Oregon Perinatal Hepatitis B Prevention Program

1. BACKGROUND

The following document is a compilation of the recommendations of the Advisory Committee on Immunization Practices (ACIP) for a comprehensive strategy to eliminate transmission of hepatitis B virus (HBV), the chapters on hepatitis B from the American Academy of Pediatrics (AAP) Red Book 2006 and the 11th Edition of CDC’s Epidemiology and Prevention of Vaccine Preventable Disease.

The intent of these guidelines is to provide communicable disease nurses and perinatal hepatitis B case management coordinators with reference material and specific instructions for HBV antigen testing, management, and reporting of pregnant women, their household and sexual contacts, and HBV exposed infants during the perinatal period (Box 1). The Oregon Perinatal Hepatitis B Prevention Program includes case management, follow-up, and reporting of pregnant women positive for hepatitis B surface antigen (HBsAg), infants exposed perinatally to mothers positive for HBsAg, and HBV-exposed household and sexual contacts of the mother-infant pair.

Box 1. Summary of perinatal hepatitis B vaccination recommendations.

- **Pregnant women**
  - All pregnant women should be tested routinely for hepatitis B surface antigen (HBsAg) in each pregnancy.
  - Susceptible pregnant women who are identified as being at risk for HBV infection during pregnancy should be vaccinated.

- **Infants**
  - **At birth**
    - Infants born to HBsAg-positive mothers should receive hepatitis B vaccine and hepatitis B immune globulin (HBIG) within 12 hours of birth.
    - Infants born to mothers with an unknown HBsAg status should receive hepatitis B vaccine within 12 hours of birth. The mother should be tested to determine her HBsAg status as soon as possible (ASAP). If the mother is HBsAg-positive, the infant should receive HBIG ASAP, but no later than 7 days of age.
    - Full-term infants who are medically stable and weigh ≥2000 g born to HBsAg-negative mothers should receive the single-antigen hepatitis B vaccine before hospital discharge.
    - Preterm infants who weigh <2000 g born to HBsAg-negative mothers should receive the first dose of vaccine at hospital discharge or 1 month after birth.
  - **After birth**
    - All infants should complete the hepatitis B vaccine series with either single-antigen or combination vaccine, according to a recommended vaccination schedule (see Tables 2 and 3).
    - After completion of the hepatitis B vaccine series, infants born to HBsAg-positive mothers should be tested for HBsAg and antibody to HBsAg (anti-HBs) at age 9-18 months.

- **Household and sexual contacts**
  - All household contacts and sex partners of HBsAg-positive mothers identified during screening of the mother should be tracked and receive testing and post-exposure prophylaxis as appropriate.
A. Testing pregnant women for HBsAg

All pregnant women should be tested routinely for HBsAg, a marker for infectiousness, during an early prenatal visit (e.g., first trimester) in each pregnancy, even if they have been previously vaccinated or tested. As of January 1, 2006, Oregon law (Section 333.019.0036) requires routine HBsAg testing of pregnant women unless a woman specifically refuses the test. HBsAg testing may be conducted at the same time other routine prenatal laboratory testing is done.

Pregnant women who
- were not screened prenatally, or
- engage in behaviors that put them at high risk for infection, or
- present with clinical hepatitis
should be tested at the time of admission to the hospital for delivery.

Behaviors that place women at high risk for infection include
- personal injection drug use OR
- having had
  - more than one sex partner in the previous 6 months, or
  - an HBsAg-positive sex partner, or
  - a partner who has been evaluated or treated for a sexually transmitted disease (STD), or
  - a partner who is a recent or current injection drug user.

When pregnant women are tested for HBsAg at the time of admission for delivery, shortened testing protocols should be used and initially reactive results should be immediately reported to the attending physician to expedite administration of immunoprophylaxis to infants.

B. Case-management of HBsAg-positive women

Women who are HBsAg-positive should be identified to ensure that their infants receive timely post-exposure prophylaxis and follow-up. The woman’s healthcare provider should send a copy of the original laboratory report, if available, indicating the pregnant woman’s HBsAg status to the hospital where delivery is planned.

