# Hepatitis B Care Guide

June 2024

CALIFORNIA CORRECTIONAL HEALTH CARE SERVICES

*Information contained in the Care Guide is not a substitute for a health care professional's clinical judgment. Evaluation and treatment should be tailored to the individual patient and the clinical circumstances. Furthermore, using this information will not guarantee a specific outcome for each patient. Refer to "Disclaimer Regarding Care Guides" for further clarification.*
*https://cchcs.ca.gov/clinical-resources/*

## SUMMARY

### GOALS

- ✓ Screen for chronic Hepatitis B Virus (HBV) infection
- ✓ Vaccinate non-immune patients
- ✓ Evaluate patients with active HBV for treatment
- ✓ Monitor patients for hepatocellular carcinoma (HCC) as appropriate
- ✓ Screen for substance use disorder

### ALERTS

- Acute flare of HBV may occur with treatment discontinuation, monitor patient for several months after discontinuation
- If patient has a co-infection with Hepatitis C Virus (HCV), consult with the HCV Central Team. Treatment for HBV should be initiated concurrently or prior to HCV treatment. Order "Consult to HBV Central Team" in the electronic health record system (EHRS)

### DIAGNOSTIC CRITERIA

Chronic HBV is a deoxyribonucleic acid (DNA) virus infection defined by Hepatitis B surface antigen (HBsAg) present for > 6 months. Disease presentation can vary:

1. Serum HBV DNA varies from undetectable to several billion IU/mL
2. Subdivided into Hepatitis B e-antigen (HBeAg) positive and negative. The "e" antigen represents replicating virus and infectivity.
    - HBeAg positive patients have HBV DNA levels that are typically > 20,000 IU/mL and they have an increased risk of progressive liver disease, but they can respond better to treatment
    - HBeAg-negative patients typically have lower HBV DNA values (2,000-20,000 IU/mL) but can have elevated alanine aminotransferase (ALT) levels, necroinflamation in their liver, a more fluctuating and less predictable course to cirrhosis, and less response to treatment
3. Normal or elevated ALT and/or aspartate aminotransferase (AST) levels
4. Biopsy results show chronic hepatitis with variable necroinflammation and/or fibrosis (see page 5).

### EVALUATION

Indication for screening for chronic HBV is based on several risk factors, most of our patients have indications (see page 3)
Screening is based on HBsAg and Hepatitis B surface antibody (HBsAb) in addition to total hepatitis B core antibody (anti-HBc) (see page 4 for interpretation). Treatment is not indicated in all patients, but for those being considered for additional evaluation, testing is done which can include:

- History and Physical (H&P): mode of transmission, family history of liver disease and/or HCC cancer, and Hepatitis A Virus (HAV) vaccine status
- Sexual risk assessment and substance use disorder screening
- Labs: complete blood count (CBC), comprehensive metabolic panel (CMP), INR, HBeAg, HBe antibody (anti-HBe), and HBV DNA
- Identify viral co-infections: Hepatitis C, Human Immunodeficiency Virus (HIV), and Hepatitis D (anti-HDV)
- In some patients liver fibrosis staging with Fibroscan or FibroSure, or in some rare cases liver biopsy

### PREVENTION

Vaccinate non-immune patients for HAV and/or HBV (for those who screen negative and are still susceptible). For HBV, use current 2-dose formulary product (e.g., Heplisav-B®, which is only 2 doses separated by 1 month). Note that the HBV/HAV combination vaccine is no longer favored and for those

patients with both HAV and HBV non-immune status, use the 2 dose HBV vaccine and the 2 dose Hepatitis A series (1440 units/mL, Havrix®) for 4 shots total. Certain populations need a test of immunity 1 month after completing the HBV vaccine series, including chronic dialysis patients, people with HIV and other immunocompromised people (disease state or immunosuppressant medications), and patients with an isolated core antibody positive (cleared HBV, but reactivation risk). See Attachment A.

Patients with chronic HBV should be vaccinated for HAV if not immune. Offer COVID-19 (see CDC COVID-19 Guidelines), annual influenza and pneumococcal vaccines (Note: Pnuemococcal vaccination recommendations have changed in 2022. Please see the new CDC Pneumococcal Guidelines). HBV vaccination is not needed in patients with chronic HBV, but it will not harm the patient if they do receive the vaccine.

## TREATMENT

- Refer to the HBV Central Team for assistance with treatment and consultant decisions
- Treatment with antiviral agents (interferon alpha and nucleoside/nucleotide analogues [NAs]) is unlikely to eradicate HBV infection, but is used to suppress viral replication and hopefully, induce seroconversion to HBeAg negative status and potentially reduce progression to cirrhosis or HCC.
- The decision to treat is based on multiple factors including:
  - Severity of liver disease/risk of progression (patients with cirrhosis generally treated)
  - Co-infection with HIV, HDV, HCV (patients generally treated)
  - Higher ALT and HBV DNA levels
  - HBeAg status (HBeAg negative patients less responsive to treatment)
  - Age of patients/duration of infection (Patients > 40 more likely to be treated)
- Typically patients should be referred to a specialist for consideration of HBV treatment (see page 7)

## MONITORING (SEE PAGES 7-8)

### FOLLOW-UP VISITS

- On treatment: every 3 months or as indicated
- Not on treatment: every 6 months or as indicated

### LABS

- On treatment: follow specialist direction
- Not on treatment: frequency of ALT and HBV DNA level monitoring varies depending on HBeAg status
- (See algorithm page 6)

### ULTRASOUND

- HCC is a lifetime risk. Optimal screening is not known but if in higher risk group screen for HCC with ultrasound every 6 months (see page 4).