



**Get Updated on Hepatitis B: Screening & Vaccine Recommendations**

Sarah Weninger, HIV/STI/Hepatitis Prevention Coordinator  
April 10, 2024



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**Topics**

- Hepatitis B Epidemiology in World & ND
- Hepatitis B Disease Progression, Transmission and Testing.
- Summarize CDC Hepatitis B Screening Recommendations.



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**Hepatitis B**

- Hepatitis B is a viral infection of the liver caused by the hepatitis B virus (HBV).
- Hepatitis B can cause serious liver damage including cirrhosis and liver cancer.
- Hepatitis B is a vaccine preventable disease.



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### Health Disparities - Who is Impacted in the U.S.?

- Asian Americans and Pacific Islanders
  - Comprise less than 6% of the U.S. population, but account for over 60% of all chronic hepatitis B cases in the country
- African Immigrants
  - Communities can have infection rates as high as 18%
- People who inject drugs
- People with HIV and hepatitis C
- People with kidney disease/diabetes



However, anyone can be at some degree of risk for hepatitis B in their lifetime.

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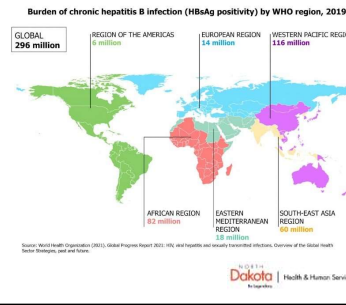
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- Hepatitis B affects approximately 296 million people, including over 6 million children under the age of 5.
- There were 11,635 cases of new chronic hepatitis B reported in U.S, 2020.

### Hepatitis B is prevalent across the world.



Source: World Health Organization (WHO), Global Hepatitis Report 2017, 100, and hepatitis and sexually transmitted infections. Overview of the Global Health Sector Strategy, 2019 and 2030.

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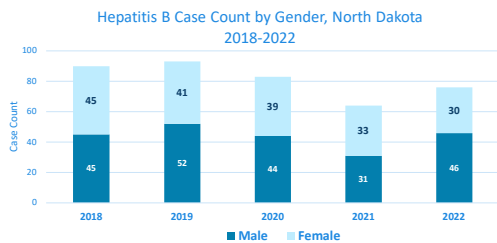
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### Hepatitis B increased 19% in 2022



Source: NDDHHS Sexually Transmitted and Bloodborne Disease Unit

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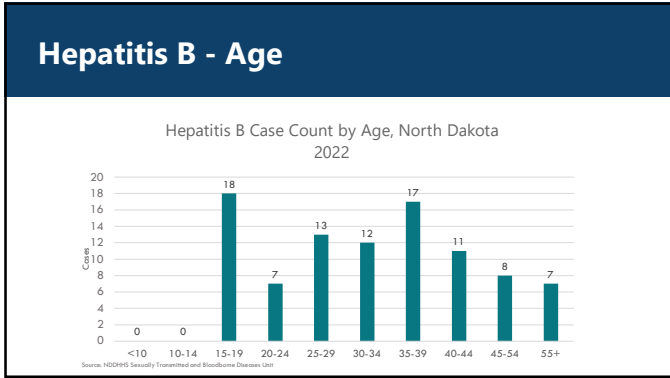
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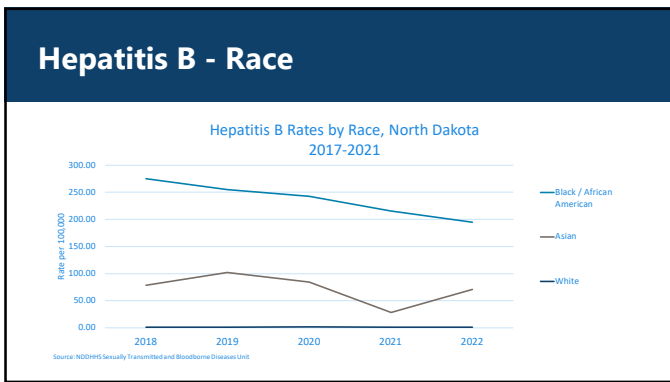
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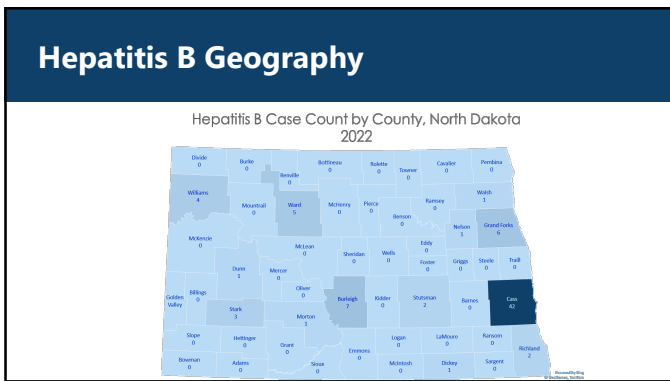
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## Hepatitis B – Stages of Infection

