

HEPATITIS B VIRUS DATA SNAPSHOT WASHINGTON STATE 2024



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Executive Summary

Hepatitis B Virus (HBV) affects thousands of Washingtonians. This vaccine-preventable disease can lead to severe liver damage, cancer, and even death. HBV is a reportable disease, meaning Washington State (WA) requires healthcare providers and laboratories to report testing results and positive cases. The Washington State Department of Health (DOH) removes personal identifiers and sends data to the Centers for Disease Control and Prevention (CDC) so CDC can compile national data and monitor national trends. DOH conducts HBV disease surveillance and monitors for any outbreaks that may occur. Surveillance data provide insight into trends in incidence, immunization uptake, and mortality due to HBV.

Washington trends show that increased vaccination has greatly decreased rates of acute hepatitis B infection over the last several decades, from approximately 1,000 acute cases per year in the late 1980s to an average of 29 acute cases per year today. Over the last five years, DOH reported a yearly average of 1,550 new cases of chronic HBV. Since 2020, there has been one documented case of perinatal HBV transmission in Washington State.

In 2024, DOH reported 26 cases of acute HBV in WA, with a rate of 0.3 cases/100,000 population. For acute case exposures, four reported using injection drugs, three had sexual exposures, and one reported a medical/dental exposure. Also in 2024, WA saw a total of 1,663 chronic HBV cases (20.8 cases/100,000 population). In 2023, there were 201 infants born in Washington to HBV-positive persons. However, DOH reported no perinatal infections among those that had follow-up testing (69%) through the end of December 2024.

Data presented in this report summarize the burden of disease in WA and provide an overview of the distribution of cases among the population. Data are through December 31, 2024 and mainly gathered through the Washington Disease Reporting System (WDRS), though other sources such as the immunization and cancer registries provide further insight.

Additionally, this report also provides data on the perinatal hepatitis B prevention efforts in Washington including vaccine coverage among newborns. CDC reports that since implementing the birth dose, the U.S. has prevented an estimated 90,100 deaths from hepatitis B.¹ Washington has an effective Perinatal Hepatitis B Prevention Program (PHBPP) which aims to minimize transmission between birthing parents and infants.

What is Hepatitis B Virus?

HBV is a virus of the hepadnaviridae family that causes liver disease. HBV can cause sickness with symptoms like jaundice, vomiting, diarrhea, and fatigue mostly during an acute infection. HBV can also become chronic, damaging the liver and affecting a person for life. It is vaccine-preventable and three doses of the HBV vaccine can provide lifelong protection against the disease. There is currently no cure for HBV, though some people clear the infection on their own. In chronic cases, the disease can be managed with anti-viral medication to slow the advances of complications like cancer and liver cirrhosis.

HBV is spread from person to person via body fluids like blood, semen or mucous. People are commonly infected with hepatitis B virus from sharing drug-injection equipment (e.g. syringes), sexual contact, or from mother to baby at birth. Exposure to things that are contaminated with blood or body fluids like medical or dental tools, tattooing or piercing needles, and items like razors or toothbrushes can also cause infection. The virus can live on surfaces for seven days and it takes a minuscule amount to infect non-vaccinated people.

After exposure to the virus, it can take 60-90 days for a person to become sick though some people who are infected have no symptoms at all. A blood test can confirm if someone has hepatitis B.

Types of Hepatitis B Virus Infection

There are three classifications of HBV infection: acute, chronic, and perinatal. An acute infection is short-term and the infected person may have no symptoms of illness. They may also have an abrupt onset of fever, abdominal pain and jaundice as well as elevated liver enzymes. A chronic infection is long-term and the person typically has no symptoms until complications like liver damage or cancer develop after years of infection. Finally, a perinatal infection is when a pregnant person with hepatitis B passes the virus to their newborn via birth. Perinatal infection carries a high risk of lifelong chronic infection for the newborn. Roughly 90% of infants and 30% of children under five infected will have chronic HBV.

