in greater benefits and fewer harms than when the USPSTF last considered the evidence. Direct-acting antiviral regimens are of shorter duration, with higher rates of sustained virologic response (SVR) and fewer serious harms than previous treatment regimens. Since 2013, the prevalence of HCV infection has increased in younger persons aged 20 to 39 years. There are limited epidemiologic data available on HCV incidence in adolescents younger than 18 years. The HCV infection prevalence rates in older adults born between 1945 and 1965 remain relatively high, and prevalence in the elderly will increase as this population ages. Clinical trials of DAA treatment included adults in their early 80s, which increases the evidence for the benefits of screening in older adults. In addition, many older adults could experience the benefits of screening. As a result, the USPSTF concluded that broadening the age for HCV screening beyond its previous recommendation will identify infected patients at earlier stages of disease who could greatly benefit from effective treatment before developing complications.

Moran et al. (2020) The authors analyzed data from 2015-2018 regarding prevalence estimates of past or present HBV infection and evidence of hepatitis B vaccination, based on blood collected in the National Health and Nutrition Examination Survey (NHANES). The prevalence of any past or present HBV infection during 2015-2018 was 4.3%. Prevalence was higher among men (5.3%) compared with women (3.4%), and was highest among non-Hispanic Asian adults (21.1%), followed by non-Hispanic black adults (10.8%). Adults who were born outside of the 50 United States and the District of Columbia had a higher prevalence of past or present infection (11.9%) compared with those born in the United States (2.5%). These results are consistent with prior literature on HBV infection by race and ethnicity and birth status. There was a significant decreasing trend over time in past or present infection from 1999-2002 (5.7%) through 2015-2018 (4.3%). This decrease corresponds to an increasing trend during the same time period in hepatitis B vaccination based on blood test results. Prevalence among adults was 12.3% during 1999-2002 and increased to 25.2% during 2015-2018. NHANES sample does not include certain groups, such as institutionalized, incarcerated, and homeless persons. There may be a higher prevalence of risk behaviors and need for adult hepatitis B vaccination among some of these populations (e.g., injection-drug users). Therefore, the data in this report may provide conservative estimates of the overall prevalence of infection and vaccination.

Schillie et al. (2020) reported the following report. The CDC recommends hepatitis C screening of all adults aged  $\geq 18$  years once in their lifetimes, and screening of all pregnant women (regardless of age) during each pregnancy. The recommendations include an exception for settings where the prevalence of HCV infection is demonstrated to be  $< 0.1\%$ ; however, few settings are known to exist with a hepatitis C prevalence below this threshold. The recommendation for testing of persons with risk factors remains unchanged from 2017; those with ongoing risk factors should be tested regardless of age or setting prevalence, including continued periodic testing as long as risks persist. These recommendations can be used by health care professionals, public health officials, and organizations involved in the development, implementation, delivery, and evaluation of clinical and preventive services.

The CDC, in collaboration with the New York City (NYC) Department of Health and Mental Hygiene (DOHMH), conducted a chronic HBV surveillance, selecting a random sample of newly reported cases and collecting more detailed information from the patients' clinicians. Analysis was presented on 180 randomly selected HBV cases reported during June 2008 to November 2009. Approximately two-thirds (67 %) of the patients were Asian, and the most commonly reported reason for HBV testing was the patient's birth country or race/ethnicity (27 %). In 70 % of cases, the clinician did not know of any patient risk factors and 62 % did not know their patient's hepatitis A vaccination status despite recommendations. Sixty-nine percent of clinicians stated that they counseled their patients about notifying close contacts about their infection, and 75 % counseled about transmission and prevention. This surveillance effort provided quantitative data on health disparities, illustrating that not all patients received recommended prevention and treatment services. In response to these findings, DOHMH now routinely distributes HBV patient education materials to populations in need (CDC, 2014).

Pauly et al. (2018) conducted a retrospective analysis of 8887 adult patients. They each began treatment with TNF antagonists for autoimmune diseases (dermatologic, rheumatologic, or gastrointestinal) from 2001 through 2010, followed through December 2012. The authors obtained data on HBV infection (52% of patients were screened for HBV before treatment), demographic features, comorbidities, and use of immunosuppressive agents. Of the 4267 patients with unknown HBV status at baseline, 2 had HBV reactivation. Those treated with TNF antagonists for autoimmune diseases, had 39% HBV reactivation rate in those who were HBsAg+ before therapy, but not patients who were HBsAg-negative and anti-HBc+ before therapy. The authors concluded that patients should be screened for HBV infection before anti-TNF therapy; HBsAg+ patients should receive prophylactic antiviral therapy, but not HBsAg-negative, anti-HBc+ patients.

