PROTECT ALL BABIES AT BIRTH WITH HEPATITIS B VACCINE

New Jersey Department of Health
Perinatal Hepatitis B Prevention Program
PO Box 369, Trenton, NJ 08625-0369
609-826-4860
http://nj.gov/health/cd/hepatitisb_perinatal/

PROTECT ALL BABIES AT BIRTH WITH HEPATITIS B VACCINE

HOSPITAL MANUAL

This manual was prepared by the New Jersey Department of Health Perinatal Hepatitis B Prevention Program. For additional copies, contact the Perinatal Hepatitis B Prevention Program at 609-826-4860 or visit **http://nj.gov/health/cd/hepatitisb_perinatal/**

Disclaimer: The materials in this binder and on this CD represent the most current information at the time of printing. Some of these materials (e.g., Vaccine Information Statements) are updated periodically. Please check the web sites of the source organization to access the most up-to-date materials available.

Created July 2013

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DEPARTMENT OF HEALTH
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Governor

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Lt. Governor

MARY E. O'DOWD, M.P.H.
Commissioner

To: New Jersey Birthing Hospitals

From: Barbara Montana, MD, MPH, FACP
Medical Director
Communicable Disease Service

Date: July 2013

Subject: Perinatal Hepatitis B Prevention Program and Universal Hepatitis B Vaccine Birth Dose

Hepatitis B virus (HBV) is a major cause of acute and chronic hepatitis, cirrhosis and primary hepatocellular carcinoma. Chronic infection will occur in up to 90% of infants perinatally infected with an ultimate mortality rate of approximately 25%. The NJ Department of Health Perinatal Hepatitis B Prevention Program (PHBPP) annually identifies approximately 400 infants with perinatal exposure to HBV. Appropriate case management of these infants and the timely administration of HBV vaccine, including the birth dose, are effective strategies for preventing HBV infection.

During 2005, the Centers for Disease Control and Prevention (CDC) published updated recommendations of the Advisory Committee on Immunization Practices (ACIP) for prevention of HBV infections in children which includes the recommendation to administer HBV vaccine to *all* newborns *before* hospital discharge. The American Academy of Pediatrics, American Academy of Family Physicians, and American College of Obstetricians and Gynecologists have all endorsed the birth dose recommendation. In addition, the birth dose coverage rate has been adopted as a measure of hospital quality by the National Quality Forum. Unfortunately, data from the 2011 National Immunization Survey indicates that only 47% of infants born in New Jersey receive HBV vaccine within 3 days of birth compared to 68% nationally.

Administering a birth dose to all infants serves as a safety net to prevent perinatal infection among infants born to hepatitis B surface antigen (HBsAg) positive mothers who are not identified because of errors in maternal HBsAg testing or failures in reporting of test results. The birth dose also provides early protection to infants at risk for infection after the perinatal period. Administration of a birth dose has been associated with higher rates of on-time completion of the HBV vaccine series and, in certain populations, improved completion rates for all other infant vaccines.

The NJ Department of Health PHBPP is enclosing materials to assist hospitals in implementing HBV prevention protocols that ensure all newborns receive a birth dose of HBV vaccine. These resources can help your hospital strengthen or establish policies, procedures, and standardized admission orders to ensure all newborns receive HBV vaccine prior to discharge. Background information about perinatal HBV transmission and educational materials for parents and staff are also included.

If you have questions about any of the materials, please do not hesitate to contact the PHBPP at 609-826-4860. Please make sure your hospital has implemented the nationally recommended policies to ensure that every newborn in your facility receives their first dose of HBV vaccine before hospital discharge.

Thank you for your assistance in the prevention of HBV infection.

Perinatal Hepatitis B Prevention Program Overview

PO Box 369, Trenton, NJ 08625-0369
609-826-4860
http://nj.gov/health/cd/hepatitisb_perinatal/

The New Jersey Department of Health, Vaccine Preventable Disease Program implemented the Perinatal Hepatitis B Prevention Program (PHBPP) in 1993. The primary goal of the PHBPP is to identify all pregnant hepatitis B surface antigen (HBsAg) positive women to ensure prophylaxis of newborns at birth, completion of the hepatitis B virus (HBV) vaccine series, and post vaccination serology testing. For nearly 20 years, the PHBPP has promoted the recommendations for the prevention of perinatal HBV infection endorsed by the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention, the American Academy of Pediatrics, the American Academy of Family Physicians, and the American Congress of Obstetricians and Gynecologists. The PHBPP depends on the cooperation of many public health and health care professionals throughout the state to succeed. Obstetricians, pediatricians, family practice physicians, birthing hospitals, hospital and commercial laboratories, local health departments (LHD) and other health and social service agencies must work together to accomplish the following objectives:

- Ensure all women are screened for HBsAg at each pregnancy and reported if positive;
- Ensure all infants born to HBsAg positive mothers are identified, reported, and receive timely immunoprophylaxis; and
- Promote HBV vaccination for all infants

The PHBPP also depends on regulations mandating the testing of pregnant woman and reporting of individuals identified as HBsAg positive. These regulations are summarized below:

N.J.A.C.§ 8:43G-19.2 (Hospital Licensing):
All pregnant women admitted to the hospital with unknown or undocumented HBsAg assay results shall be immediately screened for the HBV using the HBsAg test or other standardized hepatitis B tests. Test results should be available within 24 hours but no later than 48 hours to ensure appropriate prophylaxis of the newborn. All positive HBsAg test results shall be reported in compliance with *N.J.A.C.§ 8:57-1.5 (see below).*

N.J.A.C.§ 8:57-1.5 (Reportable Communicable Diseases):
Confirmed cases of HBV infection, including a positive HBsAg test in a pregnant woman, should be reported to the LHD where the patient resides within 24 hours of diagnosis. All state laboratories are required to report all positive HBV serology to the LHD and to NJDOH electronically through the Communicable Disease Reporting and Surveillance System. Case management of HBsAg positive women, their newborns and their household and sexual contacts is completed by the LHD.

To report a positive HBsAg test result, please contact the LHD for the jurisdiction where the patient resides. Contact information for LHDs is available through the DOH website at:

http://www.nj.gov/health/lh/directory/lhdselectcounty.shtml

Hepatitis B Disease

By: Christine Armenti, Hepatitis B Coordinator

Hepatitis B virus (HBV) infection is a major cause of acute and chronic hepatitis, cirrhosis of the liver, and primary hepatocellular carcinoma. It is the most prevalent chronic infectious disease in the world, a common cause of morbidity and mortality worldwide, and a major health problem in the United States (US). In the US it is estimated that 70,000 people are newly infected with HBV every year and that 1.25 million people are chronically infected with HBV. Many persons who are chronically infected are unaware and are at risk of transmitting the infection to others. Of those chronically infected, about 20%-30% acquired their infection in early childhood. Approximately 5,000 Americans die each year from HBV and its related complications.

HBV is primarily transmitted person to person through direct contact with infectious blood, semen, and other body fluids primarily through birth to an infected mother, sexual contact with an infected person, sharing contaminated needles, syringes, or injection drug equipment and needlesticks or other sharp instrument injuries. Transmission of HBV from an infected mother to infant during the perinatal period represents one of the most efficient modes for acquiring HBV infection. Vaccination with the hepatitis B vaccine is the most effective means of preventing HBV infection.

Perinatal Hepatitis B Prevention Program

In June 1988 the Advisory Committee on Immunization Practices (ACIP) revised its recommendations on preventing perinatal hepatitis B transmission to include universal hepatitis B serologic testing of all pregnant women. In 1990, the American College of Obstetrics and Gynecology (ACOG) recommended all pregnant women be tested during each pregnancy for the hepatitis B surface antigen (HBsAg). (HBsAg positive persons are infectious). In 1992, both the ACIP and the American Academy of Pediatrics (AAP) recommended that universal hepatitis B immunization (birth dose) of all infants become standard practice in the United States.

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The NJDHSS Communicable Disease Service includes:

Infectious and Zoonotic Disease Program (IZDP): 609-826-5964

Vaccine Preventable Disease Program (VPDP): 609-826-4860

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www.nj.gov/health/cd

Past issues of the NJ Communi-CABLE are available online at: http://www.nj.gov/health/cd/newsletter.htm.

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Hepatitis, **continued from page 2**

The New Jersey Department of Health and Senior Services (NJDHSS) Vaccine Preventable Disease Program (VPDP) implemented the Perinatal Hepatitis B Prevention Project in 1993 following the Centers for Disease Control and Prevention (CDC), the ACIP and the ACOG recommendations for prevention of perinatal HBV infection. The goal of the program is to identify all pregnant HBsAg positive women to ensure prophylaxis of the newborn at birth and completion of the hepatitis B vaccine series and post vaccination serology testing. The program is dependent on different reporting entities and all positive HBsAg test results, including positive labs in pregnant women, must be reported to NJDHSS as per New Jersey Administrative Code (NJAC) Title 8, Chapter 57, Reporting Requirements for Communicable Disease. All state laboratories are legally required to report all positive hepatitis B serology to the local health departments (LHDs) and to NJDHSS electronically through the Communicable Disease Reporting Surveillance System (CDRSS). Based on the NJAC, Title 8, Chapter 57, Communicable Diseases case management of HBsAg positive women, their newborns and their household and sexual contacts is completed by the LHD's.

