

California Birth Hospital Policies to Prevent Perinatal Hepatitis B Transmission

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BACKGROUND

- Hepatitis B is caused by the hepatitis B virus (HBV) and is the world's most common liver infection.
- Infants of HBV-infected women are at risk for acquiring HBV infection at birth.
- Administering hepatitis B immune globulin (HBIG) and the first dose of HBV vaccine to a newborn within 12 hours of birth is highly effective in preventing perinatal HBV infection.

To reduce the number of infants who become perinatally infected with HBV, the Advisory Committee on Immunization Practices (ACIP) recommends that hospitals implement a number of measures at the time pregnant women are admitted for delivery and for infants after delivery.

ACIP recommends that birth hospitals:

- Include a copy of the HBsAg laboratory test result in the medical record of all women admitted for delivery.
- Review the prenatal HBsAg test results of all women admitted for delivery.
- Perform HBsAg testing upon admission for women admitted for delivery who do not have a documented HBsAg test result.
- Administer HBV vaccine to all infants born to HBsAg-positive mothers within 12 hours of birth.
- Administer hepatitis B immune globulin (HBIG) to all infants born to HBsAg-positive mothers within 12 hours of birth.
- Administer HBV vaccine to all infants born to mothers with unknown HBsAg status within 12 hours of birth.
- Administer hepatitis B immune globulin (HBIG) to all infants <2000 grams born to mothers with unknown HBsAg status within 12 hours of birth.
- Routinely administer HBV vaccine to all newborns before hospital discharge (i.e., universal birth dose policy).



OBJECTIVE

Determine if California birth hospital policies reflect ACIP recommendations for perinatal hepatitis B prevention

METHODS

In September 2011, an online survey regarding California birth hospital implementation of ACIP recommendations to prevent perinatal HBV infection was emailed to Infection Preventionists and/or Labor/Delivery Managers in 247 California hospitals with >50 births in 2010.

Participants were asked to complete the survey online or to complete the survey manually and return it via fax. Follow-up to obtain unsubmitted surveys was attempted with telephone calls, emails, faxes and mailers through March 2012.

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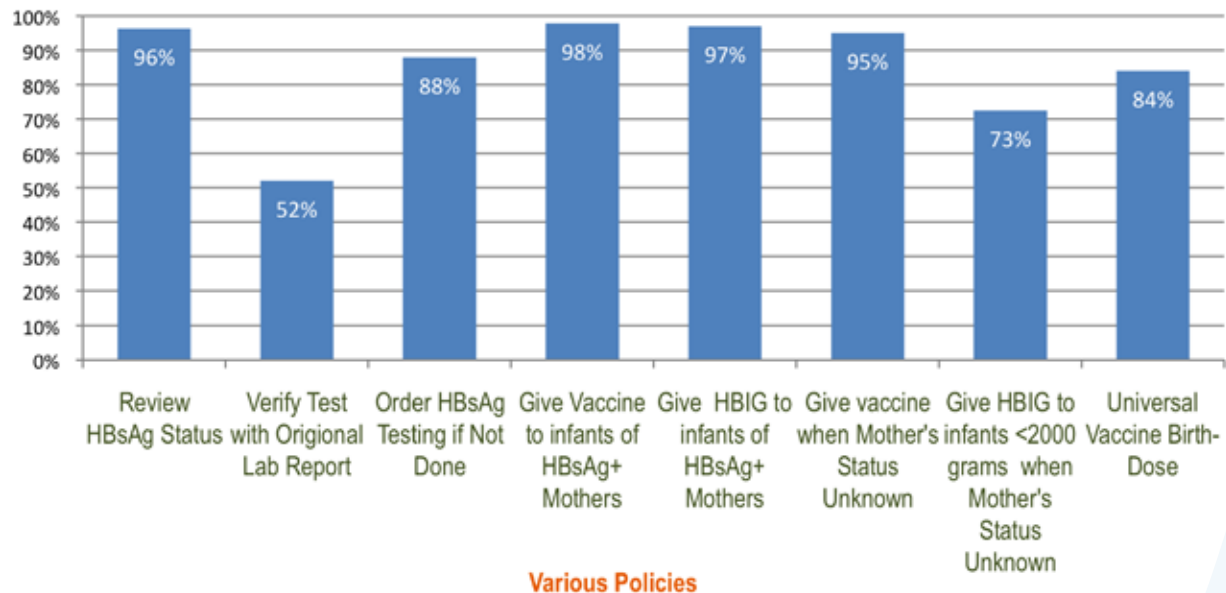
RESULTS

198 (80%) of 247 California birth hospitals responded to the survey, but not all hospitals responded to all questions. The majority of hospitals responding to the survey had implemented most of the ACIP recommendations to prevent perinatal HBV infections (Table 1 and Figure 1). However, only 59% of hospitals verified the HBsAg status of admitted women by reviewing a copy of the lab report and only 69% of hospitals had a policy to give HBIG to infants weighing <2,000 grams at birth if their mother's HBsAg status is unknown.

Table 1. California Birth Hospital Implementation of ACIP Recommendations to Prevent Perinatal Hepatitis B Infection

Policy	Yes	No	Number of Responses
Review mother's HBsAg status at admission	183	7	190
Verify mother's HBsAg status with copy of lab report	112	78	190
HBsAg testing for those who do not have it	167	23	190
Administer HBV vaccine to infants of HBV-infected mothers <12 hours	184	4	188
Administer HBIG to infants of HBV-infected mothers < 12 hours	183	5	188
Administer HBV vaccine to infants whose mothers have unknown HBsAg status	176	9	185
Administer HBIG to infants <2000 grams whose mothers have unknown HBsAg status	127	48	175
Universal birth dose	154	30	184

Figure 1. Percentage of California Birth Hospitals with Policies Consistent with ACIP Recommendations, 2011



Various Policies

Of 27 responding birth hospitals that did not have a universal HBV vaccine birth dose policy, the most commonly cited barrier to having such a policy was that pediatricians preferred to give the vaccine in their offices (Table 2).

Table 2. Cited Barriers to a Universal HBV Birth Dose Policy

Barrier	Responses*
Pediatricians prefer to give vaccine in the office	16
Parents decline vaccine	12
Administrative concerns	2
Nursing staff resistance	1
Other	7

*Responses were not mutually exclusive.

DISCUSSION

- A majority of California birth hospitals had policies that reflected most of the ACIP recommendations. However, the policies of some hospitals were suboptimal.
- Less than 60% of birth hospitals had a policy to verify the mother's HBsAg status using a laboratory report, as opposed to a transcribed status from a prenatal record.
- An internal review of failures by California birth hospitals to administer HBV vaccine and HBIG to infants of HBV-infected women per ACIP recommendations revealed that the most common causes were misinterpretation or mistranscription of the mother's HBsAg status.
- Establishing a hospital policy of determining the HBsAg status of women admitted for delivery by reviewing a copy of the actual laboratory report would likely reduce misinterpretation and mistranscription errors.
- These survey results will be used to identify hospitals for targeted education efforts.