- Stages of Hepatitis B Infection: Acute or Chronic
  - **Acute:** First 6 Months of Infection
  - **Chronic:** Lifelong Infection
- Chronic Infection Depends on Age at Time of Infection
  - Infants – Perinatal Infection: > 90% Chronic
  - Older Adults: 5 to 10% Develop Chronic Infection



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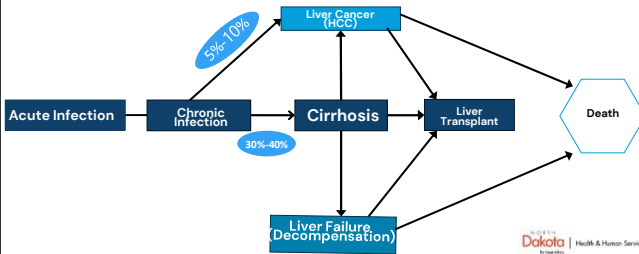
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## Hepatitis B Disease Progression

The progression of hepatitis B is variable. Acute hepatitis B is usually self-limiting and benign but may progress to chronic hepatitis B in a proportion of patients. Chronic hepatitis B may lead to more serious conditions including cirrhosis, liver failure, and hepatocellular carcinoma.



Moore SA, Nair SS, An J, Don-Mat, 1994, Weygand CG, J, Pfeiffer BE, et al. Hepatology. 2003;37:434-442.

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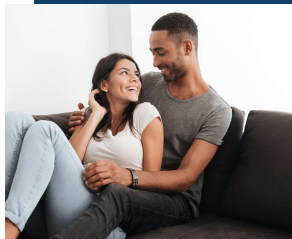
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## Hepatitis B: Person to Person Transmission

- **Percutaneous** (i.e., puncture through the skin) or **mucosal contact** with infectious blood or body fluids (e.g., semen and saliva)
  - Sex with an infected partner
  - Sharing needles, syringes, or drug preparation equipment
  - Birth to an infected mother
  - Contact with blood from or open sores on an infected person
  - Exposures to needle sticks or sharp instruments



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### Infants are at risk of Perinatal Transmission of Hepatitis B.

- HBV Infection in a pregnant women poses a serious risk to her infant at birth.
- 40% infants become HBV-infected if proper postexposure immunoprophylaxis is not provided.
- Prevention: hepatitis B immune globulin and hepatitis B vaccine to their infants within 12 hours of birth.



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### Some adults acutely infected will develop symptoms of hepatitis B.

- Acute HBV infections only cause symptoms some of the time.
- Most children under age 5 years and newly infected immunosuppressed adults are generally asymptomatic.
- 30%–50% of persons aged  $\geq 5$  years have signs and symptoms:
  - Fatigue, Vomiting, Loss of Appetite, Nausea, Abdominal Pain, Dark Urine, Jaundice, Joint Pain



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### Hepatitis B is Treatable.

- Acute Hepatitis B
  - Supportive therapy
- Chronic Hepatitis B
  - No cure
  - Antiviral medications
  - Require continual, life-long care
  - Goal: prevent liver damage and/or hepatocellular carcinoma.



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### Hepatitis B is Preventable!

- Get vaccinated!
- Prevent blood, semen and vaginal fluids from entering body
- Use barriers for sex
- Do not share needles or other equipment that may have blood on them



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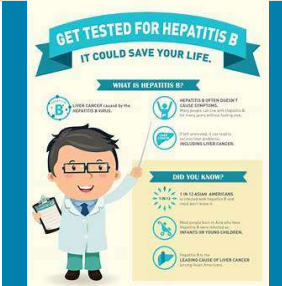
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### Hepatitis B Screening Recommendations – Why Change?