Women who are HBsAg-positive should be provided with appropriate counseling and medical management. HBsAg-positive pregnant women should receive information concerning HBV that discusses:
- Medical evaluation and possible treatment of chronic HBV,
- Modes of transmission,
- Perinatal transmission risk and consequences of perinatal transmission,
- Prevention of HBV transmission to contacts,
- Importance of post-exposure prophylaxis, and
- Substance abuse treatment, if appropriate.

C. Reporting of HBsAg-positive women

HBsAg-positive individuals are reportable in the State of Oregon, regardless of whether the HBV infection is acute or chronic. A pregnant woman who is HBsAg-positive must be reported to Acute and Communicable Disease Prevention (ACDP) and with each pregnancy to the Immunization Program of the Oregon Public Health Division. The local health department should report to the Immunization Program within two weeks of receiving the laboratory report. If you are unsure if an HBsAg-positive individual has been previously reported in Oregon, please contact the Perinatal Hepatitis B Prevention Program Coordinator.
D. Vaccinating pregnant women at risk for HBV infection

Susceptible pregnant women at risk for HBV infection during pregnancy should be vaccinated. See Section 2.A. for risk factors. Table 1 provides a summary of the recommended doses by age group and vaccine type for the currently licensed hepatitis B vaccine formulations.

Table 1. Recommended doses of currently licensed formulations of hepatitis B vaccine by age group and vaccine type.

<table>
<thead>
<tr>
<th>Age group</th>
<th>Single-antigen vaccine</th>
<th>Combination vaccine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Recombivax HB</td>
<td>EngerixB</td>
</tr>
<tr>
<td></td>
<td>Dose (µg)</td>
<td>Volume (mL)</td>
</tr>
<tr>
<td>Infants (&lt;1 years)</td>
<td>5</td>
<td>0.5</td>
</tr>
<tr>
<td>Children (1-10 years)</td>
<td>5</td>
<td>0.5</td>
</tr>
<tr>
<td>Adolescents (11-19 years)</td>
<td>5³</td>
<td>0.5</td>
</tr>
<tr>
<td>Adults (≥20 years)</td>
<td>10</td>
<td>1.0</td>
</tr>
<tr>
<td>Immunocompromised persons &amp; hemodialysis patients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20 years 6</td>
<td>5</td>
<td>0.5</td>
</tr>
<tr>
<td>≥20 years</td>
<td>40³</td>
<td>1.0</td>
</tr>
</tbody>
</table>

¹ Combined hepatitis B-Haemophilus influenzae type b conjugate vaccine. This vaccine cannot be administered at birth, before 6 weeks of age, or after 71 months (≥6 years) of age.
² Combined hepatitis B-diphtheria, tetanus, and acellular pertussis-inactivated poliovirus vaccine. This vaccine cannot be administered at birth, before 6 weeks of age, or after 83 months (≥7 years) of age.
³ Combined hepatitis A and hepatitis B vaccine. This vaccine is recommended for persons ≥18 years of age who are at increased risk for both hepatitis B virus and hepatitis A virus infections.
⁴ Recombinant hepatitis B surface antigen protein dose.
⁵ If an adult formulation of Recombivax HB is used (i.e., 10 µg dose, 1.0 mL volume), the vaccine is administered on a 2-dose schedule.
⁶ Higher doses might be more immunogenic, but no specific recommendations have been made.
⁷ Dialysis formulation administered on a 3-dose schedule at 0, 1, and 6 months.
⁸ Two 1.0mL doses administered at one site, on a 4-dose schedule at 0, 1, 2, and 6 months.
NA = Not Applicable.