It is important to emphasize that, in accordance with NJAC 8:43G-19.2, the Hospital Licensing Standards, hospitals must ensure all pregnant women admitted to the hospital with unknown or undocumented HBsAg results are immediately tested for HBV and that results are available within 24 hours, but no later than 48 hours, to ensure appropriate prophylaxis of the newborn.

Perinatal HBV Prevention

An infant born to a mother who is HBsAg positive is vulnerable to infection. The risk of perinatal transmission among infants born to HBV infected mothers can be as high as 90% depending on the mother's infectivity status at the time of delivery. Children of HBV infected mothers, even if not infected during the perinatal period remain at high risk of acquiring infection in the household (horizontal transmission). Infants that do acquire perinatal infection most

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Hepatitis, continued from page 6

often develop chronic HBV and serve as a reservoir of HBV transmission to other household contacts, and if left untreated as sexually active adults they may continue the cycle of perinatal transmission. Proper prophylaxis with hepatitis B immune globulin and completion of the hepatitis B vaccine series can reduce neonatal infection and the potential sequelae by 95%.

While perinatal and early childhood transmission of hepatitis account for a small number of acute hepatitis B cases in the U.S, when it occurs it may have serious consequences. Approximately 25% - 50% of children infected before five years of age become chronically infected with HBV and are referred to as HBV "carriers," whereas only 6% - 10% of acutely infected adults develop chronic infection or become HBV "carriers." This is significant since it is estimated that up to 25% of children who are chronically infected with HBV will develop cirrhosis or liver cancer later in life.

Since the implementation of the perinatal Hepatitis B Prevention Project, NJDHSS receives on average 400 reports of HBsAg positive pregnant women annually. This number is far less than the CDC estimate of (based on NJ demographics) 1,100 births annually to HBsAg positive women. All newborns of HBsAg positive women are followed by NJDHSS from birth until completion of the HBV vaccine series and post-vaccination serology testing to ensure the child has developed protective antibodies from vaccine and not infection.

In 2007, CDC reported that 799 perinatal hepatitis B infections occurred in the US. Since 1993, the number of perinatal infections reported in NJ is 26, however all infants do not complete post-vaccination serology testing. This is one of several program barriers to perinatal case management. Some cases are lost to follow-up and others are not referred for serology by the medical provider. However, with the implementation of CDRSS perinatal case management, staff is optimistic that the number of identified HBsAg positive pregnant women reported will increase and case management of infants will improve.

The chart below summarizes perinatal case management and outcomes from 1996-2006.

Cases Reported 1996-2006

Case Management Criteria	Number of infants
Completed 3 vaccine doses by 8 months	1953 (55% of total cases)
Completed post vaccine serology	2020 (57% of total cases)
Perinatal infection	23 (1.2% of total cases)
Perinatal infection prevention	1767 (87% of total cases)

Hepatitis B Vaccine Birth Dose

Routine hepatitis vaccination has had significant impact in reducing the number of new HBV infections per year, with the greatest decline among children and adolescents. Nationally since 1990 there has been a 75% de-

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Vaccine Preventable Disease Program (VPDP): 609-826-4860

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Hepatitis, continued from page 6

crease in incidence of acute hepatitis B cases and the rate of disease among children <12 years and adolescents aged 12-19 has declined by 94 %.

Since 1992 the ACIP, AAP, and the CDC have recommended the routine administration of a birth dose of hepatitis B vaccine. Administering a birth dose to all infants serves as a safety net to prevent perinatal infection among infants born to HBsAg positive mothers who are not identified because of errors in maternal HBsAg testing or failures in reporting of test results. The birth dose also provides early protection to infants at risk for infection after the perinatal period. Administration of a birth dose has been associated with higher rates of on-time completion of the hepatitis B vaccine series and in certain populations, improved completion rates for all other infant vaccines. NJDHSS supports these recommendations for the Universal Hepatitis B Birth Dose. The National Immunization Survey (NIS) indicates that only 35% of newborns in NJ receive the hepatitis B birth dose. Strategies are currently being discussed to ensure NJ hospitals implement birth dose policy.

The hepatitis B vaccine and prevention recommendations were consolidated and updated in 2005; all recommendations for protection against HBV infection and the immunization strategy to eliminate HBV can be viewed at: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5416a1.htm

The steady decline of hepatitis B infection coincides with CDC, ACIP, ACOG, and the AAP implementation of a national strategy to achieve the elimination of HBV by the recommendations to:

1) **Screen all pregnant women for HBV infection with provision of postexposure prophylaxis to infants born to infected women;**
2) **Routine vaccination of all infants and children aged 18 and younger;**
3) **Vaccination of others at increased risk of acquiring hepatitis B.**

Resources

- Call NJDHSS at 609-826-4860.
- A comprehensive immunization strategy to eliminate transmission of hepatitis B virus infection in the United States: recommendations of the Advisory Committee on Immunization Practices (ACIP), Part 1: Immunization of Infants, Children, and Adolescents, MMWR 2005; 54(RR-16).

Websites

- New Jersey Department of Health and Senior Services, Communicable Disease Service: http://nj.gov/health/cd/vpdp/index.shtml
- Centers for Disease Control and Prevention: www.cdc.gov/hepatitis
- National Center for Immunization and Respiratory Diseases: www.cdc.gov/vaccines
- Immunization Action Coalition: www.immunize.org
- Healthy People 2020: www.healthypeople.gov
- Parents of Kids with Infectious Diseases: www.pkids.org
- HepB Moms: http://hepbmoms.org/

