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Contact Information

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Prevention Program
Coordinator**

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Iowa Department of Public Health
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Des Moines, IA 50319
515/281-4938
800-831-6293, ext. 2
Fax: 1-800-831-6292

Iowa Immunization Program

<http://www.idph.state.ia.us/ImmTB/Immunization.aspx?prog=Imm&pg=ImmHome>

Contact Number 1-800-831-6293

**Clearinghouse for the
hepatitis B Brochures**

1-888-398-9696
<http://www.idph.state.ia.us/ImmTB/Products.aspx?prog=Imm&pg=Products>

**University of Iowa Hygienic
Lab**

General Web Address: <http://www.uhl.uiowa.edu/>

Serology Request Form for Testing:
<http://www.uhl.uiowa.edu/kitsquotesforms/serologyrequestform.pdf>

**IDPH Center for Acute
Disease Epidemiology**

<http://www.idph.state.ia.us/adper/cade.asp>

Contact Number: (515) 242-5935 or 1-800-362-2736

Statement of Iowa Law and HIPAA

Iowa Code Chapter 139A and 641 Iowa Adm. 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 who are infected with or suspected to be infected with a reportable disease. Iowa law clearly outlines all reportable diseases and conditions and investigation methods for reportable diseases such as hepatitis B. (641 IAC chapter 1)

Iowa law further requires health care providers and laboratories to assist in public health disease investigations: “A health care provider and a public, private, or hospital clinical laboratory shall assist in a disease investigation conducted by the department, a local board, or local department. A health care provider and a public, private, or hospital clinical laboratory shall provide the department, local board, or local department with all information necessary to conduct the investigation, including but not limited to medical records; exposure histories; medical histories; contact information; and test results necessary to the investigation, including positive, pending, and negative test results.” (Iowa Code section 139A.3; 641 IAC 1.4(3))

HIPAA

Because 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 therefore conduct all activities outlined in the IDPH EPI Manual, Section 2 (Disease Reporting and Case Investigation) and Section 3 (Controlling Further Spread), 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:
http://www.idph.state.ia.us/hipaa_statement.asp

**When a
Parent
Refuses to
Provide
Information**

Parents are not legally required to assist in a case investigation absent the issuance of a subpoena by the department. There have been instances where 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 its confidentiality, and inform them that you will seek the rest of the information needed to complete the Perinatal Hepatitis B Carrier Follow-up Report form directly from the health care provider(s)(both mother's and baby's health care provider).

If they continue to refuse to provide information, document the discussion on the Perinatal Hepatitis B Carrier Follow-up Report form and notify the Perinatal Hepatitis B Prevention Program coordinator not to contact the parent.

As stated above, parents are not required to assist in our case investigation and there should not be pressure applied to them 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 in hepatitis B vaccination. Vaccines available in the United States use recombinant DNA technology to express HBsAg in yeast.
- 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 also in fixed combination with other vaccines. Two single-antigen vaccines are available in the United States: Recombivax HB[®] (Merck) and Engerix-B[®] (GlaxoSmithKline). **Only single antigen vaccine should be used for the birth dose.**
- Of the three licensed combination vaccines two are used for vaccination of infants and young children: Comvax[®] (Merck & Co) and Pediarix[®] (GlaxoSmithKline).

Hepatitis B vaccine doses are found in appendix 6 on page 217.

Hepatitis B Immune Globulin (HBIG)

HBIG provides passively acquired anti-HBs and temporary protection (i.e., 3-6 months) when administered in standard doses. HBIG is typically used as an adjunct to hepatitis B vaccine for post-exposure immunoprophylaxis to prevent HBV infection.

HBIG is prepared from the plasma of donors with high concentrations of anti-HBs. HBIG that is commercially available in the United States does not contain thimerosal.

Availability of Hepatitis B Vaccine and HBIG

The VFC program will support requests for four 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:

Kelli Smith, RN, BSN
Iowa Department of Public Health, Immunization Program
321 East 12th Street
Des Moines, IA 50319
1-800-831-6293, ext. 4

*IDPH does not keep HBIG on hand. It is vital that we receive notification as soon as the need is identified so that we may order the product directly from the manufacturer.

HBsAg Testing

Purpose HBsAg is the confirmatory test to indicate a patient is currently infected with the hepatitis B virus.

HBsAg and Infection The presence of a confirmed HBsAg positive result is indicative of ongoing HBV infection. All HBsAg positive persons should be considered infectious. 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).

University Hygienic Laboratory and Testing Perinatal serological specimens can be submitted to the University Hygienic Laboratory (UHL) for anyone who is unable to pay for the testing. Those who wish to submit specimens to UHL should contact them at 319-335-4500. For lab slips and instructions on submission go to their Web page: www.uhl.uiowa.edu. Click on “Kits, Quotes, and Forms” then scroll down to the “clinical” section – click on S and then select “Serology Test Request Form.” **If the patient is known to be pregnant please be sure to mark the “Maternal HBV” box under “Patient History”.**

UHL will notify the Iowa Department of Public Health (IDPH) of HBsAg positive patients.

