Note: This document has been updated; for a current version, please visit
http://www.cdph.ca.gov/programs/Documents/HepatitisBandCScreeningToolkitforPrimaryCare.pdf

Hepatitis B and Hepatitis C: Whom to Test

Most people with viral hepatitis do not know they are infected. Chronic hepatitis B and chronic hepatitis C infection are associated with cirrhosis, liver cancer, and liver failure. These complications can be prevented or mitigated by early detection, treatment, and lifestyle changes. Serologic testing is the primary means for identifying persons with chronic viral hepatitis.

I. Populations recommended for hepatitis B testing[1]

- All pregnant women
- Infants born to hepatitis B surface antigen (HBsAg)-positive mothers
- Persons born in geographic regions with HBsAg prevalence ≥2 percent[2]
- U.S.-born persons not vaccinated as infants whose parents were born in geographic regions with HBsAg prevalence of ≥8 percent[3]
- 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
- Persons with selected medical conditions
  - Elevated liver enzymes of unknown etiology
  - Renal disease requiring hemodialysis
  - HIV infection
  - Any disease requiring immunosuppressive therapy
- Persons who are the source of blood or body fluid exposures that might warrant postexposure prophylaxis (e.g., needlestick injury to a healthcare worker)

II. Populations recommended for hepatitis B vaccination, without pre-vaccination serology[1]

- Persons under 19 years of age who have not been vaccinated against hepatitis B
- Persons over 19 years of age and under 60 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 where at least two percent of the population has hepatitis B (Asia, Africa, the Amazon Basin in South America, the Pacific Islands, Eastern Europe or the Middle East)
- 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 testing[1]

- 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 human immunodeficiency virus (HIV) infection
  - 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 hepatitis C virus (HCV)-positive
  - Patients who have ever received long-term hemodialysis
- Children born to HCV-positive mothers (to avoid detecting maternal antibody, these children should not be tested before age 18 months)
- Persons with known HCV exposures (e.g., healthcare workers after needlesticks involving HCV-positive blood)

[1] 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.

[2] Regions with ≥2 percent HBsAg prevalence include the regions described below as well as South, Central, and Southwest Asia, Japan; Russia; Eastern and Southern Europe; Honduras; Guatemala; North America (Alaska Natives and indigenous populations of Northern Canada); and the areas surrounding the Amazon River basin. (A complete list is available at wwwnc.cdc.gov/travel/destinations/list.aspx.)

[3] 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 interior Amazon River basin. (A complete list is available at wwwnc.cdc.gov/travel/destinations/list.aspx.)

Prepared by the California Department of Public Health, April 2014

Hepatitis B and C: Patient Self-Administered Risk Assessment

Hepatitis B and 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, the Amazon Basin in South America, the Pacific Islands, Eastern Europe, or the Middle East)?
- Were you not vaccinated for hepatitis B as infants?
- Was your mother infected with hepatitis B when you were born?
- Are you pregnant?
- Are you HIV-positive, have an HCV 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 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 where at least two percent of the population has hepatitis B (Asia, Africa, the Amazon Basin in South America, the Pacific Islands, Eastern Europe or the Middle East)?
- 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

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For administrative use only:

If yes to I, order test for HBV (HBsAg and anti-HBs) ☐

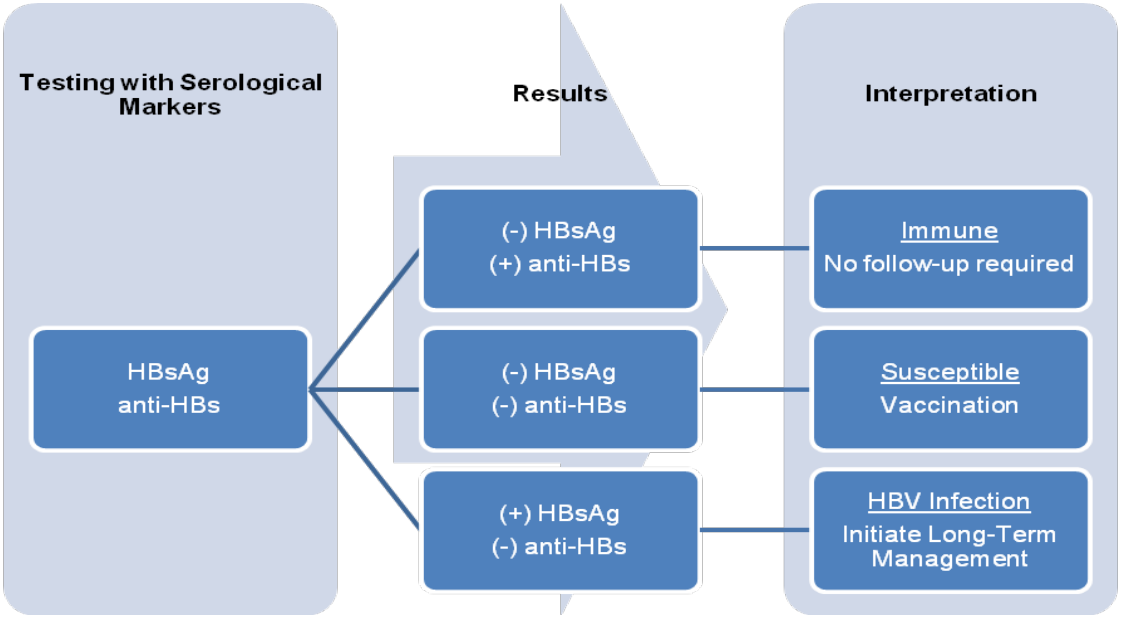
If yes to II, administer first dose of HBV vaccine ☐