Diagnosing Hepatitis B Virus

Healthcare providers order blood tests to diagnose hepatitis B infection. The exact tests needed depends on whether the case is suspected as acute, chronic or perinatal but there are four main tests to determine infection. Healthcare providers also consider symptoms and liver function test results to identify cases. There is no cure for HBV but there are effective vaccines to prevent infection. To prevent infection in people exposed to HBV, healthcare providers can administer a prophylaxis injection called hepatitis B immune globulin (HBIG).

Hepatitis D Virus

A unique component of HBV is the potential for hepatitis D virus (HDV) liver infection. Hepatitis D virus needs hepatitis B virus to replicate so only those with HBV can contract HDV. If a person acquires HDV at the same time as HBV, it is called a coinfection. If a person acquires HDV after acquiring HBV, it is called a superinfection. There is no treatment available for HDV.

HBV Surveillance in Washington State

**Chart 1. Acute HBV Cases in WA
1984 - 2024**

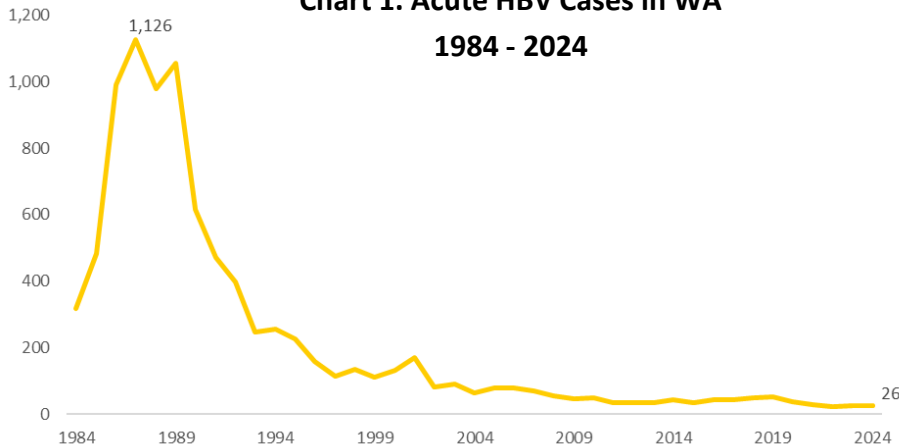


Chart 1: WA saw a sharp increase in the number of acute cases between 1983–1989. In 1987, the case count peaked at 1,126 cases but has declined since. In 1991, the Advisory Committee on Immunization Practices (ACIP) recommended universal HBV vaccination for children and cases of acute HBV declined even further. In 2024 there were 26 acute cases in the state and zero deaths due to acute HBV. Since 2007, WA has had seven deaths due to acute HBV.

