

# Maryland Department of Health and Mental Hygiene

## Epidemiology and Disease Control Program

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### **Guidelines for Prevention of Perinatal Hepatitis B Infection**

The risk of developing chronic hepatitis B virus (HBV) infection is age dependent and is greatest for infants, who have a 90% chance of developing chronic infection if infected at birth. Persons with chronic HBV infection are at increased risk of developing chronic liver disease (cirrhosis) or hepatocellular carcinoma.

Because infected infants and children are at such high risk of chronic infection, prevention of transmission in these age groups is of utmost importance. In the United States, 16,000-20,000 women who are HBsAg positive give birth each year. Infants born to these women are at high risk of acquiring chronic HBV infection from transmission during the perinatal period or early childhood. Without postexposure prophylaxis to prevent perinatal HBV infection, it is estimated that 12,000 infants and children would be infected with HBV annually.

#### **A. ROUTINE PRENATAL HEPATITIS B SCREENING**

##### **1. Testing**

- All pregnant women should be routinely tested for hepatitis B surface antigen (HBsAg) during an early prenatal visit in each pregnancy
- HBsAg testing should be repeated if the woman has never been vaccinated and has risk factors of HBV (hepatitis B virus) infection such as an STD, injection drug use, or multiple sex partners. If a risk factor has been identified during pregnancy, the woman should be started on the hepatitis B vaccine series right away.
- Chronic hepatitis B virus (HBV) infection is defined as the presence of HBsAg in serum for at least six months; or, the presence of HBsAg with a negative test for IgM anti-HBc. Following an initial positive test for HBsAg, the blood should be tested for IgM anti-HBc, to determine if this is an acute case.
- A woman with an acute case of hepatitis B she should be retested for HBsAg and antibody to the surface antigen (abbreviated either HBsAb or anti-HBs) later in the pregnancy to determine either recovery or carrier status.

- To ensure that all high risk infants receive timely prophylaxis, a woman should be tested for HBsAg upon hospital admission for delivery if previous serologic testing has not been done, or test results are unavailable.

## **2. Reporting**

- Local health jurisdictions should investigate every HBsAg-positive lab report in a female of reproductive age to determine if she is pregnant.
- Pregnant women who are identified for the first time as cases or carriers should be reported through MERSS and should be entered into the Maryland perinatal B-First database.
- The information that a pregnant woman is HBsAg positive must be transferred among all levels of providers, e.g., the prenatal provider, the delivery site, the newborn nursery, and the outpatient pediatric provider. When these linkages are weak or nonexistent, information can be lost or misinterpreted, and high-risk infants left untreated.
- Results of lab tests done on the mother and her contacts, as well as the confirmed dates of doses of HBIG and hepatitis B vaccine given to the infant and other susceptible contacts should be entered into B-First.
- The results of the infant's post-vaccination serology (after 3 doses of vaccine, at 9– 15 months of age) should be entered in B-First. This post-vaccination test should be done for both the presence of hepatitis B surface antibody (HBsAb or anti-HBs) as well as for surface antigen (HBsAg.)

## **B. MANAGEMENT OF THE PREGNANT WOMAN WHO IS IDENTIFIED AS A CASE OR CARRIER OF HEPATITIS B.**

- Counsel the woman on
  - the meaning and implications of her diagnosis; and
  - timely prevention of transmission to her baby at and after the time of birth; and
  - screening of her sexual and household contacts, and evaluation for their need for hepatitis B vaccine.
- If she has an acute case of hepatitis B, complete the CDC Viral Hepatitis Case Investigation form and interview her to try to determine the source of her infection.

## **C. MANAGEMENT OF INFANTS BORN TO HBsAg POSITIVE WOMEN**

- Whenever possible the hospital should be notified in advance of admission of the mother's HBsAg status to ensure prompt administration of HBIG and hepatitis B vaccine to her infant(s).
- Hospital labor and delivery units should have a written policy in place requiring the serologic testing of a woman whose HBsAg status is unknown at the time of admission.
- Infants born to HBsAg positive mothers should receive hepatitis B immune globulin (HBIG), 0.5ml I.M. and hepatitis B vaccine 0.5ml. I.M. (at a different site) within 12 hours of birth. Both HBIG and hepatitis B vaccine are available through the Vaccines for Children Program (VFC).
- The source of pediatric care should be identified and reminders of the second and third doses sent to the family. Doses of hepatitis B vaccine should be administered at birth, one month of age, and six months of age.
- Four months should separate the first and third doses of hepatitis B vaccine. The third dose of hepatitis B vaccine should not be given before six months of age.
- Following the third dose of vaccine, at age 9 to 15 months, the infant should have a post-vaccination serology for both HBsAg and HBsAb (also abbreviated anti-HBs). The indicator of immunity to HBV is the presence of antibody to the surface antigen (HBsAb, anti-HBs). The infant whose serology does not demonstrate HBsAb should have additional vaccine doses. Record the serology results and any additional doses of vaccine given in B-First.

## **D. MANAGEMENT OF HOUSEHOLD AND SEXUAL CONTACTS**

- Household contacts and sexual partners of hepatitis B carriers should be assessed for immunity, susceptibility or carrier status of HBV. Contacts who do not have a history of immunization against hepatitis B should be tested for HBsAg and HBsAb. If positive for either one, they do not need the vaccine.
- Susceptible contacts should complete the appropriate doses of hepatitis B vaccine series, with dates documented in the B-First database. Adult hepatitis B vaccine is available through DHMH for perinatal hepatitis B contacts who do not have insurance.
- Sex partners of HBsAg-positive persons should have post-vaccination testing (anti-HBs or HBsAb) to confirm adequate response to vaccination. This should be done one to two months after the third dose.