

Hepatitis B and Hepatitis C: Whom to Test

Most people with viral hepatitis do not know they are infected. Chronic infection with hepatitis B virus (HBV) and/or hepatitis C virus (HCV) is associated with cirrhosis, liver cancer, and liver failure. Complications can be prevented or mitigated by early detection, treatment, and lifestyle changes. Serologic testing is the primary means for identifying persons with viral hepatitis infection. The U.S. Preventive Services Task Force (USPTF) recommends HBV screening of pregnant women and HBV and HCV screening of high risk adults¹ without patient cost sharing.²

I. Populations recommended for hepatitis B testing³

- All pregnant women
- Infants born to hepatitis B surface antigen (HBsAg)-positive mothers
- Persons born in geographic regions with HBsAg prevalence ≥ 2 percent
- U.S.-born persons not vaccinated as infants whose parents were born in geographic regions with HBsAg prevalence ≥ 8 percent⁴
- Household contacts, sex partners, and needle-sharing partners of hepatitis B-infected persons
- Persons with behavioral exposures to hepatitis B
 - Injection drug users
 - Men who have sex with men (MSM)
- Persons with selected medical conditions
 - Elevated liver enzymes (AST/ALT) of unknown etiology
 - Renal disease requiring hemodialysis
 - Human immunodeficiency virus (HIV) infection
 - Any person with a medical condition that requires immunosuppressive therapy
- Persons who are the source of blood or body fluid exposures (e.g., needlestick injury to a healthcare worker) that might warrant postexposure prophylaxis

II. Populations recommended for hepatitis B vaccination, without pre-vaccination serology¹

- All infants, beginning at birth
- Persons under 19 years of age who have not been vaccinated against hepatitis B
- Persons 19 to 59 years of age who have diabetes mellitus and have not been vaccinated against hepatitis B (and persons with diabetes mellitus 60 years of age or older at the discretion of the treating provider)
- Persons having more than one (>1) sexual partner in the past six months
- Persons seeking evaluation or treatment for a sexually transmitted disease
- Health care or public safety workers with reasonably anticipated occupational exposures to blood or infectious body fluids
- Persons with select medical conditions:
 - Chronic (long-term) liver disease
 - End-stage renal disease
- Persons planning to travel to a country/region where ≥ 2 percent of the population has hepatitis B (e.g., Asia, Africa, Ecuador, Peru, Bolivia, Chile, Argentina, Uruguay, Guyana, Suriname, the interior Amazon Basin in South America, Eastern Europe, Central Asia or the Middle East, the Pacific Islands, and Australia)
- Persons who live or work in a facility for developmentally disabled persons
- Anyone who wishes to be protected from hepatitis B infection

III. Populations recommended for hepatitis C testing³

- Persons who have ever injected illegal drugs, including those who injected only once many years ago
- Persons born during the years 1945-1965 (recommended by USPSTF for one-time testing)
- Persons with selected medical conditions
 - All persons with HIV infection, including annual testing of HIV positive MSM
 - Patients with signs or symptoms of liver disease (e.g., abnormal liver enzyme tests)
 - Recipients of clotting factor concentrates made before 1987
 - Recipients of blood transfusions or solid organ transplants before July 1992
 - Recipients of blood or organs from a donor who later tested HCV positive
 - Patients who have ever received long-term hemodialysis
- Children born to HCV-positive mothers should be tested after 18 months of age to avoid detection of maternal antibodies
- Persons with known HCV exposures (e.g., healthcare workers after needlesticks involving HCV-positive blood)

¹ Source: U.S. Preventive Services Task Force <http://www.uspreventiveservicestaskforce.org/BrowseRec/Search?s=hepatitis>

² Source: Centers for Medicare & Medicaid Services: http://www.cms.gov/CCIIO/Resources/Fact-Sheets-and-FAQs/aca_implementation_faqs12.html

³ Source: Centers for Disease Control and Prevention (CDC). Access CDC recommendations and other clinical guidelines for viral hepatitis prevention, testing, management, and care as well as patient education materials at www.cdc.gov/hepatitis or www.cdph.ca.gov/programs/Pages/ovhp.aspx.