**Chart 2. Chronic HBV Cases in WA
2001 - 2024**

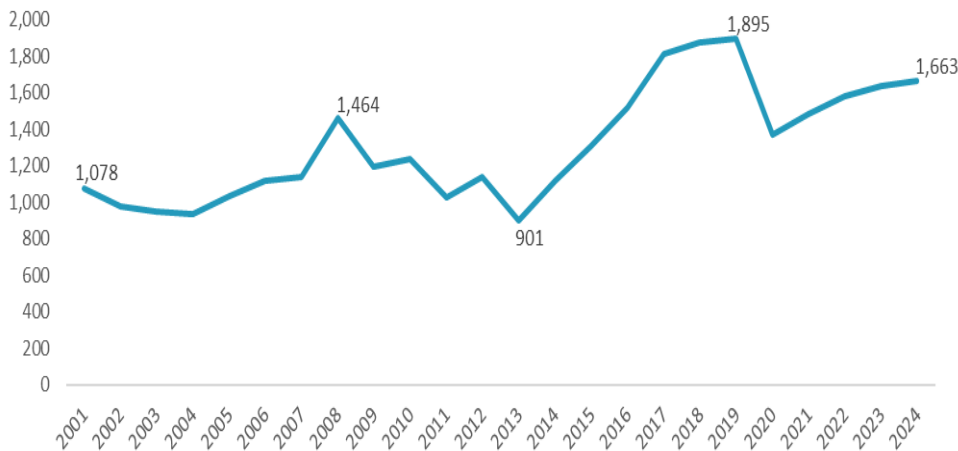


Chart 2: In 2001, chronic HBV became a notifiable condition in WA. Since then, chronic HBV case counts have fluctuated, with a peak in 2019. WA began using a new data system in 2018, resulting in better public health surveillance; previous years may have undercounted HBV cases. In 2024, WA had 1,663 chronic cases with a case rate of 20.8 per 100,000 people.

Global HBV Trends

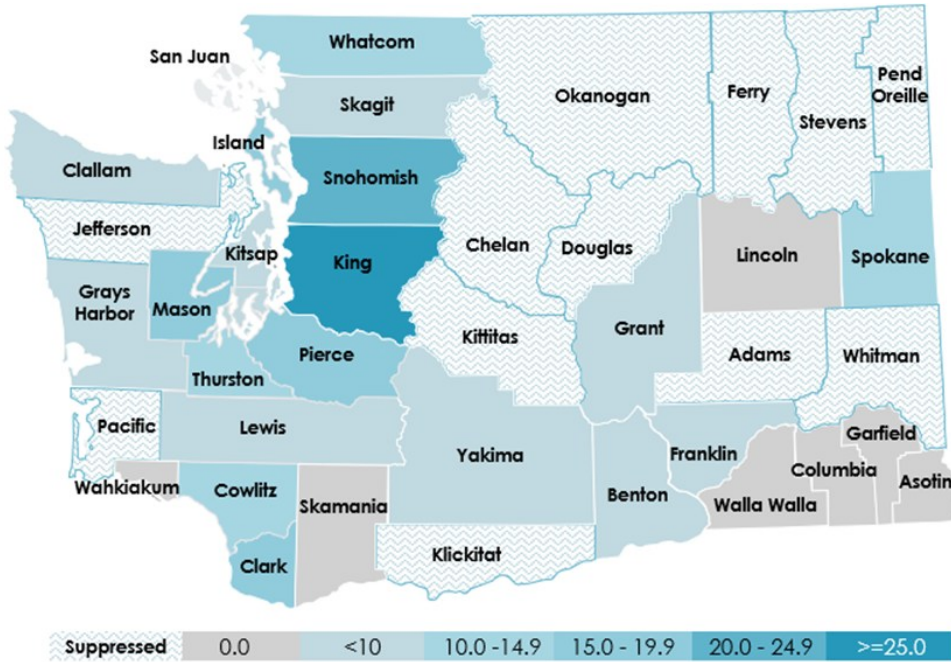
In 2022, World Health Organization (WHO) global data estimated that 254 million people were living with chronic HBV, yet only 13% of people were diagnosed. They also estimated 1.2 million new infections and 1.1 million deaths due to HBV each year. Though the incidence of new infections is decreasing, the death rate for HBV increased from 10 per 100,000 in 2020 to 14 per 100,000 population in 2022. WHO attributes the decrease in new cases to vaccines, prevention efforts and better reporting.²

U.S. HBV Trends

The CDC estimates that in the U.S. in 2023, there were 14,400 new acute HBV cases, 17,650 new chronic cases and 1,769 HBV-related deaths.³ CDC also reports that 50-70% of those infected with acute HBV are asymptomatic and up to half of those with any form of HBV may be undiagnosed.⁴ Another study estimates that when accounting for foreign born people, up to 2.4 million people are living with chronic HBV in the U.S.⁵