3. INFANT MANAGEMENT

A. Management of infants weighing ≥2000 g at birth

1. Infants (≥2000 g) born to HBsAg-positive women

All infants born to HBsAg-positive women should receive single antigen hepatitis B vaccine and hepatitis B immune globulin (HBIG) within 12 hours of birth. The hepatitis B vaccine and HBIG should be administered concurrently, by intramuscular injection, and at different injection sites. The vaccine series should be completed according to the recommended schedule for infants born to HBsAg-positive women (Table 2). The final dose in the vaccine series should not be administered before the infant is 24 weeks (164 days) of age. Post-vaccination testing for anti-HBs and HBsAg should be performed after completion of the vaccine series, at 9-18 months of age (see section 3.C.).
Table 2. Hepatitis B vaccine schedules for newborn infants by maternal hepatitis B surface antigen (HBsAg) status*.

<table>
<thead>
<tr>
<th>Maternal HBsAg status</th>
<th>Single-antigen vaccine</th>
<th>Single antigen + combination vaccine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dose</td>
<td>Age</td>
</tr>
<tr>
<td>Positive</td>
<td>1†</td>
<td>Birth (within 12 hours)</td>
</tr>
<tr>
<td></td>
<td>HBIG§</td>
<td>Birth (within 12 hours)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1-2 months</td>
</tr>
<tr>
<td></td>
<td>3¶</td>
<td>6 months</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unknown**</td>
<td>1†</td>
<td>Birth (within 12 hours)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1-2 months</td>
</tr>
<tr>
<td></td>
<td>3¶</td>
<td>6 months</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>1†</td>
<td>Birth (before discharge)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1-2 months</td>
</tr>
<tr>
<td></td>
<td>3¶</td>
<td>6-18 months</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* See Table 3 for vaccine schedules for preterm infants weighing <2000 g.  
† Recombivax HB or EngerixB should be used for the birth dose. Comvax and Pediarix cannot be administered at birth or before age 6 weeks.  
§ Hepatitis B immune globulin (0.5 mL) administered intramuscularly in a separate site from vaccine.  
¶ The final dose in the vaccine series should not be administered before age 24 weeks (164 days).  
** Mothers should have blood drawn and tested for HBsAg as soon as possible after admission for delivery; if the mother is found to be HBsAg-positive, the infant should receive HBIG as soon as possible but no later than age 7 days.  

Note. Oregon Public Health Division does not provide HBIG to hospitals or health departments at this time. Hospitals should purchase HBIG directly from the manufacturer or from the distributor of their choice.

2. Infants (≥2000 g) born to women of unknown HBsAg status

Women admitted for delivery without documentation of HBsAg test results should have blood drawn and tested as soon as possible after admission.

While test results are pending, all infants born to women without documentation of HBsAg test results should receive the first dose of single antigen hepatitis B vaccine within 12 hours of birth.

- If the mother is determined to be HBsAg-positive, her infant should receive the additional protection of HBIG as soon as possible but no later than 7 days of age. The efficacy of HBIG administered after 48 hours of age, however, is not known. The hepatitis B vaccine and HBIG should be administered by intramuscular injection and at different injection sites. The vaccine series should be completed according to the recommended schedule for infants born to HBsAg-positive women (Table 2). The final dose in the vaccine series should not be administered before the infant is 24 weeks (164 days) of age. Post-vaccination testing for anti-HBs and HBsAg should be performed after completion of the vaccine series, at 9-18 months of age (see Section 3.C.).

- If the mother is determined to be HBsAg-negative, the vaccine series should be
completed according to a recommended schedule for infants born to HBsAg-negative women (Table 2). The vaccine should be administered by intramuscular injection. The final dose in the vaccine series should not be administered before the infant is 24 weeks (164 days) of age.

- If the mother has never been tested to determine her HBsAg status, the vaccine series should be completed according to the recommended schedule for infants born to HBsAg-positive women (Table 2). The vaccine should be administered by intramuscular injection. The final dose in the vaccine series should not be administered before the infant is 24 weeks (164 days) of age. Post-vaccination testing for anti-HBs and HBsAg should be performed after completion of the vaccine series, at 9-18 months of age (see Section 3.C.).

