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HEPATITIS AWARENESS MONTH – PRENATAL HEPATITIS B TESTING AND INFANT CASE MANAGEMENT, INCLUDING NEW RECOMMENDATIONS FROM ACIP

Introduction

May is Hepatitis Awareness Month. This is our annual edition of Epi News that highlights the importance of screening patients for hepatitis, especially pregnant women. WCHD's Perinatal Hepatitis B Prevention Program (PHBPP) helps to coordinate with healthcare providers and birthing hospitals to prevent perinatal transmission of hepatitis B.

Prevention of Perinatal HBV Transmission

The purpose and ultimate goal of screening pregnant women for hepatitis B is to prevent perinatal transmission of the infection. For those women who are identified as positive for hepatitis B, post-exposure prophylaxis (PEP) can be provided to the baby within 12 hours of birth to prevent disease transmission. Only 1% of infants receiving PEP develop hepatitis B, decreasing the incidence of liver cancer or cirrhosis.

Prenatal Testing for Hepatitis B

Updated in January 2018, the following are recommendations from the Advisory Committee on Immunization Practices (ACIP) and CDC to reduce the risk of perinatal HBV transmission:

- ◆ 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. This helps identify those infants needing prophylaxis early on. See page 2 for available prenatal testing panels. Please also check CDC's testing algorithm for more information, <https://www.cdc.gov/hepatitis/hbv/pdfs/PerinatalAlgorithm-Prenatal.pdf>
 - When ordering prenatal testing it is important to use an obstetric 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.

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.*

- ◆ To ensure exposed infants receive timely PEP, all HBsAg-positive pregnant women must be reported to the health district's Perinatal Hepatitis B Prevention Program prior to delivery. **HBsAg-positive persons can be 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.

- ◆ **New recommendation** - For HBsAg positive pregnant women, the American Association for the Study of Liver Diseases (AASLD) suggests testing for HBV DNA to determine if maternal antiviral therapy is recommended for the prevention of HBV transmission.
- ◆ **New recommendation** – For HBsAg positive pregnant women, AASLD recommends antiviral therapy when maternal HBV DNA is > 200,000 IU/mL.
- ◆ Information should be provided to all HBsAg-positive pregnant women regarding the potential use of antiviral therapy, the importance of infant prophylaxis, infant's completion of the vaccination series and post-vaccination serological testing.

Infants Born to HBsAg-Positive Women

- ◆ Infants should receive Hep B vaccine (single antigen) and hepatitis B immunoglobulin (HBIG) **within 12 hours of birth, administered at different infection sites (e.g. separate limbs)**. Only single-antigen Hep B vaccine should be used for the birth dose.

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.*

- ◆ **New recommendation** – Infants born to women for whom HBsAg test results during pregnancy are not available, but evidence suggests maternal HBV infection (e.g. presence of HBV DNA, HBeAg-positive or mother is known to have chronic HBV) should be managed as if they were born to an HBsAg-positive mother.
- ◆ The infant's Hep B vaccination series should be completed according to the recommended schedule for infants born to HBsAg positive mothers.

- ◆ The birth dose of Hep B vaccine is not counted as part of the vaccination series in **infants weighing <2,000 grams**. The infant should receive an additional 3 doses of Hep B vaccine for a total of 4 doses, starting at 1 month of age. The last dose should not be administered prior to 24 weeks.
- ◆ Between 9-12 months of age, post-vaccination serological testing should be completed. Both HBsAg and anti-HBs (hepatitis B surface antibody, quantitative) should be ordered. For anti-HBs, testing should be ordered that measures protective concentration anti-HBs (≥ 10 mIU/mL). Testing should not be completed prior to 9 months of age to avoid passive anti-HBs from the birth dose of HBIG. Due to passively acquired maternal anti-HBc (hepatitis B core antibody) still circulating, testing the infant for anti-HBc is not recommended.
- ◆ Infants born to HBsAg positive mothers and that receive post-exposure prophylaxis can be breastfed immediately after birth.
- ◆ **New recommendation** – Hospital staff transferring infants after birth to another facility for a higher level of care should communicate to the receiving facility the infant's need for prophylaxis with Hep B vaccine and HBIG, so it can be administered in a timely manner.