**Universal HBV Screening – New Recommendations:**

- Risk-based guidelines did not accurately capture the problem
  - Rises in acute hepatitis B due to opioid epidemic
  - Two-thirds of case reports to the CDC had no reported risk factor or missed risk factor data
- Global and national goals to eliminate viral hepatitis by 2030



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### Updated HBV Screening Recommendations in 2023.

**Universal HBV Screening – New Recommendations:**

- All adults 18 and older at least once in their lifetime using a triple panel test
- Pregnant people during each pregnancy
- People who are at ongoing risk for exposure should be tested periodically
- Anyone who requests HBV testing should be tested



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Schillie S, Wasler C, Osborne M, Westwood L, Ryanon AB. CDC Recommendations for Hepatitis B Screening Among Adults — United States, 2020. MMWR Recomm Rep. 2023;72(No. RR-2):1-17. DOI: 10.1186/14752875-2023-0010

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## Who Should be Screened for HBV?

- People with a history of STIs or multiple sex partners
- People with HCV or a history of hepatitis C virus infection
- People incarcerated or formerly incarcerated in a jail, prison, or other detention setting
- Persons born in countries with 2% or higher HBV prevalence: US born people not vaccinated as infants whose parents were born in geographic regions with HBsAg prevalence of >8%
- Infants born to HBsAg-positive people
- People who inject drugs or have a history of injection drug use
- People with HIV infection
- Men who have sex with men
- Household contact or former household contacts of people with known HBV infection
- Needle-sharing or sexual contacts of people with known HBV infection
- People on maintenance dialysis, including in-center or home hemodialysis and peritoneal dialysis; People with elevated liver enzymes



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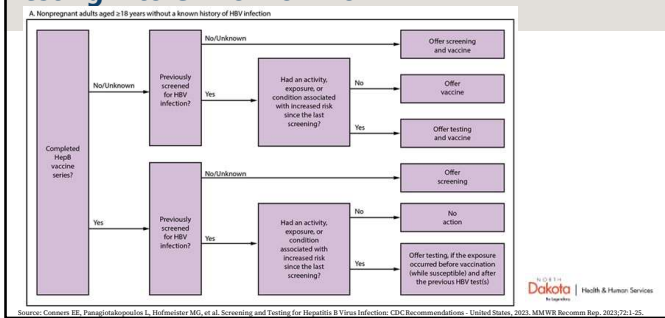
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## Incorporating Hepatitis B Virus Screening and Testing into Clinic Workflow



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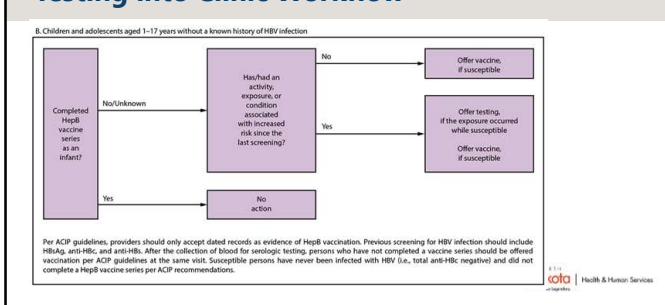
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## Incorporating Hepatitis B Virus Screening and Testing into Clinic Workflow



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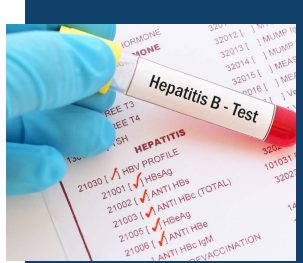
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## What do the HBV Screening tests mean?

### Three-part Hepatitis B Panel

- **HBsAg** – The presence of HBsAg indicates HBV infection, either acute or chronic, except when it might be transiently positive shortly after a dose of HepB vaccine
- **HBsAb** – positive test indicates immunity
  - Can be vaccine-induced or from past exposure
- **HBcAb** – Total anti-HBc develops in all HBV infections, resolved or current, and typically persists for life. Persons whose immunity to HBV is from a vaccine do not develop anti-HBc.



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## Interpreting Hepatitis B Blood Test Results.