B. Management of infants weighing <2000 g at birth

1. Infants (<2000 g) born to HBsAg-positive women

Preterm infants weighing <2000 g born to HBsAg-positive women should receive single antigen hepatitis B vaccine and hepatitis B immune globulin (HBIG) within 12 hours of birth. The hepatitis B vaccine and HBIG should be administered concurrently, by intramuscular injection, and at different injection sites. However, the initial vaccine (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. The vaccine series (3 additional doses) should be completed beginning when the infant reaches 1 month of age in accordance with the recommended schedule for infants born to HBsAg-positive women (Table 3). The final dose (4th dose) in the vaccine series should not be administered before the infant is 24 weeks (164 days) of age. Post-vaccination testing for anti-HBs and HBsAg should be performed after completion of the vaccine series, at 9-18 months of age (see Section 3.C.).

<table>
<thead>
<tr>
<th>Maternal HBsAg status</th>
<th>Recommendation</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>• HBIG* AND hepatitis B vaccine&lt;br&gt;• Administer 3 additional doses at 1,2-3, and 6 months (single-antigen) or 2,4 and 6 months (Pediarix) or 2, 4, 12-15 months (Comvax)&lt;br&gt;• Do not count birth dose as part of the vaccine series&lt;br&gt;• Test for HBsAg and anti-HBs† after completion of the vaccine series</td>
<td>• Within 12 hours of birth&lt;br&gt;• Begin at age 1-2 months&lt;br&gt;• 9-18 months of age</td>
</tr>
<tr>
<td>Unknown</td>
<td>• HBIG AND hepatitis B vaccine&lt;br&gt;• Test mother for HBsAg&lt;br&gt;• Administer 3 additional doses at 1,2-3, and 6 months (single-antigen) or 2,4 and 6 months (Pediarix) or 2, 4, 12-15 months (Comvax)&lt;br&gt;• Do not count birth dose as part of the vaccine series&lt;br&gt;• Test for HBsAg and anti-HBs† after completion of the vaccine series, if necessary</td>
<td>• Within 12 hours of birth&lt;br&gt;• Begin at age 1-2 months&lt;br&gt;• 9-18 months of age</td>
</tr>
<tr>
<td>Negative</td>
<td>• May delay first dose of hepatitis B vaccine&lt;br&gt;• Complete the vaccine series at 2, and 6-18 months (single antigen) or 2,4 and 6 months (Pediarix) or 2,4 and 12-15 months (Comvax)</td>
<td>• At hospital discharge or begin at 1 month of age</td>
</tr>
</tbody>
</table>

* Hepatitis B immune globulin. † Antibody to HBsAg.

Note. Oregon Public Health Division does not provide HBIG to hospitals or health departments at this
time. Hospitals should purchase HBIG directly from the manufacturer or from the distributor of their choice.

2. **Infants (<2000 g) born to women of unknown HBsAg status**

Because of potentially decreased immunogenicity of vaccine in preterm infants weighing <2000 g, **these infants born to women without documentation of HBsAg test results should receive BOTH single antigen hepatitis B vaccine and HBIG if the mother’s HBsAg status cannot be determined within 12 hours of birth.** The hepatitis B vaccine and HBIG should be administered concurrently, by intramuscular injection, and at different injection sites. However, the initial vaccine (birth dose) should not be counted as part of the vaccine series. The vaccine series (3 additional doses) should be completed beginning when the infant reaches 1 month of age in accordance with the recommended schedule for infants born to HBsAg-positive women or HBsAg-negative women, based on the woman’s test results (Table 3). The **final dose (4th dose) in the vaccine series should not be administered before the infant is 24 weeks (164 days) of age.**

If the infant was born to an HBsAg-positive woman, post-vaccination testing for anti-HBs and HBsAg should be performed on the infant after completion of the vaccine series, at 9-18 months of age (see Section 3.C.).

