



**IN THIS ISSUE: Hepatitis Awareness Month - Prevention of Perinatal Hepatitis B Transmission**

In honor of Hepatitis Awareness Month in May, the Washoe County Health District (WCHD) would like to remind healthcare providers about the importance of screening patients for hepatitis B and C. This issue of Epi-News will focus on screening for hepatitis B in pregnant women. The next issue will focus on hepatitis C screening.

**Background**

Nearly 25,000 infants are born every year in the United States to HBsAg-positive mothers. Prior to the availability of post-exposure prophylaxis (PEP) up to 90% of infants born to HBsAg mothers contracted hepatitis B. HBV transmission has been reduced greatly by the availability of PEP. As a result, only 1% of infants who receive PEP developing hepatitis B. This cuts down significantly the incidence of premature death due to liver cancer or cirrhosis.<sup>1</sup>

**Perinatal Hepatitis B Prevention**

Mandatory hepatitis B screening of all pregnant women and reporting of HBsAg-positive pregnant women prior to delivery are important components of WCHD's Perinatal Hepatitis B Prevention Program (PHBPP). The goal of the program has been to prevent perinatal transmission of hepatitis B by assuring timely and appropriate post-exposure prophylaxis (PEP) for infants born to HBsAg-positive women in Washoe County.

Nevada Administrative Code (NAC) 441A.570 requires that *a pregnant woman shall be screened by her health care provider for the presence of hepatitis B surface antigen. The health care provider shall refer a pregnant woman who is positive for hepatitis B surface antigen to the health authority for counseling and recommendations on testing and immunizing contacts.*

The Advisory Committee on Immunization Practices (ACIP) guidelines for prevention of perinatal HBV infection and management of pregnant women include the following:

- ◆ 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 or tested.***

<sup>1</sup>[http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6439a6.htm?s\\_cid=mm6439a6\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6439a6.htm?s_cid=mm6439a6_w)

- when ordering prenatal testing it is important to use an OB or prenatal panel. This will alert health departments receiving results that the woman is pregnant. **THIS DOES NOT REPLACE A PROVIDER'S DUTY TO REPORT A POSITIVE HBSAG WOMAN TO THE HEALTH AUTHORITY.**
- Three laboratories widely used in Washoe County offer prenatal panels. See below table.

|                   |   |
|-------------------|---|
| ARUP Laboratories | Panel-Prenatal Reflexive Panel (Test Code-0095044)  |
|                   | Standalone-HBV Surface Antigen with Reflex to Confirmation, Perinatal (Test Code-2007573) |
| LabCorp           | Panel-Prenatal Profile I with Hepatitis B Surface Antigen (Test Code-202945)              |
|                   | Panel-Hepatitis Profile XIII (HBV Prenatal Profile) (Test Code) 265397                    |
| Quest Diagnostics | Obstetric Panel (Test Code-20210)   |

- ◆ In addition, the following groups should be tested at the time of admission to the hospital for delivery:
  - women who were not screened prenatally,
  - women who engage in behaviors that put them at high risk for infection (e.g., recent or current injection drug use, having had more than one sex partner in the previous 6 months or a HBsAg-positive sex partner, evaluation or treatment for a sexually transmitted disease, HIV infection, chronic liver disease, or end-stage renal disease, and international travel to regions with HBsAg prevalence of  $\geq 2\%$ ), and
  - women with clinical hepatitis.
- ◆ HBsAg-positive pregnant women should be referred to an appropriate case-management program for education and follow-up. In Washoe County please call the Communicable Disease Program at **775-328-2447** to make a referral.
- ◆ HBsAg-positive pregnant women should be provided with or referred for appropriate counseling and medical management. See the attached CDC Screening and Referral Algorithm for Hepatitis B Virus (HBV) Infection among Pregnant Women on page 3.