Interpretation & Action Needed	HBsAg Hepatitis B Surface Antigen	HBsAb (anti-HBs) Hepatitis B Surface Antibody	HBcAb (anti-HBc) Hepatitis B Core Antibody
<b>Not Immune – Not Protected</b> Has not been infected, but still at risk for possible hep B infection <b>Vaccine is needed.</b>	-	-	-
<b>Immune Controlled – Protected</b> Surface antibodies present due to natural infection. Has recovered from a prior hepatitis B infection. Cannot infect others. <b>No vaccine is needed.</b>	-	+	+
<b>Immune - Protected</b> Has been vaccinated. Does not have the virus and has never been infected. <b>No vaccine is needed.</b>	-	+	-
<b>Infected</b> Positive HBsAg indicates hepatitis B virus is present. Virus can spread to others. Find a doctor who is knowledgeable about hepatitis B for further evaluation. <b>More Testing Needed.</b>	+	-	+

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## HBV Vaccination & Screening in Practice

- Collect Blood
- Offer Vaccine per ACIP
- No need to wait for test results

- Vaccination should not be a barrier to screening, and screening should not be a barrier to vaccination
- Provide what service you are able, and refer patient to the one you cannot
- An option can be to screen and give the first dose at the same visit – but draw blood first!

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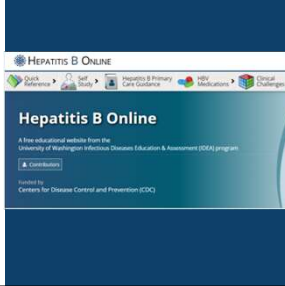
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## Provider Resources

- [Call-to-Action: Eliminating Hepatitis B Virus Through Universal Screening and Vaccination for Adults Ages 19-59](#)
- [MMWR: Universal Hepatitis B Vaccination In Adults Aged 19-59 Years: Updated Recommendations Of The Advisory Committee On Immunization Practices — US, 2022](#)
- Websites:
  - [www.hepb.org](http://www.hepb.org)
  - <https://www.hepatitisb.uw.edu/> (CME education)
  - [www.immunize.org](http://www.immunize.org)
  - <https://www.cdc.gov/hepatitis/hbv/index.htm>



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## Sexually Transmitted and Bloodborne Diseases Unit.

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**VIRAL HEPATITIS**

*The United States will be a place where new viral hepatitis infections are prevented, every person knows their status, and every person with viral hepatitis has high-quality health care and treatment and lives free from stigma and discrimination.*

National Strategic Plan

*This vision includes all people, regardless of age, sex, gender identity, sexual orientation, race, ethnicity, religion, disability, geographic location, or socioeconomic circumstance.*

National Viral Hepatitis Strategic Plan, 2021 - 2025

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**Hepatitis B Adult Recommendations**  
ND HHS Immunization Unit

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*Be legendary.*

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### Simplify a complex adult HepB vaccination schedule

Persons recommended to receive hepatitis B vaccination

Existing Recommendations	New Recommendations (Proposed)
<ul style="list-style-type: none"> <li>All infants</li> <li>Unvaccinated children aged &lt;19 years</li> <li><b>Persons at risk for infection by sexual exposure</b> <ul style="list-style-type: none"> <li>Sex partners of hepatitis B surface antigen (HBsAg)-positive persons</li> <li>Sexually active persons who are not in a long-term, mutually monogamous relationship (e.g., persons with more than one sex partner during the previous 6 months)</li> <li>Persons seeking evaluation or treatment for a sexually transmitted infection</li> </ul> </li> <li><b>Persons at risk for infection by percutaneous or mucosal exposure to blood</b> <ul style="list-style-type: none"> <li>Men who have sex with men</li> <li>Current or recent injection-drug users</li> <li>Household contacts of HBsAg-positive persons</li> <li>Residents and staff of facilities for developmentally disabled persons</li> <li>Health care and public safety personnel with reasonably anticipated risk for exposure to blood or blood-contaminated body fluids</li> <li>Hemodialysis patients and predialysis, peritoneal dialysis, and home dialysis patients</li> <li>Persons with diabetes aged 19–59 years; persons with diabetes aged ≥60 years at the discretion of the treating clinician</li> </ul> </li> <li><b>Others</b> <ul style="list-style-type: none"> <li>International travelers to countries with high or intermediate levels of endemic hepatitis B virus (HBV) infection (HBsAg prevalence of ≥2%)</li> <li>Persons with hepatitis C virus infection</li> <li>Persons with chronic liver disease (including, but not limited to, persons with cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, and an alanine aminotransferase [ALT] or aspartate aminotransferase [AST] level greater than twice the upper limit of normal)</li> <li>Persons with HIV infection</li> <li>Incarcerated persons</li> </ul> </li> </ul> <p><b>*All other persons seeking protection from HIV infection</b></p>	<ul style="list-style-type: none"> <li>All infants (No change)</li> <li>Unvaccinated children aged &lt;19 years (No change)</li> </ul> <p><b>All adults previously unvaccinated for hepatitis B should receive hepatitis B vaccination</b></p>