Reporting of HBsAg positive Tests If the woman has a positive HBsAg test, the case must be reported to the Iowa Department of Public Health, Center for Acute Disease Epidemiology within one week of diagnosis per Iowa Administrative Code 614 Chapter 1. The case may be reported by:

- Phone (1-800-362-2763)
- Secure fax (515-281-5698) or
- In writing

The form for reporting a hepatitis B case is located in the EPI Manual, Hepatitis B section at:

http://www.idph.state.ia.us/adper/common/pdf/epi_manual/hepatitis_b.pdf

ACTION

1. If the lab slip comes to you directly from a provider or lab, confirm that the case was reported to IDPH by using IDSS or contacting CADE.
 2. Complete Section I of the IDPH “Perinatal Hepatitis B Carrier Follow-Up Report” form.
 3. If the case is an existing “chronic” case in IDSS, a “maternal hepatitis B” event will be created to allow preservation of original chronic case file and capture of current pregnancy/hepatitis information.
-

Hepatitis B Serology

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.

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 it is recommended, should be performed 1–2 months after the last dose of vaccine. Infants born to HBsAg-positive mothers should be tested 3–9 months after the last dose.

- †1. May be recovering from acute HBV infection
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
 4. May be chronically infected and have an undetectable level of HBsAg present in the serum

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Test	Name	Value	Interpretation	Action
HBsAg	Hepatitis B Surface Antigen	Negative		
anti-HBc	Hepatitis B Core Antibody	Negative	Susceptible to HBV	Vaccinate for HBV
anti-HBs	Hepatitis B Surface Antibody	Negative		
HBsAg	Hepatitis B Surface Antigen	Negative		
anti-HBc	Hepatitis B Core Antibody	Negative	Immune to HBV due to vaccination	None Required
anti-HBs	Hepatitis B Surface Antibody	Positive		
HBsAg	Hepatitis B Surface Antigen	Negative		
anti-HBc	Hepatitis B Core Antibody	Positive	Immune to HBV due to infection	Counsel & Treat as Clinically Indicated
anti-HBs	Hepatitis B Surface Antibody	Positive		
HBsAg	Hepatitis B Surface Antigen	Positive		
anti-HBc	Hepatitis B Core Antibody	Positive	Acute HBV infection	Report & Counsel
anti-HBc (IgM)	Hepatitis B Core Antibody (IgM)	Positive		
anti-HBs	Hepatitis B Surface Antibody	Negative		
HBsAg	Hepatitis B Surface Antigen	Positive		
anti-HBc (IgG)	Hepatitis B Core Antibody (IgG)	Positive	Chronic HBV infection	Report & Counsel
anti-HBc (IgM)	Hepatitis B Core Antibody (IgM)	Negative		
anti-HBs	Hepatitis B Surface Antibody	Negative		
			4 Possible Interpretations	
HBsAg	Hepatitis B Surface Antigen	Negative	1. Recovering from acute HBV	Report & Counsel
anti-HBc	Hepatitis B Core Antibody	Positive	2. Distantly immune, ↓ anti-HBV in serum	None Required
anti-HBs	Hepatitis B Surface Antibody	Negative	3. False pos anti-HBc=Susceptible to HBV	R/O False Positive anti-HBc
			4. Chronic, with ↓ level of HBsAg in serum	Report & Counsel
anti-HBe	Hepatitis B Be Antibody	Positive	Resolved acute HBV infection or inactive (non-replicating) chronic infection	F/U Testing: HBV DNA, HBeAg, HBsAg and HBcAb
HBeAg	Hepatitis B Be Antigen	Positive	Active viral replication-high level of infectivity Seen in both acute HBV & Actively replicating chronic HBV	Report & Counsel
HBeAg	Hepatitis B Be Antigen	Negative	Mutant form of HBV	Report & Counsel
HBV DNA	Hepatitis B DNA	Positive	Active viral replication with high level of infectivity	
HBeAg	Hepatitis B Be Antigen	Negative		
HBV DNA	Hepatitis B DNA	Negative	Chronic Carrier: Asymptomatic with Normal LFT's	Report & Counsel
HBsAg	Hepatitis B Surface Antigen	Positive	Non-active viral replication and non-infectious to others	Annual blood tests to monitor
anti-HBc (IgG)	Hepatitis B Core Antibody (IgG)	Positive		progression of disease

Screening of Pregnant Women

Purpose	Timely identification of pregnant women who are HBsAg positive provides the opportunity to counsel the woman and initiate appropriate case management to prevent further transmission of the virus to the neonate and other susceptible household contacts.
Country of Origin	<p>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. Clients from the following countries/regions may have an increased risk for HBsAg infection:</p> <p>Afghanistan, Africa, rural Alaska, Albania, Bangladesh, Bosnia and Herzegovina, Bulgaria, Cambodia, China, Eastern Europe, Haiti, Hawaii, India, Indonesia, Iran, Iraq, Korea, Laos, Malaysia, the Middle East, Myanmar, Pakistan, the Pacific Islands, Philippines, Romania, the former Soviet Union, South America's Amazon Basin, Sri Lanka, Syria, Taiwan, Thailand, or Vietnam.</p>
Early Testing	<p>All pregnant women should be tested routinely for HBsAg during an early prenatal visit (e.g., first trimester) in each pregnancy, even if they have been previously vaccinated, tested, or previously HBsAg positive.</p> <p>In special situations, an additional HBsAg test can 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 a HBsAg positive sex partner, evaluation or treatment for a sexually transmitted disease [STD], or recent/current injection-drug use).</p>
Transfer of Test Results	Women who are HBsAg positive should have a copy of the original laboratory report indicating her HBsAg status provided to the hospital or birth center where delivery is planned and to the health-care provider who will care for the newborn.

