



ALASKA PERINATAL HEPATITIS B PREVENTION PROGRAM MANUAL



Division of Public Health
Section of Epidemiology
Immunization Program

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The Alaska Perinatal Hepatitis B Prevention Program is managed through the Alaska Immunization Program. For more information about the program please visit:

<http://dhss.alaska.gov/dph/Epi/iz/Pages/hbv/default.aspx>

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Introduction

Hepatitis B virus (HBV) infection is a major cause of acute and chronic hepatitis, cirrhosis of the liver, and primary hepatocellular carcinoma. It is the most prevalent chronic infectious disease in the world, a common cause of morbidity and mortality worldwide, and a major health problem in the United States. One mode of transmission of HBV is perinatal transmission (from mother to infant during birth). An estimated 24,000 infants are born each year to women in the United States who are infected with HBV; between 30% and 40% of all chronic HBV infections result from perinatal transmission. Infants and young children are at particular risk for developing chronic hepatitis B infection after exposure to the virus.

- 90% of HBV-infected newborns will develop chronic infection and up to 25% of these children will die of cirrhosis, liver failure or liver cancer later in life
- 25% to 50% of children between the ages of one and five years who are acutely infected with HBV will progress to develop chronic infection
- Only 5% of newly infected adults become chronically infected
- Proper prophylaxis and completion of the hepatitis B vaccine series can reduce neonatal infection and the potential sequelae by 95%

ALASKA STATE PUBLIC HEALTH LAW

The State of Alaska has provided legislative directives to require reporting cases of hepatitis B as this allows the protection of all residents. The regulations dictate that *BOTH* providers and laboratories must report the lab results with evidence of human infection caused by selected agents including hepatitis B virus. Relevant Alaska State Statutes and Regulations are 18.15.370, 7 AAC 27.005 and 7 AAC 27.007. A complete set of statutes and regulations may be found at <http://www.law.state.ak.us>.

REPORTING AND HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT (HIPAA)

The HIPAA Privacy Rule has been in effect since April 14, 2003. The intent of HIPAA is to establish national standards for consumer privacy protection and insurance market reform. The Privacy Rule strikes a balance between protecting patient information and allowing traditional public health activities to continue. Disclosure of patient health information without the authorization of the individual is permitted by law 45 CFR § 164.512 (a) and (b) (i).

“No health department, state or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.”

Public Health Reports, 1946

Case Identification and Management

Case management can take up to two years from identification of an HBsAg-positive pregnant woman through follow-up of her infant. Such a lengthy process is unusual in public health and presents unique challenges, particularly since most cases will have long periods of time between communications.

CASE IDENTIFICATION

Identification of HBsAg-positive pregnant women by DHSS/DPH, Section of Epidemiology occurs primarily through mandatory reporting by laboratories and prenatal care providers.

CASE MANAGEMENT

The Alaska Perinatal Hepatitis B Prevention Program is managed through the Alaska Immunization Program. The Perinatal Hepatitis B Coordinator contacts the provider to confirm pregnancy status, estimated date of confinement (EDC), insurance status, planned delivery hospital and any additional demographic information required.

Three weeks prior to EDC the Perinatal Hepatitis B Coordinator will notify the delivery hospital to ensure they are aware of HBsAg-positive mother status.

Once delivery of infant has been confirmed and information has been obtained from the delivery hospital the Perinatal Hepatitis B Coordinator will contact the pediatrician on record.

The Perinatal Hepatitis B Coordinator will provide the pediatrician with the date of birth, HBIG and hepatitis B vaccine.

The Perinatal Hepatitis B Coordinator will contact the provider three weeks prior to an infant being due for their hepatitis B vaccine and post-vaccination serology testing.

The Perinatal Hepatitis B Program may perform medical record reviews at hospitals that deliver at least 90% of the state's birth cohort. Hospitals that have delivered infants of HBsAg-positive women or hospitals in areas with high HBsAg prevalence rates will be prioritized. The chart reviews will focus on the:

- Presence of maternal HBsAg test results (including the test date) in both infant and mothers record.
- Administration of hepatitis B vaccine within 12 hours of birth to infants born to HBsAg-unknown status women.
- Administration of a dose of hepatitis B vaccine to all infants prior to hospital discharge.
- Assessment of perinatal hepatitis B written policies and standing orders.

Recommendations

RECOMMENDATIONS FOR PRENATAL PROVIDERS

Prenatal care providers should test every woman for HBsAg during an early prenatal visit (e.g., in the first trimester), even if a woman has been previously vaccinated or tested. In addition, prenatal care settings should incorporate each of the following actions into their policies and protocols:

For a pregnant woman with a *positive* HBsAg test result:

- Report the positive test result to the Perinatal Hepatitis B Coordinator.
- Provide a copy of the original laboratory report indicating the pregnant woman's HBsAg status to the hospital where the delivery is planned and to the health-care provider who will care for the newborn.
- Attach an alert notice or sticker to the woman's medical record to remind the delivery hospital/nursery that the infant will need hepatitis B vaccine and HBIG at birth.
- Educate the mother about the need for immunoprophylaxis of her infant at birth, and obtain consent for immunoprophylaxis before delivery. Consider printing additional reminder notices for mothers about the importance of immunoprophylaxis for infants and attaching the notices to the inside front or back cover of the medical record.
- Advise the mother that all household, sexual, and needle-sharing contacts should be tested for HBV infection and vaccinated if susceptible.
- Provide information to the mother about hepatitis B, including modes of transmission, prenatal concerns (e.g., infants born to HBsAg-positive mothers may be breastfed), medical evaluation and possible treatment of chronic hepatitis B, and substance abuse treatment (if appropriate).
- Refer the mother to a medical specialist for evaluation of chronic hepatitis B.

