pennsylvania
DEPARTMENT OF HEALTH

PREVENTION OF PERINATAL HEPATITIS B INFECTION AND MANAGEMENT OF PREGNANT WOMEN
Guidelines for Medical Care Providers

I. Routine Prenatal Hepatitis B Screening

A. All pregnant women are to be screened for the hepatitis B surface antigen (HBsAg) on the first prenatal visit, or within 15 days, but no later than the time of delivery, as stated in PA Code §27.99 (a).

- Complete hepatitis B triple panel screening, preferably in the first trimester, regardless of vaccination status, for pregnant persons without history of previous screening or complete again if high risk. Hepatitis B triple panel includes: HBsAg, hepatitis B surface antibody (anti-HBs), and total hepatitis B core antibody (anti-HBc). Screening and Testing for Hepatitis B Virus Infection: CDC Recommendations — United States, 2023 | MMWR
- "Testing pregnant persons known to be chronically infected or immune enables documentation of the HBsAg test result during that pregnancy to ensure timely prophylaxis for exposed infants."
- If patient has a history of hep B infection, it is recommended to run hepatitis B DNA (HBV DNA) with initial hepatitis B blood work for current pregnancy.

❖ *If the patient is HBsAg negative:*

- Record status in the medical record
- Provide a copy of the original lab report to the woman's delivery hospital
- Repeat HBsAg at the time of admission to the hospital for delivery if the patient is in any of the following high-risk categories:
  - Recent or current injection drug use
  - More than one sex partner in previous 6 months
  - HBsAg + sex partner
  - Evaluation or treatment for a sexually transmitted disease
  - Symptoms of clinical hepatitis

❖ *If the patient is HBsAg positive:*

- Record status in the medical record.
- Report the case to the Pennsylvania Department of Health Perinatal Hepatitis B Prevention Program by contacting your local state health center or county/municipal health department, or through electronic laboratory reporting (ELR), and enter the information in the Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS).
- Recall patient to clinic to inform of positive status, provide education and support and perform a medical evaluation.

- Order an HBV DNA test during first trimester and again at 26-28 weeks on the HBsAg-positive pregnant women. The HBV DNA test at 26-28 weeks will guide the use of maternal antiviral therapy during pregnancy for the prevention of perinatal HBV transmission. AASLD suggests maternal antiviral therapy at 28-32 weeks until birth when the maternal HBV DNA is >200,000 IU/mL. current AASLD guidance
- Notify hospital maternity/neonatal/pediatric services of mother's HBsAg status. A copy of the original laboratory report should be provided to the hospital or birthing facility and to the HCP who will care for the newborn infant.

B. Medical records of all pregnant women in the prenatal setting and all birthing hospitals should be reviewed for the HBsAg test when a woman is admitted for delivery.

C. If a pregnant or delivering woman is admitted to the hospital and has not been screened or the test result is unavailable, HBsAg testing should be performed immediately by the hospital at the time of admission.

D. It is recommended that all newborn infants born to mothers of HBsAg positive, or unknown status receives the first dose of single-antigen hepatitis B vaccine within 12 hours of birth.

E. Full term infants who are medically stable and weigh ≥2,000 g born to HBsAg negative mothers should receive the first dose of single-antigen hepatitis B vaccine within 24 hours of birth.

F. Preterm infants weighing less than 2,000 g born to HBsAg negative mothers should receive the first dose of single-antigen hepatitis B vaccine 1 month after birth or at hospital discharge (see Section IV).

II. Management of Infants Born to HBsAg Positive Women

❖ *Vaccination series for infants of birth weight ≥ 2,000 grams:*

- Within 12 hours of birth, administer single antigen hepatitis B vaccine and Hepatitis B Immune Globulin (HBIG) in different limbs.
- The 2nd dose of hepatitis B vaccine should be administered at 1-2 months of age with a minimum of 4 weeks from the first dose.
- The 3rd dose of hepatitis B vaccine should be administered at 6 months of age (minimum age of 24 weeks) with an interval of at least 8 weeks between the 2nd and 3rd dose.
- Infants should be tested for HBsAg & anti-HBs (quantitative) after completing the hepatitis Bvaccine series at age 9 months (1-2 mo. after the 3rd dose).

❖ *Vaccination series for pre-term infants of birth weight < 2,000 grams:*

- Within 12 hours of birth, administer single antigen hepatitis B vaccine and HBIG in different limbs.
- Do not count the birth dose as part of the vaccine series because of the potentially

reduced immunogenicity of hepatitis B vaccine in these infants; 3 additional doses (for a total of 4 doses) should be administered.

