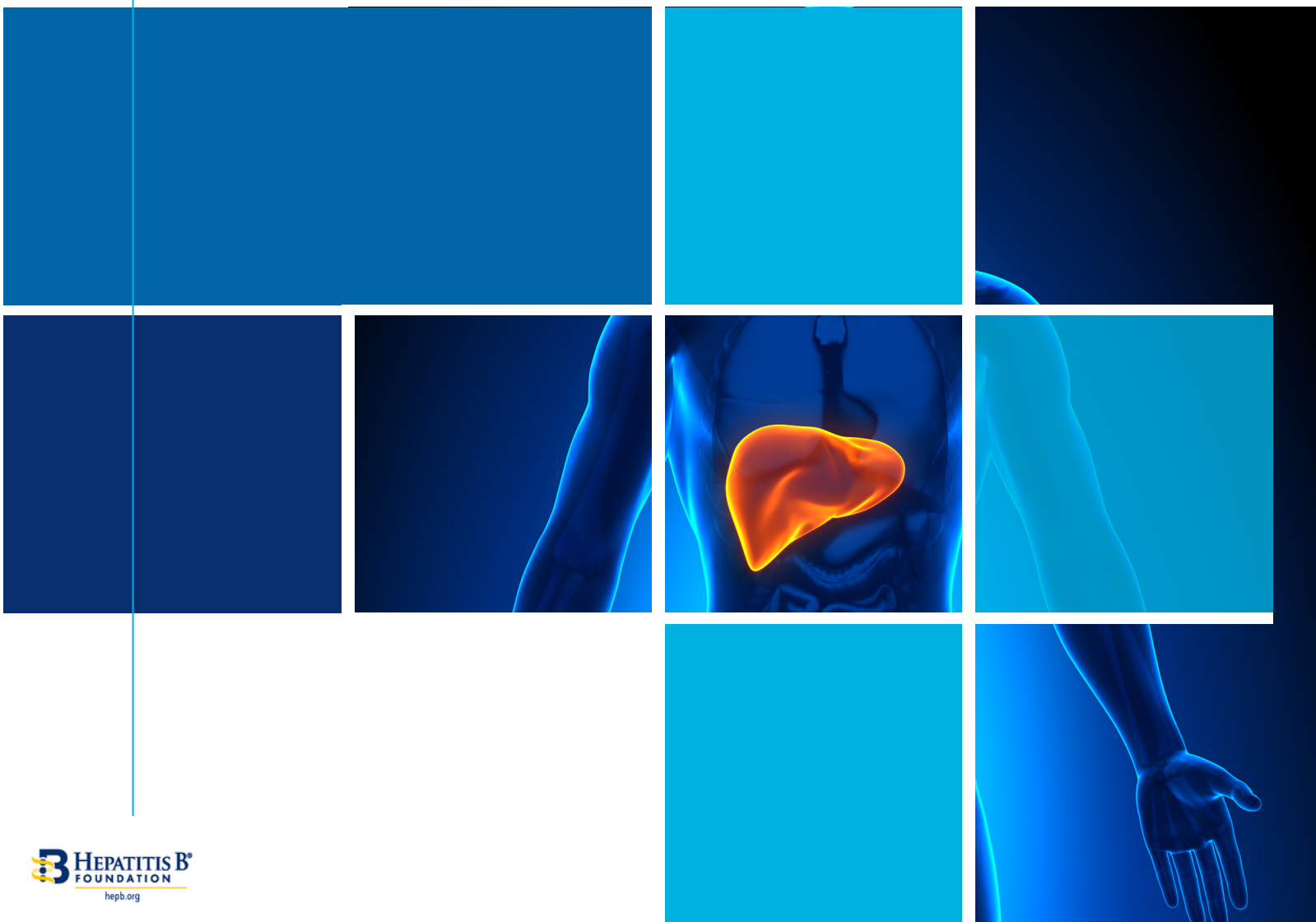


Guidance on the Clinical Implementation of Adult Universal Hepatitis B Vaccination and Screening Recommendations



This resource was created by the Hepatitis B Foundation and the Hepatitis B Screening and Vaccine Advisory Council.