For a pregnant woman with a *negative* HBsAg test result:

- Provide a copy of the original laboratory report indicating the pregnant woman's HBsAg status to the hospital where the delivery is planned and to the health-care provider who will care for the newborn.
- Include information in prenatal care education about the rationale for and importance of newborn hepatitis B vaccination for all infants.
- Administer the hepatitis B vaccine series if the patient has a risk factor for HBV infection during pregnancy (e.g., injection-drug use, more than one sex partner in the previous 6 months or an HBsAg-positive sex partner, evaluation or treatment for a sexually-transmitted disease [STD]).
- Repeat HBsAg testing upon admission to labor and delivery for HBsAg-negative women who are at risk for HBV infection during pregnancy or who have had clinical hepatitis since previous testing.

RECOMMENDATIONS FOR DELIVERY HOSPITALS

Delivery hospitals should enroll in the Alaska Vaccine Distribution program to obtain free hepatitis B vaccine for administration of the birth dose to all newborns. Delivery hospital policies and procedures to prevent perinatal HBV transmission are needed in both the labor and delivery department and the newborn nursery and should include the following *standing orders*:

- For all pregnant women, review of HBsAg test results at the time of admission for delivery.
- For women who do not have a documented HBsAg test result, obtain HBsAg testing as soon as possible after admission for delivery.
- Identification and management of all infants born to HBsAg-positive mothers, including provision of post-exposure immunoprophylaxis.
- Identification and management of all infants born to mothers with unknown HBsAg status.
- For all infants, documentation on the infant's medical record of maternal HBsAg test results, infant hepatitis B vaccine administration, and administration of HBIG (if appropriate).

In addition to policies and procedures to prevent perinatal HBV transmission, ***all delivery hospitals should implement standing orders for administration of hepatitis B vaccination before hospital discharge as part of routine medical care*** of all medically stable infants weighing $\geq 2,000$ grams at birth.



Give birth to the end of Hep B

Protect newborns - Administer hepatitis B vaccine at birth

The Immunization Action Coalition (IAC) is urging hospitals and birthing centers to meet the national standard of care by providing a universal birth dose of hepatitis B vaccine.



It prevents mother-to-infant transmission
Prevents 70%–95% of transmission to infants born to HBsAg-positive women



It prevents household transmission
Protects infants from infected family members and other caregivers



It provides protection if medical errors occur
Provides a safety net to prevent perinatal transmission when medical errors occur

Adapted from the Immunization Action Coalition

RECOMMENDATIONS FOR PEDIATRICIANS

Pediatric care providers should establish practices for *ensuring appropriate follow-up of infants born to HBsAg-positive mothers and infants born to mothers with unknown HBsAg status at the time of delivery*. These practices should include the following:

- For all infants, complete the hepatitis B vaccine series according to a recommended vaccination schedule, and document the date of administration of each dose of the vaccine series.
<http://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html>.
- Identify and manage infants born to mothers who did not have a documented HBsAg test at the time of delivery. This requires obtaining maternal HBsAg test results from the delivery hospital laboratory and providing appropriate management on the basis of those results:
 - If the mother is found to be HBsAg-positive, her infant should receive HBIG as soon as possible but no later than age seven days, and the vaccine series should be completed according to a schedule for infants born to HBsAg-positive mothers.
 - If the mother is found to be HBsAg-negative, the vaccine series should be completed according to a recommended schedule for infants born to HBsAg-negative mothers.
- For preterm infants weighing <2,000 grams at birth, the initial vaccine dose (birth dose) should not be counted as part of the vaccine series because of the potentially reduced immunogenicity of hepatitis B vaccine in these infants. Three additional doses of vaccine (for a total of four doses) should be administered beginning when the infant reaches the chronological age of one month.
- For infants born to HBsAg-positive mothers, perform post-vaccination serology testing (PVST) for **anti-HBs** and **HBsAg** after completion of the vaccine series, generally at 9–12 months of age. (*Anti-HBc is not recommended as passively acquired maternal anti-HBc may be detected in children up to 24 months of age.*)
- Criteria for post-vaccination serology testing are as follows:
 - Infant must be at least 9 months of age **and**
 - A minimum of one month has to have elapsed since last hepatitis B vaccine.
- Test results should be managed as follows:
 - HBsAg-negative infants with anti-HBs concentrations of ≥ 10 mIU/mL are protected and need no further medical management.
 - HBsAg-negative infants with anti-HBs concentrations of < 10 mIU/mL should be revaccinated with a second three-dose series and retested one to two months after the last dose of vaccine.
 - Infants who are HBsAg- positive should receive appropriate follow-up and should be reported to the health department.

References & Resources

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7. Centers for Disease Control and Prevention. Viral Hepatitis: www.cdc.gov/hepatitis
8. Vaccines & Immunizations: <http://www.cdc.gov/vaccines/default.htm>
9. Immunization Action Coalition: www.immunize.org
10. Healthy People 2020: www.healthypeople.gov
11. Parents of Kids with Infectious Diseases: www.pkids.org
12. HIPAA: <http://www.cdc.gov/vaccines/imz-managers/laws/HIPAA/qa-patient-recs-perinatal-hepb.html>
13. Hep B United: <http://hepbunited.org/>
14. HepB Moms: <http://www.hepbmoms.org/>