⁴ Regions with ≥ 8 percent HBsAg prevalence include Southeast Asia; South and Western Pacific Islands; Africa; the Middle East (except Israel); Haiti; the Dominican Republic; and the Amazon basin. (A complete list is available at wwwnc.cdc.gov/travel/destinations/list.aspx.)

Hepatitis B and Hepatitis C: Patient Self-Administered Risk Assessment

Hepatitis B and hepatitis C are transmitted in different ways. Most people do not know they are infected until they are tested. Hepatitis vaccination and testing are available at this clinic. Please check if these statements apply to you.

I. Have you been exposed to hepatitis B?

- Were you born in an area of the world where at least two percent of the population has hepatitis B (Asia, Africa, Ecuador, Peru, Bolivia, Chile, Argentina, Uruguay, Guyana, Suriname, and the Amazon Basin in South America, Eastern Europe, Central Asia or the Middle East, the Pacific Islands, and Australia)?
- Were you not vaccinated for hepatitis B as an infant?
- Was your mother infected with hepatitis B when you were born?
- Are you pregnant?
- Are you HIV-positive, have an hepatitis C infection, or on immunosuppressive therapy?
- Did you have abnormal liver enzyme test results for an unknown reason?
- Have you ever been on hemodialysis?
- Have you ever had a sexual partner who was infected with hepatitis B?
- Have you lived in the same house with someone infected with hepatitis B?
- Are you a man who has sex with men?
- Have you ever injected illicit drugs or shared drug injection equipment?
- Have you shared needles with someone infected with hepatitis B?
- Are you a health care or public safety worker with a known, recent occupational exposure to hepatitis B-infected blood or bodily fluids (e.g., through an accidental needle stick)?

_____ None of the above _____ Yes, at least one of the above applies to me

II. Do you need to be vaccinated against hepatitis B?

- Are you under 18 but have not been vaccinated against hepatitis B?
- Are you over 18 and under 59 and living with diabetes but have not been vaccinated against hepatitis B?
- Have you had more than one sexual partner in the past six months?
- Are you seeking evaluation or treatment for a sexually transmitted disease?
- Are you a health care or a public safety worker with reasonably anticipated occupational exposures to blood or infectious body fluids?
- Do you have chronic (long-term) liver disease?
- Do you have end-stage renal disease?
- Are you planning to travel to a country/region where at least two percent of the population has hepatitis B (Asia, Africa, Ecuador, Peru, Bolivia, Chile, Argentina, Uruguay, Guyana, Suriname, the interior Amazon Basin in South America, Eastern Europe, Central Asia or the Middle East, the Pacific Islands, and Australia)?
- Do you live or work in a facility for developmentally disabled persons?
- Do you wish to be protected from hepatitis B infection?

_____ None of the above _____ Yes, at least one of the above applies to me

III. Have you been exposed to hepatitis C?

- Have you ever injected illicit drugs, even once, many years ago?
- Were you born during the years 1945 – 1965?
- Did you receive donated blood or donated organs before 1992 and/or blood clotting products before 1987?
- Have you ever been on hemodialysis?
- Are you a health care or public safety worker with a known, recent occupational exposure to hepatitis C-infected blood or bodily fluids (e.g., through an accidental needle stick)?
- Are you HIV-positive?
- Have you had signs or symptoms of liver disease (e.g., abnormal liver enzyme tests, jaundice)?
- Was your mother infected with hepatitis C when you were born?

