

Perinatal Hepatitis B Prevention Program Guide

Iowa Department of Public Health
Division of Acute Disease Prevention, Emergency Response, and Environmental
Health (ADPER and EH)
Bureau of Immunization and TB



April 2022

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Appendix 1 Perinatal Hepatitis B Carrier Follow-up Report Form

Appendix 2 Perinatal Hepatitis B Hospital Report Form

Contact Information

Welcome

Hepatitis B is a serious disease caused by the hepatitis B virus (HBV), which can be transmitted from an infected mother to her infant at birth. The Iowa Department of Public Health, Perinatal Hepatitis B Program works to prevent transmission of hepatitis B infection from mothers to infants by conducting parent and healthcare provider education, case management of mothers and babies, distribution of hepatitis B vaccine and hepatitis B immune globulin (HBIG), and laboratory testing.

Contact Information

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Iowa Immunization Program	(800) 831-6293 http://idph.iowa.gov/immtb/immunization https://idph.iowa.gov/immtb/immunization/perinatal-hepb
State Hygienic Lab	http://www.shl.uiowa.edu/
IDPH Center for Acute Disease Epidemiology (CADE)	Phone: (515) 242-5935 or (800) 362-2736 https://idph.iowa.gov/CADE

Statement of Iowa Law and HIPAA

HIPAA Parental Refusal

Iowa Code Chapter 139A and 641 Iowa Administrative Code Chapter 1

The Iowa Department of Public Health (IDPH), local boards of health, and local health departments are authorized to access medical records and other information of patients infected or suspected to be infected with a reportable disease. Iowa Administrative Code clearly outlines all reportable diseases, conditions and investigation methods for reportable diseases such as hepatitis B. Iowa law further requires healthcare providers and laboratories to assist in public health disease investigations: “The healthcare provider or public, private, or hospital clinical laboratory attending a person infected with a reportable disease shall report the case to the department. A healthcare provider or public, private, or hospital clinical laboratory who files such a report which identifies a person infected with a reportable disease shall assist in the investigation by the department, a local board, or a local department.” A healthcare provider or public, private, or hospital clinical laboratory shall provide the department, local board, or local department with all information reasonably necessary to conduct an investigation pursuant to this chapter upon request of the department, local board, or local department.

- Chapter 139A Communicable and Infectious Diseases and Poisonings
- Iowa Administrative Code 641- Reporting of reportable communicable and infectious diseases

Health Insurance Portability and Accountability Act - HIPAA

As a result of the state law requirements listed above, the HIPAA privacy rule expressly permits covered entities (including providers and clinics) to report disease information and participate in a public health disease investigation without obtaining consent or authorization from the patient. (45 CFR 160.203(c); 45 CFR 164.512(a)(1); 45 CFR 164.512(b)(1)(i))

For this reason, IDPH and local public health authorities conducting a hepatitis B investigation are authorized to access patient specific information directly from providers, clinics, and hospitals without obtaining a consent or release from the patient. IDPH and local public health authorities may conduct all activities outlined in the [IDPH EPI Manual](#), including case investigation of infants born to HBsAg-positive women, without obtaining consent or authorization from the patient.

For full text of IDPH’s HIPAA statement visit: <https://idph.iowa.gov/hipaa-statement>.

Parent Refusal

Parents are not legally required to assist in a case investigation without the issuance of a subpoena by the local public health agency or department. There have been instances when a parent has refused to provide information to the investigating nurse regarding the HBsAg and/or immunization status of household contacts.

If this occurs while investigating a case, reiterate to the parent the reason for collecting the information. Assure them of patient confidentiality, and inform them the rest of the information needed to complete the IDPH [Perinatal Hepatitis B Carrier Follow-up Report](#) form will be obtained directly from the mother's and baby's healthcare providers.

If the parent continues to refuse to provide information, document the discussion on the Perinatal Hepatitis B Carrier Follow-up Report form and/or in IDSS (Iowa Disease Surveillance System) and notify the Perinatal Hepatitis B Prevention Program Coordinator not to contact the parent.

As stated above, parents are not required to assist in the case investigation and should not be pressured to gain information on the status of household members. Adequate information regarding the HBsAg-positive mother and resulting child is obtainable through medical providers.

Hepatitis B Vaccine and HBIG

Hepatitis B Vaccine

Hepatitis B Immune Globulin (HBIG)

Availability of Hepatitis B Vaccine and HBIG

Hepatitis B Vaccine

- HBsAg is the antigen used for hepatitis B vaccination.
- Since March 2000, hepatitis B vaccines produced for distribution in the United States do not contain thimerosal as a preservative or contain only a trace amount (<1.0 mcg mercury/mL) resulting from the manufacturing process.
- Hepatitis B vaccine is available as a single-antigen formulation and in combination with other vaccines.
- Two single-antigen hepatitis B vaccines are licensed for use in infants and young children in the United States: Recombivax HB® (Merck) and Engerix-B® (GlaxoSmithKline).
- **Only single antigen vaccine should be used for the birth dose.**
- Pediarix® (GlaxoSmithKline) and Vaxelis (Sanofi Pasteur Limited, distributed by Merck Sharp and Dohme Corp & Sanofi Pasteur Inc) are the only licensed combination hepatitis B vaccine available for vaccination of infants and young children. These vaccines may be used to complete the remaining doses of the hepatitis B vaccine series.

Additional information regarding hepatitis B vaccines is available in the [Pink Book](#).

Hepatitis B Immune Globulin (HBIG)

HBIG provides passively acquired hepatitis B surface antibody (anti-HBs) and temporary protection (e.g., 3-6 months) when administered in standard doses. HBIG is used as an adjunct to hepatitis B vaccine for post-exposure immunoprophylaxis to prevent HBV infection. HBIG can augment protection until a response to vaccination is attained. HBIG is prepared from the plasma of donors with high concentrations of anti-HBs. HBIG is commercially available in the United States and does not contain thimerosal.

Availability of Hepatitis B Vaccine and HBIG

The VFC program will support requests for 4 doses of hepatitis B vaccine for routine vaccination of infants when using combination vaccines. However, the Iowa VFC Program asks providers to consider using single antigen hepatitis B vaccine when appropriate. If a client is unable to pay for the hepatitis B vaccine or HBIG* contact:

Shelly Jensen, RN, BSN
Shelly.Jensen@idph.iowa.gov
(800) 831-6293, ext. 2

*IDPH does not maintain HBIG in inventory. It is vital the Immunization Program receive notification as soon as the need is identified so doses may be ordered directly from the manufacturer.

HBsAg Testing

*HBsAg and Infection
SHL (State Hygienic Lab)
Reporting of HBsAg Positive Tests
Action for LPHA*

HBsAg (hepatitis B surface antigen) is the confirmatory test to indicate if an individual is currently infected with the hepatitis B virus

HBsAg and Infection

The presence of a confirmed HBsAg positive result is indicative of current HBV infection, either acute or chronic. All HBsAg positive persons should be considered infectious. If a person was vaccinated against hepatitis B within the past 18 days, they may have a false-positive HBsAg result due to circulating antigen in their blood from the vaccine. In newly infected persons, HBsAg is the only serologic marker detected during the first 3-5 weeks after infection, and it persists for variable periods at very low levels. The average time from exposure to detection of HBsAg is 30 days (range: 6-60 days).

SHL (State Hygienic Lab)

Serological specimens may be submitted to the State Hygienic Laboratory (SHL) for any sexual or household contact (including children) of an HBsAg-positive pregnant woman who is unable to pay for the testing. Those who wish to submit specimens to SHL should contact the State Perinatal Hepatitis B Prevention Program Coordinator for instructions and approval.

Reporting of HBsAg Positive Tests

If a woman has a positive HBsAg test, the case must be reported to the Iowa Department of Public Health, Center for Acute Disease Epidemiology (CADE) within 3 days of diagnosis per Iowa Administrative Code 614 Chapter 1. The [form](#) for reporting a hepatitis B case is located in the CADE EPI Manual. The case may be reported through any of the following:

- Iowa Disease Surveillance System (IDSS)
- Phone:(800) 362-2736
- Secure fax: (515) 281-5698 or
- Mail to:
Lucas State Office Building, 5th Floor
321 E. 12th St.
Des Moines, IA 50319-0075

Action for LPHAs

1. If the lab slip comes directly from a provider or lab, confirm the case was reported to IDPH.
2. Complete Section "I" of the IDPH [Perinatal Hepatitis B Carrier Follow-Up Report](#) form.