Infants Born to Women with Unknown HBsAg Status

- ◆ **New recommendation** – If HBsAg test results during pregnancy are not available, but evidence suggests maternal HBV infection (e.g. presence of HBV DNA, HBeAg-positive or mother is known to have chronic HBV), the infant should be managed as if they were born to a HBsAg-positive mother. Both Hep B vaccine and HBIG should be given within 12 hours of birth, administered at different injection sites (e.g. separate limbs).
- ◆ Women admitted for delivery who do not have documented HBsAg test results, need to have a blood draw and be tested as soon as possible.
 - While maternal HBsAg test results are pending, infants weighing >2,000 grams should receive the first dose of Hep B vaccine, **without** HBIG within 12 hours of birth.
 - If the mother's results show she is HBsAg positive, the baby should receive HBIG as soon as possible, but no later than 7 days. The Hep B vaccination series should then be completed according to the schedule for infants born to HBsAg-positive mothers.
 - If the mother is HBsAg-negative, the Hep B vaccination series should be completed according to the schedule for infants born to HBsAg-negative mothers.
 - If the mother's results cannot be obtained within 12 hours of birth, infants weighing <2,000 grams should be given both Hep B vaccine and HBIG in different injection sites (e.g. separate limbs) within 12 hours of birth. Again this birth dose does not count as part of the required 3 doses of vaccine required to complete the series. **New recommendation for infants**

within this category - 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 a recommended schedule for infants born to HBsAg-positive mothers.

Available Tests for Hepatitis B

See table below for the three laboratories widely used in Washoe County that offer prenatal panels.

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 $\geq 2\%$).
 - Women with clinical hepatitis.
- ◆ Providers should also attach an alert notice to the patient's medical record to remind the delivery hospital/nursery of the patient's HBsAg + status and the newborn's need for hepatitis B vaccine and HBIG at birth.

CDC Algorithms - Perinatal Hepatitis B Prevention Procedures at Time of Delivery

Please see page 3 for CDC's algorithms to highlight procedures, at the time of delivery, to prevent perinatal transmission of hepatitis B.

Questions

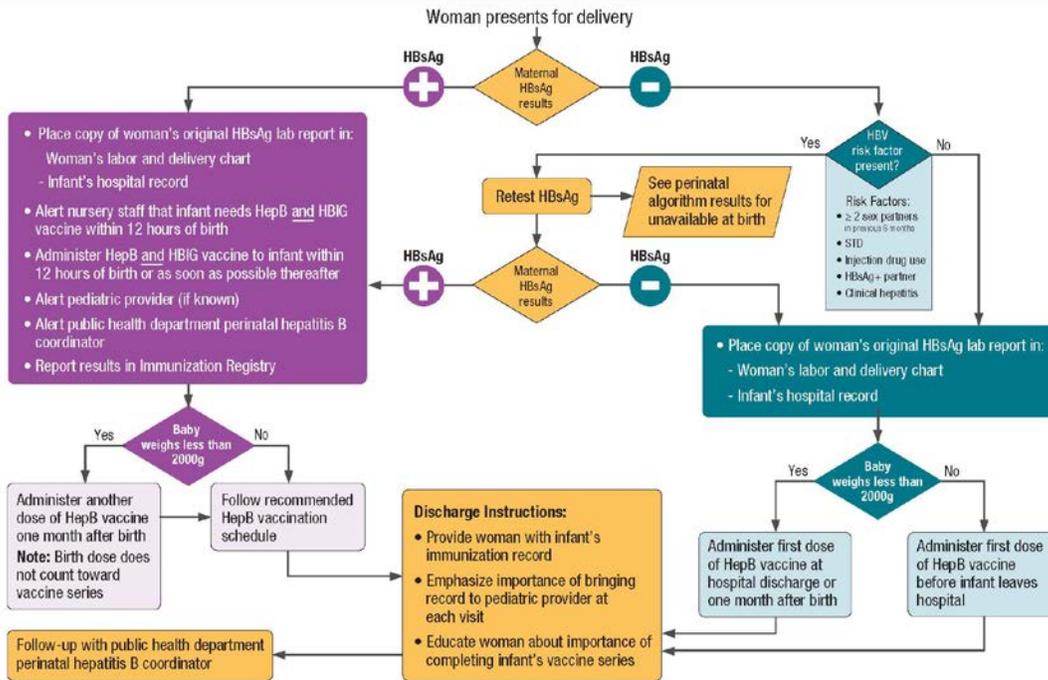
For questions regarding the WWCHD's Perinatal Hepatitis B Prevention Program, please call (775) 328-2447. To report HBsAg positive pregnant women, fax the positive lab result along with patient demographic information to (775) 328-3764. This is a confidential fax line. For more information on ACIP's updated recommendations on hepatitis B, please visit, <https://www.cdc.gov/mmwr/volumes/67/rr/rr6701a1.htm>.