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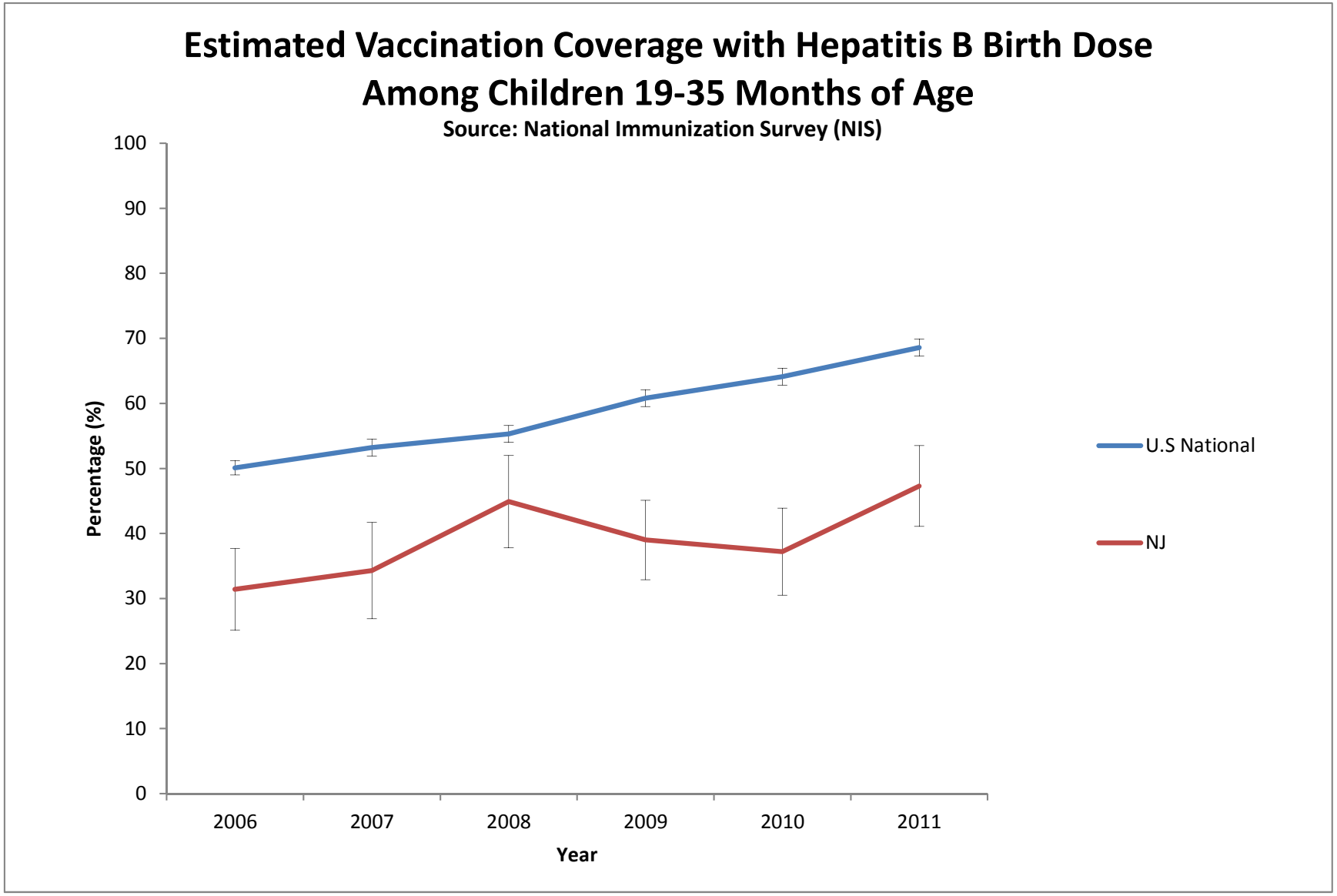
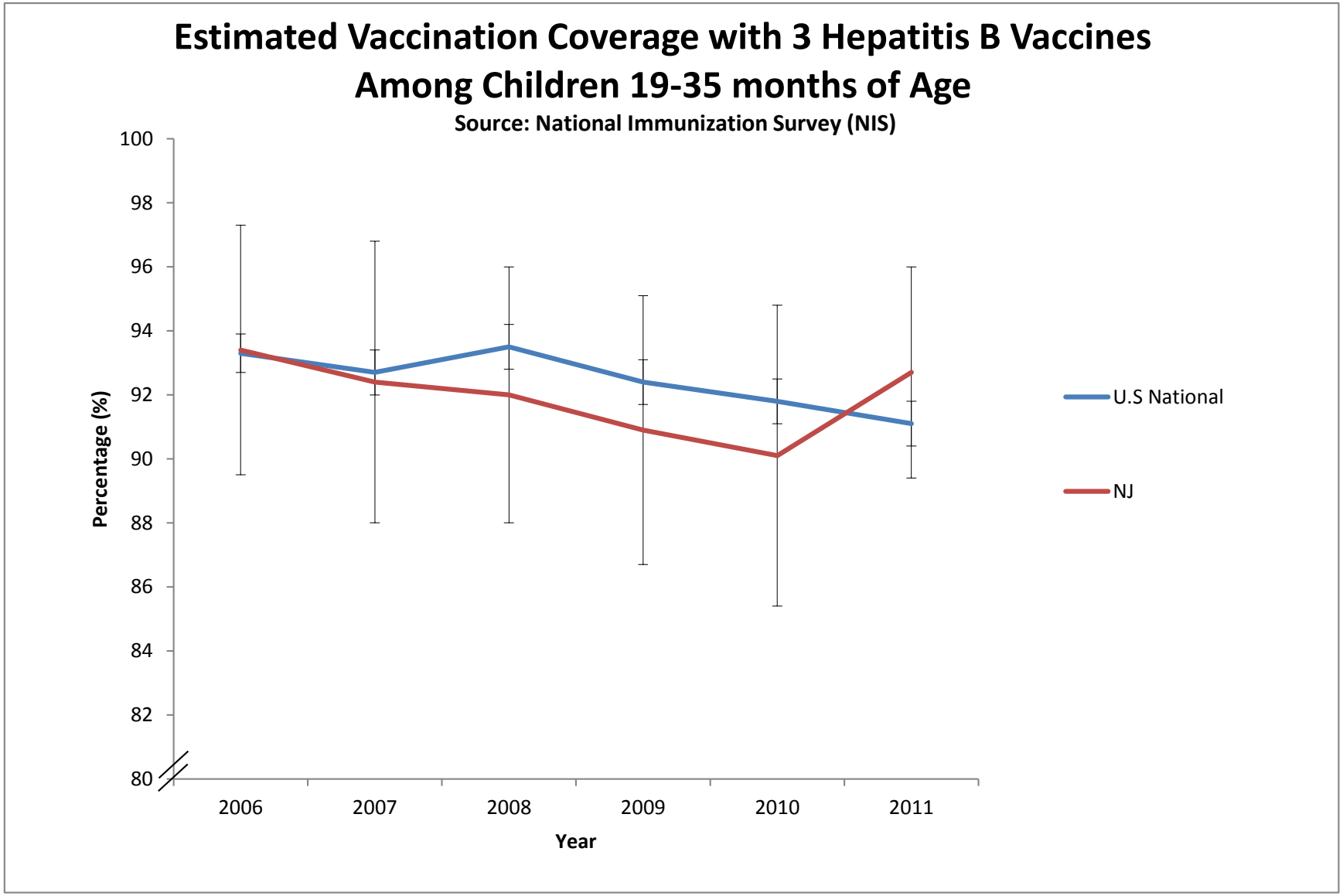

Estimated Vaccination Coverage with Hepatitis B Birth Dose
Among Children 19-35 Months of Age
Source: National Immunization Survey (NIS)
Percentage (%)
100
90
80
70
60
50
40
30
20
10
0
2006
2007
2008
2009
2010
2011
Year
U.S National
NJ


Estimated Vaccination Coverage with 3 Hepatitis B Vaccines
Among Children 19-35 months of Age
Source: National Immunization Survey (NIS)
100
98
96
94
92
90
88
86
84
82
80
Percentage (%)
2006
2007
2008
2009
2010
2011
Year
U.S National
NJ

Please contact the NJ Perinatal Hepatitis B Program for hospital-specific data.

609-826-4860

http://nj.gov/health/cd/hepatitisb_perinatal/

What Are the Leading Health Indicators?

March 2013

Leading Health Indicators are a small set of Healthy New Jersey 2020 (HNJ2020) objectives selected to communicate high-priority health issues and actions that can be taken to address them. New Jersey's Leading Health Indicators are considered to be a reflection of the state's major public health concerns. The HNJ2020 initiative is a comprehensive set of disease prevention and health promotion objectives for the state to achieve over the next decade.

Identifying the Leading Health Indicators

New Jersey's Leading Health Indicators are the product of an extensive external and internal feedback process. In order to first identify local public health priorities, the New Jersey Department of Health administered the HNJ2020 Leading Health Indicator Poll to stakeholders throughout the State who were invited to attend one of three Healthy New Jersey 2020 Regional Meetings. Over 200 partners participated in the Poll. A refined list of indicators based on the results of the HNJ2020 Leading Health Indicators Poll was presented to the Department's HNJ2020 Advisory Committee in the form of a survey for final determination.

The New Jersey Department of Health considers the following five health indicators to be the leading health issues facing New Jerseyans today. The Leading Health Indicators will be used to facilitate collaboration with public health partners and motivate action to improve health across the state for the remainder of the decade.

The Leading Health Indicators

1. **Access to Primary Care**
   Measurement: Increase the proportion of adults with a personal doctor or health care provider
   Baseline (2011): 83.5%
   Target (2020): 90.0%

2. **Birth Outcomes**
   Measurement: Reduce the infant death rate
   Baseline (2007): 5.1 per 1,000 live births
   Target (2020): 4.8 per 1,000 live births

3. **Childhood Immunization**
   Measurement: Increase the percentage of children aged 19 to 35 months who receive the recommended doses of DTaP, polio, MMR, Hib, hepatitis B, varicella and pneumococcal conjugate vaccine (PCV)
   Baseline (2010): 74%
   Target (2020): 80%

4. **Heart Disease**
   Measurement: Reduce the death rate due to coronary heart disease
   Baseline (2007): 140.1 per 100,000 population (age-adjusted)
   Target (2020): 112.1 per 100,000 population (age-adjusted)

5. **Obesity**
   Measurement: Prevent an increase in the proportion of the population that is obese
   Baseline:
   - Adults (2011; 20 years+): 23.8%
   - High school students (2009): 10.3%

   Targets:
   - Adults (2020): 23.8%
   - High school students (2020): 10.3%

1. Access to Primary Care

Measurement: Increase the proportion of adults with a personal doctor or health care provider

	Total Population	Race/Ethnicity			
		White	Black	Hispanic	Asian
Baseline (2011)	83.5%	88.8%	81.8%	65.4%	84.1%
Target (2020)	90.0%	90.0%	90.0%	80.0%	90.0%

Baseline data source: New Jersey Behavioral Risk Factor Survey (NJBRFS), Center for Health Statistics, New Jersey Department of Health

2. Birth Outcomes

Measurement: Reduce the infant death rate (per 1,000 live births)

	Total Population	Race/Ethnicity			
		White	Black	Hispanic	Asian
Baseline (2007)	5.1	3.1	10.9	5.4	2.3
Target (2020)	4.8	1.9	6.0	4.5	2.2

Baseline data source: Matched Infant Death-Birth Certificate Database, Center for Health Statistics, New Jersey Department of Health

3. Childhood Immunization

Measurement: Increase the percentage of children aged 19 to 35 months who receive the recommended doses of DTaP, polio, MMR, Hib, hepatitis B, varicella and pneumococcal conjugate vaccine (PCV)
Baseline (2010): 74%
Target (2020): 80%
Data by race/ethnicity are not available.