Hepatitis B Serology

Hepatitis B Laboratory Nomenclature

HBsAg:	<i>Hepatitis B surface antigen</i> is a marker of infectivity. Its presence indicates either acute or chronic HBV infection.
anti-HBs:	<i>Antibody to hepatitis B surface antigen</i> is a marker of immunity. Its presence indicates an immune response to HBV infection, an immune response to vaccination, or the presence of passively acquired antibody. (It is also known as HBsAb , but this abbreviation is best avoided since it is often confused with abbreviations such as HBsAg.)
anti-HBc (total):	<i>Antibody to hepatitis B core antigen</i> is a nonspecific marker of acute, chronic, or resolved HBV infection. It is not a marker of vaccine-induced immunity. It may be used in pre-vaccination testing to determine previous exposure to HBV infection. (It is also known as HBcAb , but this abbreviation is best avoided since it is often confused with other abbreviations.)
IgM anti-HBc:	<i>IgM antibody subclass of anti-HBc</i> . Positivity indicates recent infection with HBV (≤ 6 mos). Its presence indicates acute infection.
HBeAg:	<i>Hepatitis B "e" antigen</i> is a marker of a high degree of HBV infectivity, and it correlates with a high level of HBV replication. It is primarily used to help determine the clinical management of patients with chronic HBV infection.
Anti-HBe:	<i>Antibody to hepatitis B "e" antigen</i> may be present in an infected or immune person. In persons with chronic HBV infection, its presence suggests a low viral titer and a low degree of infectivity.
HBV-DNA:	<i>HBV Deoxyribonucleic acid</i> is a marker of viral replication. It correlates well with infectivity. It is used to assess and monitor the treatment of patients with chronic HBV infection.

Interpretation of Common Hepatitis B Panel Results

Tests	Results	Interpretation	Vaccinate?
HBsAg anti-HBc anti-HBs	Negative Negative Negative	Susceptible	Vaccinate if indicated
HBsAg anti-HBc anti-HBs	Negative Negative Positive with ≥ 10 mIU/mL*	Immune due to vaccination	No vaccination necessary
HBsAg anti-HBc anti-HBs	Negative Positive Positive	Immune due to natural infection	No vaccination necessary
HBsAg anti-HBc IgM anti-HBc anti-HBs	Positive Positive Positive Negative	Acutely infected	No vaccination necessary
HBsAg anti-HBc IgM anti-HBc anti-HBs	Positive Positive Negative Negative	Chronically infected	No vaccination necessary (may need treatment)
HBsAg anti-HBc anti-HBs	Negative Positive Negative	Four interpretations possible†	Use clinical judgment

* Post-vaccination testing, when recommended, should be performed 1–2 months after the last dose of vaccine. Infants born to HBsAg-positive mothers should be tested for HBsAg and anti-HBs after completion of at least 3 doses of a licensed hepatitis B vaccination series, at age 9–12 months (generally at the next well child visit.)

† 1. Passive transfer after the hepatitis B immune globulin, 2. May be distantly immune, but the test may not be sensitive enough to detect a very low level of anti-HBs in serum, 3. May be susceptible with a false positive anti-HBc or 4. May be chronically infected and have an undetectable level of HBsAg present in the serum.

Screening of Pregnant Women

Country of Origin
Early Testing
Transfer of Test Results
Admission Testing
HBsAg Positive Mother
HBsAg Status of Mother Unknown
HBsAg Negative Mother
Action for LPHA

Timely identification of HBsAg positive pregnant women provides the opportunity to educate and initiate appropriate case management to prevent further transmission of the virus to the neonate and other susceptible household contacts.

Country of Origin

Residents and descendants of certain countries and regions of the world are more prone to HBsAg infection as the disease was, or currently is, endemic ($\geq 2\%$ or more of the population is infected). Clients from the western Pacific and African regions may have an increased risk for HBsAg infection. More information is available in the [CDC Yellow Book](#).

Early Testing

All pregnant women should be tested routinely for HBsAg during an early prenatal visit (e.g., first trimester) **in each pregnancy**, even if they were previously vaccinated, tested, or HBsAg positive.

In special situations, an additional HBsAg test may be ordered during the third trimester. This should be considered if the patient develops symptoms, is exposed to HBV, or engages in high-risk behavior (e.g., having had more than one sex partner in the previous 6 months, having an HBsAg positive sex partner, evaluation or treatment for a sexually transmitted disease [STD], or recent/current injection-drug use).

Transfer of Test Results

Pregnant women who are HBsAg positive should have a copy of the original laboratory report indicating HBsAg status provided to the hospital or birthing facility where delivery is planned and to the healthcare provider who will care for the newborn. Pregnant women who are HBsAg positive should also be referred to the state Perinatal Hepatitis B Prevention Coordinator for overall case management.

Admission Testing

Women not screened prenatally, those who engage in behaviors putting them at high risk for infection (see high-risk behaviors on the previous page) and those with clinical hepatitis should be tested at the time of admission for delivery.

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.

HBsAg Positive Mother

If the mother is HBsAg positive and the child weighs 2,000 grams (4.4 lbs.) or **more** at birth:

- **Give infant HBIG and hepatitis B vaccine within 12 hours of birth**
- Continue vaccine series on an accelerated schedule beginning at 1-2 months of age and completing the 3 dose series at 6 months of age (the final dose in the series should not be administered before age 24 weeks).
- Check quantitative anti-HBs and HBsAg 1-2 months after completion of vaccine series at 9-12 months of age. Testing should not be performed before age 9 months to avoid detection of passive anti-HBs from HBIG administered at birth.

If the mother is determined to be HBsAg positive and the child weighs **less than** 2,000 grams (4.4 lbs.) at birth:

- **Give infant HBIG and hepatitis B vaccine within 12 hours of birth**
- **Due to potentially reduced immunogenicity of the birth dose in these infants do not count birth dose as part of the typical 3-dose vaccine series.** Instead, immunize with 4 total doses of vaccine.
- Continue vaccine series on an accelerated schedule beginning at 1-2 months of age and complete the 4 dose series at 6 months of age (the final dose in the series should not be administered before age 24 weeks).
 - Single-antigen hepatitis B vaccine series - Dose 1: Birth (\leq 12 hours of age), Dose 2: 1 months of age, Dose 3: 2-3 months of age, Dose 4: 6 months of age.
 - Single antigen plus combination hepatitis B vaccine - Dose 1: Birth (\leq 12 hours of age), Dose 2: 2 months of age, Dose 3: 4 months of age, Dose 4: 6 months of age.
- Check quantitative anti-HBs and HBsAg 1-2 months after completion of vaccine series at 9-12 months of age. Testing should not be performed before age 9 months to avoid detection of passive anti-HBs from HBIG administered at birth.

HBsAg Status of Mother Unknown

Infants born to women with unavailable HBsAg testing results, but with evidence suggesting maternal HBV infection exists (e.g., presence of HBV DNA, HBeAg-positive, or mother known to be chronically infected with HBV) should be managed as if born to an HBsAg positive mother. The infant should receive both hepatitis B vaccine and HBIG within 12 hours of birth. The hepatitis B vaccine series should be completed according to the recommended schedule for infants born to HBsAg positive mothers and post vaccination serology (quantitative anti-HBs and HBsAg) should be performed at age 9-12 months (at least 1-2 months following completion of hepatitis B vaccine series).

If it is not possible to determine the mother's HBsAg status (e.g., when a parent or person with lawful custody safely surrenders an infant confidentially shortly after birth) the vaccine series should be completed according to the recommended schedule for infants born to HBsAg positive mothers. The final dose in the series should not be administered before age 24 weeks. These infants should receive post vaccination serology (quantitative anti-HBs and HBsAg) at age 9-12 months.

