

Guidelines for Standing Orders in Labor & Delivery & Nursery Units to Prevent Hepatitis B Virus (HBV) Transmission to Newborns

To obtain the Centers for Disease Control and Prevention (CDC) recommendations for preventing hepatitis B in infants and children, visit CDC's website at www.cdc.gov/mmwr/PDF/rr/rr5416.pdf

In December 2005, the Centers for Disease Control and Prevention (CDC) published new recommendations of the Advisory Committee on Immunization Practices (ACIP) for prevention of hepatitis B virus (HBV) infections in infants and children. The American Academy of Pediatrics, American Academy of Family Physicians, and American College of Obstetricians and Gynecologists have endorsed these recommendations. To obtain a copy, go to www.cdc.gov/mmwr/PDF/rr/rr5416.pdf.

The guidelines below were developed to help all hospitals establish standing orders and protocols in their labor and delivery and nursery units. The content has been reviewed by CDC staff for consistency with CDC recommendations.

To protect all infants, CDC recommends that all delivery hospitals **institute standing orders and protocols** to ensure healthcare professionals do the following:

- Administer hepatitis B vaccine to all newborns who weigh at least 2 kg (4.4 lb) before discharge from the nursery.
- Identify all infants born to mothers who are hepatitis B surface antigen (HBsAg) positive or to mothers with unknown HBsAg status. Administer appropriate immunoprophylaxis to all these infants.

Labor and Delivery (L&D) Procedures

Upon admission, review the HBsAg¹ status of all pregnant women. Be sure to review a copy of the mother's *original* laboratory report to verify that the correct test was performed during this pregnancy and to verify the test date. Do not rely on a transcribed test result!

For women with a documented HBsAg lab report

- Place a copy of the *original* laboratory report of the mother's HBsAg¹ test result into (1) the mother's L&D record and (2) the infant's medical record.
- If the mother is HBsAg positive, alert the nursery staff.
- If the mother is HBsAg negative during a prenatal visit but was at risk for acquiring HBV infection during this pregnancy (e.g., not in a long-term, mutually monogamous relationship; had an HBsAg-positive sex partner; had evaluation or treatment for a sexually transmitted disease; currently uses or recently used injection drugs), perform a repeat test for HBsAg.¹ Instruct the laboratory to call L&D and the nursery with the HBsAg test result ASAP.

For women without a documented HBsAg lab report

- Perform HBsAg¹ testing ASAP on women who do not have a documented HBsAg test result from the current pregnancy.
- Instruct the lab to call L&D and the nursery with the newly obtained HBsAg test result ASAP.

Nursery Procedures

Procedures to follow for ALL newborns

1. Review a copy of the mother's *original* HBsAg¹ lab report to ensure test was ordered and interpreted accurately.
2. Provide appropriate management based on (1) the mother's HBsAg status and (2) the infant's birth weight. Manage infants who weigh less than 2 kg differently from those who weigh 2 kg or more. See descriptions below and footnotes 2, 5, 6.
3. Give the mother an immunization record card that includes the hepatitis B vaccination date. Explain the need for the complete hepatitis B vaccine series to protect her baby. Remind her to bring the card with her each time her baby sees a provider.

For infants born to HBsAg-negative mothers

Administer single-antigen hepatitis B vaccine (0.5 mL, IM) before discharge to all infants weighing at least 2 kg at birth.^{2,3,4} Document the hepatitis B vaccine dose in the infant's medical record, including date, time, site of administration, and lot number.

For infants born to mothers with unknown HBsAg status

Administer single-antigen hepatitis B vaccine (0.5 mL, IM) within 12 hours of birth.^{3,5} Do not wait for test results to return before giving this dose of vaccine. Document the hepatitis B vaccine dose appropriately.