Baseline data source: National Immunization Survey, U.S. Centers for Disease Control and Prevention

4. Heart Disease

Measurement: Reduce the death rate due to coronary heart disease (age-adjusted per 100,000 population)

	Total Population	Race/Ethnicity			
		White	Black	Hispanic	Asian
Baseline (2007)	140.1	144.0	167.3	78.2	66.1
Target (2020)	112.1	115.7	133.8	62.6	52.9

Baseline data source: Death certificate database, Center for Health Statistics, New Jersey Department of Health

5. Obesity

Measurement: Prevent an increase in the proportion of the population that is obese

	Total Population	Race/Ethnicity			
		White	Black	Hispanic	Asian
Adult aged 20+: Baseline (2011) & Target (2020)	23.8%	22.4%	32.5%	28.0%	11.0%
HS Student: Baseline (2009*) & Target (2020)	10.3%	8.2%	16.5%	14.4%	N/A

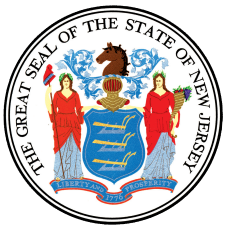
*High School (HS) Student Baseline data by race/ethnicity are from 2007. The number of Asians in the student sample is too small to compute reliable statistics.

Baseline data source (adults): New Jersey Behavioral Risk Factor Survey (NJBRFS), Center for Health Statistics, New Jersey Department of Health. Baseline data source (high school): New Jersey Student Health Survey of High School Students, New Jersey Department of Education.

Topic Areas and Objectives

Statewide Baseline and Target Data

February, 2013



Objective Topic Areas and Page Numbers

Topic Area	Page	Topic Area	Page
Access to Health Services	2	Injury and Violence Prevention	23
Asthma	3	Maternal and Child Health	26
Cancer	7	Nutrition and Fitness	30
Chronic Kidney Disease	11	Occupational Safety and Health	32
Diabetes	12	Older Adults	33
Environmental Health	13	Public Health Infrastructure	35
Healthcare-Associated Infections	15	Public Health Preparedness	36
Heart Disease and Stroke	18	Sexually Transmitted Diseases	37
HIV/AIDS	19	Tobacco Use	39
Immunization	21	Tuberculosis	41

Topic Area: Immunization

IMM-1: Increase effective vaccination coverage levels for universally recommended vaccines among young children

IMM-1a: Four (4) doses diphtheria-tetanus-acellular pertussis (DTaP) vaccine by age 19 to 35 months

Target:	95 percent
Baseline: (Year)	87 percent (2011)
Data source:	National Immunization Survey, Centers for Disease Control and Prevention

IMM-1b: Birth dose of hepatitis B vaccine (0 to 3 days between birth date and date of vaccination, reported by annual birth cohort)

Target:	75 percent
Baseline: (Year)	47 percent (2011)
Data source:	National Immunization Survey, Centers for Disease Control and Prevention

IMM-1c: Four (4) doses of pneumococcal conjugate vaccine (PCV) among children by age 19 to 35 months

Target:	90 percent
Baseline: (Year)	84 percent (2011)
Data source:	National Immunization Survey, Centers for Disease Control and Prevention

IMM-2: Increase the percentage of children aged 19 to 35 months who receive the recommended doses of DTaP, polio, MMR, Hib, hepatitis B, varicella, and pneumococcal conjugate vaccine (PCV)

Target:	80 percent
Baseline: (Year)	74 percent (2011)
Data source:	National Immunization Survey, Centers for Disease Control and Prevention

IMM-3: Increase the percentage of non-institutionalized adults aged 65 years and older who have ever been vaccinated against pneumococcal infections

Target:	To be determined
Baseline: (Year)	Not yet available (2011)
Data source:	New Jersey Behavioral Risk Factor Survey, Center for Health Statistics, New Jersey Department of Health

IMM-4: Increase the percentage of non-institutionalized adults aged 65 years and older who are vaccinated annually against seasonal influenza

Target:	To be determined
Baseline: (Year)	Not yet available (2011)
Data source:	New Jersey Behavioral Risk Factor Survey, Center for Health Statistics, New Jersey Department of Health

Measuring Hepatitis B Vaccination for Newborns Prior to Hospital Discharge Is Endorsed by the National Quality Forum (NQF)

The National Quality Forum (NQF) is a widely looked to standards-setting organization for health-care facilities. In response to a submission by the Centers for Disease Control and Prevention, the NQF endorsed as a standard the reporting of "Hepatitis B Coverage Among All Live Newborn Infants Prior to Hospital or Birthing Facility Discharge."

Specifically, NQF Measure #0475 recommends that hospitals measure and report the "percent of live newborn infants that receive hepatitis B vaccination before discharge at each single hospital/birthing facility during given time period (one year)," excluding infants whose parents refuse vaccination.

Hospitals that adopt this measure will be taking an important step to ensure that no baby born to an HBsAg-positive mother slips through the cracks and becomes infected.

▶ For more information on the NQF hepatitis B birth dose endorsement, visit **www.qualityforum.org/MeasureDetails.aspx?actid=0&SubmissionId=287#k=0475.**

NQF # 0475	Hepatitis B Vaccine Coverage Among All Live Newborn Infants Prior to Hospital or Birthing Facility Discharge

Measure Status

Endorsement Type: Endorsed

Endorsement Date: Oct 24, 2008

Last Updated Date: Feb 15, 2013

eMeasure Available: No

Measure Details

Measure Steward: Centers for Disease Control and Prevention

Measure Description: Percent of live newborn infants that receive hepatitis B vaccination before discharge at each single hospital/birthing facility during given time period (one year).

Numerator Statement: The number of live newborn infants administered hepatitis B vaccine prior to discharge from the hospital/birthing facility ("birth dose" of hepatitis B vaccine).

Denominator Statement: The number of live newborn infants born at the hospital/birthing facility during the reporting window (one calendar year)

Exclusions: a. Determine number of live newborn infants born at the hospital/birthing facility whose parent/guardian refused hepatitis B birth dose and exclude from the denominator. ICD-10 code for this information will include the following(link: http://www.icd10data.com/ICD10CM/Codes/Z00-Z99/Z20-Z28/Z28-/#Z28):

i. Z28.82 Immunization not carried out because of caregiver refusal

Risk Adjustment: No

Classification

National Quality Strategy Priorities: Health and Well-Being

Actual/Planned Use: Public Health/Disease Surveillance, Public Reporting, Quality Improvement (Internal to the specific organization)

Care Setting: Hospital/Acute Care Facility

Condition: Infectious Diseases: Hepatitis, Perinatal and Reproductive Health, Perinatal and Reproductive Health: Newborn

Cross-Cutting Area: Prevention, Prevention: Immunization

Data Source: Administrative claims, Electronic Clinical Data, Electronic Clinical Data: Electronic Health Record, Electronic Clinical Data: Pharmacy, Electronic Clinical Data: Registry

Level of Analysis: Clinician: Group/Practice, Clinician: Individual, Facility, Health Plan

Measure Type: Composite

Target Population: Children's Health, Populations at Risk

Measure Steward Contact Information

Organization Name: Centers for Disease Control and Prevention

Email Address: tkm4@cdc.gov

Website URL (general):

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Give the Birth Dose . . .

Hepatitis B vaccine at birth saves lives!

By ***Deborah L. Wexler, MD,*** *Executive Director, Immunization Action Coalition*

In December 2005, CDC issued updated recommendations on hepatitis B vaccination for infants. The recommendations strongly support (1) giving the hepatitis B vaccine birth dose to every newborn prior to hospital discharge and (2) using standardized admission orders for administering the birth dose. In addition, it is recommended that a copy of the ***original*** *maternal hepatitis B lab report be sent to the hospital—****not*** *a transcribed result. The recommendations also state that the hepatitis B vaccine birth dose may be delayed until after hospital discharge only "in rare circumstances." When doing so, a physician's order to withhold the birth dose and a copy of the original lab report indicating that the mother was HBsAg negative during this pregnancy should be placed in the infant's medical record. The most recent CDC estimates indicate only 69% of newborns receive the hepatitis B vaccine birth dose by 3 days of age. Clearly, there is much work left to do to fully protect newborns.*

Healthcare Professionals!

Urge your patients to protect their newborns with hepatitis B vaccine before hospital discharge. Your recommendation to vaccinate is a strong patient motivator.

The birth dose saves lives!

To obtain CDC's recommendations for hepatitis B vaccination of infants, go to: www.cdc.gov/mmwr/pdf/rr/rr5416.pdf

Leading health organizations—CDC, AAP, AAFP, and ACOG—recommend that all hospitals and healthcare professionals protect newborns from hepatitis B virus (HBV) infection by administering the first dose of hepatitis B vaccine to every baby at birth, no later than hospital discharge.