If the mother's HBsAg status is unknown and the child weighs 2,000 grams (4.4 lbs.) or more at birth:

- Test mother for HBsAg immediately after admission.
- **While maternal HBsAg results are pending, give infant hepatitis B vaccine within 12 hours of birth.**
- **Give infant HBIG as soon as possible, but no later than age 7 days if mother tests HBsAg positive.** If the mother's HBsAg status remains unknown at the time of discharge it may be appropriate to provide HBIG to the child prior to release from the hospital. Efforts should be made to determine HBsAg status prior to discharge, but in the absence of this information and faced with a situation where you are unsure the child will receive appropriate follow-up, providing HBIG may be appropriate.
- Continue vaccine series beginning at 1-2 months of age according to the recommended schedule based on mother's HBsAg status. The final dose in the series should not be administered before age 24 weeks.
- Check quantitative anti-HBs and HBsAg after completion of vaccine series at 9-12 months of age if mother is determined positive for HBsAg or if her status remains unknown.

If the mother's HBsAg status is unknown and the child weighs less than 2,000 grams (4.4 lbs.) at birth:

- Test mother for HBsAg immediately after admission.
- **Give infant hepatitis B vaccine within 12 hours of birth.**
- **Give infant HBIG if mother tests HBsAg positive OR if mother's HBsAg result is not available within 12 hours of birth.**
- **Do not count birth dose as part of vaccine series.** Immunize with 4 doses of vaccine.
- Continue vaccine series beginning at 1-2 months of age according to the recommended schedule based on mother's HBsAg status (**the final dose in the series should not be administered before age 24 weeks**).
- If mother's HBsAg status is determined to be positive, continue vaccine series on an accelerated schedule beginning at 1-2 months of age and complete the 4 dose series at 6 months of age (the final dose in the series should not be administered before age 24 weeks).
 - Single-antigen hepatitis B vaccine series - Dose 1: Birth (<12 hours of age), Dose 2: 1 months of age, Dose 3: 2-3 months of age, Dose 4: 6 months of age.
 - Single antigen plus combination hepatitis B vaccine - Dose 1: Birth (<12 hours of age), Dose 2: 2 months of age, Dose 3: 4 months of age, Dose 4: 6 months of age.
- Check quantitative anti-HBs and HBsAg after completion of vaccine series at 9-12 months of age if mother is determined positive for HBsAg or if her status remains unknown.

HBsAg Negative Mother

If the mother is determined to be HBsAg negative, the **infant weighing 2,000 grams or more should receive the birth dose of hepatitis B vaccine within 24 hours of birth**. The series should be completed according to the ACIP Recommended Childhood and Adolescent Immunization Schedule (birth, 1-2, and 6-18 months).

For infants born weighing less than 2,000 grams, the birth dose of hepatitis B vaccine should be deferred until hospital discharge or 1 month of age (even if weight is still less than 2,000 grams). For these infants, the series should be completed per the ACIP recommended immunization schedule. Infants weighing less than 2,000 grams at birth have a decreased response to HepB vaccine administered before age 1 month.

Action for LPHAs

1. Confirm with the women's healthcare provider a copy of the original laboratory report indicating her HBsAg status was provided to the hospital where delivery is planned.
2. Contact hospital notifying them of mother's plans for delivery and status. Assure the delivery hospital has HBIG and HepB vaccine available for administration and review with them the recommendations as needed.
3. Contact the child's healthcare provider and discuss vaccination and HBIG as well as serology.

HBsAg Positive Pregnant Women

HBV Education Action for LPHAs

HBV Education

HBsAg positive pregnant women should receive information on hepatitis B that includes:

- Modes of transmission and how to prevent transmission
- Education on perinatal transmission and importance of HBIG and HepB vaccination within 12 hours of birth, completion of HepB vaccine series, and post vaccination serology testing (PVST) of infant. Inform mother the LPHA will be providing case management of infant following birth through completion of PVST.
- Perinatal concerns (e.g., there is no contraindication for infants of HBsAg positive mothers to be breast fed beginning immediately after birth. Although HBsAg can be detected in breast milk, there is no evidence that HBV can be transmitted by breastfeeding).
- Prevention of HBV transmission to contacts, including the importance of post-exposure prophylaxis for the newborn, other household contacts, sexual partners, and needle-sharing contacts.
- Substance abuse treatment, if appropriate.
- Medical evaluation and possible treatment of chronic hepatitis.

Action for LPHAs

Contact the woman and provide the following information:

1. How you acquired her name (e.g., hepatitis B is a reportable disease in the state of Iowa and the lab and her provider are required to report the case).
2. Explain your role and discuss what services you will provide to her and household contacts (case management, notification of providers/birth hospital or center, immunization services for eligible contacts, and testing for hepatitis B status).
3. Explain what information you will be collecting while her case is “open.” Collect the pertinent information for the case (delivery plans and household contact information).
4. Provide her with the [Hepatitis B Brochure](#).
5. Discuss the importance of the baby completing the vaccine series by six months of age (an infected unprotected baby has a 90% chance of becoming a chronic carrier) and the need for post-vaccination serology.

Intervention for Infants Born to HBsAg+ Mothers

*Infants weighing 2,000 grams or more at birth
 Infants weighing less than 2,000 grams at birth
 Extended intervals between doses
 Pediarix and Vaxelis
 Action for LPHAs*

Infants Weighing 2,000 Grams or More at Birth

All infants born to HBsAg positive women **should receive single-antigen hepatitis B vaccine (birth dose) and HBIG within 12 hours of birth**, administered at different injection sites.

Hepatitis B Dose	Timing
1	Birth dose
2	4 weeks from dose 1
3	8 weeks from dose 2 AND 16 weeks from dose 1 AND the infant is 6 months of age (minimum age 24 weeks)

For information on the combination hepatitis B vaccines (Pediarix and Vaxelis) see the Hepatitis B chapter in the [Pink Book](#).

Infants Weighing Less Than 2,000 Grams at Birth

Infants weighing less than 2,000 grams (4.4 lbs.) born to HBsAg positive mothers **should receive single-antigen hepatitis B vaccine (birth dose) and HBIG within 12 hours of birth**, administered at different injection sites.

For infants weighing less than 2,000 grams, 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. Give 3 additional hepatitis B vaccine doses with single-antigen vaccine at ages 1, 2 to 3, and 6 months, or hepatitis B-containing combination vaccine (Pediarix or Vaxelis) at ages 2, 4, and 6 months. **A total of four doses of hepatitis B vaccine are recommended in this circumstance.**

Single antigen hepatitis B vaccine

Dose	Age and Minimum Interval
1 (DO NOT count as part of series)	Birth dose
2	1 month
3	2-3 months (minimum interval 4 weeks from dose 2)
4	6 months (minimum interval 8 weeks from dose 3 AND 16 weeks from dose 2 AND at least 24 weeks of age)

Single antigen plus combination hepatitis B vaccines

Dose	Age and Minimum Interval
1 (DO NOT count as part of series)	Birth dose
2	2 months
3	4 months (minimum interval 4 weeks from dose 2)
4	6 months (minimum interval 8 weeks from dose 3 AND 16 weeks from dose 2 AND at least 24 weeks of age)

Extended Intervals Between Doses

All doses not violating the minimum intervals are valid. **It is not necessary to restart the vaccine series if there is an extended interval between doses.**

The minimum interval between the first and second dose is 4 weeks. The minimum interval between the second and third dose is 8 weeks and 16 weeks from the first dose, as long as the third dose is given after 6 months of age (see chart above).

Combination Hepatitis B Vaccines

Pediarix is a combination vaccine containing DTaP, hepatitis B, and IPV. **Vaxelis is a combination vaccine containing DTaP, IPV, Hib, and Hepatitis B.** Typically, Pediarix or Vaxelis is administered at 2, 4 and 6 months of age. When giving Pediarix or Vaxelis after a birth dose of hepatitis B, the infant will receive a total of 4 doses of hepatitis B vaccine. **Four doses of hepatitis B vaccine is permissible when using combination vaccines. Combination Hepatitis B vaccines cannot be used for the birth dose. The minimum age for the final dose of hepatitis B vaccine is 24 weeks of age or older.**

Serologic testing following the Pediarix or Vaxelis series should be performed at least 1-2 months after the last dose of vaccine (typically given at 6 months of age). Testing should be performed at age 9-12 months. Testing should not be done prior to 9 months of age to avoid detection of the anti-HBs from HBIG administered at birth. For more serology information see the section titled “Post-Vaccination Serology.”