- Confirm that the laboratory has received serum for the mother's HBsAg¹ test. Verify when the HBsAg result will be available and that it will be reported to L&D and the nursery ASAP. If the nursery does not receive the report at the expected time, call the laboratory for the result.
- If the mother's HBsAg¹ test result is positive, do the following:
 - Administer hepatitis B immune globulin (HBIG 0.5 mL, IM) to the infant ASAP. Document the HBIG dose appropriately in the infant's medical record. There is little benefit in giving HBIG if more than 7 days have elapsed since birth.
 - Alert the mother's and infant's physician(s) of the test result.
 - Follow the instructions below for infants born to HBsAg-positive mothers.
- If the infant must be discharged before the HBsAg result is known:
 - Document contact information for the parents (e.g., addresses, telephone numbers, emergency contacts) in case further treatment is needed.
 - Obtain the name, address, and phone number of the mother's

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and the infant's healthcare providers.

- Notify the mother's and the infant's healthcare providers that the mother's HBsAg test result is pending.

For infants born to HBsAg-positive mothers

- Administer HBIG (0.5 mL, IM) and single-antigen hepatitis B vaccine^{3, 6} (0.5 mL, IM) at separate injection sites within 12 hours of birth. Document the hepatitis B vaccine and HBIG doses appropriately in the infant's medical record.
- Notify the local or state health department of the infant's birth and the date and time of administration of HBIG and hepatitis B vaccine doses.
- Obtain the name, address, and phone number of the infant's primary care provider. Notify the provider of the infant's birth, the date and time of HBIG and hepatitis B vaccine doses administered, and the importance of additional on-time vaccination and postvaccination testing of the infant for HBsAg and antibody to HBsAg after completion of the hepatitis B vaccine series.
- Provide advice to the mother. Tell her
 - That she may breast-feed her infant upon delivery, even before hepatitis B vaccine and HBIG are given
 - About the importance of her infant completing the full hepatitis B vaccine series on schedule
 - That blood will need to be drawn from the infant after completion of the hepatitis B vaccine series at age 9–18 months to determine if the infant needs further management
 - About modes of HBV transmission and the need for testing and vaccination of susceptible household, sexual, and needle-sharing contacts
 - That she needs to have a medical evaluation for chronic hepatitis B, including an assessment of whether she is eligible for antiviral treatment.

Footnotes

1. Be sure the correct test for HBsAg (hepatitis B surface antigen) was/is ordered. The HBsAg test should not be confused with other hepatitis B serologic tests, including antibody to HBsAg (anti-HBs or HBsAb) and antibody to hepatitis B core antigen (anti-HBc or HBcAb).
2. Infants weighing less than 2 kg whose mothers are documented to be HBsAg negative should receive the first dose of vaccine 1 month after birth or at hospital discharge. The mother's HBsAg status must be part of the infant's medical record.
3. Federal law requires that you give parents a Hepatitis B Vaccine Information Statement (VIS) before vaccine administration. To obtain a VIS, download it from the IAC website at www.immunize.org/vis or call your state health department.
4. Exceptions to giving the birth dose of hepatitis B vaccine are allowed on a case-by-case basis and only in rare circumstances. If a birth dose is not administered, a copy of the mother's negative HBsAg test result from the current pregnancy must be placed in the infant's medical record and the attending physician must write a specific order directing staff not to administer the birth dose in the hospital. Infants who don't receive the first dose of hepatitis B vaccine before hospital discharge should receive the first dose no later than age 2 months.
5. An infant weighing less than 2 kg whose mother's HBsAg status is unknown should receive HBIG and hepatitis B vaccine within 12 hours of birth. Do not count the hepatitis B vaccine dose as the first dose in the vaccine series. Reinitiate the full hepatitis B vaccine series at age 1–2 months.
6. An infant weighing less than 2 kg whose mother is HBsAg positive should receive the first dose of hepatitis B vaccine and HBIG within 12 hours of birth. Do not count the hepatitis B vaccine dose as the first dose in the vaccine series. Reinitiate the full hepatitis B vaccine series at age 1–2 months.

To access a CDC web page that includes a text version of the recommendations, a “Dear Colleague” letter that explains details of the recommendations, an archived net conference, brochures, slide sets, and more, go to: www.cdc.gov/ncidod/diseases/hepatitis/b/acip.htm