Approximately 25,000 women with chronic HBV infection give birth in the U.S. each year, and many do not know they are infected. Up to 95% of perinatal infections can be prevented by postexposure prophylaxis given within 12 hours of birth. Tragically, many babies are exposed to HBV at birth and do not receive appropriate postexposure prophylaxis. Infants infected at birth have a 90% chance of becoming chronically infected with HBV. Chronic HBV infection in infants leads to liver cancer, cirrhosis, and liver failure in up to 25% of these infants when they become adults.

Why is a universal birth dose policy necessary in hospitals?

Following are some of the ways newborns can be infected if they do not receive a dose of hepatitis B vaccine, ideally within 12 hours of birth:

- The pregnant woman is tested and found to be hepatitis B surface antigen (HBsAg) positive, but her "infected" status is not communicated to the newborn nursery. The infant receives neither hepatitis B vaccine nor hepatitis B immune globulin (HBIG) protection at birth.
- A chronically infected pregnant woman receives the wrong test. For example, antibody to hepatitis B surface antigen (antiHBs) is ordered in error, instead of HBsAg. This can happen because some labs use the confusing abbreviation HBsAb instead of anti-HBs. This misordering of a test is relatively common since the two abbreviations (HBsAg and HBsAb) differ by only one letter. However, when her incorrectly ordered test comes back "negative," the woman may actually be HBsAg positive and her infant would not receive appropriate postexposure prophylaxis.
- The pregnant woman is HBsAg positive, but her test results are misinterpreted or mistranscribed into her prenatal record or her infant's chart. As a result, her infant does not receive HBIG or hepatitis B vaccine.
- The pregnant woman is not tested for HBsAg either prenatally or in the hospital at the time of delivery. In one study, women who didn't receive prenatal care were eight times more likely to be HBsAg positive than women who received prenatal care. When a woman does not receive prenatal care and is not tested at the time of delivery, her infant is in danger of being infected with HBV at birth—unless he or she is born in a hospital that adheres to a policy of administering HepB within 12–24 hours of birth to every newborn ***without fail.*** This provides the greatest effectiveness in preventing HBV infection.
- She develops HBV infection later in pregnancy, but it is not clinically detected. Because her initial HBsAg test result is negative, she is not retested later in pregnancy as CDC recommends for high-risk women, and her infant does not receive hepatitis B vaccine or HBIG at birth.
- The mother is HBsAg negative, but the infant is exposed to HBV postnatally from another family member or caregiver. This occurs in two-thirds of the cases of childhood transmission.

State perinatal hepatitis B coordinators provided hundreds of reports of newborns who were unprotected or inadequately protected because of medical errors.

In 2001, 2002, and 2008, the Immunization Action Coalition surveyed perinatal hepatitis B coordinators at every state health department, as well as at city and county CDC projects to assess their views about providing hepatitis B vaccine in the hospital. Their responses contained hundreds of reports of newborns who were unprotected or inadequately protected because healthcare professionals failed to order or misordered hepatitis B blood tests or misinterpreted, mistranscribed, or miscommunicated the test results of the children's mothers. (See www.immunize.org/catg.d/p2062.pdf.)

These state coordinators' reports tell us that no matter how well healthcare providers think they are doing in screening all pregnant women for HBsAg, mistakes continue to occur. Newborns are unnecessarily being exposed without the benefit of post-exposure prophylaxis. At least one baby has died of fulminant hepatitis B; hundreds have become chronically infected and are doomed to preventable hepatocellular carcinoma or cirrhosis later in life. To overcome these failures, perinatal hepatitis B coordinators overwhelmingly endorse providing a hepatitis B vaccine birth dose as the first step in developing a safety net to protect all infants from HBV infection, regardless of the circumstances.

To maximally protect every newborn, CDC, AAP, AAFP, and ACOG recommend ***all*** infants be vaccinated with a hepatitis B vaccine birth dose prior to hospital discharge. Delaying hepatitis B vaccination until a follow-up office visit will be too late to prevent perinatal HBV transmission.*

State perinatal hepatitis B coordinators surveyed overwhelmingly endorsed providing the birth dose.

Hepatitis B vaccine is highly effective. Studies have shown that infants of the most highly infectious mothers (women who are both HBsAg and HBeAg positive) who receive postexposure prophylaxis with hepatitis B vaccine alone (without HBIG) at birth are protected in 70%–95% of cases. Please read the hepatitis coordinators' survey results (www.immunize.org/birthdose/survey.asp), including descriptions of their experiences with failures of the system—failures that largely will be prevented by administering hepatitis B vaccine to infants before they go home from the hospital, ideally within 12 hours of birth.

Your support for providing a birth dose to newborns while they are still in the hospital will protect and save lives that are now being put at risk. ♦

*For subsequent doses of hepatitis B vaccine in infants, use monovalent hepatitis B vaccine or hepatitis B-containing combination vaccines. If using hepatitis B-containing combination vaccines, you will be giving 3 more doses of hepatitis B vaccine. Giving a total of 4 doses of hepatitis B vaccine to infants is acceptable practice to CDC, AAP, and AAFP. These vaccine doses are covered under the Vaccines For Children (VFC) program for VFC-eligible children.

www.immunize.org/catg.d/p2125.pdf • Item #P2125 (9/12)

Medical Errors Put infants at Risk for Chronic Hepatitis B Virus Infection—Six Case Reports

Since 1990, New York State has had a law mandating hepatitis B surface antigen (HBsAg) testing of all pregnant women, reporting of positive HBsAg results, and treatment of infants born to HBsAg-positive women. Compliance with these mandates and current Centers for Disease Control and Prevention recommendations for perinatal hepatitis B prevention is closely monitored through routine visits to birthing hospitals to conduct record reviews and provide education for hospital staff. Despite these efforts, medical errors continue to be made that put infants at risk for chronic hepatitis B virus (HBV) infection. These errors underscore the importance of administering the first dose of hepatitis B vaccine at birth, before discharge from the hospital.

Although 85–95% of perinatal hepatitis B virus infections can be prevented by appropriate prophylactic treatment, many newborns don't receive such prophylaxis. Approximately 90% of infants who become infected will develop chronic HBV infection with all its serious potential sequelae, including possible cirrhosis and liver cancer later in life. To better protect newborns against chronic HBV infection, the New York State Department of Health Immunization Program provides state-funded hepatitis B vaccine, free of charge, to any birthing hospital that institutes a universal hepatitis B birth dose policy.

The following six cases from New York were reported in April 2005 by Elizabeth J. Herlihy, RN, BSN, MS, who was the New York State Department of Health's hepatitis B coordinator at that time. The cases illustrate a variety of medical errors that led to high-risk newborns not receiving the recommended hepatitis B prophylaxis (0.5 mL hepatitis B vaccine and 0.5 mL hepatitis B immune globulin [HBIG] within 12 hours of birth).

Case Study #1

A woman known to be chronically infected with HBV delivered her third infant a month early at a birthing hospital. Unfortunately, her HBsAg status was incorrectly recorded in her hospital record as negative. The hospital did not have a universal birth dose policy, so the infant received no hepatitis B vaccine at birth. The mother assumed that the baby was vaccinated because her other two infants had been treated appropriately. A few weeks later (at the time of the mother's original due date), the public health department contacted her to make sure the infant had been vaccinated. They discovered the mother had not been given a shot record for her newborn upon discharge, nor had vaccines ever been discussed with her at the hospital. The hospital was contacted, and it was discovered that the infant had not received *any* prophylaxis. The first dose of vaccine was immediately administered, but by then the infant was already one month old.

Case Study #2

A woman in labor presented to a suburban birthing hospital. The hospital staff found that she had not been tested for HBsAg this pregnancy because her family practice physician said she was negative two years ago so "not to worry about it." The hospital correctly ordered a test, but did not ask the test to be done as quickly as possible and did not give the infant hepatitis B vaccine dose #1 within 12 hours of birth as recommended. The infant was discharged two days after birth; the mother's HBsAg test came back positive three days after birth. That same day, public health representatives tracked down the family and made sure the infant immediately received vaccine dose #1 and HBIG. Hepatitis vaccine doses #2 and #3 were given according to the recommended schedule.

Case Study #3

An infant born to an HBsAg-positive mother at a birthing hospital received HBIG at birth but not hepatitis B vaccine. Upon investigation, it was learned that the physician forgot to write an order for the vaccine. The hospital did not have standing orders in effect for the universal hepatitis B birth dose, so the infant did not routinely receive hepatitis B vaccine. Public health staff uncovered the error when the infant was two weeks of age, and the infant was immediately vaccinated.