Action for LPHAs

1. Contact the birth hospital to complete the infant’s information and HBIG/hepatitis B vaccination status in Section II of the “Perinatal Hepatitis B Carrier Follow-up Report” form (Appendix 1).
2. Contact the infant’s healthcare provider and give them the hepatitis B vaccine and HBIG information. Stress the importance of adhering to the accelerated schedule (3rd dose at 6 months) and post-vaccination serology at 9-12 months of age.
3. Update IDPH Perinatal Hepatitis B Prevention Coordinator of birth.
4. Follow the infant through the vaccine series and document vaccination dates.

Post-Vaccination Serology

Post-Vaccination Serology after the Initial Series
Post-Vaccination Serology more than two-years after completion
Test Results
Action for LPHAs

Post-vaccination serology for infants born to HBsAg positive mothers is the method of confirming protection from HBV. **Post-vaccination serology is a key component to case management of the child.**

Post-Vaccination Serology After the Initial Series

Post-vaccination testing for HBsAg and quantitative anti-HBs should be performed no sooner than 1-2 months following completion of the hepatitis B vaccine series at age 9-12 months.

It is very important to request the healthcare provider order quantitative anti-HBs, in addition to HBsAg. Without ordering a quantitative anti-HBs, there is no way to determine the antibody concentration and thus determine if the infant is protected (equal to or greater than 10 mIU/mL) or needs further doses of vaccine (less than 10 mIU/mL). See “Test Results” section below.

Testing should not be performed before age 9 months to avoid detection of passive anti-HBs from HBIG administered at birth. Anti-HBc testing of infants is not recommended because passively acquired maternal anti-HBc might be detected in infants born to HBV-infected mothers to age 24 months.

Use of single antigen hepatitis B vaccine or combination hepatitis B vaccines: the final dose of hepatitis B containing vaccine should be given at age 6 months (no sooner than age 24 weeks), and serology should be drawn at least 1-2 months following final dose of Hep B vaccine and no sooner than age 9 months.

Post-Vaccination Serology More Than Two Years After Completion of the HBV Series

Post-vaccination serology done more than two years after the third dose of vaccine causes difficulty in interpreting the anti-HBs result because antibody levels begin to decrease in the blood below detectable levels, even though the child may still have active immunity.

The child should receive **one additional dose** of vaccine (it is permissible to have 5 total doses in the series in this instance) and then have HBsAg and quantitative anti-HBs serology drawn 4-6 weeks after the dose to check immunity. This single dose is designed to “wake up” the immune response and then allow determination of protection.

Test Results

HBsAg Negative Infants:

- HBsAg-negative infants with anti-HBs levels equal to or greater than 10mIU/mL are protected and need no further medical management.
- HBsAg-negative infants with anti-HBs levels less than 10mIU/mL should be revaccinated with a single dose of hepatitis B vaccine and receive post-vaccination serology 1-2 months later. Infants whose anti-HBs remain less than 10 mIU/mL following a single dose revaccination should receive 2 additional doses of vaccine to complete the second series, followed by post-vaccination serology at 1-2 months following the final dose. Alternatively, based on clinical judgement or family preference, HBsAg negative infants with anti-HBs less than 10mIU/mL may be re-vaccinated with a second complete 3 dose series, followed by post vaccination serology performed 1-2 months following the second full series. Minimum intervals must be maintained when completing a second hepatitis B vaccine series.

There is currently no data to support a benefit from administering additional hepatitis B vaccine doses to infants who have not attained anti-HBs ≥ 10 mIU/mL (minimum level needed to indicated vaccine induced seroprotection against hepatitis B infection) following receipt of 2 complete hepatitis B vaccine series. These infants will be considered non-responders. **HBsAg positive infants:** should receive appropriate follow-up including periodic evaluation for liver function.

Action for LPHAs

1. Complete Section III of the "Perinatal Hepatitis B Carrier Follow-up Report" form (Appendix 1) upon post-vaccination serology and if necessary assist with referrals for HBsAg positive infant.
2. **Immediately** notify IDPH Perinatal Hepatitis B Prevention Program Coordinator of HBsAg positive infant by calling (800) 831-6293, ext. 2.

Testing and Vaccination of Household and Sexual Contacts

Transmission Reduction

Pre and Post Vaccination Serological Testing and Vaccination

Children at Risk

Availability of Hepatitis B Vaccine

Adult Vaccination and Vaccine Efficacy

Action for LPHAs

Transmission Reduction

Sexual partners of HBsAg-positive persons should be counseled to use methods (e.g., condoms) to protect themselves from sexual exposure to infectious body fluids (e.g., semen or vaginal secretions) unless they have demonstrated immunity after vaccination (e.g., anti-HBs ≥ 10 mIU/mL) or previously infected (anti-HBc positive).

Additionally, household contacts should be counseled to refrain from sharing household articles (e.g., toothbrushes, razors, nail clippers and files, or personal injection equipment) that could become contaminated with blood.

Pre and Post Vaccination Serological Testing and Vaccination

Screening is usually cost-effective, and should be considered in groups with a high risk of HBV infection such as men who have sex with men, injection-drug users, Alaska natives, Pacific Islanders, children of immigrants from endemic-disease countries, and family members of HBsAg-positive persons.

Unvaccinated sexual partners, household contacts, and needle-sharing contacts should be tested for susceptibility to HBV infection and should receive the first dose of hepatitis B vaccine immediately after collection of the blood sample for serologic testing.

Susceptible persons should complete the vaccine series using an age-appropriate vaccine dose and schedule. Persons who have begun the series in the past but did not complete it should now complete the full series. **It is not necessary to restart the vaccine series if there is an extended interval between doses.**

Post-Vaccination serologic testing is also recommended for sexual partners of HBsAg-positive persons. When necessary, post-vaccination testing should be performed 1-2 months after completion of the vaccine series.

Children at Risk

Children not infected at birth remain at risk from long-term interpersonal contact with their infected mothers. In one study, 38% of infants who were born to HBsAg positive mothers and who were not infected prenatally became infected by four years of age.

In addition, children living with any chronically infected persons are at risk for becoming infected through percutaneous or mucosal exposures to blood or infectious body fluids (e.g., sharing a toothbrush, contact with exudates from dermatologic lesions, contact with HBsAg-contaminated surfaces). HBV transmission rates to susceptible household contacts of chronically infected persons have varied from 14%-60%.

Availability of Hepatitis B Vaccine

Hepatitis B vaccine provided by IDPH for contacts of HBsAg positive women is limited to children through the age of 18, primary sexual contacts, household contacts, and needle sharing partners who have no method of payment for vaccine. Vaccine may be ordered from IDPH on an as needed basis.

IDPH makes available hepatitis B vaccine for children through 18 years of age who are living with an HBsAg positive woman and is provided at no cost to the client through the VFC Program. Agencies may administer hepatitis B vaccine to these children in the same manner they would to any other VFC eligible child and no special arrangements are necessary to obtain vaccine through IDPH.

Agencies that identify a susceptible adult contact of an HBsAg positive woman are to contact the State Perinatal Hepatitis B Prevention Program Coordinator at 1-800-831-6293, ext. 2 to make arrangements to receive hepatitis B vaccine. The vaccine is made available to adult household contacts (persons over the age of 19) through non-federal funding.

Clients immunized with state supplied vaccine must be entered and maintained in Iowa's Immunization Registry Information System (IRIS). Vaccine administration recommendations and inventory requirements must be followed in accordance with current IDPH Immunization Program protocols.

Action for LPHAs

1. Obtain household contact information and complete pre-vaccination serologic testing of unvaccinated primary sexual partners and adult household contacts.
2. Assure children living in the household are either vaccinated or currently receiving the hepatitis B vaccine series.
3. As needed, make arrangements for vaccination and testing of susceptible contacts.
4. Complete Section IV of the "Perinatal Hepatitis B Carrier Follow-up Report" form (Appendix 1).