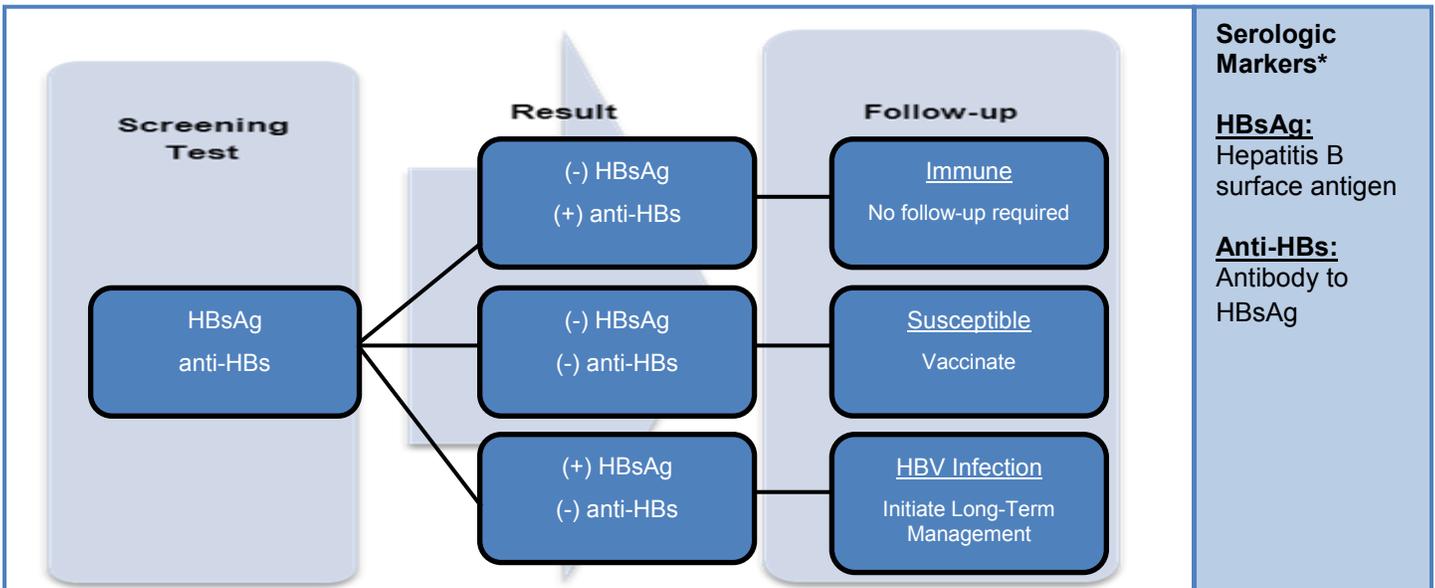
_____ None of the above _____ Yes, at least one of the above applies to me

For administrative use only:

- If yes to I, order tests for HBV (HBsAg and anti-HBs)
- If yes to II, administer first dose of HBV vaccine
- If yes to III, order test for HCV (anti-HCV) w/reflex to RNA

Hepatitis B: Testing and Serology

Hepatitis B is an infection caused by the hepatitis B virus (HBV). Chronic hepatitis B infection is associated with cirrhosis, liver cancer, and liver failure. These complications can be prevented or mitigated by treatment and lifestyle changes (e.g., reducing or eliminating alcohol use and practicing other forms of liver self-care). Serologic testing is the primary means for identifying persons with hepatitis B infection. An effective vaccine is available to prevent HBV transmission.



* Note: Another HBV test is total antibody to hepatitis B core antigen (anti-HBc), which can be used to distinguish whether immunity is due to past infection (anti-HBc-positive) or to previous vaccination (anti-HBc-negative). In patients with chronic HBV infection, anti-HBc is present. In the absence of HBsAg or anti-HBs, an anti-HBc-positive test result has one of four interpretations: 1) recovering from acute HBV infection; 2) distantly immune, test not sensitive enough to detect low level of anti-HBs; 3) susceptible with a false positive anti-HBc; or 4) chronically infected with an undetectable level of HBsAg.

Hepatitis B Vaccination

- 3 doses are administered at 0, 1, 6 months; a combination HAV/HBV vaccine is available.
- If partially vaccinated, the patient does not need to restart the series.
- Vaccination is safe and recommended for pregnant and HIV-infected persons.
- Post-vaccine serology testing (anti-HBs) is recommended for household, needle-sharing, and sexual contacts of HBsAg-positive persons, HIV-positive persons, and healthcare workers.
- Booster doses may be indicated for persons who do not develop effective immune response.
- Adult patients receiving hemodialysis or with other immunocompromising conditions should receive 1 dose of 40 mcg/mL (Recombivax HB) administered on a 3-dose schedule at 0, 1, and 6 months or 2 doses of 20 mcg/mL (Engerix-B) administered simultaneously on a 4-dose schedule at 0, 1, 2, and 6 months.