Case Study #4

Staff from the New York State Department of Health conducted a perinatal hepatitis B record review at a birthing hospital. The hospital had failed a record review the prior year, and one of the corrective actions recommended was to include a hard copy of the maternal HBsAg test result in the record. Upon review, it was discovered that the wrong hepatitis test (hepatitis B surface antibody [HBsAb], rather than hepatitis B surface antigen [HBsAg]) had been ordered in three out of the 35 records reviewed. Furthermore, this same error had been made by three different ob/gyn physicians. The obstetrics department head was very surprised to learn of this error and immediately issued a memorandum of clarification to the physicians that HBsAg must be ordered for all pregnant women.

Case Study #5

A woman known to be chronically infected with HBV delivered her second infant five weeks prematurely. Her first infant had received appropriate prophylaxis, and postvaccination serology revealed that child to be immune. The woman was tested during her current pregnancy and again found to be HBsAg positive. She was referred to a gastroenterologist who ordered further serology including hepatitis B e antigen and viral load tests. The e antigen was non-reactive and the viral load was low (which is often the case in persons chronically infected with HBV).

The infant was born five weeks early and transferred to the neonatal intensive care unit (NICU). The neonatologist at the NICU consulted the mother's gastroenterologist. The two decided that the infant did not need to receive hepatitis B prophylaxis, even though it was clearly documented on the hospital record that the mother was HBsAg positive. Neither HBIG nor hepatitis B vaccine was given to the infant. The hospital did not have a universal birth dose policy, so vaccine was not routinely administered.

The county health department, assuming the appropriate treatment had been given at birth, discovered this error when following up to make sure the infant was scheduled to receive a second dose of vaccine. The infant's pediatrician was not aware that the mother was chronically infected with HBV and was very disturbed to learn that the infant had not received prophylaxis at birth. The infant was immediately seen in the pediatric office and given the first dose of vaccine at two months of age.

Case Study #6

A multipara woman sought late prenatal care for her current pregnancy. She had been HBsAg positive during all prior pregnancies, but her current HBsAg test result was negative. Suspecting this could be a false negative HBsAg result, the provider ordered another specimen to be drawn and sent to the state laboratory. Before the results were known, the woman delivered at a birthing hospital that had been sent the prenatal file, which included negative HBsAg results. Since the mother was incorrectly thought to be HBsAg negative, no HBIG was administered to the infant. Fortunately, the hospital recently had adopted a universal hepatitis B birth dose policy, so the infant was administered a routine birth dose of hepatitis B vaccine.

The medical errors described in cases 1–5 would have been circumvented had these hospitals had policies in place to administer hepatitis B vaccine to all newborns. Hepatitis B vaccine is the safety net that protects newborns from HBV infection and its complications.

www.immunize.org/catg.d/p2128.pdf • Item #P2128 (9/12)

States Report Hundreds of Medical Errors in Perinatal Hepatitis B Prevention

Avoid tragic mistakes—vaccinate newborns against HBV in the hospital

*By Teresa A. Anderson, DDS, MPH, and Deborah L. Wexler, MD**

On two annual surveys conducted by the Immunization Action Coalition covering the period from July 1999 to October 2002, state and local hepatitis coordinators reported more than 500 medical errors regarding perinatal hepatitis B prevention. Examples of types of errors included:

- not properly prophylaxing infants born to HBsAg-positive mothers with both hepatitis B vaccine and hepatitis B immune globulin (HBIG) within 12 hours of birth
- not giving hepatitis B vaccine to infants born to mothers of unknown HBsAg status within 12 hours of birth
- misinterpreting or mistranscribing hepatitis B screening test results, or failing to communicate results to or within the hospital
- ordering the wrong hepatitis B screening test

Because of these types of errors, many children are now chronically infected with hepatitis B virus (HBV) and at least one infant has died. Children infected when less than one year of age have a 90% chance of developing chronic HBV infection with all its serious potential sequelae, such as cirrhosis and liver cancer.

Consider the following examples of medical errors reported by the nation's hepatitis coordinators where infants were needlessly put at risk for perinatal HBV infection.

Medical Error Type #1

Infants born to HBsAg-positive mothers did not receive both hepatitis B vaccine and HBIG within 12 hours of birth.

Recommendation of the Centers for Disease Control and Prevention (CDC), American Academy of Pediatrics (AAP), American Academy of Family Physicians (AAFP), and the American College of Obstetricians and Gynecologists (ACOG): All infants of HBsAg-positive mothers (including premature infants) should receive hepatitis B vaccine and HBIG within 12 hours of birth.

Case report examples

- "The mother had been diagnosed with chronic hepatitis B in 1994. In her prenatal record she was documented to be HBsAg and HBeAg positive, and this information appeared in several places on the record that was sent to the hospital. Despite this, her baby did not receive HBIG or the first dose of hepatitis B vaccine in the hospital. In fact, the hepatitis B vaccine order was crossed out in the infant's chart. Follow-up with the pediatrician on day six indicated that the baby still had not received any prophylaxis. The first dose of vaccine was given when the infant was three weeks of age, the second dose three months after the first, and the third dose six months after the first. The child's current status is unfortunate. Diagnosed HBsAg-positive at 19 months of age, the child is now being followed by a liver specialist for chronic hepatitis B."
- "We have two cases where infants born to carrier mothers received the first dose of hepatitis B vaccine three weeks after birth and no HBIG. In one of the cases, a resident interviewed the mother who claimed she was not HBsAg positive."
- "In 2000, we had 25 cases where the babies of positive moms did not receive HBIG at birth. Three of these babies are now infected. In one of the cases, the mother's status was erroneously marked as unknown, another was marked as negative, and in one the status was correctly marked, but the HBIG was still not given."
- "In 2000, there were eight infants of HBsAg-positive mothers who never received HBIG and six who did not get hepatitis B vaccine within 12 hours of birth. This is despite letters to the hospital and to the OB/GYN prior to the birth."
- "In one case in a rural hospital, the mother's positive hepatitis B status was documented in her chart and the infant's chart, which were seen by many nurses and three pediatricians, but no prophylaxis was ever initiated."
- "For 1999 and 2000, of the 771 infants born to HBsAg-positive women in our state, 30 did not receive HBIG at birth, 10 did not receive the first dose of vaccine, and 9 didn't receive either."

Medical Error Type #2

Infants born to mothers of unknown HBsAg status were not properly prophylaxed.

Recommendation of CDC, AAP, AAFP, and ACOG: If the mother's HBsAg status is unknown, infants must receive hepatitis B vaccine within 12 hours of birth. For premature infants weighing less than 2 kg (4.4 lbs), HBIG is also given. [Authors' note: It's not recommended to wait for the HBsAg lab result to determine your course of action. Order hepatitis B vaccine from the pharmacy and give it immediately—within 12 hours of birth.]

Case report examples

- "The mother's positive lab result was not received before she was discharged, and the hospital did not have a universal hepatitis B birth dose policy. The infant did not receive HBIG or the first dose of vaccine within the recommended time frame."
- "During a hospital audit, I found one case where the vaccine had been withheld for 25 hours while the staff awaited the results of the 'stat' HBsAg blood work on a mother of unknown status."
- "In one case a mother came in with no prenatal care. The intern did not think she *looked* high risk. She turned out positive. Her child did not receive vaccine."
- "The mother was known to be HBsAg positive with a previous pregnancy; however, with this pregnancy the woman did not receive prenatal care and reported to a different hospital in active labor. HBIG and hepatitis B vaccine were not given until two days after birth, when the mother was found to be HBsAg positive."
- "The mother's status was unknown at birth. She left the hospital without the baby being vaccinated. She gave a fictitious address."
- "This mom had no prenatal care, knew she was a carrier, but gave no indication of her HBsAg status when admitted. The hospital ran tests on mom at delivery, but it wasn't until two days later when the lab results came back positive that the baby was treated with HBIG and hepatitis B vaccine."
- "My survey found 36 women unscreened in a six-month period. Ten infants did not get vaccine."

Medical Error Type #3

Screening test results were misordered, misinterpreted, mistranscribed, or miscommunicated.

To avoid these types of errors, CDC recommends that a copy of the mother's original HBsAg lab report be sent to the birthing hospital as part of the prenatal record. Labor and delivery units and nursery units should carefully review this original lab report to determine the appropriate course of action. Do not rely on transcribed results!