Procedures to Prevent Perinatal Hepatitis B Virus Transmission at Delivery

Maternal Surface Antigen (HBsAg) Test Results **AVAILABLE**



U.S. Department of Health and Human Services
2008
Control and Prevention



Resources available at www.CDC.gov/hepatitis/perinatalHepB

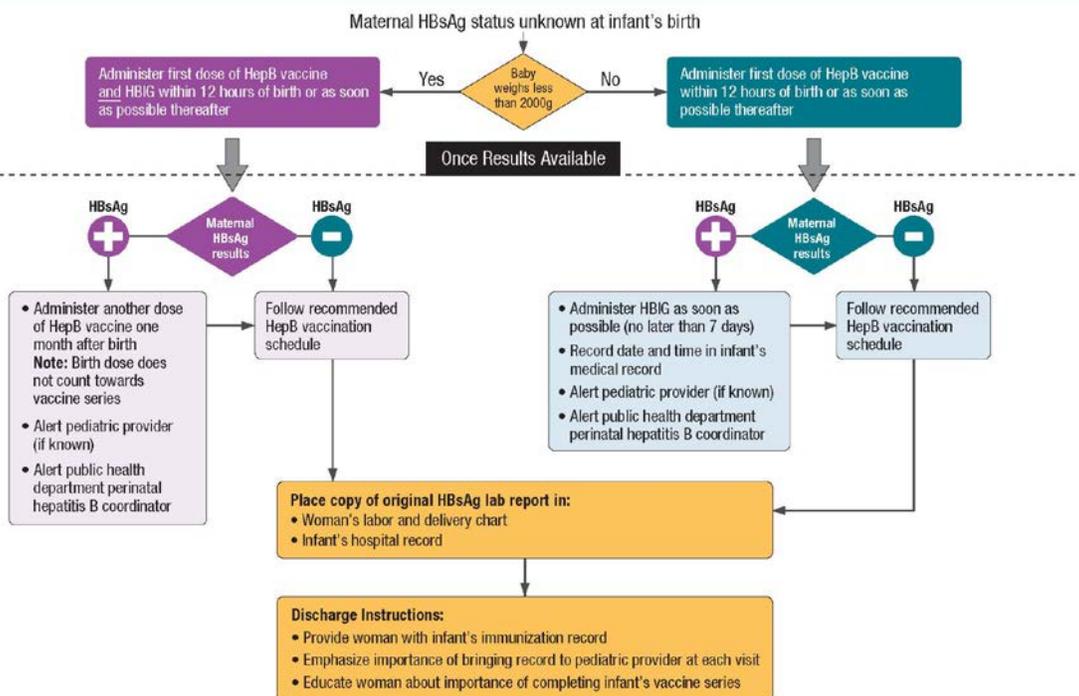
<https://www.cdc.gov/hepatitis/hbv/pdfs/PerinatalAlgorithm-Avaliable.pdf>

Procedures to Prevent Perinatal Hepatitis B Virus Transmission at Delivery

Maternal Surface Antigen (HBsAg) Test Results **UNAVAILABLE** at admission or from retesting at delivery



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



Resources available at www.CDC.gov/hepatitis/perinatalHepB

<https://www.cdc.gov/hepatitis/hbv/pdfs/PerinatalAlgorithm-Unavailable.pdf>

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