Checklist for Follow-Up of Infants

Checklist

The following checklist outlines the steps to be carried out by local public health agencies for follow-up of infants born to women who are hepatitis B carriers. It is important to incorporate these steps into your work plan to ensure proper prophylaxis of infants and household contacts of women who are carriers of hepatitis B.

Checklist

Please see “HBsAg+ Exposed Infants Follow-Up Checklist”.

HBsAg+ Exposed Infants Follow-Up Checklist

Prior to Delivery *Following Delivery*

Prior to Delivery

- Contact the mother's healthcare provider. Make sure the provider is aware of the patient's HBsAg positive lab result, the indicated immunoprophylaxis (HBIG) and hepatitis B vaccine for the infant, and provide the brochure [Hepatitis B Brochure](#).
- Contact the hospital or delivery center to ensure HBIG and hepatitis B vaccine will be on hand and the mother's HBsAg status is noted in the prenatal record.
- Prior to delivery, call, write, or make a home visit to the mother and provide perinatal hepatitis B educational materials (including the [Hepatitis B Brochure](#)).
- Complete Section I of the IDPH Perinatal Hepatitis B Carrier Follow-Up Report Form with demographic information for the mother. Educate the mother on how to reduce risk of transmission of hepatitis B to her infant and household members. Update record in IDSS as necessary.
- Complete Section IV on the IDPH Perinatal Hepatitis B Carrier Follow-Up Report Form. Identify susceptible household contacts (children and sexual contacts) and encourage testing and vaccination. Document in mother's hepatitis B case in IDSS under the follow-up tab and the notes section as needed.

Following Delivery

- Complete Section II of the IDPH Perinatal Hepatitis B Carrier Follow-Up Report. Document in infant's perinatal hepatitis B case in IDSS under the follow-up tab and update other tabs as needed. If infant is not found in IDSS, create a case or contact IDPH Perinatal Hepatitis B Prevention Coordinator.
- Notify the infant's pediatric provider of the mother's positive HBsAg status and remind the provider the infant should receive the 2nd dose of vaccine at one to two months of age and the 3rd dose of vaccine at 6 months of age (the final hepatitis B vaccine should not be administered prior to age 24 weeks) as well as post-vaccination serology between 9 and 12 months of age. Serology should not be drawn prior to 9 months of age and at least 1-2 months following the final dose of hepatitis B vaccine. Make follow-up calls or visits with the mother to make sure the baby has gone in for vaccinations and serology test. Document in the infant's perinatal hepatitis B case in IDSS and update vaccinations under Section II of the Perinatal Hepatitis B Carrier Follow-Up Report.

* The infant may receive an additional dose of hepatitis B vaccine depending on type of vaccine administered or if infant weighed less than 2,000 grams at birth.

- ❑ At 9-12 months of age, collect post-vaccination serology results. Be sure the provider tests for both HBsAg and quantitative Anti-HBs. Complete Section III of the IDPH Perinatal Hepatitis B Carrier Follow-Up Report Form. Document in the infant's perinatal hepatitis B case in IDSS.
- ❑ If the infant doesn't develop an antibody response to the hepatitis B vaccine and remains negative for hepatitis B infection, call the infant's medical provider and fax/send a request to revaccinate the infant with a single dose of hepatitis B vaccine and complete post-vaccination serologic testing 1-2 months later. Infants whose anti-HBs remain <10mIU/mL (minimum level needed to indicated vaccine induced seroprotection against hepatitis B infection) following this single dose revaccination should receive two additional doses of hepatitis B vaccine to complete the second series followed by post-vaccination serologic testing 1-2 months following this final dose. Alternatively, the family and physician may choose to revaccinate with the entire 3 dose series followed by post vaccination serology.
- ❑ Complete the IDPH Perinatal Hepatitis B Carrier Follow-Up Report form with all hepatitis B vaccination dates and test results and fax/send to IDPH or send a notification through IDSS to the statewide Perinatal Hepatitis B Coordinator, Shelly Jensen.

Periodically update the Perinatal Hepatitis B Prevention Program with progress at the following intervals:

- After Section I is completed for mom and household contacts (Section IV)
- After contacts have completed the first dose in the series, or had serology to indicate no vaccine is needed (Section IV).
- After the baby is born and HBIG and birth dose of hepatitis B vaccine have been given.
- Upon completion of each dose of vaccine in the series for newborn and contacts.
- Upon completion of serology for infant and closing of case.

Please send results through any of the following:

- IDSS via the notification option to Shelly Jensen
- Email: Shelly.Jensen@idph.iowa.gov
- Fax: (800) 831-6292) or
- Mail to:
 - Lucas State Office Building, IDPH Immunization Program
 - Attn: Shelly Jensen
 - 321 E. 12th St.
 - Des Moines, IA 50319-0075

Letter to Mothers

ADD AGENCY LETTERHEAD

Date

Dear _____:

Congratulations on the birth of your new baby **NAME!** Your baby received HBIG (Hepatitis B Immune Globulin) and the first dose of hepatitis B vaccine on DATE at HOSPITAL NAME. It is very important your child receive the second and third doses of hepatitis B vaccine on time.

This letter is to remind you the **second hepatitis B vaccination** is due **no later than two months** of age. The **third hepatitis B vaccination** is due at **six months of age**.

Your baby's healthcare provider will test your child's blood for the hepatitis B **virus between nine months and one year of age**. After the blood work is completed and if your baby needs no further doses of hepatitis B vaccine, we will close your case.

I have enclosed information regarding hepatitis B. If you have any questions, you may contact the Perinatal Hepatitis B Prevention Program at **YOUR PHONE HERE**. Thank you for your cooperation.

Sincerely,

STAFF NAME

Perinatal Hepatitis B Prevention Program

AGENCY NAME

Enc.

Note: Please bring this letter with you to your baby's next doctor appointment for his/her second Hepatitis B shot.

Letter to Mother's Provider

ADD AGENCY LETTERHEAD

Date

Dear _____:

The Iowa Department of Public Health received a report for **NAME AND DOB** indicating she is hepatitis B surface antigen (HBsAg) positive and pregnant.

Preventing perinatal transmission of hepatitis B through timely prophylaxis is a critical safeguard for the newborn. The CDC recently published a MMWR titled "Prevention of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices" January 2018. This publication highlights the importance of administering hepatitis B immune globulin and hepatitis B vaccine to infants of Hepatitis B positive mothers. The brochure included with this letter is for your patient, stressing the importance of vaccinating her child against HBV infection.

Please remember two critical steps need to be taken for your patient:

1. Send a copy of the **original lab report** indicating her HBsAg positive status to the birth hospital or center prior to delivery.
2. Be sure the child receives **Hepatitis B Immune Globulin (HBIG)** and the first dose of **hepatitis B Vaccine** within 12 hours of birth.

If you have any questions regarding the Iowa Perinatal Hepatitis B Prevention Program please contact me at **YOUR NUMBER** or the state coordinator, Shelly Jensen, RN, BSN at (800) 831-6293 ext. 2.

Your office may already have a policy in place to address HBV and birth transmission. We appreciate you reviewing this letter and making every effort to protect this child and stop the transmission of HBV at birth.

Sincerely,

STAFF NAME

Perinatal Hepatitis B Prevention Program

AGENCY NAME

General Letter to Hospitals Prior to Birth

ADD AGENCY LETTERHEAD

Date

Regarding: Pregnant Mother with Hepatitis B

Dear **OB STAFF CONTACT**:

MOTHER'S NAME AND DOB is HBsAg positive and pregnant. Her estimated due date is **DUE DATE**. Currently, she plans to deliver at your hospital.

Upon delivery, her child should receive the first dose of hepatitis B vaccine and HBIG (Hepatitis B Immune Globulin) within 12 hours of birth.