Principles of Hepatitis B Management

- Provide patient with culturally and linguistically appropriate educational materials (see links below)
- Report case to local health department or via CalREDIE provider portal within seven days
- Vaccinate against hepatitis A (unless immune as indicated by presence of total hepatitis A antibody (anti-HAV))
- Encourage patient's sex partners, household members, and injection-drug sharing contacts to seek HBV testing, medical evaluation, and vaccination
- Counsel patient to minimize alcohol consumption and other liver toxins
- Counsel patient to avoid sharing razors, toothbrushes or personal injection equipment
- Seek a hepatitis B-experienced clinician to evaluate for, manage, and treat chronic HBV infection
- When referring patients, provide the following test results, if possible: CBC with platelets; hepatic panel; PT/INR (prothrombin time/International Normalized Ratio); AFP (alpha-fetoprotein); ultrasound (if high risk per [AASLD guidelines](#)), anti-HBs; HBsAg; anti-HBc; HBeAg (hepatitis B e antigen); anti-HBe (antibody to HBeAg); HBV DNA; anti-HAV (HAV antibody); anti-HCV (HCV antibody); anti-HDV (Hepatitis Delta Virus antibody); HIV¹
- Access clinical guidelines for HBV prevention, testing, management, and care as well as patient education materials at www.cdc.gov/hepatitis or www.cdph.ca.gov/programs/Pages/ovhp.aspx.
- The U.S. Preventive Services Task Force (USPTF) recommends HBV screening of pregnant women.² Infants born to HBsAg positive women should receive vaccination and immunoprophylaxis per national guidelines.³

1 Source: American Association for the Study of Liver Disease (AASLD): www.aasld.org/practiceguidelines/pages/default.aspx

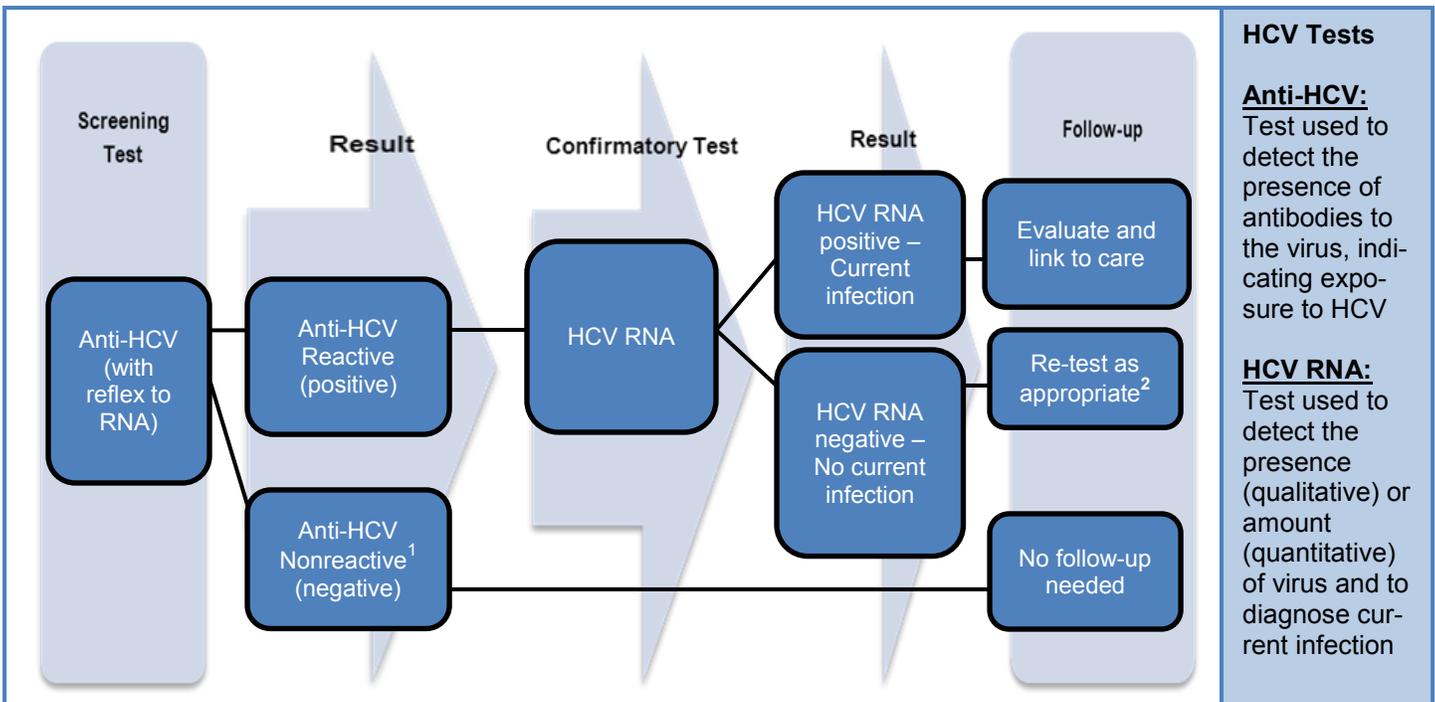
2 Source: U.S. Preventive Services Task Force: <http://www.uspreventiveservicestaskforce.org/BrowseRec/Search?s=hepatitis>