For more information, visit www.hepb.org.



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Introduction

In 2022 and 2023, the Centers for Disease Control and Prevention (CDC) released universal adult hepatitis B vaccination and screening recommendations.

This document is intended to aid clinicians in implementing the new adult hepatitis B recommendations. It contains information on the new hepatitis B recommendations, downloadable resources, and connections to helpful patient and clinical resources.

Why now?

Hepatitis B remains a persistent problem in the United States, with as many as 2.4 million individuals living with chronic hepatitis B infection. Despite having successful recommendations for infants and children, little progress has been made in addressing the hepatitis B virus (HBV) in adults.

The previous, risk-based guidelines for both screening and vaccination failed to capture all who were at risk for or living with HBV. Additionally, the opioid epidemic has contributed to an increase in acute HBV cases across the nation. HBV continues to be an underreported disease, which has made it difficult to show the full scope of the issue. Research shows that universal HBV vaccination and screening for adults are cost-effective and successful in preventing and identifying HBV infections.

Working towards elimination

The World Health Organization, the United States Department of Health and Human Services (HHS), and the CDC have committed to eliminating viral hepatitis by 2030.

Learn more:

- [National Viral Hepatitis Strategic Plan: A Roadmap to Elimination in the United States \(2021-2025\) - HHS](#)
- [Division of Viral Hepatitis 2025 Strategic Plan - CDC](#)

Anyone can be infected with hepatitis B in their lifetime, underscoring the importance of universal vaccination and screening

New Adult Hepatitis B Recommendations

Updated Hepatitis B Vaccine Recommendations

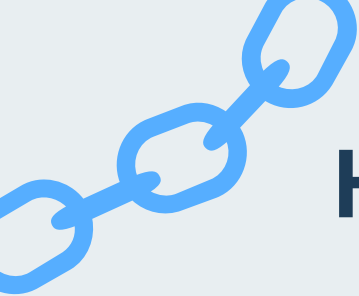
- All infants
- Persons aged <19 years
- Adults aged 19–59 years
- Adults aged ≥60 years with risk factors for hepatitis B
- Anyone who wants the vaccine

CDC's MMWR on Universal Hepatitis B Vaccination

Updated Hepatitis B Screening Recommendations

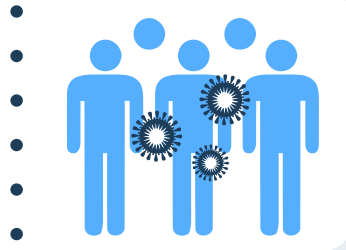
- Screen all adults aged 18 years and older at least once in their lifetime using a triple panel test (HBsAg, HBsAb, HBcAb)
- Screen pregnant people for hepatitis B surface antigen (HBsAg) during each pregnancy regardless of vaccination status and history of testing
- Expand periodic risk-based testing to include people incarcerated, people with a history of sexually transmitted infections or multiple sex partners, and people with hepatitis C virus infection
- Test anyone who requests HBV testing regardless of disclosure of risk

CDC's MMWR on Universal Hepatitis B Screening



The Link Between Hepatitis B and Liver Cancer

Over **20,700 acute hepatitis B infections** occur in the United States each year. **2.4 million** people are living with **chronic hepatitis B.**



Liver cancer is the second most common cancer in the world. Nearly **60%** of cases are caused by hepatitis B **ALONE**

In the United States, liver cancer incidence and death rates have **increased substantially** in recent years



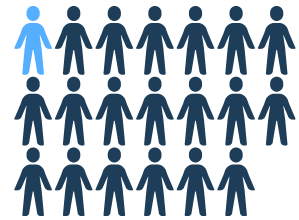
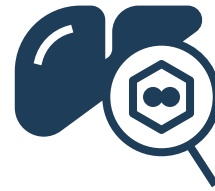
Asian and Black Americans living with chronic hepatitis B are

11-17

times more at risk for liver cancer than others

15% to 25%

risk of **premature death** from liver cancer or cirrhosis without monitoring or antiviral treatment



Treating hepatitis B will prevent **1 in 20** liver cancer deaths globally

Hospitalizations due to hepatitis B-related causes account for more than

\$1,000,000,000/yr

in healthcare costs (not including indirect costs)



More than **two-thirds** of people living with hepatitis B in the U.S. are **unaware** of their status

70%

of adults in the United States are **NOT fully vaccinated** against hepatitis B



Implementing Universal Hepatitis B Screening and Vaccination for Adults

What is hepatitis B?