Screening of Pregnant Women, Cont.

Admission Testing

Women who were not screened prenatally, those who engage in behaviors that put 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.

When Testing is not Feasible

When HBsAg testing of pregnant women is not feasible (i.e., in remote areas without access to a laboratory), all infants should receive hepatitis B vaccine less than 12 hours after birth and should complete the hepatitis B vaccine series according to the recommended schedule. Administration of HBIG is not necessary for these infants.

HBsAg Positive Mother

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

- **Give infant HBIG and HBV 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 by 6 months
- Check quantitative anti-HBs and HBsAg after completion of vaccine series at 9-12 months of age

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

- **Give infant HBIG and HBV 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 by 6 months
- **Do not count birth dose as part of vaccine series**, immunize with 4 doses of vaccine.
- Check quantitative anti-HBs and HBsAg after completion of vaccine series at 9-12 months of age

Screening of Pregnant Women, Cont.

**HBsAg
Status
Unknown
Mother**

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
- **Give infant HBV vaccine within 12 hours of birth**
- Give infant HBIG (within 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

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

- Test mother for HBsAg immediately after admission
- **Give infant HBV 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
- Check quantitative anti-HBs and HBsAg after completion of vaccine series at 9-12 months of age

**HBsAg
Negative
Mother**

If the mother is determined to be HBsAg negative, the vaccine series should be completed according to the Recommended Childhood and Adolescent Immunization Schedule (birth, 1-2, and 6-18 months).

ACTION

1. Confirm with the women's provider that 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.
3. Contact the child's health-care 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
 - 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 B
-

ACTION

Contact the woman and provide the following information:

1. How you acquired her name (i.e., 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 visit (delivery plans and household contact information).
4. Provide her with the “Hepatitis B and Moms-to-Be” 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 of post-vaccination serology.
6. Enter all case information into IDSS under the “Follow-Up hep B” tab.

Intervention for Infants Born to HBsAg+ Mothers

Term Infants 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.

Dose	Timing
#1	Birth dose
#2	28 days from dose #1
#3	2 months from dose #2 AND 4 months from dose #1 AND the infant is 6 months of age (minimum age 24 weeks)

For information on combination vaccines (Comvax and Pediarix) see the following page.

Preterm Infants Infants weighing less than 2,000 g (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 preterm infants weighing less than 2,000 g, 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.

The second dose of HBV vaccine should be given when the infant is chronologically one month of age regardless of weight. The third dose should be administered one month following the second dose, and the fourth dose should be given six months following the second dose. Thus, **a total of four doses of HBV vaccine are recommended in this circumstance.**

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 28 days. The minimum interval between the second and third dose is 2 months and 4 months from the first dose, as long as the third dose is given after 6 months of age (see chart above).

Intervention for Infants Born to HBsAg+ Mothers, Cont.

Pediarix Pediarix (GSK) is a combination vaccine that contains DTaP, hepatitis B, and IPV. Typically Pediarix is given at 2, 4 and 6 months of age. When giving Pediarix after a birth dose of hepatitis B, the infant will receive a total of 4 doses of hepatitis B vaccine. **Four doses of HBV is permissible when using combination vaccines.**

There is a flow-chart describing how to administer Pediarix and the use of single antigen hepatitis B vaccine in the section titled “Pediarix Series for Hepatitis B Vaccine.” (page 22)

Serologic testing following the Pediarix series is performed 3 months after the last dose of vaccine (typically given at 6 months of age). Testing can be done as early as 9 months of age, but is often performed at the routine well child visit at 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.”

Comvax Comvax (Merck) is a combination vaccine that contains Hib and hepatitis B vaccines. Comvax is typically given at 2, 4 and 12 months of age. When giving Comvax, after the birth dose of hepatitis B, the infant will receive a total of 4 doses of hepatitis B vaccine. **Four doses of HBV is permissible when using combination vaccines.**

CDC does not recommend giving 5 doses of HBV. When using the Comvax series some providers want to add an additional dose of monovalent hepatitis B vaccine at 6 months of age and then continue giving the Comvax series leading to 5 total HBV doses. 5 doses of HBV is not recommended.

If the provider uses a monovalent HBV at 6 months of age, (so the child is complete with the HBV series at 6 months) they should not use Comvax at 12 months of age (because the child already has 4 HBV), but should instead use single antigen Hib (Pedvax) to complete the series.

There is a flow-chart describing how to administer Comvax and the use of single antigen hepatitis B vaccine and Hib in the section titled “Comvax Series for Hepatitis B Vaccine.” (Page 23)

Serologic testing following the Comvax series is performed 3 months after the last dose of vaccine (typically given at 12 months of age). Testing can be done as early as 4 weeks after the last dose of vaccine is given. For more serology information see the section titled “Post-Vaccination Serology.”

Intervention for Infants Born to HBsAg+ Mothers, Cont.