Case report examples

- "We had a mom who was reported to the hospital as HBsAg negative by the prenatal care provider. Unfortunately, this woman was actually HBsAg positive. The baby did not receive HBIG or the birth dose of hepatitis B vaccine, and by three months of age developed fulminant hepatitis B and died."

continued on page 2

www.immunize.org/catg.d/p2062.pdf • Item #P2062 (9/12)

- "In June 2002, a situation occurred where an infant born to an HBsAg-positive mother at a large teaching hospital was not appropriately treated with hepatitis B vaccine and HBIG at birth. A full investigation was launched, and it was found that although the mother's HBsAg status was clearly marked on the prenatal record as 'reactive,' a resident at the hospital mistranscribed the mother's HBsAg status onto the hospital chart as 'negative.'"
- "On an average, we receive ten newborn screening forms each month that indicate a misinterpreted or mistranscribed maternal hepatitis B status."
- "We find that doctors' offices sometimes have a positive result in the mother's chart and neglect to look at it. Or they order labs and neglect to notice that they were never drawn."
- "Three infants were born to HBsAg-positive mothers where the hospital record erroneously indicated that the mothers were negative for HBsAg. The babies were not prophylaxed within 12 hours with HBIG and hepatitis B vaccine."
- "In two cases, the mothers were tested prenatally and the mothers' charts showed positive HBsAg test results. However, the HBsAg test result was documented as negative in the infants' charts, resulting in neither HBIG nor hepatitis B vaccine being given. In two other cases, the positive results were transcribed incorrectly in the mothers' charts as negative."
- "The hospital nursery claimed they had a record of the mother being HBsAg negative. The baby was not immunized at time of birth, although the health department had a copy of the lab slip indicating that mom was HBsAg positive. The OB's office claimed that they did not have this lab slip in the patient's chart but later confirmed that mom was HBsAg positive."
- "We have two cases due to transcription error. The children are now positive."
- "Concerning an HBsAg-positive mom, I was told by both the doctor and nurse that this meant that the woman had hepatitis B antibodies."
- "The physician's interpretation of a mother's prenatal HBsAg-positive lab was 'hepatitis B negative.' This infant was not given HBIG or vaccine prior to hospital discharge. The hospital records recorded the physician's interpretation of the lab rather than the actual lab results. This child is now HBsAg positive."

Medical Error Type #4

Pregnant women were screened using the incorrect hepatitis B test

Recommendation of CDC, ACOG, AAP, and AAFP: The hepatitis B screening test to order for each and every pregnancy is HBsAg (hepatitis B surface antigen). [Authors' note: The standard screening test is NOT antibody to hepatitis B surface antigen (anti-HBs or HBsAb), antibody to hepatitis B core antigen (anti-HBc or HBcAb), HBeAg, anti-HBe, or HBV-DNA. These tests are easily confused and often misordered since some differ only by a single letter. Ordering the wrong lab test can be a fatal error.]

Case report examples

- "We have examples of approximately 25 such cases: we ask for copies of the labs and we find that anti-HBs has been frequently ordered."
- "We get reports of the wrong screening test ordered, including HBcAb and HBV-DNA."
- "Two maternal records were found to have anti-HBc documented instead of HBsAg. In one hospital, cord blood was used to test mother's HBsAg status."
- "We see anti-HBs erroneously ordered in clinics and hospitals for unscreened women. We also see HBsAg ordered correctly in the hospitals but sent to the labs requesting an anti-HBs test. These appear to be errors and lack of knowledge on the part of the physicians and other hospital staff. Most disturbing is that it has never been noticed by the physicians, lab staff, or nursing staff until it is brought to their attention by health department staff. We also see physicians who only order HBsAg screening for the first pregnancy and none of the following pregnancies, and also those who order only anti-HBs when their patient has had the vaccine series."

Conclusion

As these examples demonstrate, medical errors in perinatal hepatitis B prevention can occur at any time—beginning with the woman's first prenatal visit and extending beyond the mother's and infant's hospital discharge. The errors described in this article are only the "tip of the iceberg." Most errors remain undiscovered. CDC estimates that annually about 12,500 HBsAg-positive women are not reported to their state's perinatal hepatitis B program and therefore do not benefit from case management. Only about half of the expected infants born to HBsAg-positive mothers are identified for case management. In terms of a "safety net" for these infants, a 2010 CDC survey found that nationwide, only 69% of infants received the first dose of hepatitis B vaccine within three days of birth. Putting these numbers together, one can conclude that many high-risk infants are not being identified and protected against HBV infection.

Errors are made by a broad range of perinatal healthcare workers including obstetricians, family physicians, pediatricians, nurses, lab technicians, and clerical staff, and these errors occur in hospitals as well as in primary care settings. While you may be following the national recommendations for the patients under your care, you can't be certain about everyone else. Human error will never be eliminated.

Only a universal hepatitis B vaccine birth dose policy in every hospital will optimize the protection of all infants from human error and chronic HBV infection. If your hospital isn't vaccinating every infant against hepatitis B virus infection prior to discharge, IAC urges you to work together with your hospital, your medical staff, and your local and/or state health departments to institute this lifesaving policy in your hospital. The words of one hepatitis coordinator (whose state experienced an infant death from fulminant hepatitis B) make the case for this policy: "Life is messy, and giving the birth dose is the best way to avoid worst-case scenarios."

For resources and ideas to help you, including all responses to IAC's 2001 and 2002 birth dose surveys, related journal articles, and more, visit the Immunization Action Coalition's birth dose web pages at www.immunize.org/birthdose.

Other Related Resources

Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States. Source: *MMWR,* 12/23/05, Vol. 54(RR16). www.cdc.gov/mmwr/pdf/rr/rr5416.pdf

"Guidance for Developing Admission Orders in Labor & Delivery and Newborn Units to Prevent Hepatitis B Virus Transmission." Source: IAC. www.immunize.org/catg.d/p2130.pdf

"Give the Birth Dose... Hepatitis B Vaccine at Birth Saves Lives!" Source: IAC. www.immunize.org/catg.d/p2125.pdf

"Recommended Childhood Immunization Schedule." Source: ACIP, AAP, AAFP. www.cdc. gov/vaccines/recs/schedules/child-schedule.html

General Recommendations on Immunization. Source: *MMWR,* 1/28/11, Vol. 60(RR2). www.cdc.gov/mmwr/PDF/rr/rr6002.pdf

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Deborah L. Wexler, MD, family physician, is the founder and executive director of the Immunization Action Coalition (IAC). The Coalition provides practical immunization education materials to health professionals and patients. IAC promotes the recommendation to give hepatitis B vaccine to every newborn no later than hospital discharge.

Hospitals & Doctors Sued for Failing to Protect Newborns from Hepatitis B Virus Transmission

Case #1

In 1989 on the West Coast, a woman was identified as a being chronically infected with hepatitis B during her prenatal care. However, this information was not transmitted to the newborn nursery at the time of delivery. Her baby received neither hepatitis B immune globulin (HBIG) nor hepatitis B vaccine and the infant subsequently became chronically infected. The mother sued the hospital, the obstetrician, and the pediatrician. A substantial settlement was awarded.

Case #2

In a large Midwestern city in approximately 1988, a woman was screened in pregnancy and was found to be hepatitis B surface antigen (HBsAg) positive. Her baby was born and appropriately immunized at birth with HBIG and hepatitis B vaccine. The baby returned for well child care with a provider at the hospital-based clinic. The parents asked if the baby needed a second dose of hepatitis B vaccine. The provider reviewed the birth record and told the parents that the vaccine was not necessary and did not give the follow-up dose. The provider did not understand the indications for hepatitis B vaccine. At 12 months of age, the child was found to have chronic persistent hepatitis B by the hospital's follow-up clinic that tracks the infants born to HBsAg positive mothers. The hospital was sued and the case was settled out of court.

Cases #3 and #4

These cases occurred at a large teaching hospital affiliated with a medical school in a state where a law exists mandating prenatal hepatitis B screening. In this hospital, mothers were not routinely screened at delivery, but the neonatologist tested every infant for HBsAg as part of a panel of tests that were routinely done on cord blood. If this test was negative, no hepatitis B vaccination was given. If the test was positive, sometimes vaccine and HBIG were given and sometimes they were not ("too late—baby already infected"). Both of the infants at the centers of these lawsuits were born in 1991 when this policy was in effect. In one case, the mother had been tested during her pregnancy but the test results were not communicated to her or to the hospital. The infant's cord blood test was negative. In a subsequent pregnancy she was discovered to be HBsAg positive and was referred to the state's perinatal program. Her other children were tested as a part of this program and the one child was discovered to be chronically infected. In the other case, the mother had not been tested during the pregnancy. The cord blood of this infant was positive for HBsAg, but the report was received after the discharge of the infant and the report was filed without action. In both cases, the infants were not treated for perinatal exposure because the hospital was relying on cord blood testing to determine the need for hepatitis B prophylaxis. The hospital policy has since been changed and all mothers are screened on admission to labor and delivery. Lawsuits are pending in both cases [1994]. (IAC has no further information about these cases.)