Hepatitis B is an infection caused by the hepatitis B virus that affects the liver. It is vaccine-preventable and can be managed through highly effective treatments.



People living with chronic hepatitis B have a **15% to 25% risk of premature death from cirrhosis or liver cancer** without monitoring and antiviral treatment as indicated



Up to
2.4 Million
Americans

Are living with chronic hepatitis B



67%

Of people living with hepatitis B are unaware of their infection



70%

Of adults 19 and older have **NOT** completed the hepatitis B vaccine series

How Can Providers Prevent Hepatitis B and Liver Cancer ?

The best way to prevent hepatitis B and liver cancer is with screening and and vaccination.

Updated Adult Hepatitis B Screening Recommendation

- **Hepatitis B screening at least once in a lifetime for adults aged ≥18 years**
 - During screening, test for hepatitis B surface antigen (HBsAg), antibody to hepatitis B surface antigen (anti-HBs), and total antibody to hepatitis B core antigen (anti-HBc)

Screening pregnant persons

- Hepatitis B screening for all pregnant persons during each pregnancy, preferably in the first trimester, regardless of vaccination status or history of testing
- Pregnant persons with a history of appropriately timed triple panel screening and without subsequent risk for exposure to HBV (*i.e.*, no new HBV exposures since triple panel screening) only need HBsAg screening

Updated Adult Hepatitis B Vaccination Recommendation

- Adults aged 19–59 years
- Adults aged ≥60 years with risk factors for hepatitis B
- Adults aged ≥60 years without known risk factors for hepatitis B may also receive the vaccine

Vaccination is not dependent on screening.

If you can do either screening or vaccination, provide the service you are able, and refer for the other service.

For more information,

- Read the Hepatitis B Foundation's Call-to-Action: <https://www.hepb.org/assets/Uploads/FINALv3-Call-to-Action-Universal-HBV-Screening-and-Vaccination-03.13.2023.pdf>
- Read the full recommendation and clinical guidance: https://www.cdc.gov/mmwr/volumes/71/wr/mm7113a1.htm?s_cid=mm7113a1_w

The below implementation strategies were developed by the Hepatitis B Screening and Vaccine Advisory Council to optimize the implementation of the universal screening and vaccination recommendations.



Educate stakeholders about disease burden and new recommendations

- Focus education on cancer prevention benefit of hepatitis B vaccination and screening
- Engage trusted community members to develop culturally and linguistically appropriate messages
- Enlist national partners to provide education and debunk myths
- Partner with professional societies to provide education at annual meetings
- Collaborate with clinical training programs, provide hospital grand rounds, and develop interprofessional continuing education
- Leverage CDC partnerships and create cooperative agreements to create common education resources for all healthcare providers



Explore multi-stakeholder collaborations and technology innovations

Stakeholder Collaborations:

- Seek insights from experienced centers
- Involve disease intervention specialists at sexual health clinics
- Establish pharmacy-provider collaborative communication agreements
- Engage and collaborate with state/local health departments, leveraging state/local clinics for vaccine delivery

Technology Innovations:

- Consider using a mobile-accessible vaccine card
- Leverage capacity built with COVID-19 vaccination implementation
- Update EHR systems to include screening and vaccination prompts
- Develop national standards for integrating data into EHR systems in settings serving corrections and substance use settings



Address Vaccine Hesitancy

- Emphasize the cancer prevention benefit of hepatitis B vaccination and screening
- Create FAQ documents to help HCPs prepare for questions around vaccine safety and efficacy
- Engage trusted providers and faith leaders to deliver the messaging
- Engage with patients on an individual level to understand their concerns, assess vaccine status, and discuss vaccine recommendations



Anyone can have an unrecognized risk of hepatitis B infection, and the risk varies over the lifespan. Screening and vaccination eliminate that risk, regardless of how the risks change.