ACTION

1. Contact the birth hospital to complete the infant's information and HBIG/vaccination status in Section II of the "Perinatal Hepatitis B Carrier Follow-up Report" form (Appendix 1).
2. Contact the infant's 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 12 months.
3. Follow the infant through the vaccine series and document vaccination dates.
4. After each dose of vaccine enter dates into IDSS under the "Follow-Up hep B" tab.

Post-Vaccination Serology

Purpose 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 after completion of the vaccine series 3 to 9 months following the final dose of hepatitis B vaccine** (generally at the 12 month well-child visit, although encouraged to be performed earlier if applicable).

It is very important to have the provider order quantitative anti-HBs. Without ordering a quantitative anti-HBs, there is no way to determine the antibody concentration and thus determine if the infant is protected (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 anti-HBs from HBIG administered during infancy. 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.

The AAP and ACIP have both recommended the use of combination vaccines, such as Comvax or Pediarix, when indicated. **However, combination vaccines can create differences in timing as to when post-vaccination serology is performed.**

Pediarix: the last dose of Pediarix should be given at 6 months, and serology should be drawn 3 months later at the 9 month visit. There are some clinics that prefer to bring the child back at the routine 12 month visit and test them at that time. This is permissible, although it is preferred to test the child after 9 months of age so that revaccination can begin sooner, if necessary.

Comvax: the last dose of Comvax should be given at 12 months of age, and serology should be drawn 1 month (4 weeks) later. There are some clinics that prefer to bring the child back at the routine 18 month visit and test them at that time. This is permissible although not ideal. It is preferred to test the child 1 month after the last dose of Comvax so that revaccination can begin sooner, if necessary.

There is an option to give Comvax for the first 2 doses of the series then give single antigen HBV at 6 months of age with a Pedvax Hib at 12 months of age. This method would allow the provider to draw serology as early as 9 months of age. See page 23 for more detail.

Post-Vaccination Serology, Cont.

Post-Vaccination Serology More Than Two Years after Completing the 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 that 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 second 3-dose series (either using 0, 2, 4 months or 0, 1, 4 months schedule) and retested 1 month after the final dose of vaccine.

Infants who are HBsAg positive should receive appropriate follow-up including periodic evaluation for liver function.

Test Results Continued

Post-vaccination serology done more than two years after the third dose of vaccine with results of **anti-HBs negative and HBsAg negative**, the child should receive one additional dose of HBV vaccine and then have a serology done 1 month after the final dose.

Post-vaccine serology was done less than one year after the third dose of vaccine with results of **anti-HBs negative and HBsAg negative**, the child should receive 3 more doses of HBV vaccine followed by serology done 1 month after the final dose.

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ACTION

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. Enter information into IDSS under the “Follow-Up Hep B” tab.
 2. **Immediately** notify IDPH Perinatal Hepatitis B Prevention Program Coordinator of HBsAg positive infant by calling 1-800-831-6293, ext. 7.
 3. Notify IDPH Perinatal Hepatitis B Prevention Program Coordinator after serologic testing is completed and all data for case has been entered.
-

Testing and Vaccination of Household and Sexual Contacts

Transmission Reduction

Sex 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 (i.e., 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 Serologic Testing and Vaccination

Screening is usually cost-effective, and should be considered in groups with a high risk of HBV infection (prevalence of HBV markers 20% or higher) 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 sex 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 (see Adult Vaccine and Vaccine Efficacy below). 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 sex 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 who are 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 4 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 (range: 14%–60%).

Testing and Vaccination of Household and Sexual Contacts, Cont.

**Availability
of HBV
Vaccine**

HBV 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 and is not routinely maintained.

IDPH makes available HBV vaccine for children through 18 years of age who are living with a HBsAg positive woman and is provided at no cost to the client through the VFC Program. Agencies may administer HBV 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 a HBsAg positive woman are to contact the State Perinatal HBV Prevention Program Coordinator at 1-800-831-6293, ext. 7 to make arrangements to receive HBV vaccine. HBV 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 IRIS (Iowa's Immunization Registry Information System). Vaccine administration recommendations and inventory requirements must be followed in accordance with current IDPH Immunization Program protocols.

Testing and Vaccination of Household and Sexual Contacts, Cont.

Adult Vaccination and Vaccine Efficacy

Adults 20 years of age and older should receive 1 mL (10 mcg) of pediatric or adult formulation Recombivax HB (Merck) or 1 mL (20 mcg) of adult formulation Engerix-B (GlaxoSmithKline). The pediatric formulation of Engerix-B is not approved for use in adults.

The usual schedule for adults is two doses separated by no less than 4 weeks, and a third dose 4–6 months after the second dose. If an **accelerated schedule** is needed, the minimum interval between the first two doses is 4 weeks, and the minimum interval between the second and third doses is 8 weeks. However, **the first and third doses should be separated by no less than 16 weeks**. Doses given at less than these minimum intervals should not be counted as part of the vaccination series

Protection* by Age Group and Dose		
Dose	Infants**	Teens and Adults***
1	16%-40%	20%-30%
2	89%-95%	75%-80%
3	98%-100%	90%-95%

*anti-HBs antibody titer of 10mIU.mL or higher

**preterm infants less than 2kg have been shown to respond to vaccination less often.

***factors that may lower vaccine response rates are age >40 years, male, smoking, obesity, and immune deficiency

ACTION

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 HBV 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). Enter data into IDSS on the “Follow-Up Hep B” tab under contacts.