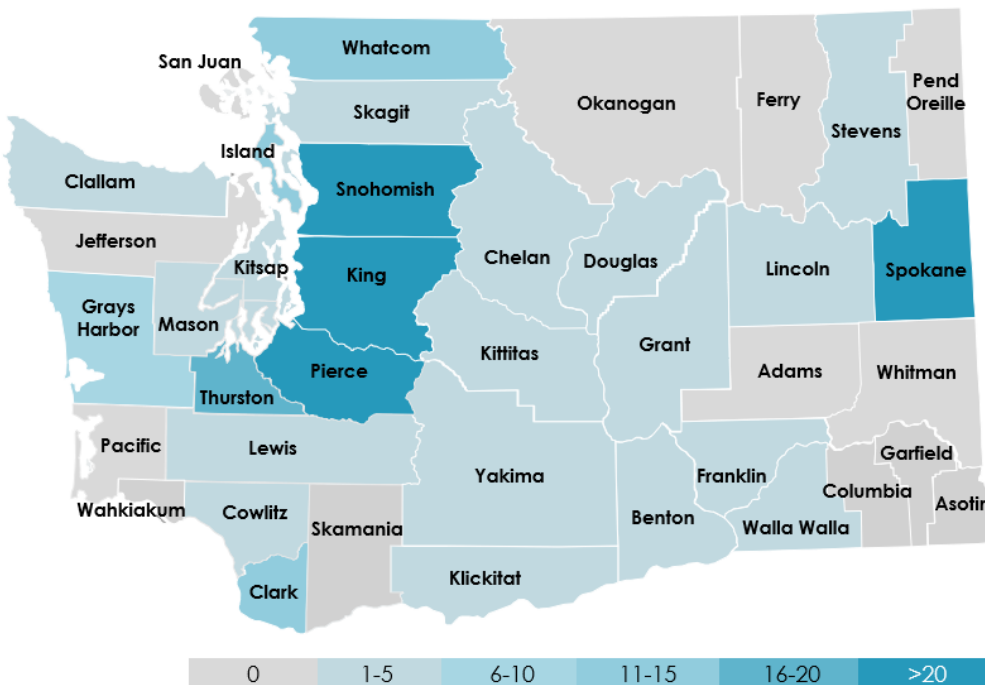
HBV Regional Surveillance Data in WA

Map 1. County Rates of Chronic HBV per 100,000 Residents, 2024



Map 1 shows the rates of chronic HBV in 2024 by county of residence. Data for some counties are suppressed due to small or unreliable numbers. Overall, chronic case rates tend to be higher in more populated areas. However, there are a few counties such as Mason and Cowlitz with low populations and moderate rates of chronic HBV.

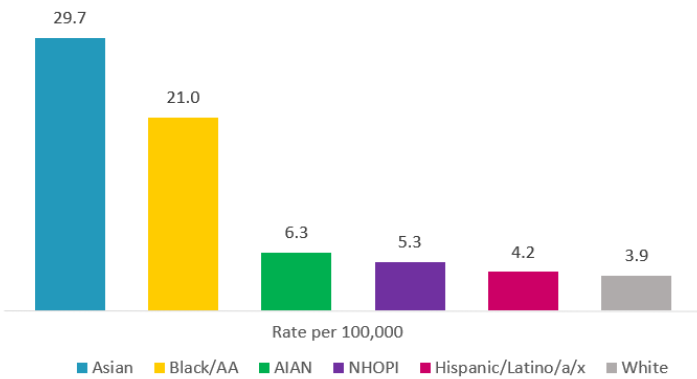
Map 2. Number of Acute HBV Cases by County, 2018-2024



Map 2 shows the number of acute HBV cases for 2018-2024 combined, by county of residence. Some counties had zero cases of acute HBV during this time. Overall acute cases tend to be clustered in the higher-density urban and semi-urban areas.

Demographics of HBV in WA

Chart 3. Chronic HBV Rates by Race/Ethnicity, 2024



AI/AN – American Indian/Alaska Native; Black/AA – Black or African American; NHOPI – Native Hawaiian/other Pacific Islander. Note: Cases are included as ‘Hispanic/Latino/Latina/Latinx’ if indicated as ethnicity.