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### Updated Hepatitis B Recommendations (as of Nov 2021)

The Advisory Committee on Immunization Practices (ACIP) recommends the following groups **should** receive hepatitis B vaccines:

- Adults aged 19–59 years
- Adults aged ≥60 years with risk factors for hepatitis B

The ACIP recommends the following groups **may** receive hepatitis B vaccines:

- Adults aged ≥60 years without known risk factors for hepatitis B

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### Risk-based hepatitis B immunization among adults: a partial success

- Initial decreases in new hep B infections plateaued 10 years ago
- Rates are now highest among adults
- Rates have **increased** among adults ≥40 years of age

Rates of reported acute hepatitis B virus infection, by age group — United States, 2004–2019

2019 CDC Hepatitis Surveillance Report<sup>1</sup>

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### Hepatitis B routine recommendations

All and all adults 19-59, complete a 2 or 3, or 4-dose series:

- 2-dose series
  - Only applies when 2 doses of HepBisav-B® are used at least 4 weeks apart
    - HepBisav-B® is not recommended in pregnancy.
- or 3-dose series
  - Engerix-B®, PreHevbrio®, or Recombivax HB® at 0, 1, 6 months
    - Minimum intervals: Dose 1 to Dose 2: 4 weeks / Dose 2 to Dose 3: 8 weeks / Dose 1 to Dose 3: 16 weeks
      - PreHevbrio® is not recommended in pregnancy.
  - HepA-HepB (Twinrix®) at 0, 1, 6 months
    - Minimum intervals: Dose 1 to Dose 2: 4 weeks / Dose 2 to Dose 3: 5 months



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### Hepatitis B routine recommendations

All and all adults 19-59, complete a 2 or 3, or 4-dose series:

- or 4-dose series
  - HepA-HepB (Twinrix®) accelerated schedule at 0, 7, and 21 days. Booster 12 months later



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### Hepatitis B routine recommendations

- Any adults 60 years or older without known risk factors for hepatitis B **may** receive a HepB vaccine series.
- Any adult ages 60 years or older with known risk factors for hepatitis B **should** receive a Hep B vaccine series.
- Any adult age 60 years of age or older who requests HepB vaccination **should** receive a HepB vaccine series.

- Risk factors include
  - Chronic Liver Disease e.g., persons with hepatitis C, cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, alanine aminotransferase (ALT) or aspartate aminotransferase (AST) level greater than twice the upper limit of normal
  - HIV infection
  - Sexual exposure risk (e.g., sex partners of hepatitis B surface antigen (HBsAg)-positive persons; sexually active persons not in mutually monogamous relationships; persons seeking evaluation or treatment for a sexually transmitted infection; men who have sex with men)
  - Current or recent injection drug use
  - Percutaneous or mucosal risk for exposure to blood e.g., household contacts of HBsAg-positive persons; residents and staff of facilities for developmentally disabled persons; health care and public safety personnel with reasonably anticipated risk for exposure to blood or blood-contaminated body fluids; persons on maintenance dialysis, (including in-center or home hemodialysis and peritoneal dialysis), persons who are predialysis, and patients with diabetes
  - Incarceration
  - Travel in countries with high or intermediate endemic hepatitis B.