3 Source: Centers for Disease Control and Prevention: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00022736.htm>

Screening Toolkit for Primary Care Providers

Hepatitis C: Testing and Serology

Hepatitis C is an infection caused by the hepatitis C virus (HCV). Chronic infection with HCV is associated with liver failure, cirrhosis, and liver cancer. Significant advances in the development of interferon (IFN)-sparing antiviral agents have made current treatment options more effective and easier to tolerate than traditional IFN-based regimens. HCV treatment may be managed in primary care settings. Treatment of HCV and lifestyle changes (such as eliminating alcohol use) can prevent or mitigate the complications of chronic hepatitis C infection. Serologic testing is the primary way to identify persons with hepatitis C infection. Currently, no vaccine is available to prevent transmission of HCV.



¹ For persons who might have been exposed to HCV within the past 6 months, testing for HCV RNA or follow-up testing for HCV antibody is recommended. For persons who are immunocompromised, testing for HCV RNA may be considered.

² To differentiate past, resolved HCV infection from biologic false positivity for HCV antibody, testing with another HCV antibody assay may be considered. Repeat HCV RNA testing if the person tested is suspected to have had HCV exposure within the past 6 months or has clinical evidence of HCV disease, or if there is concern regarding the handling or storage of the test specimen.

Source: CDC. Testing for HCV infection: An update of guidance for clinicians and laboratorians. *MMWR* 2013;62(18).

Evaluation and Linkages to care

- Counsel patient on meaning of test results; ensure patients with positive anti-HCV receive HCV RNA testing
- Report case to local health department or via CalREDIE provider portal within seven days <http://www.cdph.ca.gov/DATA/INFORMATICS/TECH/Pages/CalREDIEHelp.aspx>; forms and contact information for reporting cases to the local health department can be accessed at: www.cdph.ca.gov/healthinfo/Pages/ReportableDiseases.aspx
- Vaccinate patients against hepatitis A and hepatitis B unless immune
- Advise patients to reduce or eliminate intake of alcohol and other liver toxins
- Counsel patients to practice safer injection, follow infection control guidelines, and avoid sharing personal items that might have blood on them, such as razors, nail clippers, and toothbrushes
- Counsel patients to practice safer sex when engaging with multiple sex partners or infected with HIV
- Provide patient with culturally and linguistically appropriate educational materials (see link below)
- Seek a hepatitis C experienced clinician to evaluate for, manage, and treat chronic HCV infection, either by referral or through clinical consultation
- When referring patients, provide the following test results, if possible: CBC with platelets; hepatic panel; PT/INR (prothrombin time/International Normalized Ratio); ultrasound (if high risk per [AASLD guidelines](#)), anti-HBs; HBsAg; anti-HAV (HAV antibody); anti-HCV (HCV antibody); HCV RNA, quantitative; HCV genotype with subtype; HIV¹
- Access clinical guidelines for HCV prevention, testing, management, and care as well as patient education materials at the CDPH, Office of Viral Hepatitis Prevention website: www.cdph.ca.gov/programs/Pages/HepatitisCGuidelines.aspx

¹ Source: American Association for the Study of Liver Disease (AASLD): www.aasld.org/practiceguidelines/pages/default.aspx.