Please complete the enclosed form "Perinatal Hepatitis B Hospital Report" regarding the administration of the hepatitis B vaccine birth dose and HBIG. Upon completion, please fax this form to **YOUR FAX NUMBER**. (FORM FOUND IN APPENDIX 2)

For patients with no means of payment for HBIG and hepatitis B vaccine, please contact me. The Iowa Department of Public Health will provide these important vaccinations without charge through the Vaccines for Children Program (VFC). **However, IDPH does not maintain HBIG in inventory so advance planning is necessary to order this product from the manufacturer.**

If you have any questions regarding the Iowa Perinatal Hepatitis B Prevention Program please contact me at **YOUR NUMBER** or the state coordinator, Shelly Jensen, RN, BSN at (800) 831-6293 ext. 2.

Sincerely,

STAFF NAME

Perinatal Hepatitis B Prevention Program

AGENCY NAME

Enc.

General Letter to Baby's Provider Prior to Birth

ADD AGENCY LETTERHEAD

Date

Regarding: Pregnant Mother with Hepatitis B

Dear **Healthcare Provider**:

MOTHER'S NAME is HBsAg positive and pregnant. Her estimated due date is **DUE DATE**. Currently she plans to deliver her baby at **HOSPITAL NAME** and bring her child to your clinic for well-child checkups and immunizations. This child should receive the first dose of hepatitis B vaccine and HBIG within 12 hours of birth. Due to the exposure to hepatitis B at birth, it is very important this child receive the 2nd and 3rd doses of vaccine on time.

According to guidance from CDC in the MMWR entitled "Prevention of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices" January 12, 2018, infants born to HBsAg positive mothers should receive their **second dose of hepatitis B vaccine at one-two months of age**, followed by the **third dose at six months of age**. The final dose should not be administered prior to 24 weeks of age.

Post-vaccination serologic testing is essential for these infants. Both HBsAg and quantitative anti-HBs lab tests should be performed after completion of the vaccine series at age 9-12 months (at least 1-2 months following the final dose of vaccine and not before the age of 9 months). Without serologic testing the outcome of the preventive therapy is unknown and opportunities to revaccinate or treat are missed. I will be following up with your office regarding the test results.

If you have any questions regarding the Iowa Perinatal Hepatitis B Prevention Program please contact me at **YOUR NUMBER** or the state coordinator, Shelly Jensen, RN, BSN at (800) 831-6293 ext. 2.

Sincerely,

STAFF NAME

Perinatal Hepatitis B Prevention Program

AGENCY NAME

General Letter to Baby's Provider Post Birth

ADD AGENCY LETTERHEAD

Date

Regarding: CHILD'S NAME/BIRTH DATE

Dear Healthcare Provider:

CHILD'S NAME birth date BIRTH DATE was born to an identified HBsAg positive mother NAME. The mother is planning to bring the child to your clinic for well-child checkups and immunizations. This child received the first dose of hepatitis B vaccine and HBIG on DATE at HOSPITAL NAME. It is very important the child receive the 2nd and 3rd doses of vaccine on time.

According to guidance from CDC in the MMWR entitled "Prevention of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices" January 12, 2018, infants born to HBsAg positive mothers should receive their **second dose of hepatitis B vaccine at one-two months of age**, followed by the **third dose at six months of age**. The final dose should not be administered prior to 24 weeks of age.

Post-vaccination serologic testing is essential for these infants. Both HBsAg and quantitative anti-HBs lab tests should be performed after completion of the vaccine series at age 9-12 months (at least 1-2 months following the final dose of vaccine and not before the age of 9 months). Without serologic testing the outcome of the preventive therapy is unknown and opportunities to revaccinate or treat are missed. Please complete the enclosed form and return to me at YOUR FAX NUMBER.

If you have any questions regarding the Iowa Perinatal Hepatitis B Prevention Program please contact me at YOUR NUMBER or the state coordinator, Shelly Jensen, RN, BSN at (800) 831-6293 ext. 2.

Sincerely,

STAFF NAME

Perinatal Hepatitis B Prevention Program

AGENCY NAME

Enc.

Letters to Provider Regarding Serology

ADD AGENCY LETTERHEAD

Date

Regarding: CHILD'S NAME/BIRTH DATE

Dear Healthcare Provider:

CHILD'S NAME was exposed to hepatitis B (HBV) at birth and is now due for **post-vaccination serologic testing for HBV**. Testing for immunity is essential for these infants. **Both HBsAg and quantitative anti-HBs** lab tests should be performed after completion of the vaccine series at age 9-12 months.

Without serologic testing the outcome of the preventive therapy is unknown and opportunities to revaccinate or treat are missed. Please complete the serologic testing results below or fax a copy of the child's lab results to me at **YOUR FAX NUMBER**.

Post vaccination serology drawn between 9-12 months of age (at least 1 month following final hepatitis B vaccine and not before 9 months of age)

HBsAg Results: _____

Quantitative anti-HBs Results: _____

If you have any questions regarding the Iowa Perinatal Hepatitis B Prevention Program please contact me at **YOUR NUMBER** or the state coordinator, Shelly Jensen, RN, BSN at (800) 831-6293 ext. 2.

Sincerely,

STAFF NAME

Perinatal Hepatitis B Prevention Program

AGENCY NAME

Letter to Provider Regarding Overdue Serology

ADD AGENCY LETTERHEAD

Date

Regarding: CHILD'S NAME/BIRTH DATE

Dear Healthcare Provider:

CHILD'S NAME was exposed to hepatitis B at birth and is now **past due for post-vaccination serologic testing for hepatitis B**. Testing for immunity is essential for these infants. **Both HBsAg and quantitative anti-HBs** lab tests should be performed after completion of the vaccine series at age 9-12 months.

This child is now older than 18 months and needs to be tested soon to determine immunity and if revaccination is needed.

Without serologic testing the outcome of the preventive therapy is unknown and opportunities to revaccinate or treat are missed. Please complete the serologic testing results below or fax a copy of the child's lab results to me at **YOUR FAX NUMBER**.

Post vaccination serology drawn at _____ months of age

HBsAg Results: _____

Quantitative anti-HBs Results: _____

If you have any questions regarding the Iowa Perinatal Hepatitis B Prevention Program, please contact me at **YOUR NUMBER** or the state coordinator, Shelly Jensen, RN, BSN at (800) 831-6293 ext. 2.

Sincerely,

STAFF NAME

Perinatal Hepatitis B Prevention Program

AGENCY NAME

Fax to Provider Regarding Serology

ADD AGENCY LETTERHEAD

DATE:

FROM:

TO:

SUBJECT: Hepatitis B Serology Information

As part of the surveillance of reportable disease in Iowa, the Iowa Department of Public Health, Perinatal Hepatitis B Prevention Program needs the hepatitis B serology information for children born to Hepatitis B positive mothers (Iowa Administrative Code 641, Chapter 1).

The child listed below was exposed to hepatitis B at birth and has completed the hepatitis B vaccine series. This child is now due for the serology testing. The Centers for Disease Control and Prevention and the Iowa Department of Public Health recommend **post-vaccination testing at 9-12 months of age**. Without serologic testing the outcome of preventative therapy is unknown and opportunities to revaccinate or treat the child are missed.

Child's Name: _____ DOB: _____
Mother's Name: _____ DOB: _____

Please fax the following information to **YOUR NAME AND FAX**:

Test Results

Test Date: _____
Hepatitis B Surface Antigen (HBsAg): _____
Quantitative Hepatitis B Surface Antibody (anti-HBs): _____

If you have questions regarding the Iowa Perinatal Hepatitis B Prevention Program, please contact the State coordinator:

Shelly Jensen, RN, BSN
Iowa Department of Public Health, Immunization Program
321 East 12th Street
Des Moines, IA 50319
(800) 831-6293 ext. 2

Letter to Provider Regarding 2nd Series of Immunizations

ADD AGENCY LETTERHEAD

Date

Regarding: CHILD'S NAME/BIRTH DATE

Dear Healthcare Provider:

CHILD'S NAME was exposed to hepatitis B (HBV) at birth. Subsequently, this child received hepatitis B vaccination and post-vaccination serologic testing. **Unfortunately, according to the serology report, the child does not show immunity to hepatitis B and requires revaccination.**

The recommended approach is to administer a single dose of hepatitis B vaccine and complete post-vaccination serologic testing 1-2 months later. Infants whose anti-HBs remains <10 mIU/mL following single dose re-vaccination should receive two additional doses of hepatitis B vaccine to complete the second series followed by post-vaccination testing 1-2 months after the final dose.