C. **Post-vaccination serology**

**Infants born to HBsAg-positive mothers should be tested for both HBsAg and anti-HBs after completion of the hepatitis B vaccine series at 9-18 months of age. Post-vaccination testing includes serological screening for two different markers,** each for a specific reason:

- HBsAg to determine whether they have become infected with the hepatitis B virus; AND
- Anti-HBs to determine whether the vaccine was effective in mounting an immune response in the recipient.

For a table of hepatitis B markers and interpretation of serologic test results, see Table 4.

- **Testing should not be performed before age 9 months to avoid detection of anti-HBs from HBIG administered during infancy and to maximize the likelihood of detecting late HBV infection.**
- **Anti-HBc testing of infants is NOT recommended** because passively acquired maternal antiHBc might be detected in infants born to HBV-infected mothers to age 24 months.
- **HBsAg-negative infants with anti-HBs levels ≥10 mIU/mL, or ≥ or equal to the cut off value for the test method,** are protected and need no further medical management.
- **HBsAg-negative infants with anti-HBs levels <10mIU/mL, or < than the cut off value for the test method,** should be revaccinated with a second 3-dose series and retested 1-2 months after the final dose of vaccine. Infants who are HBsAg-positive should receive appropriate follow-up. **Note.** In a study of infants born to HBsAg-positive mothers who did not respond to a primary vaccine series indicated that all those not infected with HBV responded satisfactorily to a repeat 3-dose revaccination series. Data suggests that children who have no detectable antibody after 6 doses of vaccine would NOT benefit from additional hepatitis B vaccine doses.
Table 4. Typical interpretation of serologic test results for hepatitis B virus infection.

<table>
<thead>
<tr>
<th>Serologic Marker</th>
<th>HBsAg ¹</th>
<th>Total anti-HBc ²</th>
<th>IgM ³ anti-HBc</th>
<th>Anti-HBs ⁴</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEGATIVE</td>
<td>NEGATIVE</td>
<td>NEGATIVE</td>
<td>NEGATIVE</td>
<td>Never infected</td>
<td></td>
</tr>
<tr>
<td>POSITIVE</td>
<td>NEGATIVE</td>
<td>NEGATIVE</td>
<td>NEGATIVE</td>
<td>Early acute infection; transient (up to 18 days) after vaccination</td>
<td></td>
</tr>
<tr>
<td>POSITIVE</td>
<td>POSITIVE</td>
<td>POSITIVE</td>
<td>NEGATIVE</td>
<td>Acute infection</td>
<td></td>
</tr>
<tr>
<td>NEGATIVE</td>
<td>POSITIVE</td>
<td>NEGATIVE</td>
<td>POSITIVE</td>
<td>Acute resolving infection</td>
<td></td>
</tr>
<tr>
<td>NEGATIVE</td>
<td>POSITIVE</td>
<td>NEGATIVE</td>
<td>NEGATIVE</td>
<td>Recovered from past infection and immune</td>
<td></td>
</tr>
<tr>
<td>POSITIVE</td>
<td>POSITIVE</td>
<td>NEGATIVE</td>
<td>NEGATIVE</td>
<td>Chronic infection</td>
<td></td>
</tr>
<tr>
<td>NEGATIVE</td>
<td>POSITIVE</td>
<td>POSITIVE</td>
<td>NEGATIVE</td>
<td>False positive (i.e., susceptible); past infection; &quot;low-level&quot; chronic infection; ⁵ passive transfer to infant born to HBsAg-positive mother</td>
<td></td>
</tr>
<tr>
<td>NEGATIVE</td>
<td>NEGATIVE</td>
<td>NEGATIVE</td>
<td>POSITIVE</td>
<td>Immune if concentration is ≥10mIU/mL, ⁷ ⁸ passive transfer after hepatitis B immune globulin administration</td>
<td></td>
</tr>
</tbody>
</table>