- The 2nd dose of hepatitis B vaccine should be given at the chronological age of 1-2 months.
- The 3rd dose of hepatitis B vaccine should be given 1-2 months after the second.
- The 4th dose of hepatitis B vaccine should be given at the chronological age of 6 months (minimum age of 24 weeks) with an interval of at least 8 weeks between the 3rd and 4th dose.
- Infants are to be tested for HBsAg & anti-HBs (quantitative) after completing the hepatitis Bvaccine series at chronological age 9 months (1-2 mo. after the 4th dose).

III. Management of Infants Born to Women of Unknown HBsAg Status

❖ *Vaccination series for infants of birth weight ≥ 2,000 grams:*

- Within 12 hours of birth, administer single antigen hepatitis B vaccine (without HBIG).
- Infants born to women for whom HBsAg testing results during pregnancy are not available but other evidence suggestive of maternal HBV infection exists. (e.g., presence of HBV DNA, HBeAg-positive, 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 Hep B vaccine and HBIG within12 hours of birth.
- If the mother is determined to be HBsAg positive, her infant should receive HBIG as soon as possible but no later than age 7 days; the hepatitis B vaccine series is to be completed according to the schedule for HBsAg positive mothers.
- If the mother is determined to be HBsAg negative, the hepatitis B vaccine series should be completed according to the recommended schedule for infants born to HBsAg negative mothers.
- If the mother has never been tested to determine her HBsAg status or when a parent or person with lawful custody safely surrenders an infant confidentially shortly after birth, the hepatitis B vaccine series should be completed according to the recommended schedule for infants born to hepatitis B positive mothers. Administration of HBIG is not necessary for these infants. These infants should receive postvaccination serologic testing at age 9 months, and revaccination if necessary.

❖ *Vaccination series for pre-term infants of birth weight < 2,000 grams:*

- Administer single antigen hepatitis B vaccine within 12 hours of birth.
- If the maternal HBsAg status cannot be determined within 12 hours of birth administer HBIG (0.5mL) because the immune response is less reliable in preterm infants weighing less than 2,000 grams.
- Do not count the birth dose as part of the vaccine series because of the potentially

reduced immunogenicity of hepatitis B vaccine in these infants; 3 additional doses (for a total of 4 doses) should be administered beginning when the infant reaches the chronological age of 1 month.

- The 2nd dose should be given at the chronological age of 1-2 months.
- The 3rd dose of hepatitis B vaccine should be given 1-2 months after the second.
- The 4th dose of hepatitis B vaccine should be given at the chronological age of 6 months but with an interval of at least 8 weeks between the 3rd and 4th dose.
- Infants should be tested for HBsAg & anti-HBs (quantitative) after completion of the hepatitis Bvaccine series at age 9 months (1-2 mo. after the 4th dose).
- For infants transferred to a different facility after birth (e.g., a hospital with a higher level of neonatal care), staff at the transferring and receiving facilities should communicate regarding the infant's Hep B vaccination and HBIG receipt status to ensure prophylaxis is administered timely.

IV. Preterm Infants weighing <2,000 g born to HBsAg Negative Mothers:

- Should have their first dose of Hepatitis B vaccine delayed until 1 month after birth or hospital discharge (even if weight is still < 2,000 grams). For these infants, a copy of the original laboratory report indicating the mother was HBsAg negative during this pregnancy should be placed in the infant's medical record.

V. For All Infants Born to HBsAg + Mothers or Mothers of Unknown Status:

- Document immunization on the PA Immunization Card with the name, dose, date of vaccine and give to the infant's parent/ guardian.
- Report to DOH within 5 days of delivery by either method:
    - "Perinatal Hepatitis B Case Report," which can be found at www.health.pa.gov by searching for "Perinatal Hepatitis B Case Report for Hospitals."
    - PA-NEDSS as "infant born to HBsAg positive mother."
- Instruct the parent/guardian to bring the PA Immunization Card to each medical appointment and update the card at each visit.

VI. Testing for Post-Exposure Prophylaxis

❖ *Infants of HBsAg positive mothers should be tested for HBsAg & anti-HBs (quantitative) aftercompletion of the hepatitis B vaccine series at age 9 months.*

- Testing should be performed 1-2 months after last dose.
- To meet ACIP recommendations, HBsAg negative infants with anti-HBs levels ≥ 10mIU/mL are protected and need no further medical management.
- HBsAg negative infants with anti-HBs levels <10mIU/mL or non-reactive results should be revaccinated with a single dose of Hep B vaccine and receive post-vaccination serologic testing 1-2 months later. Infants who's anti-HBs remains. <10mIU/mL following single dose revaccination should receive two additional doses of Hep B vaccine to complete the second series, followed by post-vaccination serologic testing 1-2 months after the final dose.
- Based on clinical circumstances or family preference, HBsAg-negative infants with anti-HBs<10mIU/ml may instead be revaccinated with a second, complete 3-

dose series, followed by post-vaccination serologic testing performed 1-2 months after the final dose of vaccine.