If yes to III, order test for HCV (anti-HCV) ☐

Prepared by the California Department of Public Health, April 2014

Hepatitis B: Testing and Serology

Hepatitis B is an infection caused by the hepatitis B virus (HBV). Chronic infection with HBV 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 chronic HBV infection. An effective vaccine is available to prevent HBV infection.



Serologic Markers*

HBsAg:
Hepatitis B surface antigen

Anti-HBs:
Antibody to HBsAg

* 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 hepatitis A/hepatitis B vaccine is available and follows the same dosing schedule
- If partially vaccinated, the patient does not need to restart the series
- Vaccine is safe 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 hemodialysis patients, HIV-infected persons, and immunocompromised persons

Principles of Long-Term Hepatitis B Management

- Provide patient with culturally and linguistically appropriate educational materials (see links below)
- Report case to local health department within seven days
- Vaccinate against hepatitis A (unless immune as indicated by presence of total hepatitis A antibody (anti-HAV) in serum)
- 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; anti-HBs; HBsAg; anti-HBc; hepatitis B e antigen (HBeAg); antibody to HBeAg (anti-HBe); HBV DNA; anti-HAV; anti-HCV; anti-HDV (hepatitis Delta); HIV; AFP; ultrasound (if high risk as per AASLD guidelines).[1]
- 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.

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

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Hepatitis B: Billing and Diagnosis Codes

CPT Codes		
90632	Monovalent hepatitis A vaccine for adult dosage	Vaccine Codes
90633	Monovalent hepatitis A vaccine for pediatric/adolescent use (2-dose schedule)	Vaccine Codes
90634	Monovalent hepatitis A vaccine for pediatric/adolescent use (3-dose schedule)	Vaccine Codes
90746	Monovalent hepatitis B vaccine for adult dosage	Vaccine Codes
90743	Monovalent hepatitis B vaccine for adolescent use (2-dose schedule)	Vaccine Codes
90745	Monovalent hepatitis B vaccine for pediatric use (3-dose schedule)	Vaccine Codes
90636	Combination hepatitis A/hepatitis B vaccine for adult dosage	Vaccine Codes
90740	Hepatitis B vaccine for dialysis or immunosuppressed patient (3-dose schedule)	Vaccine Codes
90747	Hepatitis B vaccine for dialysis or immunosuppressed patient (for 40 mcg dosing and 4-dose schedule)	Vaccine Codes
86706	Hepatitis B surface antibody (HBsAb)	Testing Codes
87515	Infectious agent detection by nucleic acid (DNA or RNA); hepatitis B virus, direct probe technique	Testing Codes
87516	Infectious agent detection by nucleic acid (DNA or RNA); hepatitis B virus, amplified probe technique	Testing Codes
87517	Infectious agent detection by nucleic acid (DNA or RNA); hepatitis B virus, quantification	Testing Codes
87340	Infectious agent antigen detection by enzyme immunoassay technique, qualitative or semiquantitative, multiple-step method; hepatitis B surface antigen (HBsAg)	Testing Codes
87341	Infectious agent antigen detection by enzyme immunoassay technique, qualitative or semiquantitative, multiple-step method; hepatitis B surface antigen (HBsAg), neutralization	Testing Codes
90741	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)	Administration 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
571.8	Other chronic nonalcoholic liver disease
571.9	Unspecified chronic liver disease without the mention of alcohol
070.3	Chronic hepatitis B without mention of hepatic coma

CPT Codes		
90201-99205	Office or outpatient visit for the evaluation or management of a new patient	E & M Codes
36415	Collection of venous blood by venipuncture	E & M Codes

