

# **Perinatal Hepatitis B Prevention Program Guide**

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### **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 lowa Department of Health and Human Services, 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**

Contact information	
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	Phone:(515) 423-3341 or (800) 831-6293, ext. 1 Fax: (800) 831-6292
Iowa Immunization Program	(800) 831-6293
	https://hhs.iowa.gov/public-health/immunization https://hhs.iowa.gov/public- health/immunization/perinatal-hepatitis-b
State Hygienic Lab	http://www.shl.uiowa.edu/
Center for Acute Disease	Phone: (515) 242-5935 or (800) 362-2736
Epidemiology (CADE)	https://hhs.iowa.gov/public-health/center-acute-disease-epidemiology
Iowa HHS Hepatitis Program	https://hhs.iowa.gov/public-health/center-acute-disease-epidemiology/epi-manual/reportable-diseases/hepatitis-b

## Statement of Iowa Law and HIPAA

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

The Iowa Department of Health and Human Services, 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.

# <u>lowa Code 139A Chapter 641.1 REPORTABLE DISEASES, POISONINGS AND</u> CONDITIONS, AND QUARANTINE AND ISOLATION

### **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 to report disease information and participate in a public health disease investigation (45 CFR 164.512(a)(b)).

For this reason, lowa HHS 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.

lowa HHS and local public health authorities may conduct all activities outlined in the <u>EPI Manual</u>, including case investigation of infants born to HBsAg-positive women, without obtaining consent or authorization from the patient.

For full text of the HIPAA statement visit: https://hhs.iowa.gov/media/16703/download?inline



### **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 <u>Perinatal Hepatitis B Carrier Follow-up Report</u> 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**

- 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.</li>
- 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<sup>®</sup> (Merck) and Engerix-B<sup>®</sup> (GlaxoSmithKline).
- Only single antigen vaccine should be used for the birth dose.
- Pediarix<sup>®</sup> (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 lowa 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@hhs.iowa.gov (800) 831-6293, ext. 1

\*Iowa HHS 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 (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 Center for Acute Disease Epidemiology (CADE) within 3 days of diagnosis per Iowa Administrative Code 614 Chapter 1. The <u>form</u> 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)
- o Phone:(800) 362-2736
- Secure fax: (515) 281-5698 or
- Mail to:
- lowa Department of Health and Human Services Lucas State Office Building, 5<sup>th</sup> Floor 321 E. 12th Street 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 Iowa HHS.
- 2. Complete Section "I" of the Perinatal Hepatitis B Carrier Follow-Up Report form.



# Hepatitis B Serology

## **Hepatitis B Laboratory Nomenclature**

nepatitis b Laboratory Nomenctature			
HBsAg:	Hepatitis B surface antigen is a marker of infectivity. Its presence indicates either acute or chronic HBV infection.		
anti-HBs:	Antibody to hepatitis B surface antigen 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):	Antibody to hepatitis B core antigen 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:	IgM antibody subclass of anti-HBc. Positivity indicates recent infection with HBV (≤6 mos). Its presence indicates acute infection.		
HBeAg:	Hepatitis B "e" antigen 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:	Antibody to hepatitis B "e" antigen 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:	HBV Deoxyribonucleic acid 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	Negative			
anti-HBc	Negative	Susceptible	Vaccinate if indicated	
anti-HBs	Negative			
HBsAg	Negative			
anti-HBc	Negative	Immune due to	No versination passage	
anti-HBs	Positive with >10mIU/mL*	vaccination	No vaccination necessary	
HBsAg	Negative	Immuno duo to		
anti-HBc	Positive	Immune due to natural infection	No vaccination necessary	
anti-HBs	Positive	Hatural Infection	_	
HBsAg	Positive			
anti-HBc	Positive	Acutely infected	No vaccination necessary	
IgM anti-HBc	Positive	Acutely infected	No vaccination necessary	
anti-HBs	Negative			
HBsAg	Positive			
anti-HBc	Positive	Chronically	No vaccination necessary (may	
IgM anti-HBc	Negative	infected	need treatment)	
anti-HBs	Negative			
HBsAg	Negative	Four		
anti-HBc	Positive	interpretations	Use clinical judgment	
anti-HBs	Negative	possible†		

<sup>\*</sup>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 moths (generally at the next well child visit.)