Smith et al (2012) reported that many of the 2.7 to 3.9 million persons living with HCV infection, an increasing cause of morbidity and mortality in the United States, are unaware they are infected and do not receive care (e.g., education, counseling, and medical monitoring) and treatment. The CDC estimates that although persons born between 1945 to 1965 comprise an estimated 27% of the population, they account for approximately three-fourths of all HCV infections in the United States, 73% of HCV-associated mortality, and are at greatest risk for hepatocellular carcinoma and other HCV-related liver disease. The CDC is augmenting previous recommendations for HCV testing to recommend one-time testing without prior ascertainment of HCV risk for persons born during 1945 to 1965. These recommendations do not replace previous guidelines for HCV testing that are based on known risk factors and clinical indications, but rather define an additional target population for testing: persons born during 1945 to 1965. The CDC developed these recommendations with the assistance of a work group representing diverse expertise and perspectives. The recommendations are informed by the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) framework, an approach that provides guidance and tools to define the research questions, conduct the systematic review, assess the overall quality of the evidence, and determine the strength of the recommendations.

Evidence regarding the frequency of testing in persons at risk for ongoing exposures to HCV is lacking. Therefore, clinicians should determine the periodicity of testing based on the risk of infection or reinfection. Because of the high incidence of HCV infection among persons who inject drugs and HIV-infected men who have unprotected sex with men, HCV testing at least annually is recommended for these populations (Aberg, 2014); (Linas, 2012); (Wandeler, 2012); (Witt, 2013); (Williams, 2011).

Wiersma et al (2011) reported that most of the estimated 350 million people with chronic hepatitis B virus (HBV) live in resource-constrained settings and that up to 25 % of those persons will die prematurely of hepatocellular carcinoma or cirrhosis. They further state that an informal World Health Organization consultation of experts concluded that chronic HBV is a major public health problem in emerging nations, all HIV-infected persons should be screened for HBV infection, HIV/HBV co-infected persons should be treated with therapies active against both viruses and that reduce the risk of resistance, and that standards for the management of chronic HBV infection should be adapted to resource-constrained settings.

## **Professional Societies**

### ***American Association for the Study of Liver Disease (AASLD)***

The AASLD's practice guidelines for "Treatment of Chronic Hepatitis B" recommended that continued risk based screening for Hepatitis B is necessary to reduce morbidity and mortality of chronic hepatitis B (Terrault et al, 2016).

In 2018, universal hepatitis C screening during pregnancy was recommended by the American Association for the Study of Liver Diseases. This report expands hepatitis C screening for all pregnant women during each pregnancy, except in settings where the prevalence of HCV infection is <0.1%.

### ***American Gastroenterological Association (AGA)***

The AGA's guideline on "The prevention and treatment of hepatitis B virus reactivation during immunosuppressive drug therapy" recommended screening for HBV (HBsAg and anti-HBc, followed by a sensitive HBV DNA test if positive) in patients at moderate or high risk who will undergo immunosuppressive drug therapy. The AGA recommended against routinely screening for HBV in patients who will undergo immunosuppressive drug therapy and are at low risk (Reddy et al, 2015).

### ***North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN)***

NASPGHAN's practice guidelines on "Diagnosis and management of hepatitis C infection in infants, children, and adolescents" noted that children from a region with high prevalence of HCV infection as well as present sexual partners of HCV-infected persons should be screened for HCV infection " (Mack et al, 2012).

## **U.S. Food and Drug Administration (FDA)**

This section is to be used for informational purposes only. FDA approval alone is not a basis for coverage.

Laboratories that perform hepatitis antibody screening are regulated by the FDA under the Clinical Laboratory Improvement Amendments. See the following web site for more information:

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## Guideline History/Revision Information

Date	Summary of Changes
01/01/2021	<b>Template Update</b> <ul style="list-style-type: none"><li>Reformatted policy; transferred content to new template</li></ul>
10/14/2020	<b>Applicable Codes</b> <ul style="list-style-type: none"><li>Updated list of applicable CPT codes; revised description for 87340, 87341, and 87350</li></ul> <b>Supporting Information</b> <ul style="list-style-type: none"><li>Archived previous policy version MMG054.P</li></ul>

## Instructions for Use

This Medical Management Guideline provides assistance in interpreting UnitedHealthcare standard benefit plans. When deciding coverage, the member specific benefit plan document must be referenced as the terms of the member specific benefit plan may differ from the standard plan. In the event of a conflict, the member specific benefit plan document governs. Before using this guideline, please check the member specific benefit plan document and any applicable federal or state mandates. UnitedHealthcare reserves the right to modify its Policies and Guidelines as necessary. This Medical Management Guideline is provided for informational purposes. It does not constitute medical advice.

UnitedHealthcare may also use tools developed by third parties, such as the MCG™ Care Guidelines, to assist us in administering health benefits. UnitedHealthcare West Medical Management Guidelines are intended to be used in connection with the independent professional medical judgment of a qualified health care provider and do not constitute the practice of medicine or medical advice.

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