Who should be vaccinated?



Adults < 60



Adults 60 years and older with risk factors* for HBV



Anyone who wants the vaccine

Universal adult HepB vaccination through age 59 years removes the need for risk factor screening and disclosure.

*See risk factors at the bottom of the page

Which Vaccine?

- All HBV vaccines are approved for use in the general adult population. There is no official preference for one vaccine over another.
 - Heplisav-B and PreHevbrio are NOT recommended in pregnancy due to a lack of safety data
- Heplisav-B and PreHevbrio have quicker and higher rates of protection including higher rates of protection associated with obesity, smoking, diabetes, and well-managed chronic illnesses over older 3 dose HBV vaccines

Screening Information

- All adults 18 years and older should be screened once in their life for HBV using the triple panel test (HBsAg, HBsAb, HBcAb).
- Recommend patients talk to their doctor about screening if you cannot screen during the visit.

Scan to learn more about the updated HBV screening guidelines



FAQ

Q: What should be done if the HBV vaccine series was not completed?

A: If the HBV vaccine series is interrupted, the next dose should be given as soon as possible. The first dose(s) does not need to be repeated.

Q: Is it harmful to have an extra dose of the HBV vaccine or to repeat the entire HBV vaccine series?

A: No, getting extra doses of the HBV vaccine is not harmful.

Q: Who should NOT receive the HBV vaccine?

A: Anyone who has had a serious allergic reaction to a prior dose of the HBV vaccine, any part of the vaccine, or yeast should NOT get the vaccine. However, PreHevbrio is the **only** HBV vaccine that does not contain yeast, and is safe for yeast allergic individuals.

Q: Can the HBV vaccine be given at the same time as other vaccines?

A: Yes. Getting two different vaccines at the same time is not harmful.

Q: Are there symptoms associated with HBV vaccines?

A: Yes. Mild symptoms such as soreness, redness, or swelling in the arm where the shot was given, headache, and/or fever may occur and last 1-2 days.

Q: What if someone is a non-responder?

A: For “susceptible” persons considered at high risk for HBV who previously received a complete vaccine series without follow-up testing, you can 1) give a booster vaccine dose followed by serologic testing 1 to 2 months later, with completion of a full vaccine series if the post-booster HBsAb test remains negative OR 2) give full vaccine series followed by post-vaccination serologic testing 1 to 2 months after the last vaccine dose.

Billing and Insurance

The HBV vaccine should be covered with no cost-shares for all insured adults with commercial insurance, Medicare, and states with expanded Medicaid.

ICD-10: Z23 - Encounter for immunization

CPT Administrative Code: 90471

CPT Product Codes (adult schedule):

- PreHevbrio (3-dose) - 90759
- Engerix-B (3-dose) - 90746
- Twinrix (Hepatitis A& B - 3 dose) - 90636
- Recombivax HB (3-dose) - 90746
- Heplisav-B (2-dose) - 90739

NOTE: The above codes are for a standard adult patient, and the CPT code may differ based on the dosage/schedule needed for your patient. Please refer to current payer publications for the most up-to-date coding information, as codes may have changed.

HBV Risk Factors

Only use to assess when a patient is 60+ years old AND does not request the vaccine.