Checklist for Follow-Up of Infants

Purpose

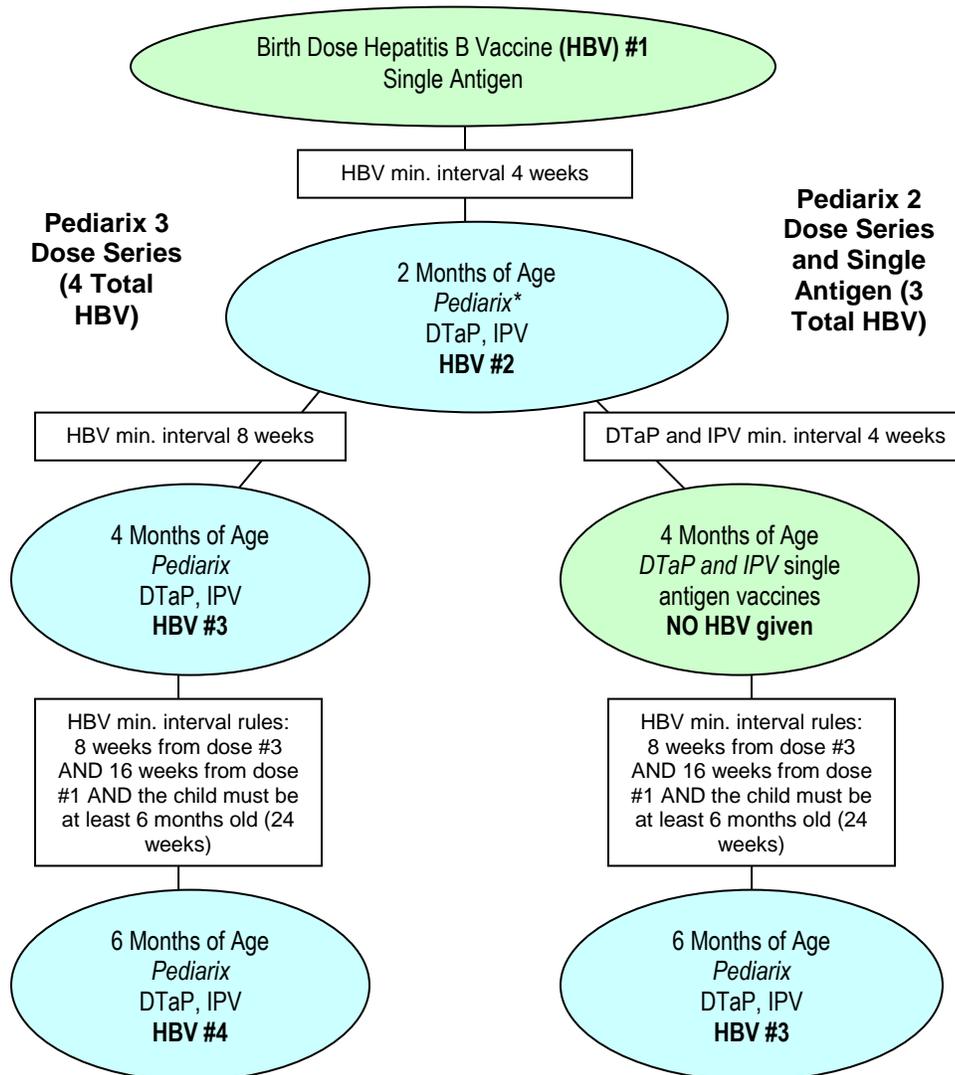
To outline the steps to be carried out by local public health for follow-up of infants born to women who are hepatitis B carriers.