Alternatively, based on clinical circumstances or family preference, these infants may instead be revaccinated with a complete second 3-dose series of vaccine (again at 0, 2 and 4 months) and re-test for both HBsAg and anti-HBs 1-2 months after the third dose of vaccine.

If anti-HBs and HBsAg are still negative after 3 dose revaccination, the infant is considered a non-responder to hepatitis B vaccine.

Please complete the following information regarding hepatitis B vaccination series and post-vaccination serology for this infant:

- HepB vaccine 4 - first dose in second vaccine series (0 months) Date given _____
- Faxed results to (YOUR FAX)

Post vaccination serology drawn 1-2 months after 4th dose of vaccine

Date of serology _____

- HBsAg Results _____
- Quantitative anti-HBs Results _____
- Faxed results to (YOUR FAX)

- HepB vaccine 5 - if needed-second dose in second vaccine series (2 month)
Date given _____
- Faxed results to (YOUR FAX)

- HepB vaccine 6 -if needed-third dose in second vaccine series (4 months)
Date given_____
- Faxed results to (YOUR FAX)

Post vaccination serology drawn 1-2 months after final dose of vaccine

- Date of serology _____
- HBsAg Results _____
- Quantitative anti-HBs Results _____
- Faxed results to (YOUR FAX)

If you have any questions regarding the Iowa Perinatal Hepatitis B Prevention Program please contact me at YOUR NUMBER or the state coordinator, Shelly Jensen, RN, BSN at (800) 831-6293 ext. 2.

Sincerely,
STAFF NAME
Perinatal Hepatitis B Prevention Program
AGENCY NAME

Letter to Provider Regarding Second Serology

ADD AGENCY LETTERHEAD

Date

Regarding: CHILD'S NAME/BIRTH DATE

Dear Healthcare Provider:

CHILD'S NAME was exposed to hepatitis B at birth, received two complete series of hepatitis B vaccine, and is now due for the **hepatitis B post-vaccination serologic testing for the second series**. **Both HBsAg and quantitative anti-HBs** lab tests should be performed 1-2 months after completion of the second vaccine series.

Please complete the serologic testing results below, or fax a copy of the child's lab results to me at **YOUR FAX NUMBER**.

Post vaccination serology drawn 1-2 months after the final dose of hepatitis B vaccine:

- HBsAg Results: _____
- Quantitative anti-HBs Results: _____

If the child's anti-HBs is <10mIU/mL after the second 3 dose series of vaccine, and is HBsAg negative, he/she should be considered susceptible to HBV infection. Data does not support a benefit of additional hepatitis B vaccine doses following two complete series. Educate the parents or guardians regarding precautions to prevent hepatitis B infection and the need to obtain HBIG prophylaxis if any known or probable parenteral exposure to HBsAg-positive blood (CDC Pink Book, 13th Edition).

If you have any questions regarding the Iowa Perinatal Hepatitis B Prevention Program please contact me at **YOUR NUMBER** or the state coordinator, Shelly Jensen, RN, BSN at (800) 831-6293 ext. 2.

Sincerely,

STAFF NAME

Perinatal Hepatitis B Prevention Program

AGENCY NAME

Letter to Postmaster Regarding Last Known Address

ADD AGENCY LETTERHEAD

Date

US Postmaster

Address of Main Post Office

City of Question

Dear Postmaster:

YOUR AGENCY NAME has been working with the following individual, **ADD MOM'S NAME**, with a last known address of:

LIST ADDRESS HERE

We have been unable to contact this individual and would like your assistance in determining if they may have moved to a different address. If known, please provide our agency with an updated address for this individual in the section below.

Forwarding Address:

A stamped, self-addressed envelope has been provided for your convenience. Thank you for your time and assistance. Please feel free to contact me at **YOUR NUMBER** if you have any questions about this letter.

Sincerely,

STAFF NAME

Perinatal Hepatitis B Prevention Program

AGENCY NAME

Reference Materials and Resources

Reference Materials

Iowa Immunization Program Perinatal Hepatitis B Immunization Program	https://idph.iowa.gov/immtb/immunization/perinatal-hepb
Centers for Disease Control and Prevention	https://www.cdc.gov/hepatitis/hbv/pdfs/HepBPerinatal-ProtectWhenPregnant.pdf https://www.cdc.gov/hepatitis/hbv/patienteduhbv.htm https://www.cdc.gov/hepatitis/hbv/perinatalxmtn.htm
Hep B Moms	https://www.hepbmoms.org/
CDC Vaccines and Immunizations	https://www.cdc.gov/vaccines/index.html
Immunization Action Coalition	http://www.immunize.org
Hepatitis B Foundation	http://www.hepb.org/
Parents of Kids with Infectious Disease	http://www.pkids.org/
Hepatitis B Vaccination Information for Healthcare Providers	https://www.cdc.gov/vaccines/vpd/hepb/hcp/

Resources

IDPH Brochures (Available free of charge)	https://idph.iowa.gov/immtb/immunization/order-form
Hepatitis B and Mom's To Be Brochures	http://med.stanford.edu/content/dam/sm/liver/documents/resources/English.pdf
VIS Statements (Multiple languages available)	http://www.immunize.org/vis/index.htm#hepatitisb
Hep B Moms	https://www.hepbmoms.org/brochures
Frequently Asked Questions About Hepatitis B:	http://www.immunize.org/catg.d/p4090.pdf
Guidelines for Standing Orders Hospital:	http://www.immunize.org/catg.d/p2130.pdf
Immunization Action Coalition: Give Birth to the End of HepB	https://www.immunize.org/protect-newborns/
Hepatitis B Birth Dose Honor Roll	https://www.immunize.org/honor-roll/birthdose/
Sample Standing Orders Children and Teens:	http://www.immunize.org/catg.d/p3076a.pdf
CDC Pink Book Chapter on Hepatitis B:	http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/hepb.pdf
Iowa Administrative Code Chapter 641.1:	https://www.legis.iowa.gov/docs/ACO/chapter/01-21-2015.641.1.pdf
MMWR, Vol. 67/No.1/January 12, 2018 Prevention of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices.	https://www.cdc.gov/mmwr/volumes/67/rr/pdfs/rr6701-H.pdf
IDPH EPI Manual – Hepatitis B Chapter:	https://wiki.idph.iowa.gov/epimanual/Home/CategoryID/84



Iowa Department of Public Health
Bureau of Immunization and Tuberculosis
Perinatal Hepatitis B Carrier Follow-Up Report

Shelly Jensen, RN, BSN Perinatal Hepatitis B Coordinator
(515) 281-4938 or 1-800-831-6293 extension 2
FAX 1-800-831-6292
Shelly.jensen@idph.iowa.gov

Person Completing Form: _____

Date Faxed: _____

This form is designed to facilitate the follow-up of a Perinatal Hepatitis B case. The follow-up consists of determining if the patient is pregnant, confirming the delivery, assuring appropriate care for the infant as well as gaining information on susceptible household contacts. Please complete and fax to 1-800-831-6292.