<sup>†1.</sup> 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

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).

### Resources:

- Obstetrical Tip Sheet for Hepatitis B Screening, Testing, and Management of Pregnant Persons
- Screening and Referral Algorithm for Hepatitis B Virus Infection Among Pregnant Women

### **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:

- o 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:

- o 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 (<12 hours of age), Dose 2: 1 month 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 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, HBeAgpositive, 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.
- o 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.
- o 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 month 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.</li>
- 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 hepatitis B vaccine administered before age 1 month.

#### **Action for LPHAs**

- 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 hepatitis B 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**

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 hepatitis B vaccination within 12 hours of birth, completion of hepatitis B 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 postexposure prophylaxis for the newborn, other household contacts, sexual partners, and needle-sharing contacts.
- Substance abuse treatment, if appropriate.
- o 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 lowa 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 <u>Hepatitis B Brochure</u> and <u>Hepatitis B Immune Globulin</u> (HBIG): What Parents Need to Know
- 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

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 Vaccine Dose	Age and Minimum Interval	
1	Birth dose	
2	1-2 months (minimum interval 4 weeks from dose 1)	
3	6 months (minimum interval 8 weeks from dose 2 <b>AND</b> 16 weeks from dose 1 <b>AND</b> at least 24 weeks of age)	

For information on the combination hepatitis B vaccines (Pediarix and Vaxelis) see the Hepatitis B chapter in the <u>Pink Book</u>.

### Infants Weighing Less Than 2,000 Grams at Birth

Infants weighing <u>less</u> 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
3	2)
	6 months (minimum interval 8 weeks from dose 3
4	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
4	16 weeks from dose 2 <b>AND</b> 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 (3<sup>rd</sup> dose at 6 months) and post-vaccination serology at 9-12 months of age. Resource: Management of Infants Born to Women with Hepatitis B Virus Infection
- 3. Update Iowa HHS 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 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 10mlU/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 postvaccination serology
  - 1-2 months later. Infants who's 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 ≥10mIU/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 Iowa HHS Perinatal Hepatitis B Prevention Program Coordinator of HBsAg positive infant by calling (800) 831-6293, ext. 1.



## Testing and Vaccination of Household and Sexual Contacts

### **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  $\geq$ 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 HBsAgpositive 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 Iowa HHS 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 Immunization Program on an as needed basis.

The Immunization Program 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 the Immunization Program.

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 lowa's Immunization Registry Information System (IRIS). Vaccine administration recommendations and inventory requirements must be followed in accordance with current 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.



## Checklist for Follow-Up of Infants

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**

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 <u>Hepatitis B Brochure</u> .
Contact the hospital or delivery center to ensure HBIG and hepatitis B vaccine wil
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 and
Hepatitis B Immune Globulin (HBIG): What Parents Need to Know).
Complete Section I of the Perinatal Hepatitis B Carrier Follow-Up Report Form
with demographic information for the mother. Educate the mother on how to
reduce the risk of transmission of hepatitis B to her infant and household
members. Update record in IDSS as necessary.
Complete Section IV on the 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.

### **Following Delivery**

- □ Complete Section II of the Perinatal Hepatitis B Carrier Follow-Up Report.

  Document in infant's perinatal hepatitis B case in IDSS. If the infant is not found in IDSS, create a case or contact 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. Provide Management of Infants Born to Women with Hepatitis B Virus Infection for Pediatricians.
  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.

<sup>\*</sup>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 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 who's anti-HBs remain <10mlU/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 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.
- After the baby is born and HBIG and birth dose of hepatitis B vaccine have been given.
- o Upon completion of each dose of vaccine in the series for newborn.
- Upon completion of serology for infant and closing of case.

Please send results through any of the following:

- o IDSS via the notification option to Shelly Jensen
- o Email: Shelly.Jensen@hhs.iowa.gov
- o Fax: (800) 831-6292 or
- o Mail to:

Iowa Department of Health and Human Services Immunization Program Lucas State Office Building Attn: Shelly Jensen 321 E. 12th Street Des Moines, IA 50319-0075



### Letter to Mothers

### ADD AGENCY LETTERHEAD

Date		
Dear <sub>.</sub>		:

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 Health and Human Services 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 MMWR titled "Prevention of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices" January 2018, 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 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. Ensuring 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.1.

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.