Hepatitis B: Diagnosis Codes

ICD-9 Diagnosis Codes	
V01.7	Contact with or exposure to communicable diseases, other viral diseases
V05.3	Need for prophylactic vaccination and inoculation against single disease: viral hepatitis
V69.2	High-risk sexual behavior
07.30	Viral hepatitis B without hepatic coma acute or unspecified without hepatitis delta
070.32	Chronic hepatitis B without mention of hepatic coma without mention of hepatitis delta
070.33	Chronic hepatitis B without mention of hepatic coma with mention of hepatitis delta
571.5	Cirrhosis of liver without alcohol

ICD-10 Diagnosis Codes	
Z20.5	Contact with / suspected exposure to viral hepatitis
Z20.828	Exposure to viral disease not elsewhere classified (NEC)
Z23	Encounter for prophylactic vaccination
Z72.51	High-risk sexual behavior, heterosexual
Z72.52	High-risk sexual behavior, homosexual
Z72.53	High-risk sexual behavior, bisexual
B19.10	Unspecified viral hepatitis B without hepatic coma
B16.9	Hepatitis B acute infection without delta agent and without mention of hepatic coma
B18.1	Hepatitis B chronic infection without hepatitis delta agent
B18.0	Chronic hepatitis B with delta agent
K74.0	Hepatic fibrosis
B17.9	Acute viral hepatitis, unspecified
B19.9	Unspecified viral hepatitis without hepatic coma
Z86.19	History of hepatitis B; history of hepatitis C
O98.411	Pregnancy complicated by care of / management affected by viral hepatitis, first trimester
O98.412	Pregnancy complicated by care of / management affected by viral hepatitis, second trimester
O98.413	Pregnancy complicated by care of / management affected by viral hepatitis, third trimester
O98.419	Pregnancy complicated by care of / management affected by viral hepatitis, unspecified trimester
Z22.51	Carrier of viral hepatitis B

ICD-10 implementation is effective October 1, 2015. Existing ICD-9 codes and corresponding ICD-10 codes are provided for cross referencing.

Screening Toolkit for Primary Care Providers

Hepatitis B: Billing Codes

HBV CPT Codes		
90632	Monovalent hepatitis A vaccine for adult dosage	Vaccine Codes
90633	Monovalent hepatitis A vaccine for pediatric/adolescent use (2-dose schedule)	
90634	Monovalent hepatitis A vaccine for pediatric/adolescent use (3-dose schedule)	
90746	Monovalent hepatitis B vaccine for adult dosage	
90743	Monovalent hepatitis B vaccine for adolescent use (2-dose schedule)	
90745	Monovalent hepatitis B vaccine for pediatric use (3-dose schedule)	
90636	Combination hepatitis A/hepatitis B vaccine for adult dosage	
90740	Hepatitis B vaccine for dialysis or immunosuppressed patient (3-dose schedule)	
90747	Hepatitis B vaccine for dialysis or immunosuppressed patient (for 40 mcg dosing and 4-dose schedule)	
86706	Hepatitis B surface antibody (HBsAb)	Testing Codes
87515	Infectious agent detection by nucleic acid (DNA or RNA); hepatitis B virus, direct probe technique	
87516	Infectious agent detection by nucleic acid (DNA or RNA); hepatitis B virus, amplified probe technique	
87517	Infectious agent detection by nucleic acid (DNA or RNA); hepatitis B virus, quantification	
87340	Infectious agent antigen detection by enzyme immunoassay technique, qualitative or semiquantitative, multiple-step method; hepatitis B surface antigen (HBsAg) - This code includes prenatal screening for hepatitis B surface antigen	
87341	Infectious agent antigen detection by enzyme immunoassay technique, qualitative or semiquantitative, multiple-step method; hepatitis B surface antigen (HBsAg), neutralization	
91299	Unlisted diagnostic gastroenterology procedure—If physician owns the equipment and is performing the FibroScan in his or her office	
80055	Prenatal profile I with hepatitis B surface antigen (LabCorp*), or obstetric panel (Quest*)	
90471	Immunization administration (includes percutaneous, intra-dermal, subcutaneous, intramuscular and jet injections, one vaccine (single or combination vaccine/toxoid)	Administration Codes
90472	Each additional vaccine (single or combination vaccine) - List separately in addition to the code for primary procedure	
99201-99205	Office or outpatient visit for the evaluation or management of a new patient**	E & M Codes
36415	Collection of venous blood by venipuncture	

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** Reimbursable through Medi-Cal when billed as telehealth