In order to ensure appropriate and timely PEP of exposed infants, all HBsAg-positive pregnant women must be reported to the Communicable Disease Program prior to delivery. **HBsAg-positive persons can be**

**IN THIS ISSUE: Hepatitis Awareness Month - Prevention of Perinatal Hepatitis B Transmission**

**reported by using the confidential fax line at (775) 328-3764.** The majority of HBsAg-positive reports originate from the laboratory performing the prenatal labs. *This means that most health care providers inappropriately rely exclusively upon the laboratories to submit these reports for them,* which is not in compliance with Nevada law. It is possible for a case to be missed, especially if a HBsAg-positive woman moves to this community after having her prenatal testing done by a provider outside of Washoe County. Although her medical record may follow her in the transfer of care, the HBsAg-positive result will not be reported to the WCHD unless the health care provider takes the initiative to do so. NAC441A.570 also states *the health care provider of an infant born to a woman carrying hepatitis B surface antigen shall ensure that the infant is given hepatitis B immune globulin [HBIG] and hepatitis B vaccine within 12 hours of birth with the vaccine series being completed on a schedule established by the division.* ACIP provides the following recommendations for the management of infants born to HBsAg-positive women:

- ◆ All infants born to HBsAg-positive women should receive single-antigen hepatitis B vaccine and HBIG (0.5mL) within 12 hours of birth.
- ◆ The vaccine series should be completed according to the following schedules:
  - **If only single-antigen vaccine is used:** Dose 2 at 1-2 months; Dose 3 at 6 months.
  - **If single-antigen vaccine at birth + combination vaccine for subsequent doses:** Dose 2 at 2 months, Dose 3 at 4 months, Dose 4 at 6 months (if Pediarix), or at 12-15 months (if Comvax).
- ◆ Post-vaccination testing for quantitative hepatitis B surface antibody (anti-HBs) and HBsAg should be performed after completion of the vaccine series. The recommendation for testing has recently been changed from age 9-18 months to 9-12 months. Testing should not be performed before 9 months of age to avoid detection of anti-HBs administered during infancy and to maximize the likelihood of detecting late HBV infection. Hepatitis B core antibody total (anti-HBc) testing of infants is not recommended because passively acquired maternal anti-HBc might be detected in infants born to HBV infected mothers up to age 24 months.
- ◆ Infants of HBsAg-positive mothers may be breast fed beginning immediately after birth.

All delivery hospitals should implement policies and procedures to ensure:

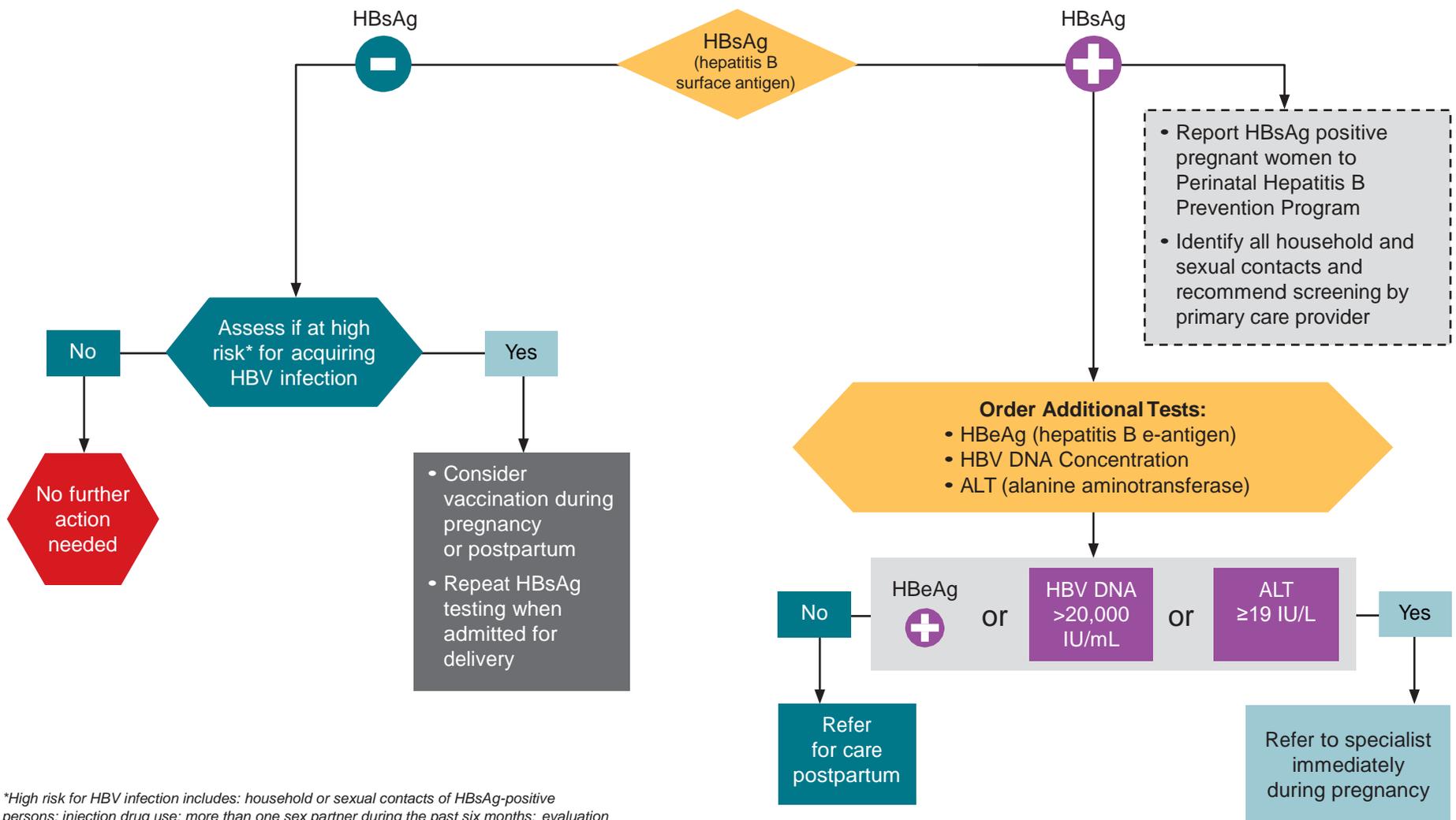
- 1) identification of infants born to HBsAg-positive mothers and infants born to mothers with unknown HBsAg status, and
- 2) initiation of immunization for these infants.