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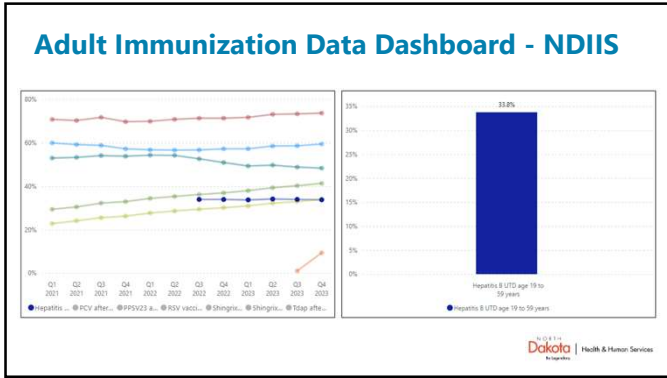
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- ### Ways to increase immunization rates
- Convenience Clinics
    - After hours/weekends
    - Vaccinate at community events (sports, concerts, festivals, school events)
  - NDIIS
    - Reminder/Recall
    - Patient listing report
    - Data Quality
  - Vaccinate at all medical encounters

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### If you want to test and vaccinate your patient for hepatitis B on the same day, does it matter if you test or vaccinate first?

- Yes. You should draw the blood first and then administer the first dose of vaccine, as transient HBsAg-positivity has been detected after a dose of HepB

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**Is post-vaccination testing needed for adults who receive HepB vaccine?**

- Serologic testing for immunity after HepB vaccination is recommended only for people whose subsequent clinical management depends on knowledge of their immune status. Testing is not necessary after routine vaccination of adults.
- Post-vaccination anti-HBs testing of certain adults is recommended for the following reasons:
- To determine the need for revaccination and the type of follow-up testing:
  - HCP and public safety workers at risk for blood or body fluid exposure
  - Hemodialysis patients (and others who might require outpatient hemodialysis)
  - People with HIV, and other immunocompromised people (e.g., hematopoietic stem-cell transplant recipients or people receiving chemotherapy)
- To determine the need for revaccination and for other methods of protection against HBV infection:
  - Sex partners or needle-sharing partners of HBsAg-positive people
- Testing should be performed 1 to 2 months after the last dose of vaccine.



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**Should pregnant people be vaccinated against hepatitis B during pregnancy?**

- Yes; people who are identified as being at risk for HBV infection during pregnancy should be vaccinated. They also should be counseled concerning other methods to prevent HBV infection. Providers should administer an age-appropriate 3-dose series of Twinrix, Engerix-B or Recombivax HB.
- Until safety data are available for Heplisav-B or PreHevbrio administration during pregnancy, ACIP does not recommend the use of either of these products to vaccinate during pregnancy. Pregnancy testing prior to administration of these products is not recommended.



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**I have a patient who is positive for anti-HBc (hepatitis B core antibody) but negative for other hepatitis B serologic markers. Should they receive hepatitis B vaccine?**

- Some isolated positive anti-HBc results are false positives (it is the most common false positive HBV marker). If that can be established, the individual can and likely should be vaccinated, assuming there is an indication or desire to be protected.
- If the positive anti-HBc is believed to be a true positive, the individual would not require vaccination since they have already (presumably) had HBV infection. Isolated positive anti-HBc could indicate low-level chronic infection. In an infant isolated anti-HBc could indicate passive transfer of antibody from a mother who is HBsAg positive, which is why anti-HBc testing of infants is not recommended.



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**What should I do if an adult patient needs screening for hepatitis B, but recently received the first dose of HepB vaccine elsewhere?**

- In general, this is not an issue, but CDC recommends waiting at least 1 month (4 weeks) after HepB vaccination before drawing blood for the triple panel screen for hepatitis B. HBsAg present in the HepB vaccine has been detected in serologic tests up to 18 days after vaccine administration. You do not have to delay the triple panel screen until after the vaccine series is complete, as long as it's been at least 4 weeks since the most recent dose.
- If you screen the patient after a partial HepB vaccination series, the screening results might show a positive anti-HBs antibody; however, you will still need to complete the vaccine series to ensure the patient develops long-term protection from infection.



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**A healthy young adult patient who received the HepB vaccine series before college recently had a triple panel screen and discovered that he had chronic hepatitis B. Did the vaccine fail? What do I tell the patient?**

- While breakthrough infections can happen, it is very uncommon in an otherwise healthy young adult. In this scenario, it is unknown when the HBV infection occurred. It is possible that the person had an unrecognized exposure to hepatitis B virus at some time before they were vaccinated; they may even have been born to a hepatitis B-infected mother and infected at birth. This is the reason triple panel screening of every adult, regardless of vaccination history, is recommended. People who decline or defer screening but accept vaccination should understand that vaccination will not alter a pre-existing infection, which is why hepatitis B screening is important for everyone.