I. Screening Data (Mother)

Name: _____ DOB: _____
Address: _____ City/State/ Zip: _____
County: _____ Pt. Phone: _____

Race/Ethnicity:

- Asian/Pacific Islander
 American Indian/ Alaskan Native
 Black/ African American
 Hispanic/ Latino
 White
 Other _____
 Unknown

Is the client foreign born? Yes No
If yes, country of origin: _____
Is the client English speaking? Yes No
If no, what language? _____

Following Physician: _____ Phys Phone: _____
Clinic Name: _____ Phys Fax: _____
Address: _____ City/State/ Zip: _____

Is the patient pregnant? Yes No Aborted (spontaneous, elected, or medically indicated)

Anticipated Date of Delivery: _____
Anticipated Delivery Hospital: _____
Address of Hospital: _____ Phone: _____
City/State/Zip: _____

HBsAg Test Results: Positive Negative Date Tested _____

When was mother tested (check one): Pre-pregnancy 1st Trimester 2nd Trimester 3rd Trimester At delivery

II. Immunization/Prophylaxis/Follow-up on Infant (complete separate forms for multiple births)

Infant's Name: _____ Sex: Female Male
Race/Ethnicity: Asian/Pacific Islander American Indian/ Alaskan Native Black/ African American Hispanic/ Latino White Other Unknown
Date and Time of Birth: _____ Birth Weight: _____
Date HBIG Given: _____ Time: _____ Given Within 12 Hours of Birth? Yes No
Dates HBV Given: Dose 1 _____ Time: _____ Dose 2 _____ Dose 3 _____ Dose 4 _____
Infant in IRIS: Yes No Vaccine Used for Series: Pediarix Hep B only
Infant's Health Care Provider: _____ Phone: _____
Clinic Name: _____ Fax: _____
Address: _____ City/State/Zip: _____

III. Post-Vaccination Infant Serology (recommended at age 9-12 months ; at least 1-2 months following completion of series) Do Not test prior to age 9 months.

HBsAg Testing Date: _____ Positive Negative Not Tested
Anti-HBs Testing Date: _____ Positive Negative Value: _____ Not Tested
Comments: _____

IV. Summary of All Household Contacts

Contact's Name: _____ DOB: _____ Sex: Male Female

Serologic Testing: HBsAg Result: Positive Negative Date: _____

Anti-HBc Result: Value: _____ Date: _____

Dates Hepatitis B Vaccine Given: Hepatitis B Only Combination (Twinrix/Pediarix) Entered into IRIS? Yes No

Dose 1 _____ Dose 2 _____ Dose 3 _____ Dose 4 _____

Contact's Name: _____ DOB: _____ Sex: Male Female

Serologic Testing: HBsAg Result: Positive Negative Date: _____

Anti-HBc Result: Value: _____ Date: _____

Dates Hepatitis B Vaccine Given: Hepatitis B Only Combination (Twinrix/Pediarix) Entered into IRIS? Yes No

Dose 1 _____ Dose 2 _____ Dose 3 _____ Dose 4 _____

Contact's Name: _____ DOB: _____ Sex: Male Female

Serologic Testing: HBsAg Result: Positive Negative Date: _____

Anti-HBc Result: Value: _____ Date: _____

Dates Hepatitis B Vaccine Given: Hepatitis B Only Combination (Twinrix/Pediarix) Entered into IRIS? Yes No

Dose 1 _____ Dose 2 _____ Dose 3 _____ Dose 4 _____

Number of household contacts identified: _____

Number of contacts tested for anti-HBc: _____ Number of positives: _____

Number of contacts tested that were susceptible (neg for anti-HBc, neg for HBsAg, neg for anti-HBs): _____

Number of contacts lost to follow-up or not tested: _____

Comments (include reasons for non-compliance or not testing and possible risk factors):

Reminders for Vaccination and Testing

At birth

- **Infants born to mothers who are HBsAg positive** should receive Hepatitis B vaccine and Hepatitis B immune globulin (HBIG) within 12 hours of birth.
- **Infants born to mothers for whom HBsAg testing results during pregnancy are not available**, but other evidence suggestive of maternal HBV infection exists (e.g., presence of HBV DNA, HBeAg-positive, or mother known to be chronically infected with HBV) should be managed as if born to an HBsAg positive mother.
- **Infants born to mothers whose HBsAg status is pending:**
 - Infants who are $\geq 2,000$ g (4.4 lbs) at birth, should receive Hepatitis B vaccine (without HBIG) within 12 hours of birth. The mother should have blood drawn and tested as soon as possible to determine her HBsAg status. If she is HBsAg positive, the infant should receive HBIG as soon as possible, but no later than age 7 days.
 - Infants weighing $< 2,000$ g at birth should receive HBIG concurrently with Hepatitis B vaccine at different injection sites within 12 hours of birth if the mother's HBsAg status cannot be determined within the 12 hours (this birth dose should not be counted as part of the 3 doses required to complete the series; 3 additional doses (4 total doses) should be administered because of potential decreased vaccine immunogenicity in these infants).
- **Infants born to HBsAg negative mothers** who are full-term, medically stable and weigh $\geq 2,000$ g should receive single-antigen Hepatitis B vaccine within 24 hours of birth (1st dose in Hepatitis B series). Infants weighing $< 2,000$ g born to HBsAg-negative mothers should have the first dose of vaccine delayed to the time of hospital discharge or age 1 month (even if weight is still $< 2,000$ g).

After the birth dose

- All infants should complete the Hepatitis B vaccine series with either single-antigen vaccine or combination vaccine, according to the recommended vaccination schedule. **The final dose in the series should not be administered prior to age 24 weeks.**

Post-vaccination testing

- Infants born to HBsAg positive mothers should be tested for anti-HBs and HBsAg after completion of the vaccine series **at age 9-12 months** (at least 1-2 months following completion of the vaccine series). Testing should not be performed before age 9 months to avoid detection of passive anti-HBs from HBIG administered at birth and maximize likelihood of detecting late HBV infection. Anti-HBc testing of infants is not recommended because passively acquired maternal anti-HBc might be detected in infants born to HBV infected mothers up to age 24 months.

Source: MMWR, Vol. 67/No.1/January 12, 2018

**If needed, the Iowa Department of Public Health can supply the Hepatitis B vaccine and Hepatitis B Immune Globulin for the baby.



Iowa Department of Public Health
Bureau of Immunization and TB
Perinatal Hepatitis B Hospital Report

Please complete the information and FAX to: Shelly Jensen RN, BSN Perinatal Hepatitis B Prevention Coordinator

Questions: Please call: 1-800-831-6293 ext. 2

Fax: 1-800-831-6292

<p>For Women known to be HBsAg Positive</p> <p><input type="checkbox"/> Administer hepatitis B immune globulin (HBIG) and Hepatitis B vaccine within 12 hours of birth.</p> <p><input type="checkbox"/> If your hospital is having difficulty obtaining HBIG, please call IDPH at 1-800-831-6293.</p>	<p>For Women whose HBsAg status is Unknown</p> <p><input type="checkbox"/> Perform stat HBsAg screening for all women admitted for delivery whose status is unknown.</p> <p><input type="checkbox"/> While test results are pending, administer hepatitis B vaccine within 12 hours of birth. If the mother is later found to be positive, her infant should receive the additional protection of HBIG as soon as possible and before the infant is discharged. HBIG must be given within 7 days of birth.</p>
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Name of Hospital: _____

Date Sent: _____

City of Hospital: _____

Mother's Hospital Record #: _____

Note: Only report if mother is **HBsAg Positive**.

Mother's Information	HBsAg(+) Test Date (if done in hospital)*
First Name:	Last Name:
Date of Birth:	Phone:
Address:	EDC:
City/Zip:	Alternate Phone (i.e. relative):
Physician's Name:	Clinic Name:
Race: <input type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> American Indian/ Alaskan Native <input type="checkbox"/> Black/ African American <input type="checkbox"/> Hispanic/ Latino <input type="checkbox"/> White <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown	Is the client foreign born? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, country of origin: _____ Is the client English speaking? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, what language? _____

*Please send a copy of the labs with this form.

Infant's Information	Hospital Record #:
First Name:	Last Name:
Date of Birth: Time of Birth:	Birth Weight: Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female
Date of HBIG: Time of HBIG:	Date of HepB vaccine: Time of HepB vaccine:
HBIG given within 12 Hours of Birth <input type="checkbox"/> Yes <input type="checkbox"/> No	Child entered into IRIS <input type="checkbox"/> Yes <input type="checkbox"/> No
IMPORTANT	
Clinic where baby will receive next dose of vaccine _____	
Infant's Physician Name and Phone: _____	

Iowa Department of Public Health
Bureau of Immunization and TB
321 East 12th Street / Lucas State Office Bldg./ Des Moines IA 50319
<http://idph.iowa.gov/imm/tb/immunization>

For More Information Please Call: 1-800-831-6293, ext 2

Form: 04-2018