State of Alaska Epidemiology Bulletin

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Reaffirming the Hepatitis B Vaccine Birth Dose

Summary
On December 5, 2025, the Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices (ACIP) recommended shared clinical decision-making for administration of the Hepatitis B (HepB) birth dose in infants born to HBsAG-negative mothers. CDC will continue to review evidence regarding serology testing and provide guidance at a future date. The purpose of this *Bulletin* is to present the epidemiologic context in Alaska for continued recommendation of the universal birth dose of HepB vaccine.

HepB is a vaccine-preventable, blood-borne infection caused by the hepatitis B virus (HBV).[1] Chronic HBV infection can lead to cirrhosis and hepatocellular carcinoma (HCC) and is the leading cause of liver cancer worldwide. Infants are particularly vulnerable: approximately 85% of infants infected at birth or early infancy develop chronic HepB, substantially increasing their lifetime risk of HCC.[1] Chronic HepB is a lifelong infection with no cure. Because universal HepB vaccination began in the 1990s, many people over age 30 are not protected.

In the 1970s, Alaska Native (AN) communities experienced HBV prevalence as high as 23% and the world's highest pediatric HCC rates.[2] Up until recently, Western Alaska was the only region in the United States where HepB was endemic.[2] Through comprehensive screening, mass vaccination, and sustained universal newborn immunization, HBV transmission has been virtually eliminated in these communities, highlighting the success of long-term, population-based vaccination programs.[2]

Despite the overall success of early vaccination efforts, during 2010–2020, 1,151 chronic HepB cases were reported in Alaska, averaging 14.2 per 100,000 annually—nearly three times the 2020 national rate.[3] Alaska's distinct epidemiologic profile and persistently elevated incidence underscore the ongoing necessity of robust vaccination efforts.

Hepatitis B Screening

The Centers for Disease Control and Prevention (CDC) recommends that all adults be tested for HepB at least once during their lifetime.[4] Anyone, regardless of age, should be tested if they are at increased risk for HBV infection and should be periodically retested if risk factors or exposures persist.[4]

Pregnant women should be screened for HBsAg during every pregnancy, regardless of prior vaccination status, previous testing, or known HBV infection.[4] If HBsAg-negative, vaccination during pregnancy is recommended for those who were not previously vaccinated. HBsAg test results should be reviewed upon admission for labor and delivery. Pregnant women should be retested if records are unavailable, results are unknown, or if they are at elevated risk for HBV infection.[1]

Birth Dose

Hepatitis B is most commonly transmitted from mother to child through blood exposure during birth. Existing guidance for preventing perinatal HepB transmission remains unchanged.[5] Infants born to HBsAg-negative mothers can still be at risk due to the highly infectious nature of HBV and the possibility of asymptomatic infection.[6] Infants can be exposed to the virus during accidental exposure through cuts and bug bites, shared personal items such as nail clippers, or close contact with HBsAg-positive people.[6]

Although prenatal HBsAg testing identifies most mothers with hepatitis B, infections can be missed due to testing errors, new maternal infection later in pregnancy, incomplete records, or false-negative results. Misinterpreted laboratory results, documentation mistakes, or delayed reporting can also put infants at risk. Additionally, newborns may be exposed to HBV through contact with household members or caregivers who are infected. The birth dose HepB vaccine offers protection when infants are most vulnerable, helping to prevent lifelong infection and liver cancer.

Vaccination Efficacy and Safety

The HepB vaccine has been extensively tested and is highly effective at preventing newborn infection when given within 24 hours of birth.[7] Adverse effects are typically mild and self-limited, resolving within 24–48 hours. Serious adverse reactions are rare, occurring at about 1.1 per million doses administered.[7] Report adverse events to the Vaccine Adverse Event Reporting System.

Coadministration

Coadministration of HepB vaccine with other routinely recommended vaccines for children and adults is appropriate when no contraindications exist. HepB and respiratory syncytial virus vaccine may be given simultaneously to eligible patients.[7]

Recommendations

1. Test all pregnant women for HBsAg during their earliest prenatal visit. Retesting at the time of delivery if the result is unknown or unavailable or there are ongoing exposure risks.
2. Administer a dose of single-antigen HepB vaccine within 12 hours of birth to infants born to women who are HBsAg-positive or whose HBsAg status is unknown at delivery.
3. Administer Hepatitis B Immune Globulin (HBIG) to infants within 12 hours of birth if their mother is HBsAg-positive or if her HBsAg status is unknown and testing is not feasible. If the mother is tested around the time of delivery and results return positive, give HBIG within 7 days of birth.
4. Offer and recommend HepB vaccine to all other infants within 24 hours of birth (use only single-antigen HepB vaccine for infants younger than 6 weeks of age).
5. Ensure all children complete the full HepB vaccination series by 18 months of age, and follow the American Academy of Pediatrics age-appropriate catch-up immunization schedule for children not fully vaccinated by 18 months.
6. Offer HepB vaccination to unvaccinated adults through age 59 years (including pregnant women who test negative for HBsAg), and to adults aged ≥60 years with risk factors or upon request.
7. Test pregnant women who are HBsAg-positive for HBV DNA, and initiate tenofovir for those with levels ≥200,000 IU/mL for the remainder of their pregnancy.[8]

Vaccine Availability

HepB vaccine is available through pediatric clinics, pharmacies, hospitals, and health care clinics. All children in Alaska are eligible for vaccines at no cost through the Vaccines for Children Program and the Alaska Vaccine Assessment Program.

References

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