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**Do adults who were properly vaccinated need to be revaccinated if they have a negative surface antibody (anti-HBs) result on their triple panel screening test for hepatitis B?**

- For most people the answer is NO. A negative anti-HBs result is a common finding when tested years after completing vaccination, and most healthy people may be reassured that they would still be protected from illness, if exposed.
- Antibody titers naturally drift lower over the years; however, studies have shown that the majority of people who were effectively immunized decades earlier can mount an effective antibody response and prevent symptomatic or chronic infection after exposure. A study of members of the Alaskan Native population published in 2022 estimated that 86% had effective protection 35 years following vaccination. Even those few with serologic evidence of hepatitis B infection at some point after vaccination showed no evidence of active infection, which is the most important health outcome.
- Revaccination is indicated for certain people at ongoing high risk, as specified in the 2018 ACIP recommendation (e.g., nonresponder infants born to people who tested positive for HBsAg, health care providers at risk of occupational exposure, and people on hemodialysis or with significant immunocompromise).



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**What do I do for adult patients who don't have records of HepB vaccination, but are sure they were vaccinated?**

- CDC's General Best Practice Guidelines for Immunization states that, in general, you should only accept written records as proof of vaccination. If the person's recollection is wrong, and the person is susceptible, then not vaccinating leaves them at ongoing risk.
- If you have no record of HepB vaccination and you intend to do the triple panel screen, it is reasonable to proceed with giving the first dose of HepB vaccine after drawing blood for screening. If that triple panel screening test shows evidence that further vaccination is not needed, or if the patient locates records later, then discontinue vaccination at that point. If screening is not done, and records are unavailable, complete the series.
- If you screen the patient after a partial HepB vaccination series, the screening results might show a positive anti-HBs antibody; however, you should complete the vaccine series to ensure the patient develops the intended long-term protection from infection.



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**What do I do if an adult patient has documentation of one dose of HepB vaccine of unknown type a few years ago, but never finished the series?**

- If the vaccine type is unknown, but you have documentation, simply pick up the series where you left off and give dose 2 now—you never have to restart the vaccine series. The patient will need a total of three doses since the only 2-dose series option is for Heplisav-B.
  - If you use Heplisav-B, complete the vaccination series by giving a dose now and a second Heplisav-B dose at least 4 weeks later.
  - If you use any other HepB vaccine product, use a minimum interval of 8 weeks between dose 2 and dose 3 to complete the series.



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**I have seen adults who have had 1 or 2 doses of Twinrix (HepA-HepB), but we only carry single-antigen vaccine in our practice. How should we complete their vaccination series with single-antigen vaccines?**

- Twinrix is licensed as a 3-dose series for people age 18 years and older. If Twinrix is not available or if you choose not to use Twinrix to complete the hepatitis A (HepA) and hepatitis B (HepB) series, you should do the following:
  - If 1 dose of Twinrix was given, complete the series with 2 adult doses of HepA and 2 adult doses of HepB.
  - If 2 doses of Twinrix were given, complete the schedule with 1 adult dose of HepA and 1 adult dose of HepB.
- Another way to consider this is as follows:
  - A dose of Twinrix contains a standard adult dose of HepB and a pediatric dose of HepA. So, a dose of Twinrix can be substituted for any dose of the HepB series but not for any dose of the HepA series.
  - Any combination of 3 doses of adult HepB or 3 doses of Twinrix is a complete series of HepB vaccine
  - One dose of Twinrix and 2 doses of adult HepA is a complete series of HepA
  - Two doses of Twinrix and 1 dose of adult HepA is a complete series of HepA



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**Which people who work in healthcare settings need hepatitis B vaccine?**

- The Occupational Safety and Health Administration (OSHA) requires that HepB be offered to healthcare personnel (HCP) who have a reasonable expectation of being exposed to blood and body fluids on the job. This requirement does not include personnel who would not be expected to have occupational risk (for example, general office workers).
- As of April 2022, CDC recommends that all people younger than age 60 years be vaccinated against hepatitis B. All adults age 60 or over with risk factors for acquiring hepatitis B (including HCP expected to be exposed to blood and body fluids) also should be vaccinated. Any adult age 60 or older may be vaccinated.