- Infants born to mothers with HBV
- People born in certain countries where HBV is common
- People born in the U.S. not vaccinated as infants whose parents were born in countries with high rates for HBV
- People living with hepatitis C
- People who have been incarcerated
- People who inject drugs or share needles, syringes, and other types of drug equipment
- Sex partners of people with HBV
- People who have sexually transmitted infections
- People with HIV infection
- Men who have sex with men
- People who live with someone who has HBV
- Health care and public safety workers exposed to blood on the job
- People on dialysis
- People who have elevated levels of certain liver enzymes



Scan to view worldwide prevalence of HBV infection

◆ Incomplete Vaccination Series

- **When feasible, the same manufacturer's vaccines should be used to complete the series.**
 - However, vaccination *should not* be deterred when the manufacturer of the previously administered vaccine is unknown or when the vaccine from the same manufacturer is unavailable.
- **The 2-dose HBV vaccine series (Heplisav-B) only applies when both doses in the series consist of this vaccine.**
 - Series consisting of a combination of 1 dose of Heplisav-B and a vaccine from a **different** manufacturer should consist of **3** total vaccine doses and should adhere to the 3-dose schedule.
- **Doses administered at less than the minimum interval* should be repeated and do not count toward series completion.**
 - However, a series containing 2 doses of Heplisav-B administered at least 4 weeks apart is valid, even if the patient received a single earlier dose from another manufacturer.

*See below for schedule regarding the different vaccines.

◆ Hepatitis B Adult Vaccine Schedules

NOTE: Heplisav-B and PreHevbrio are NOT recommended in pregnancy due to a lack of safety data.

Vaccine	Doses	Age Group	Volume	Schedule of Doses
Heplisav-B	2	Adults > 18	0.5 mL	Dose 1- Now Dose 2- 1 month after dose 1
Engerix-B, PreHevbrio, Recombivax, Twinrix (Hepatitis A & B)	3	Adults > 18	1.0 mL	Dose 1- Now Dose 2- 1 month after dose 1 Dose 3- 6 months after dose 1
Engerix-B (Accelerated)	4	Children > 1 and Adults	0.5 mL	Dose 1- Now Dose 2- 1 month after dose 1 Dose 3- 2 months after dose 1 Dose 4- 1 year after dose 1
Twinrix (Accelerated)	4	Adults > 18	1.0 mL	Dose 1- Now Dose 2- 1 week after dose 1 Dose 3- 1 month after dose 1 Dose 4- 1 year after dose 1

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- Ask the experts: Hepatitis B Vaccines. Immunize.org (2023, August). Retrieved September 29, 2023, from https://www.immunize.org/askexperts/experts_hepb.asp.

PRESENTERS FOR PROVIDER EDUCATION



If you are interested in hosting provider education, or learning more about hepatitis B in the mentioned areas, please see below for a list of qualified speakers.

NAME AND EMAIL	TITLE AND AFFILIATION	AREAS OF HEPATITIS B EXPERTISE
<p>Richard Andrews, MD, MPH, BC richard.andrews@hepatitidoc.com</p>	<p>President, Houston Viral Hepatitis Task Force; National Advisory Committee, Hep B United</p>	<p>Specialty: Family Medicine, Addiction Medicine, Preventative Medicine, International Health, Public Health Harm reduction, cross-cultural medicine, addictions as a risk-factor for hepatitis B, testing, vaccination</p>
<p>Chari Cohen, DrPH, MPH chari.cohen@hepb.org</p>	<p>President, Hepatitis B Foundation</p>	<p>Specialty: Public Health Global epidemiology, higher risk populations, screening, vaccination, public health research</p>
<p>Jose Debes, MD, Ph.D. Debes003@umn.edu</p>	<p>Associate Professor, School of Medicine and School of Public Health, University of Minnesota</p>	<p>Specialty: Hepatology Global epidemiology, Hepatitis B-related hepatocellular carcinoma, hepatitis D epidemiology</p>
<p>Catherine Freeland, Ph.D., MPH catherine.freeland@hepb.org</p>	<p>Associate Director of Public Health Research, Hepatitis B Foundation</p>	<p>Specialty: Public Health Higher risk populations, testing, vaccination, discrimination, harm reduction, implementation science, qualitative research</p>
<p>Robert Gish, MDMD, FAASLD, AGAF, FAST rgish@robertgish.com</p>	<p>Adjunct Professor of Medicine, University of Nevada; Medical Director, Hepatitis B Foundation</p>	<p>Specialty: Hepatology and Transplant Medicine Global epidemiology, higher risk populations, point-of-care RDT testing, vaccination, public health research, hepatitis D, liver cancer biomarkers, new hepatitis B tests</p>