Chart 3 shows rates of chronic HBV by race and ethnicity. It is difficult to draw conclusions about rates of *acute* HBV stratified by race and ethnicity because small case numbers make the rates unstable. In 2024, Black/African American people had the highest rate of acute HBV at 1.1/100,000; American Indian/Alaska Native people had the second highest rate at 0.6/100,000. In comparison, the state rate of acute cases was 0.3/100,000.

Chart 4 shows the percent of HBV cases by gender and subtype. These data are for years 2018-2024 combined. For both acute and chronic, the percent of cases is higher in men. Additionally, 1% of chronic cases reported “other” for sex.

Chart 4. Acute and Chronic HBV by Sex at Birth, 2018-2024

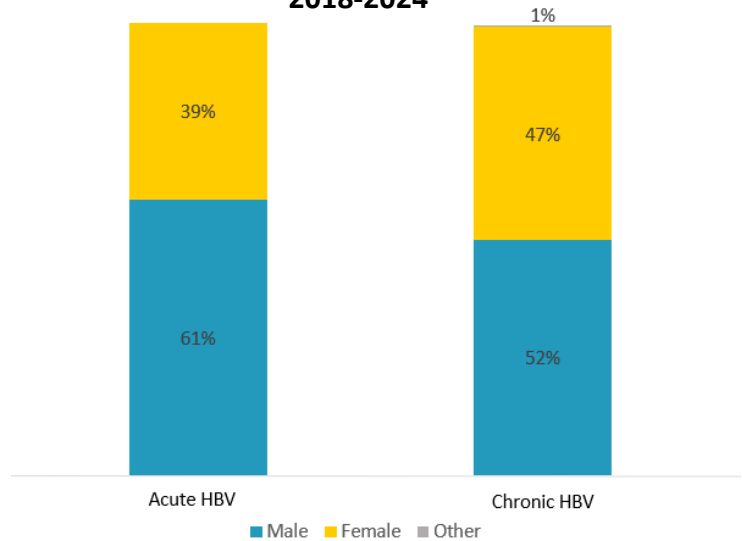
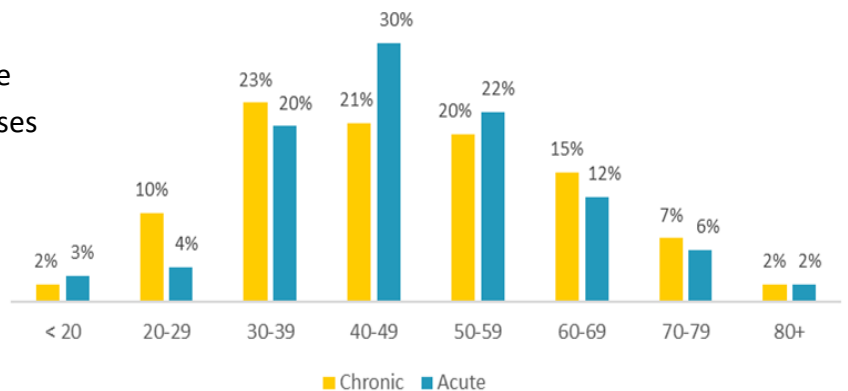


Chart 5 shows the breakdown of HBV cases by subtype and age group for the years 2018-2024 combined. Both acute and chronic follow a similar pattern with more cases in adults ages 30-60. Acute case diagnoses are highest in the 40-49 year range and chronic are highest in the 30-39 year range. The low number of cases in the younger population may be attributed to better vaccine coverage since implementing universal childhood vaccination in the 1990s.