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

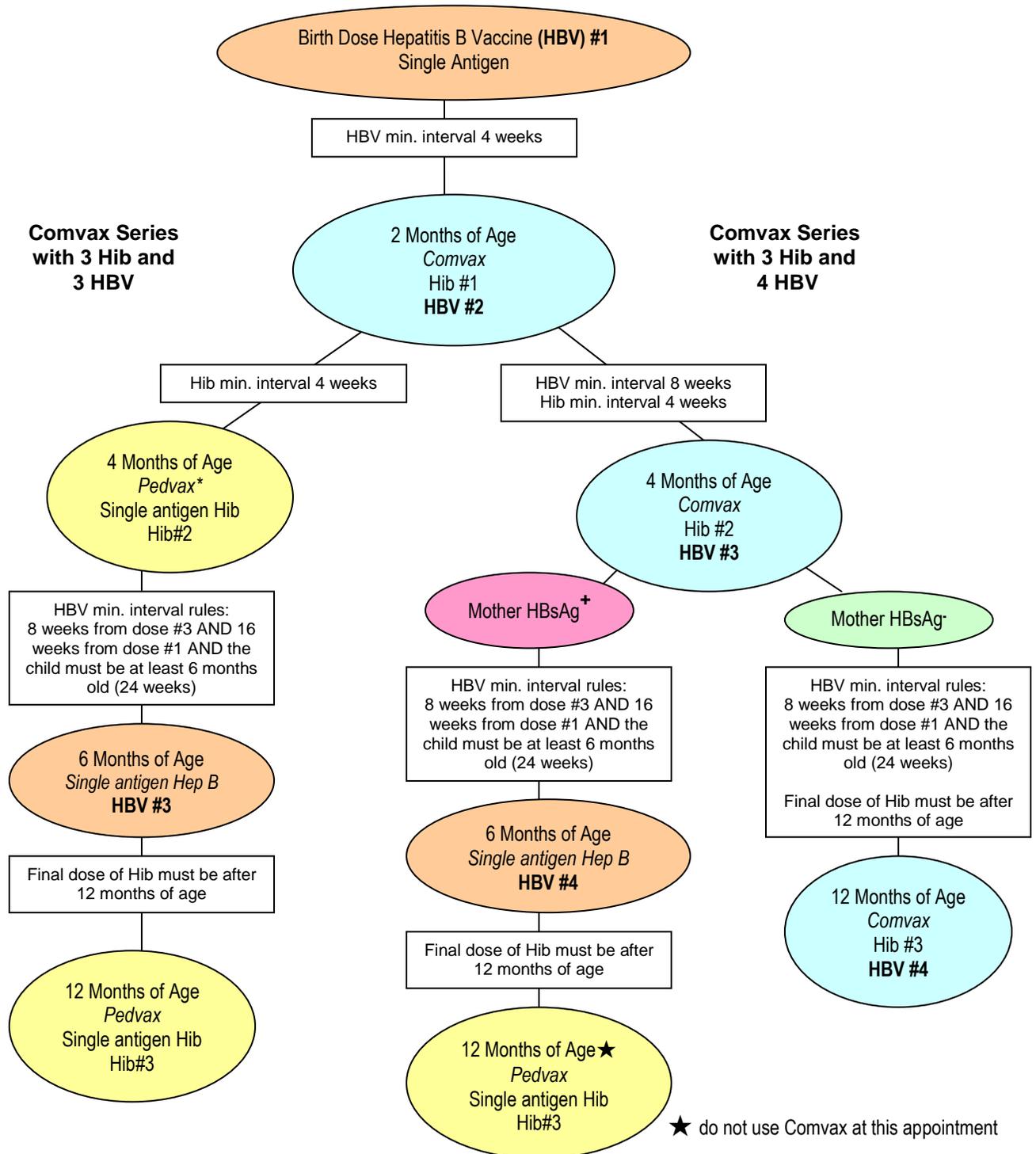
Please see “HBsAg+ Exposed Infants Follow-Up Checklist” on page 24.

Pediarix Series for Hepatitis B Vaccine 3 Dose versus 4 Dose Series



- *Pediarix contains DTaP, IPV and Hep B
- Single Antigen

Comvax Series for Hepatitis B Vaccine 3 Dose versus 4 Dose Series



*PedVax – contains HIB and is a 3 dose series

Reference Material

IDPH Brochures	Immunize for a Better Life Hepatitis B Brochure for providers and mothers are available free of charge from the clearinghouse 1-888-398-9696.
Hepatitis B and Mom's to Be Brochure	Available from Kelli Smith, State Perinatal Hepatitis B Prevention Program Coordinator. 1-800-831-6293 ext. 4.
Hepatitis B Recommendation Alert	Pre-printed copies are available from Kelli Smith, State Perinatal Hepatitis B Prevention Program Coordinator. 1-800-831-6293 ext. 4 or on the IDPH webpage at: http://www.idph.state.ia.us/adper/common/pdf/hepatitis/hep_b_alert_march_2006.pdf
VIS Statements in multiple languages	http://www.immunize.org/vis/index.htm#hepatitisb
CDC National Immunization Program Homepage	http://www.cdc.gov/nip/default.htm
Immunization Action Coalition Homepage	http://www.immunize.org
Hepatitis B Foundation	http://www.hepb.org/
Parents of Kids with Infections Diseases	http://www.pkids.org/index2.htm

HBsAg+ Exposed Infants Follow-Up Checklist

Prior to Delivery:

- Contact the mother's provider. Make sure they are aware of her HBsAg positive lab result, the indicated immunoprophylaxis (HBIG) for the infant, and provide the brochure "Perinatal Hepatitis B Providers Guide."
- Contact the hospital or delivery center to make sure that they will have HBIG on hand and that the mother's HBsAg status is noted in her prenatal record.
- Prior to delivery, call, write, or make a home visit to the client and provide perinatal hepatitis B educational materials (including the "Hepatitis B and Moms-to-Be Brochure").
- Complete Section I of the IDPH "Perinatal Hepatitis B Carrier Follow-Up Report Form" with demographic information on mom. Educate the client on how to reduce risk of transmission of hepatitis B to her infant and household members.
- Complete Section IV on the IDPH "Perinatal Hepatitis B Carrier Follow-Up Report Form" Identify susceptible household contacts (children and sexual contacts) and encourage them to be tested and vaccinated.

