

Hepatitis B:

What Hospitals Need to Do to Protect Newborns

Executive Summary

Background on Hepatitis B

- Hepatitis B is a liver disease caused by the hepatitis B virus (HBV). HBV is found in the blood and certain body fluids (such as serum, semen, saliva, and vaginal secretions) of people infected with the virus. An infected mother can transmit HBV to her baby at birth. An infant can also acquire HBV from a chronically infected member of their household.
- HBV can cause acute infection and chronic infection. Approximately 90% of children who are infected at birth or during the first year of life will become chronically infected; only 4% of newly infected adults become chronically infected.
- Most morbidity (e.g., liver cancer and liver failure) and mortality from HBV occurs in people with *chronic* HBV infection. Thus, the primary goal of administering hepatitis B vaccine at birth (i.e., the “birth dose”) is the first step to prevent chronic HBV infection.
- Post-exposure prophylaxis of newborns born to chronically infected mothers is 85%–95% effective when administered within 12 hours of birth. Timing of the birth dose is critical to achieve the highest rates of protection. Prophylaxis consists of hepatitis B vaccine **along with** hepatitis B immune globulin (HBIG). Hepatitis B vaccine alone starting at birth will prevent transmission of the virus in 70%–95% of infants born to chronically infected mothers.

The Problem

- Each year in the United States, more than 24,000 infants are born to mothers who are chronically infected with HBV. If none of these infants were to receive prophylaxis at birth, it is estimated that almost 10,000 would become chronically infected with HBV, and 2,500 would eventually die of liver failure or liver cancer as early as the second decade of life.

- All infants of HBV-infected mothers should be reported to their local health department for case management to ensure timely completion of the vaccination series and resulting protection; however, only about half of the 24,000 infants are reported.
- Although most infants could be protected if hospitals routinely provided a dose of hepatitis B vaccine to all newborns, the most recent CDC survey found that only 70% of U.S. infants received a dose of hepatitis B vaccine within 3 days of birth.
- Based on average rates of newborn hepatitis B vaccination in hospitals and on vaccine efficacy, CDC estimates that more than 800 newborns become chronically infected with HBV each year.

The Hospital’s Role

- All hospitals should implement the recommended “universal birth dose policy” to ensure that every newborn receives the first dose of hepatitis B vaccine at birth, or no later than hospital discharge. This will provide a safety net to prevent HBV infection for any at-risk newborn, including infants not identified because the mother did not receive prenatal care; because of errors made by healthcare professionals in ordering, recording, or communicating lab tests results to determine a mother’s hepatitis B status; or because of exposure to chronically infected members of the household (many people do not know they are infected).
- All hospitals should follow national recommendations for prophylaxis of newborns born to women with chronic HBV infection.

See pages 41–74 of this booklet for the recommendations of CDC’s Advisory Committee on Immunization Practices titled *A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States*.

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