¹ Hepatitis B surface antigen.  
² Antibody to hepatitis B core antigen.  
³ Immunoglobulin M.  
⁴ Antibody to HBsAg.  
⁵ To ensure that an HBsAg-positive test result is not a false positive, samples with repeatedly reactive HBsAg results should be tested with a licensed (and, if appropriate, neutralizing confirmatory) test.  
⁶ Persons positive for only anti-HBc are unlikely to be infectious except under circumstances in which they are the source for direct percutaneous exposure of susceptible recipients to large quantities of virus (e.g., blood transfusion or organ transplant).  
⁷ Milli-International Units per milliliter.  
⁸ is dependent on the cut off value for the test methodology; may also be ≥11mIU/mL or ≥12mIU/mL

Note. Testing is available free to local health departments through the Oregon State Public Health Laboratory (see the OSPHL’s "Guide to Services" manual). There is a small charge for testing ordered by private providers.

D. Reporting and follow-up of HBsAg-exposed infants

The Perinatal Hepatitis B Prevention Program requires the identification and management of infants born to HBsAg-positive women and to women without HBsAg test results. Case management involves coordinated, consistent communication among local health departments, the pregnant woman’s health care provider(s), the newborn’s health care provider(s), the birthing hospitals and birthing centers, testing laboratories, and the Oregon Public Health Division. The Oregon Perinatal Hepatitis B Prevention Program recommends the following ACIP guidelines. Contact information for the Immunization Program is provided at the end of this document.

Delivery Hospitals and Birthing Centers
- Initiation of vaccine series
  - Identification and management of infants born to HBsAg-positive women
    - Implement policies and procedures to ensure identification and initiation of post-exposure immunization of infants born to HBsAg-positive women
    - Document the date and time of birth and the date and time of administration of hepatitis B vaccine and HBIG for all infants born to HBsAg-positive women and enter into the Electronic Birth Registration System
Identification and management of infants born to women without HBsAg test results

- Implement policies and procedures to ensure identification and initiation of post-exposure immunization of infants born to women with unknown HBsAg status at the time of delivery
- Document the date and time of birth, the date and time of administration of hepatitis B vaccine, and maternal HBsAg test results for all infants born to women with unknown HBsAg status at the time of delivery. Enter the information into the Electronic Birth Registration System.

Health care providers

- Document the dates of administration of all doses of the hepatitis B vaccine series of all infants born to HBsAg-positive women.
- Document the results of testing for HBsAg and anti-HBs after completion of the hepatitis B vaccine series for all infants born to HBsAg-positive women. Report these results to the local health department.

Local Health Departments

Vaccine series

- **Dose 1 / Birth Dose:** Complete the infant contact information in the electronic case management system as soon as the infant receives HBIG and the first dose of the hepatitis B vaccine. Data should be entered as soon as possible but no later than the end of the week in which it was reported.
  - If the local health department is using forms, information should be added to the "Perinatal Hepatitis B Prevention Program — Case Management Report" form and faxed to the Immunization Program.
- **Dose 2, Dose 3, (Dose 4):** Complete the infant contact information in the electronic case management system as soon as the infant receives each dose.
  - If the local health department utilizes the forms, information should be entered on the "Perinatal Hepatitis B Prevention Program Case Management Report" form after each dose is received and faxed to the Immunization Program for data entry into the electronic case management system.

Post-vaccination testing

- **Post-vaccination Serology and Reimbursement:** Complete the infant contact information in the electronic case management system as soon as the infant has completed the 3-dose series and the post-vaccination serology test results have been received. Close the case in the system and include the date of completion.
  - If forms are being used, complete the infant’s information section on the "Perinatal Hepatitis B Prevention Program — Case Management Report" and fax the form to the Immunization Program.
- Should the child not complete the 3-dose series of vaccine and/or the post-vaccination serology within a reasonable amount of time, complete the reason lost to follow-up and close the case.
- The reimbursement for a completed case investigation of a mother-infant pair is $300.00. Partial reimbursement is also given based on how much follow-up is completed. Reimbursement is paid annually in August for the previous 12 months (August–July).