After Delivery:

- Complete Section II of the IDPH "Perinatal Hepatitis B Carrier Follow-Up Report Form" with the infant's birth date and dates for **HBIG and the 1st dose of vaccine**.
- Notify the client's pediatric provider of the mother's positive HBsAg status and remind them that the infant should receive the **2nd dose of vaccine at one to two months** and the **3rd dose of vaccine at 6 months of age** as well as **post-vaccination serology between 9 and 12 months of age**. Make follow-up calls or visits with the client to make sure that her baby has gone in for his/her vaccinations and serology test.
- At **12 months** of age, collect **post-vaccination serology results. Be sure the provider tests for both HBsAg and quantitative Anti-HBs**. Complete Section II of the IDPH "Perinatal Hepatitis B Carrier Follow-Up Report Form."
- If infant doesn't develop an antibody response to the HBV vaccine and remains negative for hepatitis B infection, call the clinic and fax/send a request to ensure that a second series of HBV vaccine is given.
- Complete the IDPH "Perinatal Hepatitis B Carrier Follow-Up Report Form" with all shot dates and test results and fax/send to IDPH.

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

- After Section I is completed for mom and household contacts have been identified (Section IV)
- After contacts have completed the first doses 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 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 by fax (1-800-831-6292) or e-mail to: Kelli.Smith@idph.iowa.gov or by mail to:
Kelli Smith, RN, BSN IDPH Immunization Program, 321 East 12th Street, Des Moines, IA 50319

Letter to Mothers

ADD YOUR LETTER HEAD

Date

Dear _____:

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

This letter is to remind you that 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 health care provider will test your child's blood for the hepatitis B virus **between 9 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**. Thanks for your cooperation.

Sincerely,

YOUR NAME

Perinatal Hepatitis B Prevention Program

YOUR AGENCY

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 YOUR LETTER HEAD

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.

As you know, CDC recently published a MMWR titled "A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States," December 23, 2005. In that publication CDC laid out the vital role a practitioner plays in preventing perinatal transmission of the hepatitis B virus. I have included a brochure for you to review that outlines the recommendations made in the December 2005 MMWR. The other brochure included in this letter for your patient, stressing the importance of vaccinating her child against HBV infection.

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

1. Send a copy of the **original lab slip** indicating her HBsAg positive status to the birth hospital or center prior to delivery.
2. Be sure that 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, Kelli Smith, RN, BSN at 1-800-831-6293 ext. 4.

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,

YOUR NAME

Perinatal Hepatitis B Prevention Program

YOUR AGENCY

General Letter to Hospitals Pre Birth

ADD YOUR 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 (HBV) 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 HBV birth dose and HBIG. Upon completion, please fax this form to **YOUR FAX NUMBER**. **(FORM FOUND IN APPENDIX 2)**

For patients that have no means of payment for HBIG and hepatitis B vaccine, please contact me. The Iowa Department of Public Health can provide these important vaccinations without charge through the Vaccines for Children Program (VFC). **However, IDPH does not maintain HBIG on hand** so advance warning 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, Kelli Smith, RN, BSN at 1-800-831-6293 ext. 4.

Sincerely,

YOUR NAME

Perinatal Hepatitis B Prevention Program

YOUR AGENCY

Enc

General Letter to Baby's Provider Pre Birth

ADD YOUR LETTERHEAD

Date

Regarding: Pregnant Mother with Hepatitis B

Dear **Health Care 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 (HBV) and HBIG within 12 hours of birth. Due to the exposure to hepatitis B at birth, it is very important that this child receive the 2nd and 3rd dose of vaccine on time.

In adherence with the Recommended Childhood and Adolescent Immunization Schedule, we recommend that infants born to HBsAg positive mothers receive their **second dose of HBV at one-two months of age**, followed by the **third dose at six months 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; three to nine months following the final dose of hepatitis B vaccine (generally at the 12 month visit, although can be drawn as early as 9 months of age). 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, Kelli Smith, RN, BSN at 1-800-831-6293 ext. 4.

Sincerely,

YOUR NAME
Perinatal Hepatitis B Prevention Program
YOUR AGENCY

General Letter to Baby's Provider Post Birth

ADD YOUR LETTERHEAD

Date

Regarding: **CHILDS NAME/BIRTH DATE**

Dear **Health Care Provider**:

CHILDS NAME birth date **BIRTH DATE** was born to an identified HBsAg positive mother **NAME**. This child is planning to come to your clinic for well-child checkups and immunizations. This child received the first dose of hep B vaccine and HBIG on **DATE** at **HOSPITAL NAME**. It is very important that this child receive 2nd and 3rd dose of vaccine on time.

In adherence with the Recommended Childhood and Adolescent Immunization Schedule, we recommend that infants born to HBsAg positive mothers receive their **second dose at one-two months of age**, followed by the **third dose at six months 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; three to nine months following the final dose of hepatitis B vaccine (generally at the **12 month visit, although can be drawn as early as 9 months of age). 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, Kelli Smith, RN, BSN at 1-800-831-6293 ext. 4.

Sincerely,

YOUR NAME
Perinatal Hepatitis B Prevention Program
YOUR AGENCY

Enc.

Fax for Providers to Report HBV Vaccine Administration

ON YOUR LETTERHEAD

Please complete the following information regarding Hepatitis B vaccination series and post-vaccination serology for: **INFANT NAME AND DOB.**

Perinatal Hepatitis B Prevention Checklist

HBV – 2nd dose due at 1 month of age

Date given: _____

Faxed results to **(YOUR FAX)**

HBV – 3rd dose due at 6 months of age

Date given: _____

Faxed results to **(YOUR FAX)**

Post vaccination serology drawn between 9-12 months of age (not before 9 months of age)

HBsAg Results _____

Quantitative anti-HBs Results _____

Faxed results to **(YOUR FAX)**

If you have any questions regarding Iowa Perinatal Hepatitis B Prevention Program please contact me at **YOUR NUMBER** or the state coordinator, Kelli Smith, RN, BSN at 1-800-831-6293 ext. 4.