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**Which HCP need serologic testing after receiving a HepB vaccine series?**

- All HCP, including trainees, who have a high risk of occupational percutaneous or mucosal exposure to blood or body fluids (for example, HCP with direct patient contact, HCP at risk of needlestick or sharps injury, laboratory workers who draw, test or handle blood specimens) should have postvaccination testing for antibody to hepatitis B surface antigen (anti-HBs).
- Postvaccination testing should be done 1–2 months after the last dose of vaccine.
- Postvaccination testing for individuals at low risk for mucosal or percutaneous exposure to blood or body fluids (for example, public safety workers and HCP without direct patient contact) likely is not cost-effective.



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**We did a hepatitis B panel for a new hospital employee. They had no documentation of having been vaccinated. Their results showed HBsAg nonreactive, anti-HBc reactive, IgM anti-HBc nonreactive, and anti-HBs borderline. We don't know how to interpret these results. Should they be immunized?**

- Most likely this person has a resolved HBV infection and is immune. However, it would be preferable to test them again for all these serologic markers, and also quantify the anti-HBs result. If the results are still positive for anti-HBc, and anti-HBs is less than the immune level of 10 mIU/mL, you can give them one dose of HepB vaccine and test again in 1–2 months. If the anti-HBs is positive (10 mIU/mL or higher), they are immune. No further action is needed other than to document the results. If the anti-HBs is still negative, complete the vaccine series and test again 1–2 months after the last dose of vaccine.



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**What should be done if a healthcare professional's postvaccination anti-HBs test is negative (less than 10 mIU/mL) 1–2 months after the last dose of vaccine?**

There are two options for healthcare professionals who test negative after completing their first HepB series.

- Give one dose of HepB, then retest for anti-HBs.
  - If positive they are considered immune
  - If negative, the person should receive the remaining doses in the series, and then retest for anti-HBs.
    - If the result is positive, the person should be considered immune.
    - If negative, the person should be tested for HBsAg and total anti-HBc to determine their HBV infection status
- Repeat the 2- or 3-dose series (depending on vaccine brand) and test for anti-HBs 1–2 months after the final dose of the repeat series.
  - If Positive they are considered immune
  - If the test is still negative after a second vaccine series, the person should be tested for HBsAg and total anti-HBc to determine their HBV infection status.



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**What should be done if a healthcare professional's postvaccination anti-HBs test is negative (less than 10 mIU/mL) 1–2 months after the last dose of vaccine?**

- People who test negative for HBsAg and total anti-HBc should be considered vaccine non-responders and susceptible to HBV infection. They should be counseled about precautions to prevent HBV infection and the need to obtain hepatitis B immune globulin (HBIG) prophylaxis for any known or likely exposure to HBsAg-positive blood.
- Those found to be HBsAg negative but total anti-HBc positive were infected in the past and require no vaccination or treatment.
- If the HBsAg and total anti-HBc tests are positive, the person should receive appropriate counseling for preventing transmission to others as well as referral for ongoing care to a specialist experienced in the medical management of chronic HBV infection.



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**How often should I test HCP after they've received the HepB vaccine series to make sure they're protected?**

- For immunocompetent HCP, periodic testing or periodic boosting is not needed. Postvaccination testing (anti-HBs) should be done 1–2 months after the last dose of the HepB series. If adequate anti-HBs (at least 10 mIU/mL) is present, nothing more needs to be done. This information should be made available to the employee and recorded in the employee's health record.



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### Thank You!

PLEASE EMAIL [VACCINE@ND.GOV](mailto:VACCINE@ND.GOV) WITH ANY QUESTIONS



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### Post-Test

- Post-test
  - Nurses interested in continuing education credit, visit Successfully complete the five-question post-test to receive your certificate: [https://ndhealth.co1.qualtrics.com/jfe/form/SV\\_b29zjp4CzgJ0rA](https://ndhealth.co1.qualtrics.com/jfe/form/SV_b29zjp4CzgJ0rA)
  - Credit for this session will not expire until May 8, 2024.
- This presentation will be posted to our website: [www.hhs.nd.gov/immunizations](http://www.hhs.nd.gov/immunizations)



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