Hepatitis C: Diagnosis Codes

CD-9 Diagnosis Codes	
V01.79	Contact with or exposure to communicable diseases, other viral diseases
V05.3	Need for prophylactic vaccination and inoculation against single disease: viral hepatitis
V69.2	High-risk sexual behavior
V70.0*	Routine general medical examination at a health care facility
V70.5*	Health examination of a defined sub-population
V70.9*	Unspecified general medical examination
V73.89	Other specified viral diseases
571.5	Cirrhosis of liver without alcohol
070.51	Acute hepatitis C without hepatic coma
070.54	Chronic hepatitis C without hepatic coma
070.70	Unspecified viral hepatitis C

ICD-10 Diagnosis Codes	
Z20.5	Contact with / suspected exposure to viral hepatitis
Z20.828	Exposure to viral disease not elsewhere classified (NEC)
Z23	Encounter for prophylactic vaccination
Z72.51	High-risk sexual behavior, heterosexual
Z72.52	High-risk sexual behavior, homosexual
Z72.53	High-risk sexual behavior, bisexual
Z00.00*	Routine medical examination of adult; Encounter for laboratory as part of general medical examination
Z00.01*	Encounter for general medical examination of adult with abnormal finding
—	No appropriate crosswalk to ICD-10
Z00.8*	Encounter for other general examination
Z11.59	Encounter for screening for other viral disease
K74.0	Hepatic fibrosis
B17.10	Acute hepatitis C without hepatic coma
B18.2	Chronic hepatitis C without hepatic coma
B19.20	Unspecified viral hepatitis C without hepatic coma
B17.9	Acute viral hepatitis, unspecified
B19.9	Unspecified viral hepatitis without hepatic coma
Z86.19	History of hepatitis B; history of hepatitis C
Z22.52	Carrier of viral hepatitis C
Z72.89**	Other problems related to life style
F19.20**	Other psychoactive substance abuse, uncomplicated

ICD-10 implementation is effective October 1, 2015. Existing ICD-9 codes and corresponding ICD-10 codes are provided for cross referencing.

* Note: In support of recommendations for one-time hepatitis C screening of all persons born during 1945 to 1965, Medi-Cal allows reimbursement for CPT code 86803 when submitted with the non-specific ICD-9 diagnosis codes V70.0, V70.5, or V70.9; corresponding ICD-10 codes are Z00.00, Z00.01, and Z00.8

** Note: Medicare covers annual hepatitis C screening of high-risk persons (ongoing illicit injection drug use). The initial encounter should include diagnosis code Z72.89; follow up encounters for annual testing should include diagnosis codes Z72.89 and F19.20. Single screening of all persons with a history of blood transfusion prior to 1992 should be assigned ICD-10 diagnosis code Z72.89 for use with Healthcare Common Procedure Coding System (HCPCS) G0472.

Hepatitis C: Billing Codes

HCV CPT Codes		
86803*	Hepatitis C antibody	Testing Codes
G0472*	Hepatitis C antibody screening for individual at high risk and other covered indication(s)	
86804	Hepatitis C antibody; confirmatory test (e.g., immunoblot or RIBA)	
87520	Infectious agent detection by nucleic acid (DNA or RNA); hepatitis C, direct probe technique	
87521	Infectious agent detection by nucleic acid (DNA or RNA); hepatitis C, amplified probe technique	
87522	Infectious agent detection by nucleic acid (DNA or RNA); hepatitis C, quantification	
87902	Infectious agent genotype analysis by nucleic acid (DNA or RNA); hepatitis C virus	
3266F	Hepatitis C, genotype test	
91299	Unlisted Diagnostic Gastroenterology Procedure - If physicians own the equipment and is performing the FibroScan in his or her office.	
99201-99205	Office or outpatient visit for the evaluation or management of a new patient**	E & M Codes
99241-99275	Consultations: Office or other outpatient, initial or follow-up inpatient, and confirmatory**	
36415	Collection of venous blood by venipuncture	

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* Note: In support of recommendations for one-time hepatitis C screening of all persons born during 1945 to 1965, Medi-Cal allows reimbursement for CPT code 86803 when submitted with the non-specific ICD-9 diagnosis codes V70.0, V70.5, or V70.9; corresponding ICD-10 codes are Z00.00, Z00.01, and Z00.8

** Reimbursable through Medi-Cal when billed as telehealth