- Infants who are HBsAg positive should receive appropriate follow-up.
- The results are to be forwarded to the local State Health Center or county/ municipal health department.

VII. Household and Sexual Contacts of HBsAg Positive Women

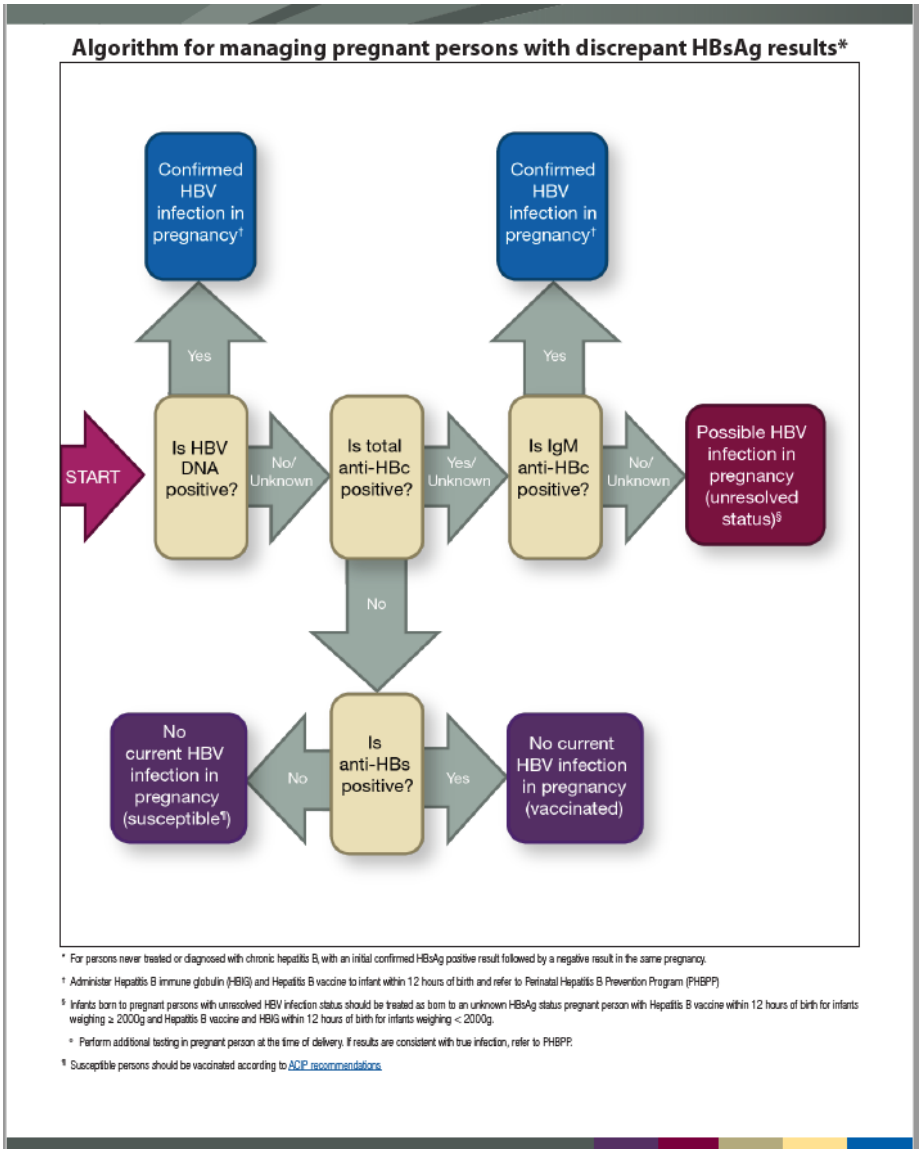
❖ *All close contacts of HBsAg positive women are to be included on the attached Perinatal Hepatitis B Case and Contact Report*

- List the date of birth and vaccination history.

- Close contacts should be offered hepatitis B testing and vaccination.
- Once this form is completed and forwarded to the state/local health department, appropriate contact and follow-up will be completed to provide hepatitis B testing and possible vaccination for the close contacts for those with no financial means.

The link to the Centers for Disease Control and Prevention's The Pink Book, Hepatitis B Chapter: http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/hepb.pdf.

For discrepant ***confirmed*** HBsAg results refer to CDC document and algorithm below: Discrepant Hepatitis B surface antigen (HBsAg) lab results during pregnancy: recommended next steps (cdc.gov)



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