For patients with no means of payment for HBIG and hepatitis B vaccine, please contact me. The lowa Department of Health and Human Services will provide these important vaccinations without charge through the Vaccines for Children Program (VFC). However, the Immunization Program 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. 1.

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 2<sup>nd</sup> and 3<sup>rd</sup> 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. <u>Both</u> HBsAg and <u>quantitative</u> 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. 1.

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 2<sup>nd</sup> and 3<sup>rd</sup> 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. 1.

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 <b>post-vaccination serologic testing for HBV.</b> Testing for immunity is essential for these infants. <b>Both HBsAg and quantitative anti-HBs</b> 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 Date: Results:
Quantitative anti-HBs Date: 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. 1.
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 Date:	Results:	
Quantitative anti-HBs Date: _		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. 1.

Sincerely,
STAFF NAME
Perinatal Hepatitis B Prevention Program
AGENCY NAME



## Fax to Provider Regarding Serology

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

Shelly Jensen, RN, BSN
Iowa Department of Health and Human Services
Immunization Program
321 East 12th Street
Des Moines, IA 50319
(800) 831-6293 ext. 1



# Letter to Provider Regarding 2<sup>nd</sup> Series of Immunizations

# ADD AGENCY LETTERHEAD

L	a	е		

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 mlU/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:

☐ Hepatitis B vaccine 4 - first	st dose in second vaccine series (0 months) Date
given	
☐ Faxed results to (YOUR F	FAX)
•	,
Post vaccination serology drawn	1-2 months after 4 <sup>th</sup> dose of vaccine
Date of serology:	
HBsAg Results:	
Quantitative anti-HBs	Results:
Faxed results to (YOUR F	=AX)



<ul><li>Hepatitis B vaccine 5 - if needed-second dose in second vaccine series (2 month)</li><li>Date given:</li></ul>
Faxed results to (YOUR FAX)
☐ Hepatitis B 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. 1.
Sincerely, STAFF NAME Desirated Handtitis B Proyentian Program
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 vaccin	ation serology drawn 1	-2 mon	ths after the fir	nal dose of	f hepatitis B	vaccine:
	HBsAg Date:		Results:		-	
	Quantitative anti-HBs	Date:		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, 14<sup>th</sup> 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. 1.

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

Refe	erence Materials		
Perinatal Hepatitis B Program	https://hhs.iowa.gov/public-		
	health/immunization/perinatal-hepatitis-b		
Centers for Disease Control and	Clinical Overview of Perinatal Hepatitis B   Hepatitis		
Prevention	B   CDC		
	Perinatal Hepatitis B Prevention Program   Vaccines		
	<u>&amp; Immunizations   CDC</u>		
Hep B Moms	https://www.hepbmoms.org/		
CDC Vaccines and Immunizations	https://www.cdc.gov/vaccines/index.html		
Immunize.org	Hepatitis B Immunization Resources for Healthcare		
	Providers   Immunize.org		
Hepatitis B Foundation	http://www.hepb.org/		
Hepatitis B Vaccination Information for Healthcare Providers	https://www.cdc.gov/vaccines/vpd/hepb/hcp/		
	Resources		
Immunization Program Brochures (Available free of charge)	Immunization Materials Order Form (office.com)		
Hepatitis B and Mom's to Be Brochures	Hep B Moms   Asian Liver Center   Stanford Medicine		
VIS Statements (Multiple languages available)	http://www.immunize.org/vis/index.htm#hepatitisb		
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		
Immunize.org: Give Birth to the End of Hep B	https://www.immunize.org/protect-newborns/		
Hepatitis B Birth Dose Honor Roll	https://www.immunize.org/honor-roll/birthdose/		
Sample Standing Orders Children and	http://www.immunize.org/catg.d/p3076a.pdf		
Teens			
CDC Pink Book Chapter on Hepatitis B	Chapter 10: Hepatitis B   Pink Book   CDC		
Iowa Administrative Code Chapter	https://www.legis.iowa.gov/docs/iac/chapter/641.1.pd		
641.1	<u>f</u>		
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/rr670 1-H.pdf		
Committee on immunization Practices			



Iowa HHS EPI Manual – Hepatitis B	https://hhs.iowa.gov/public-health/center-acute-
Chapter	disease-epidemiology/epi-manual/reportable-
	diseases/hepatitis-b