Case management of HBsAg-positive pregnant women and their infants by the WCHD PHBPP include:

- ◆ Contact of the health care provider to obtain pertinent information regarding the case.
- ◆ Interview of the case to identify contacts and provide appropriate HBV education, including:
  - modes of transmission;
  - perinatal concerns (e.g., infants born to HBsAg-positive mothers may be breast fed);
  - prevention of HBV transmission to contacts, including the importance of PEP for the newborn infant and hepatitis B vaccination for household, sexual, and needle-sharing contacts;
  - substance abuse treatment, if appropriate; and
  - medical evaluation and possible treatment of chronic hepatitis B.
- ◆ Evaluation of identified household, sexual, and needle-sharing contacts of HBsAg-positive women to determine the need for serologic screening; referral of susceptible contacts to complete the three-dose vaccination series.
- ◆ Referral of sexual partners to complete post-vaccination testing to verify adequate immune response.
- ◆ Notification of the delivery hospital approximately two to three months prior to the expected delivery date to ensure the hospital health care providers are aware the infant will need HBIG and first dose of hepatitis B vaccine within 12 hours of birth.
- ◆ Continuation of follow-up until the infant completes the hepatitis B vaccination series and is then screened at 9 to 12 months of age to verify adequate anti-HBs response and absence of HBsAg. This indicates the infant did not develop hepatitis B infection and is now immune.

Laboratories, hospitals and health care providers must report all HBsAg-positive test results promptly to the local health authority. In Washoe County reports should be faxed to the **Communicable Disease Program** confidential reporting line at **(775) 328-3764**. For more information, please contact the Communicable Disease Program at (775) 328-2447.

# Screening and Referral Algorithm for Hepatitis B Virus (HBV) Infection among Pregnant Women



\*High risk for HBV infection includes: household or sexual contacts of HBsAg-positive persons; injection drug use; more than one sex partner during the past six months; evaluation or treatment for a sexually transmitted disease; HIV infection, chronic liver disease, or end-stage renal disease; and international travel to regions with HBsAg prevalence of ≥2%.

Adapted with permission from the Hepatitis B Foundation. Original publication: Apuzzio J, Block J, Cullison S, et al. Chronic Hepatitis B in pregnancy: A workshop consensus statement on screening, evaluation, and management, part 2. The Female Patient. 2012; 37(5):30-34



U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention



The American College of Obstetricians and Gynecologists  
WOMEN'S HEALTH CARE PHYSICIANS

[www.cdc.gov/hepatitis](http://www.cdc.gov/hepatitis)

March 2015