

Perinatal Hepatitis B Prevention Program

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Background

- In 1991, the United States adopted a strategy for universal HepB vaccination of infants
 - Hepatitis B can be passed from a positive mother to her infant during birth. Approximately 90% of infants who become infected with hepatitis B within the first year of life will develop chronic infection.
- A comprehensive strategy to eliminate HBV transmission evolved over the ensuing 3 decades and encompasses
 - 1) Routine testing of all pregnant women for HBsAg and prophylaxis for infants born to HBsAg-positive mothers
 - 2) Universal vaccination of infants beginning at birth
 - 3) Routine vaccination of previously unvaccinated children and adolescents
 - 4) Vaccination of adults at risk for HBV infection

Case Management Overview

- Receive reports of HBsAg+ women and determine their current pregnancy status/recent delivery.
- Open case, tracking mom pre-delivery and infant post-delivery.
- Communicate to hospitals/providers to ensure timely vaccination to newborns to prevent Hep B transmission.
- Close case once Hep B series is complete and PVST (Post Vaccination Serologic Testing) is completed and baby is HBsAg- and Anti-HBs levels of ≥ 10 mIU/mL (Hep B negative and is immune against HBV infection).
- Provide education and materials, communicate updates, annual site visits/webinars.

Reporting Requirements

To help prevent hepatitis B perinatal transmission in the State of Maine, prenatal care providers are encouraged to do the following:

- Test every pregnant woman during each pregnancy for HBsAg.
- Inform pregnant women of their HBsAg status.
- Send a copy of HBsAg test result for current pregnancy with prenatal records to delivery hospital.
- Report all HBsAg-positive women to the MeCDC within 24 hours
- Counsel HBsAg-positive women about their status and refer for appropriate care.
- Contact the pediatric provider to communicate the woman's HBsAg-positive status and the need for hepatitis B vaccination and hepatitis B immune globulin (HBIG) for the infant.
- Counsel and vaccinate pregnant HBsAg-negative women if high risk.
- Retest high risk pregnant HBsAg-negative women in their last trimester.

Guidance for Prenatal Care

- Educate HBsAg-positive women on their HBsAg status and the importance of proper preventive care for their infant, including Hepatitis B immune globulin (HBIG) and single antigen hepatitis B vaccine at birth, hepatitis B vaccine series completion at six months of age, and post-vaccination serologic testing.
- Ensure that HBsAg-positive pregnant women are able to advocate for the proper care of their HBV-exposed infants in case labor and delivery occurs at an unplanned facility.
- Supply HBsAg-positive women with documentation of HBsAg laboratory results and ask them to provide this documentation to labor and delivery staff at the time of delivery.

Guidance for Labor & Delivery

Identify HBsAg status of all women presenting for delivery.

- **If a woman's HBsAg status is positive**, HBIG and single antigen hepatitis B vaccine should be administered to her infant within 12 hours of birth.
- **If a woman's HBsAg status is unknown**
 - Test mother ASAP
 - Infants weighing $>2,000$ grams administer single antigen hepatitis B vaccine within 12 hours of birth. If results positive, administer HBIG within 7 days of birth.
 - Infants weighing $<2,000$ grams administer Hepatitis B immune globulin (HBIG) & single antigen hepatitis B vaccine within 12 hours of birth
- Provide the birth dose of hepatitis B vaccine to all other newborns within 24 hours of birth to prevent horizontal hepatitis B virus transmission from household or other close contacts.

Guidance for Pediatric Care

- Every effort should be made to ensure HBV-exposed infants complete the hepatitis B vaccine series following the ACIP recommendations.
- Providers using single-component vaccine who are experiencing immunization service disruption should administer hepatitis B vaccine as close to the recommended intervals as possible, including series completion at 6 months, and follow ACIP recommendations for post-vaccination serologic testing.
- If post-vaccination serologic testing is delayed beyond 6 months after the hepatitis B series is completed, the provider should consider administering a “booster” dose of single antigen hepatitis B vaccine and then ordering post-vaccination serologic testing (HBsAg & antibody to HBsAg [anti-HBs]) 1-2 months after the “booster” dose.

Guidance Continued...

ACIP Recommendations (2018)

- Revaccination of susceptible infants (HBsAg-negative & anti-HBs < 10 mIU/mL)
- Option A (Newer guidance)
 - Revaccinate with a single dose of hepatitis B vaccine and receive PVST 1-2 months later. Infants who are still susceptible should complete the 2nd series with 2 additional doses followed by repeat PVST 1-2 months after final dose.
- Option B
 - Family/clinician may revaccinate with 2nd complete 3 dose series, followed by PVST 1-2 months after final dose

Note: If baby is still susceptible after completion of the 2nd series, additional vaccination is not recommended, and they are considered a non-responder.

Universal Hepatitis B Birth Dose

A birth dose of HepB vaccine serves as postexposure prophylaxis to prevent perinatal HBV infection among infants born to HBV-infected mothers.

Administration of a **birth dose to all infants (even without HBIG) serves as a safeguard to prevent perinatal transmission** among infants born to HBsAg positive mothers not identified prenatally because of lack of maternal HBsAg testing or failures in reporting test results.

The birth dose also provides protection to infants at risk from household exposure after the perinatal period.

HepB vaccine or HBIG given alone are **75%** and **71%** effective in preventing perinatal HBV transmission, respectively; their **combined efficacy is 94%**.

Maine Case Management

- Averages 20 open cases
 - 10-15 new cases/year
- 2 infant positive cases since 2005
 - 1 did not receive HBIG
 - Does not include transfers/moved/lost to follow up
- Patient demographics
 - Refugee/transient
 - MaineCare/Uninsured
- Barriers
 - Locating patients
 - Missed appointments
 - Parent Refusal

Questions?

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