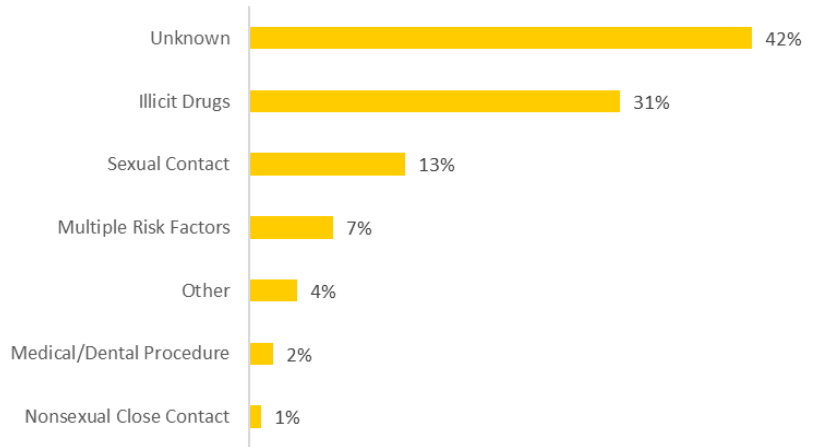
Chart 5. Age at Diagnosis, Acute and Chronic, 2018-2024



HBV Exposure and Risk Factors

Chart 6 shows combined exposure data for acute HBV. In most cases, the source of the person’s HBV infection is unknown. But when identified, the most common exposures for acute HBV are sexual contact, intravenous drug use and multiple risk factors. This aligns with the most common risk factors identified at the national level.⁶ The Healthcare Acquired Infections team also investigates any cases of potential exposures from a medical facility.

Chart 6. Most-Likely Exposure Acute HBV, 2018-2024 Combined

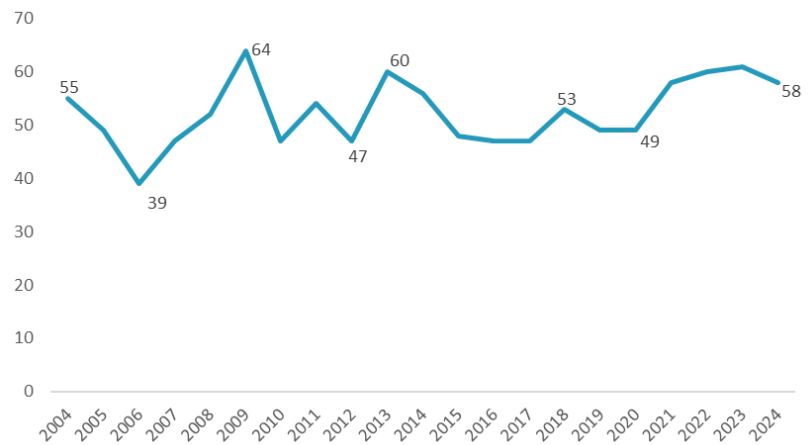


Chronic Risk and Death

Exposures for chronic HBV are more difficult to identify since a person could acquire the disease at any point. A common cause of chronic HBV is perinatal transmission, especially among those born in countries with endemic HBV. Other common ways of contracting chronic HBV are drug use, sexual behavior and medical/dental procedures, particularly before blood donations were screened for HBV.

Chart 7. Chronic HBV Deaths in WA—20 Years

Chart 7 shows the number of chronic HBV deaths over the past 20 years (2004-2024). On average, WA sees 52 deaths per year due to chronic HBV. Deaths mostly occur due to long-term infection and complications such as cancer and liver damage.



Washington Cancer Registry data cite an age-adjusted rate due to liver and intrahepatic bile duct cancer of 8.5 per 100,000 between 2018-2022. While not all liver cancers are attributable to HBV, viral hepatitis is a major contributing factor to the development of liver cancer.

Figure 1. Comparing Death Rate of Liver and Intrahepatic Bile Duct Cancers, 2022

Figure 1 compares the age-adjusted 2022 U.S. death rates of liver and intrahepatic bile duct cancers⁷ to Washington State.



HBV Vaccination and Prevention

- HBV is vaccine-preventable and providers recommend that **all people** ages 59 and under get vaccinated, including adults not in a risk population.
- Infants receive a birth dose and two more across 6 months to complete the series.
- HBV carries a high risk of perinatal transmission; vaccinating all infants at birth prevents infections especially when the birthing parent is unaware of HBV infection.