Letter Providers Regarding Serology

ADD YOUR LETTERHEAD

Date

Regarding: **CHILDS NAME/BIRTH DATE**

Dear **Health Care Provider**:

CHILDS NAME birth date **BIRTH DATE** 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; three to nine months following the final dose of hepatitis B vaccine (generally at the **12 month visit**, although can be drawn as early as 9 months of age).

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 me a copy of the child's lab slip to me at **YOUR FAX NUMBER**.

Post vaccination serology drawn between 9-12 months of age (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, Kelli Smith, RN, BSN at 1-800-831-6293 ext. 4.

Sincerely,

YOUR NAME

Perinatal Hepatitis B Prevention Program

YOUR AGENCY

Letter Providers Regarding Overdue Serology

ADD YOUR LETTERHEAD

Date

Regarding: **CHILDS NAME/BIRTH DATE**

Dear **Health Care Provider**:

CHILDS NAME birth date **BIRTH DATE** 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; three to nine months following the final dose of hepatitis B vaccine (generally at the 12 month visit).

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 me a copy of the child's lab slip 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, Kelli Smith, RN, BSN at 1-800-831-6293 ext. 4.

Sincerely,

YOUR NAME
Perinatal Hepatitis B Prevention Program
YOUR AGE/CNY

Fax to Providers Regarding Serology

ADD YOUR 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 infant is now due for the serology testing. The Centers of Disease Control and Prevention and the Iowa Department of Public Health recommend **post-vaccination testing at 12 months of age**, although can be drawn as early as 9 months of age. Without serologic testing the outcome of preventative therapy is unknown and opportunities to revaccinate or treat the child are missed.

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

Child's Name _____ DOB _____

Mother's Name _____ DOB _____

Test Date: _____

Test Results:

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:

Kelli Smith, RN, BSN
Iowa Department of Public Health, Immunization Program
321 East 12th Street
Des Moines, IA 50319
P: 1-800-831-6293 ext.4
Kelli.Smith@idph.iowa.gov

Letter Providers Regarding 2nd Series of Immunization

ADD YOUR LETTERHEAD

Date _____

Regarding: **CHILDS NAME/BIRTH DATE**

Dear **Health Care Provider**:

CHILDS NAME birth date **BIRTH DATE** was exposed to hepatitis B (HBV) at birth. Subsequently, this child received HBV vaccination and post-vaccination serologic testing. **Unfortunately, according to the serology report, the child does not show immunity to hepatitis and requires a second 3 dose series of HBV vaccine.**

The recommended approach is to complete a 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 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:

- HBV 4 – first dose in second vaccine series (0 months) Date given _____
 Faxed results to **(YOUR FAX)**
- HBV5 – second dose in second vaccine series (2 month) Date given _____
 Faxed results to **(YOUR FAX)**
- HBV 6 – third dose in second vaccine series (4 months) Date given _____
 Faxed results to **(YOUR FAX)**

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

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, Kelli Smith, RN, BSN at 1-800-831-6293 ext. 4.

Sincerely,

YOUR NAME

Perinatal Hepatitis B Prevention Program

YOUR AGE/CNY

Letter Providers Regarding Second Serology

ADD YOUR LETTERHEAD

Date

Regarding: **CHILDS NAME/BIRTH DATE**

Dear **Health Care Provider**:

CHILDS NAME birth date **BIRTH DATE** was exposed to hepatitis B at birth, received two full series of HBV 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 me a copy of the child's lab slip to me at **YOUR FAX NUMBER**.

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

HBsAg Results _____

Quantitative anti-HBs Results _____

If the child fails to seroconvert after the second series of vaccine, and is HBsAg negative, they should be considered susceptible to HBV infection. Counsel the parents or guardians regarding precautions to prevent HBV infection and the need to obtain HBIG prophylaxis if any known or probable parenteral exposure to HBsAg-positive blood (CDC Pink Book, 9th Edition)

If you have any questions regarding the Iowa Perinatal Hepatitis B Prevention Program please contact me at **YOUR NUMBER** or the state coordinator, Kelli Smith, RN, BSN at 1-800-831-6293 ext. 4.

Sincerely,

YOUR NAME

Perinatal Hepatitis B Prevention Program

YOUR AGENCY

Letter to Postmaster Regarding Last Known Address

ADD YOUR 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 whether 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,

YOUR NAME
YOUR AGENCY NAME

**Appendix 1 Perinatal Hepatitis B Carrier Follow-up Report
Form**

Appendix 2 Perinatal Hepatitis B Hospital Report Form

Appendix 3 HBsAg+ Exposed Infant Follow-up Checklist

Appendix 4 General Information for Patients

Appendix 5 General Information for Providers

Appendix 6 Hepatitis B Chapter from the CDC Pink Book

Appendix 7 Iowa Administrative Code 614, Chapter 1

Appendix 8 MMWR December 23, 2005

**Appendix 9 Hepatitis B Chapter from IDPH Epidemiology
Manual**