PRESENTERS FOR PROVIDER EDUCATION



NAME	TITLE AND AFFILIATION	AREAS OF HEPATITIS B EXPERTISE
<p>Camilla Graham, MD, MPH cgraham@bidmc.harvard.edu</p>	<p>Assistant Professor in Medicine, Part time, and Physician, Division of Infectious Disease Beth Israel Deaconess Hospital</p>	<p>Specialty: Infectious Diseases Large health systems settings, Electronic Health Record support for screening and vaccination, treatment, management</p>
<p>Michaela Jackson, MPH, MS michaela.jackson@hepb.org</p>	<p>Program Director, Prevention Policy Hepatitis B Foundation</p>	<p>Specialty: Public Health Screening, vaccination, public health, community-based efforts, federal immunization policy</p>
<p>Tatyana Kushner, MD tatyana.kushner@mssm.edu</p>	<p>Associate Professor, Division of Liver Diseases, Icahn School of Medicine at Mount Sinai</p>	<p>Specialty: Hepatology U.S. epidemiology, perinatal hepatitis B, hepatitis B and hepatitis D coinfection</p>
<p>Anthony Martinez, MD, AAHIVS, FAASLD adm35@buffalo.edu</p>	<p>Medical Director, Hepatology, University of Buffalo</p>	<p>Specialty: Hepatology, Addiction Medicine Screening, vaccination, treatment, management</p>
<p>Mark Sulkowski, MD, FIDSA, FAASLD msulkowski@jhmi.edu</p>	<p>Medical Director, Viral Hepatitis Center Divisions of Infectious Diseases and Gastroenterology/ Hepatology, Johns Hopkins University & Medicine</p>	<p>Specialty: Infectious Diseases Management, prevention of infection and reactivation, clinical trials of novel hepatitis B therapies</p>

PRESENTERS FOR PROVIDER EDUCATION



NAME AND EMAIL	TITLE AND AFFILIATION	AREAS OF HEPATITIS B EXPERTISE
<p>Amy Tang, MD amy.tang@nems.org</p>	<p>Director of Immigrant Health, North East Medical Services</p>	<p>Specialty: Internal Medicine Screening, vaccination, management in primary care settings, immigrant populations</p>
<p>Jessie Torgersen, MD, MHS, MSCE jessie.torgersen@penmedicine.upenn.edu</p>	<p>Assistant Professor of Medicine, University of Pennsylvania Perelman School of Medicine</p>	<p>Specialty: Infectious Diseases Management of HBV with and without HIV co-infection, epidemiology of HIV/HBV co-infection</p>
<p>Su Wang, MD, MPH, FACP Su.Wang@rwjbh.org</p>	<p>Medical Director, Center for Asian Health & Viral Hepatitis Programs, Cooperman Barnabas Medical Center</p>	<p>Specialty: Internist, Public Health Screening, vaccination, prevention of mother-to-child transmission, management in primary care settings, immigrant populations</p>

Customizable Hepatitis B Presentation for Providers

This PowerPoint was designed to broadly educate all providers on topics for hepatitis B prevention and diagnosis in relation to CDC's updated hepatitis recommendations. The presentation is downloadable and is meant to be tailored for the intended audience.

 [Download the customizable presentation here.](#)

Presentation Objectives

- Describe socio-cultural and systemic challenges to preventing hepatitis B amongst the general public and populations at higher risk for infection
- Describe hepatitis B diagnostics
- Identify best practices to increase rates of hepatitis B screening and vaccination
- Identify multiple resources for hepatitis B education, testing, and linkage to care

This presentation contains information on:

- Lived Experience of Hepatitis B
- About Hepatitis B
 - Transmission
 - Epidemiology
- Hepatitis B in the United States
- Hepatitis B Health Disparities
- Universal Hepatitis B Screening and Vaccination
 - New recommendations
 - Challenges to implementation
 - Strategies to overcome identified challenges
- Patient Resources
- Clinician Resources



Hepatitis B Resources for Clinicians

Primary Care Resources:

- [Hepatitis B Online](#)
 - HBV diagnosis, prevention, management, and treatment (CME available)
- [Hep B United Philadelphia and National Nurse-Led Care Consortium's Hepatitis B ECHO](#)
 - Monthly HBV training for primary care providers that include one case discussion and a 15-minute didactic (CME available)
- [Driving Hepatitis B Management: Universal Screening and Vaccination in Primary Care](#)
 - The goal of this activity is for learners to be better able to incorporate expert contextualization on the integration of updated CDC guidelines for HBV screening, testing, and vaccination into clinical management (CME/ ABIM MOC / CE available)

HBV Vaccine Resources:

- [Adult Immunization Schedule](#)
 - Contains guidance on routine immunizations and special situations
- [Hepatitis B Vaccination: Information for Healthcare Providers](#)
- [Immunize.org](#)
 - [Implementing Hepatitis B Universal Adult Screening and Vaccination: Clinical Answers for Healthcare Professionals](#)

- [Understanding the Updated Hepatitis B Vaccination Recommendations and Guidance](#)

HBV Screening Resources:

- [CDC's Interpretation of Hepatitis B Serologic Test Results](#)
- [Viral Hepatitis Serology Training](#)
- [Routine Testing and Follow-up for Higher-Risk Populations](#)
- [Screening and Referral Algorithm for HBV Among Pregnant Persons](#)

HBV Management Resources:

- [Hepatitis B Reactivation Guide \(for acute infections\)](#)
- [Chronic Hepatitis B Practice Guidelines](#)

Hepatitis B Resources for Patients

Need HBV fact sheets in a different language? Find them at CDC's Patient Education Hub or at www.hepb.org/factsheets.

Information for Vaccination and Screening

- [Hepatitis B Vaccine Fact Sheet](#)
- [The Importance of Hepatitis B Screening Infographic](#)
- [Hepatitis B Screening and Vaccination of Adults](#)
- [Understanding Your Hepatitis B Test Results](#)
- [CDC's HBV Patient Education Hub](#)
- [Hepatitis B and Pregnancy](#)

Information for Newly Diagnosed

- [Hepatitis B FAQ](#)
- [Hepatitis B Information Guide](#)
- [Hepatitis B and Your Liver Fact Sheet](#)
- [Living with Chronic Hepatitis B Fact Sheet](#)
- [Hepatitis B Treatment Information](#)
- [Hepatitis B Online Support Groups](#)
- [Pregnancy and Hepatitis B](#)
- [B Heppy Podcast](#)
- www.hepbstories.org

#JustB

Real stories from real people living with hepatitis B

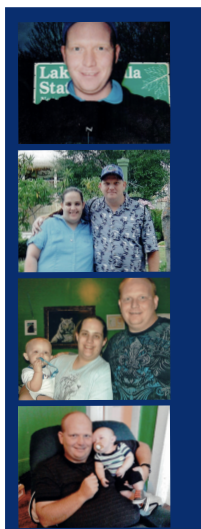
Hepatitis B takes a physical, financial, and mental toll on the people and the families who are impacted by this disease. The #JustB storytelling campaign highlights the powerful experiences of those affected by hepatitis B as a way to raise awareness and encourage people to get tested and vaccinated. Visit www.hepbstories.org for the full collection of national and international voices.

DeWayne's Story

I was 7 years old, at the clinic for a follow up visit. It was 1985, and I'd been in an accident a few months before, where I had a blood transfusion.

The blood supply wasn't being tested for hepatitis B until 1992. I overheard the doctor tell my guardian, "He probably won't live past 30."

#justB



The Importance of HBV Vaccination

- [Alan's Story](#)
- [Alice's Story](#)
- [Dewayne's Story](#)
- [Joe's Story](#)
- [John's Story](#)
- [Sura's Story](#)

The Importance of HBV Screening and Testing

- [Adama's Story](#)
- [Heng's Story](#)
- [Jacki's Story](#)
- [Jason's Story](#)
- [Randy's Story](#)
- [Roger's Story](#)

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