Chart 8. Children Aged 19-35 Months Completing HBV Vaccine Series

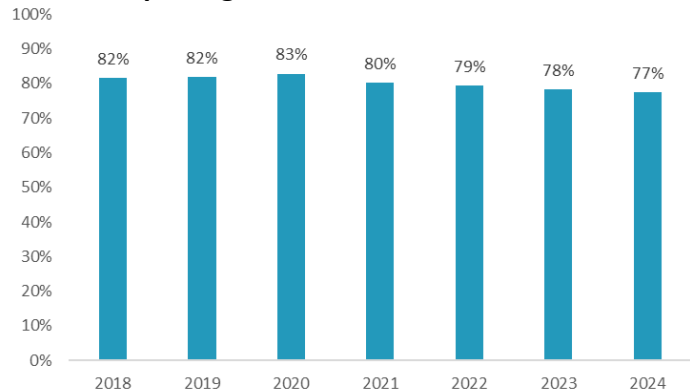


Table 1. Percent of Newborns in WA Receiving HBV Birth Dose

Year	Birth Dose
2019	80.7%
2020	80.0%
2021	79.4%
2022	79.7%
2023	78.1%
2024	75.1%

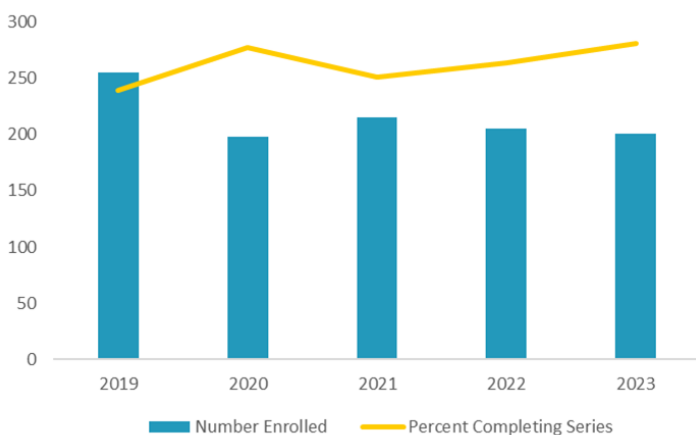
Chart 8 shows point-in-time estimates for vaccine series completion. As of December 2018, 81.5% of WA children aged 19-35 months, had completed the HBV vaccine series. In December of 2024, 77.4% of children 19-35 months had completed the series. Additionally, Table 1 shows the decrease in infants receiving the HBV birth dose between 2019 and 2024. The immunization registry data illustrate a declining trend in vaccinations for children during the first year of life.

WA Perinatal Hepatitis B Prevention Program

The Perinatal Hepatitis B Prevention Program (PHBPP) is a national program designed to reduce mother-to-child transmission of hepatitis B in the United States. The PHBPP goals are:

- Promote HBV testing for all pregnant persons during each pregnancy (universal screening)
- Ensure that infants born to HBV positive pregnant persons receive one dose of the HBV vaccine and an HBIG prophylaxis shot within 12 hours of birth
- Complete the HBV vaccine series by 12 months of age
- Get tested for HBV to confirm immunity after completing all vaccinations.

Chart 9. Number of Infants Enrolled in PHBPP by Year and Percent Completing Vaccine Series by Age 12 Months



In WA, the proportion of infants enrolled in the PHBPP that receive HBIG, completed vaccine series, and were tested for HBV immunity increased from 59% to 73% between 2022 to 2023. Over the past ten years WA has seen three perinatal HBV infections. Chart 9 shows the number of infants enrolled in the PHBPP by year and the percent of enrolled infants who received all the recommended shots by age 12 months.

Technical Notes

State of Washington Data Sources

- Washington Disease Reporting System (WDRS), 2024.
- Perinatal Hepatitis B Prevention Program (PHBPP): Programmatic data reported through 2024.
- [Washington State Cancer Registry](#). 2018-2022.
- Washington State Center for Health Statistics, Community Health Assessment Tool (CHAT), 2024.
- Washington State Center for Health Statistics, Mortality data, 2024.
- Washington Immunization Information System (WAIS), 2024.
- Washington State Office of Financial Management: WA population estimates, April, 2025.