4. HOUSEHOLD CONTACTS AND SEX PARTNERS OF HBsAg POSITIVE WOMEN

Household contacts, sex partners, and needle-sharing contacts of HBsAg-positive women identified through prenatal screening should be contacted and referred to the local health department for:

- Testing for HBV infection,
- Administration of the first dose of hepatitis B vaccine immediately after collection of a blood sample for serologic testing, and
- Appropriate counseling on methods to prevent or reduce the risk of HBV transmission.

Complete the vaccine series using an age-appropriate vaccine dose and schedule (see Table 1).
Incompletely vaccinated persons should complete the vaccine series. Sex partners of HBsAg-positive individuals and HBsAg-positive individuals should be counseled on methods to prevent or reduce the risk of HBV transmission.

A. **Prevacination serologic testing for susceptibility**

Prevacination testing is recommended for unvaccinated household, sexual, and needle-sharing contacts of HBsAg-positive individuals. **Anti-HBc is the test of choice for prevaccination testing.**

- Individuals who are **anti-HBc-negative** are **susceptible** and should complete the vaccine series.
- Individuals who are **anti-HBc-positive** should be tested for HBsAg.
- **HBsAg testing may be performed on the same specimen collected for anti-HBc testing.**

B. **Post-vaccination testing for serologic response**

Testing after vaccination is recommended only for certain individuals whose subsequent clinical management depends on knowledge of their immune status. This includes the sex partners of HBsAg-positive individuals in order to determine the need for revaccination and for counseling on methods to prevent or reduce the risk of hepatitis B transmission.

- Testing should be performed 1-2 months after administration of the last dose of the vaccine series by using a method that allows determination of a protective level of anti-HBs (usually ≥10 mIU/mL but is dependent on the test methodology).
- Persons found to have anti-HBs levels of <10 mIU/mL, or < than the cut off value for the test methodology, after the primary vaccine series should be revaccinated.
- Persons who do not respond to revaccination should be tested for HBsAg.
- HBsAg-positive individuals should receive appropriate management and any household, sexual, or needle-sharing contacts should be identified, tested, and vaccinated.
- Non-responding HBsAg-negative individuals should be considered susceptible and should be counseled on methods to prevent or reduce the risk of hepatitis B transmission as well as the need to obtain HBIG post-exposure prophylaxis for any known or likely parenteral exposure to HBsAg-positive blood.

C. **Reporting of contacts**

- **Dose 1:** Complete the contact information in the electronic case management system as soon as the contact receives HBIG, if indicated, and the first dose of the hepatitis B vaccine. Data should be entered as soon as possible but no later than the end of the week in which it was reported.
  - If using forms, complete the contact’s information on the “Perinatal Hepatitis B Prevention Program – Case Management Report” as soon as the contact receives first dose of the hepatitis B vaccine and HBIG if indicated. Fax the form to the Immunization Program.
- **Dose 2 and Dose 3:** Complete the contact information in the electronic case management system as soon as the contact receives each dose. Data should be entered as soon as possible but no later than the end of the week in which it was reported.
  - If using forms, complete the contact’s information on the “Perinatal Hepatitis B Prevention Program – Case Management Report” as soon as the contact receives each dose of the hepatitis B vaccine. Fax the form to the Immunization Program.
- **Post-vaccination Serology and Reimbursement:** Complete the appropriate sections of the electronic case management system after the contact has completed the 3-dose series and the post-vaccination serology test results have been received.
  - If using the form complete the contact post series serology section of the “Perinatal Hepatitis B Prevention Program – Case Management Report” Fax the form to the Immunization Program.
The reimbursement for a completed case investigation of a household contact is $200.00. Partial reimbursement is also given based on how much follow-up is completed. Reimbursement is paid annually in August for the previous 12 months (August–July).

REFERENCES


CONTACT INFORMATION

Perinatal Hepatitis B Prevention Program Coordinator (971) 673-0300
Immunization Program Fax Line (971) 673-0278
ACDP Fax Line (971) 673-1100