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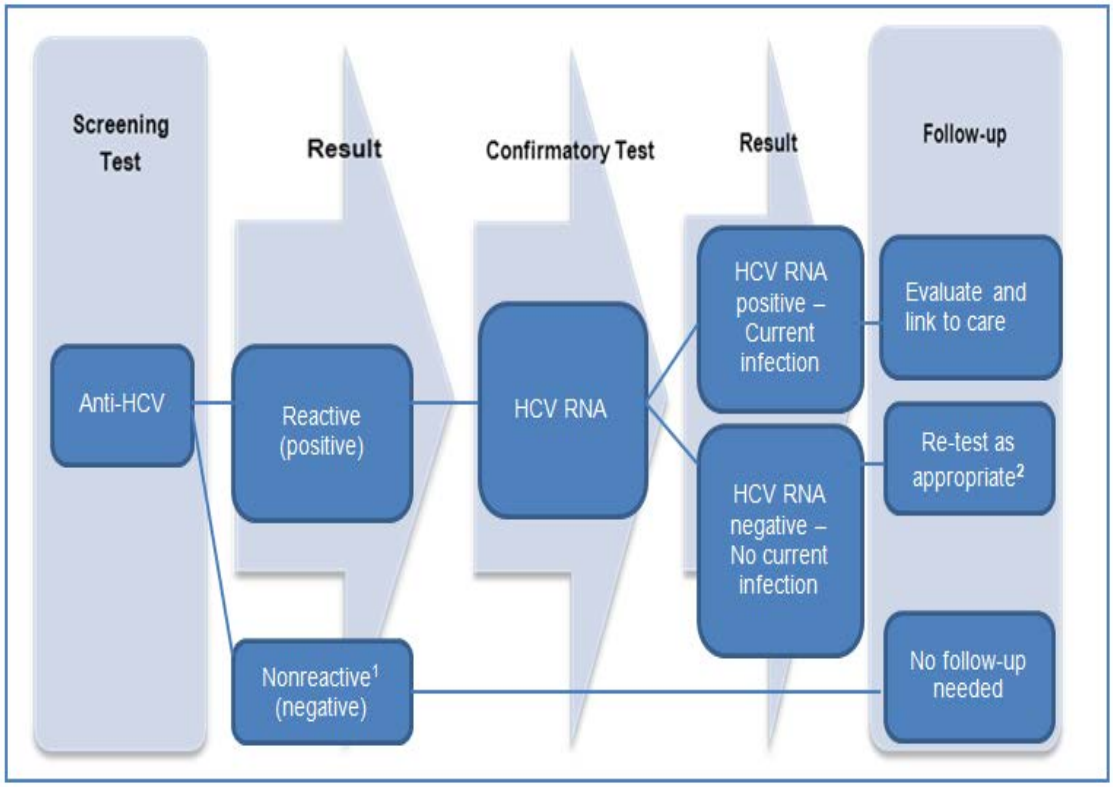
Hepatitis C: Testing and Serology

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-sparing antiviral agents with improved efficacy against HCV may make HCV easier to treat—and cure, including in primary care settings. Treatment of HCV and lifestyle changes (such as eliminating alcohol use) can prevent or mitigate the complications of chronic HCV infection. Serologic testing is the primary way to identify persons with chronic HCV infection. Currently, no vaccine is available to prevent HCV.



HCV Tests

Anti-HCV:
Test used to detect the presence of antibodies to the virus, indicating exposure to HCV

HCV RNA:
Test used to detect the presence (qualitative) or amount (quantitative) of virus and to diagnose current infection

[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 can be considered.

[2] To differentiate past, resolved HCV infection from biologic false positivity for HCV antibody, testing with another HCV antibody assay can 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 and when HCV RNA testing is needed to diagnose current infection
- Report case to local health department within 7 days – 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 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: anti-HCV; HCV RNA, quantitative; HCV genotype (at minimum); CBC with platelets; hepatic panel; PT/INR; anti-HBs; HBsAg; anti-HAV; HIV.[1]
- Access clinical guidelines for HCV prevention, testing, management, and care 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 C: Billing and Diagnosis Codes

CPT Codes		
86803*	Hepatitis C antibody	Testing Codes
86804	Hepatitis C antibody; confirmatory test (e.g., immunoblot or RIBA)	Testing Codes
87520	Infectious agent detection by nucleic acid (DNA or RNA); hepatitis C, direct probe technique	Testing Codes
87521	Infectious agent detection by nucleic acid (DNA or RNA); hepatitis C, amplified probe technique	Testing Codes
87522	Infectious agent detection by nucleic acid (DNA or RNA); hepatitis C, quantification	Testing Codes
90201-99205	Office or outpatient visit for the evaluation or management of a new patient	E & M Codes
36415	Collection of venous blood by venipuncture	E & M Codes

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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
V70.0*	Routine general medical examination at a health care facility
V70.5*	Health examination of a defined subpopulation
V70.9*	Unspecified general medical examination
571.8	Other chronic nonalcoholic liver disease
571.9	Unspecified chronic liver disease without the mention of alcohol
070.51	Acute hepatitis c without hepatic coma
070.54	Chronic hepatitis C without hepatic coma
070.7	Unspecified viral hepatitis C
070.70	Unspecified viral hepatitis C without hepatic coma

* Note: In support of recommendations for one-time hepatitis C screening of all persons born during 1945-1965, Medi-Cal allows reimbursement for CPT code 86803 when submitted with the non-specific diagnosis codes V70.0, V70.5 or V70.9.