Data Definitions and Limitations

- Hepatitis B state surveillance data were extracted from the Washington Disease Reporting System (WDRS) in September of 2024. The data in this report may differ slightly from other reports due to timing of data extraction and updates to case information. These data are surveillance data collected via lab reporting and disease investigations.
- Cases of acute, chronic, or perinatal HBV are included in this report when the person is a Washington State resident at the time of reporting and meets diagnostic criteria for an HBV infection as determined by CDC case definitions. Cases are included in the year they first become known to the Washington State Department of Health.
- Chronic counts include both confirmed and probable cases of hepatitis B. Acute counts include only confirmed cases through 2023 and confirmed and probable cases in 2024 (due to CDC case definition changes). Perinatal counts only include confirmed cases.
- Unless otherwise specified (e.g. age-adjusted rates or national data), rates per 100,000 persons are crude/unadjusted rates, and use State of Washington Office of Financial Management population data.
- The COVID-19 pandemic likely led to underreporting of hepatitis B cases to Washington State Department of Health in 2020-2022, due to limited resources for hepatitis B screening and investigation. Data from this period, as presented in this report, should be interpreted with caution.

Resources

Hep B Hub: [Hep B Hub | Washington State Department of Health](#)

WA DOH HBV Investigation Guide: [Hepatitis B Investigations Quick Guide](#)

Case Definition: [Hepatitis B Reporting Guideline \(wa.gov\)](#)

Hepatitis B Serology: [Clinical Testing and Diagnosis for Hepatitis B | Hepatitis B | CDC](#)

WDRS Reporting Manual: [WDRS Hepatitis Manual \(wa.gov\)](#)

PHBPP Guide: [Perinatal Hepatitis B Prevention Program Guidelines \(wa.gov\)](#)

DOH Reports: [2023 Communicable Disease Annual Report](#)

CDC Surveillance Guidance: [Hepatitis B Surveillance Guidance | Viral Hepatitis | CDC](#)

CDC Hepatitis B Case Definitions: [Hepatitis B, acute and chronic 2024 Case Definition | CDC](#)

References

1. Zhou, Fanguin et. al. Health and Economic Benefits of Routine Childhood Immunizations in the Era of the Vaccines for Children Program—[United States, 1994-2023. U.S. Department of Health and Human Services | Centers for Disease Control and Prevention | MMWR | August 8, 2024 | Vol. 73 | No. 31.](#)
2. Global Hepatitis Report 2024 WHO [Global hepatitis report 2024: action for access in low- and middle-income countries](#) . Global hepatitis report 2024: action for access in low- and middle-income countries. Geneva: World Health Organization; 2024. License: [CC BY-NC-SA 3.0 IGO](#).
3. Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2023. <https://www.cdc.gov/hepatitis-surveillance-2023/about/index.html> Published April 2025. Accessed October, 2025.
4. Centers for Disease Control and Prevention. [Clinical Testing and Diagnosis for Hepatitis B | Hepatitis B | CDC](#) . Published Jan. 31, 2025.
5. Wong RJ, Brosgart et. al. An Updated Assessment of Chronic Hepatitis B Prevalence Among Foreign-Born Persons Living in the United States. Hepatology. 2021 Aug;74(2):607-626. doi: 10.1002/hep.31782. Epub 2021 May 26. PMID: 33655536; PMCID: PMC8453838.
6. Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report, 2023.
7. SEER Explorer: An interactive website for SEER cancer statistics [Internet]. Surveillance Research Program, National Cancer Institute; 2025 Jul 2. [cited 2025 Dec 8]. Available from: <https://seer.cancer.gov/statistics-network/explorer/>. Data sources: U.S. Mortality Data (1969-2023), National Center for Health Statistics, CDC.



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