Case #5

On December 13, 1999, a previously healthy 3-month-old infant of Southeast Asian descent was brought to a hospital emergency department and was admitted following a 5-day history of fever, diarrhea, and jaundice. Upon admission to the hospital, hepatitis B serology was obtained along with liver function tests and liver enzymes. Laboratory results revealed that the infant was HBsAg positive and IgM core antibody (IgM anti-HBc) positive. The infant's mother was tested at the same time and was found to be HBsAg positive and anti-HBc positive. A diagnosis of hepatic failure due to hepatitis B virus infection was made; tragically, the infant died on December 17 of fulminant hepatitis B. Investigation revealed that the infant's mother had tested positive for HBsAg during her pregnancy but that the test result was communicated incorrectly as "hepatitis negative" to the hospital where the baby was born. Neither the laboratory nor the prenatal care provider reported the HBsAg-positive test results to the local health department as required by state law. The infant received no hepatitis B vaccine and no HBIG at the time of birth. There has been no litigation to date [2000], but the physician lost his license to practice medicine. (IAC has no further information about this case.)

Perinatal Hepatitis B Prevention Program
PO Box 369, Trenton, NJ 08625-0369
609-826-4860
http://nj.gov/health/cd/hepatitisb_perinatal/

Delivery Hospital Policies and Procedures to Prevent Perinatal Hepatitis B Virus (HBV) Transmission

All New Jersey delivery hospitals should institute a HBV perinatal prevention strategy that includes policies and standing or preprinted orders to ensure all pregnant women have been screened for hepatitis B surface antigen (HBsAg) prior to or upon admission for delivery. Policies should be reviewed regularly and at least every 3 years per Hospital Licensing regulations (N.J.A.C.§ 8:43G-19.2). All hospitals are strongly encouraged to also institute policies and standing or preprinted orders to ensure the administration of appropriate HBV immunoprophylaxis including the birth dose to *all* infants prior to discharge. Sample text for developing policies is provided below:

At time of admission for delivery:

1. Review the HBsAg status for all pregnant women upon admission for delivery. For all pregnant women who have a HBsAg laboratory result included in their prenatal records, examine a copy of the **original** laboratory report to verify that the correct test (i.e., HBsAg) was performed and to verify that the testing date was during **this** pregnancy, not a previous one.

2. Perform HBsAg testing on all women with no prenatal care or undocumented or unknown HBsAg status immediately upon admission for delivery to ensure the infant receives appropriate prophylaxis as per Hospital Licensing regulations (N.J.A.C.§ 8:43G-19.2).

3. Perform a repeat HBsAg test on any pregnant woman if she was 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 a HBsAg positive sex partner; had evaluation or treatment for a sexually transmitted disease; currently uses or recently used injection drugs).

4. Ensure availability of HBsAg laboratory results completed upon admission within 24 hours or before mother and infant are discharged from the hospital to guarantee the infant receives appropriate prophylaxis. Interpretation of hepatitis B serologic test results can be accessed at: http://www.cdc.gov/hepatitis/hbv/pdfs/serologicchartv8.pdf

After delivery:

HBs-Ag positive mothers and their infants:

1. Administer single-antigen HBV vaccine and hepatitis B immune globulin (HBIG) in the delivery room or ASAP *within* 12 hours of birth. The vaccine and HBIG should be administered by intramuscular injections at two different sites as per the recommendations of the ACIP and the manufacturers' instructions.

2. Report the birth of any infant born to a HBsAg positive woman and the date and time of administration of HBIG and HBV vaccine dose to the local health department for the jurisdiction where the patient resides, as per Reportable Communicable Diseases regulations (N.J.A.C. 8:57-1.5). Contact information for local health departments may be found at: http://www.nj.gov/health/lh/directory/lhdselectcounty.shtml The infant will need to also be entered into the Communicable Disease Reporting and Surveillance System (CDRSS), available at: https://cdrs.doh.state.nj.us/cdrss/login/login.jsp

3. Obtain the name, address, and phone number of the newborn's primary care provider.

4. Notify primary care provider of newborn's birth, the date and time that HBIG and HBV vaccine doses were administered, and the importance of additional on-time vaccination (infants weighing less than 2 kg (4.4 lbs.) will require 4 doses of vaccine as the first dose does not "count") and post vaccination testing of the infant for HBsAg and antiHBs (antibody to HBsAg) after completion of the HBV vaccine series at age 9–18 months.

5. Provide advice to the mother. Tell her the following:

    a. That she may breast-feed her infant upon delivery, even before HBV vaccine and HBIG are given;
    b. It is critical for her infant to complete the full HBV vaccine series on the recommended schedule;
    c. Blood will need to be drawn from the infant following completion of the HBV vaccine series (usually done at a well-child visit at age 9–18 months, but not before 9 months of age) to determine if the infant developed a protective immune response to vaccination or needs additional management;
    d. About modes of HBV transmission and the need for testing and vaccination of susceptible household, sexual, and needle-sharing contacts;
    e. She and other infected contacts need to have medical evaluations for chronic HBV infection, including assessment to determine if they are candidates for antiviral treatment.

Mothers with unknown HBsAg status and their infants:

1. Administer single-antigen HBV vaccine within 12 hours of birth. For infants weighing less than 2 kg (4.4 lbs.) at birth, also administer HBIG within 12 hours. Do not wait for test results to return before giving this dose of vaccine (and HBIG for infants weighing less than 2 kg [4.4 lb.]).

2. Confirm that the laboratory has received blood for the mother's HBsAg test.

3. Verify when the mother's HBsAg result will be available and that it will be reported to the newborn unit ASAP.

4. If the laboratory test indicates the mother's HBsAg test result is positive, do the following:

    a. Administer HBIG ASAP (no later than 7 days after birth) to the newborn weighing 2 kg (4.4 lbs.) or more. (Those weighing less than 2 kg (4.4 lbs.) at birth should have already received HBIG. HBV vaccine should have been given within 12 hours of birth to all infants of mothers with unknown HBsAg status.)
    b. Follow steps 2–5 of previous section (The Mother Is HBsAg Positive).

For routine newborn hepatitis B vaccination: the mother is HBsAg negative:

Administer single-antigen HBV vaccine intramuscularly (IM), in anterolateral thigh no later than hospital discharge.

All mothers and their infants:

1. Provide mothers with the Vaccine Information Statement (VIS) for the HBV vaccine prior to vaccine administration. A copy of the current VIS can be found here http://www.cdc.gov/vaccines/hcp/vis/current-vis.html
2. Provide infant's immunization record to parents and remind them to take it to infant's first pediatrician visit.
3. Document in the hospital record the date and time of the infant's birth and the date and time of administration of HBV vaccine series and HBIG for all infants. This information must also be entered in the infant's Electronic Birth Certificate (EBC).

Delivery Hospital Policies and Procedures to Prevent Perinatal Hepatitis B Virus Transmission

At time of admission for delivery

- Review hepatitis B surface antigen (HBsAg) status of all pregnant women.
- Record maternal HBsAg test results on both labor and delivery record and on infant's delivery summary sheet.
- Perform HBsAg testing as soon as possible on women who
  - do not have a documented HBsAg test result;
  - were at risk for hepatitis B virus (HBV) infection during pregnancy (e.g., >1 sex partner in the previous 6 months, evaluation or treatment for a sexually transmitted disease, recent or current injection-drug use, or HBsAg-positive sex partner); or
  - had clinical hepatitis since previous testing.

After delivery

HBsAg-positive mothers and their infants

- Administer single-antigen hepatitis B vaccine and hepatitis B immune globulin (HBIG) to all infants born to HBsAg-positive mothers ≤12 hours after birth and record date and time of administration of HBIG and hepatitis B vaccine in infant's medical record.
- Provide information regarding hepatitis B to HBsAg-positive mothers, including
  - advice that they may breast feed their infants upon delivery;
  - modes of HBV transmission;
  - need for vaccination of their susceptible household, sexual, and needle-sharing contacts;
  - need for substance abuse treatment, if appropriate; and
  - need for medical management and possible treatment for chronic hepatitis B.

Mothers with unknown HBsAg status and their infants

- Administer single-antigen hepatitis B vaccine (without HBIG) to all infants born to mothers with unknown HBsAg status ≤12 hours after birth and record date and time of administration of hepatitis B vaccine on infant's medical record.
- Alert infant's pediatric health-care provider if an infant is discharged before the mother's HBsAg test result is available; if the mother is determined to be HBsAg positive, HBIG should be administered to the infant as soon as possible, but no later than age 7 days.

All mothers and their infants

- Administer a dose of single-antigen hepatitis B vaccine to all infants weighing ≥2,000 g.
- Ensure that all mothers have been tested for HBsAg prenatally or at the time of admission for delivery, and document test results.

At time infant is discharged

- Provide infant's immunization record to mother and remind her to take it to the infant's first visit to a pediatric health-care provider.

Source: CDC. A comprehensive immunization strategy to eliminate transmission of hepatitis B virus infection in the United States: recommendations of the Advisory Committee on Immunization Practices (ACIP). Part 1: immunization of infants, children, and adolescents. *MMWR* 2005 (RR-16).

Guidance for Developing Admission Orders in Labor & Delivery and Newborn Units to Prevent Hepatitis B Virus Transmission

The guidelines in this document were developed to help hospitals establish policies and standing orders in their labor and delivery (L&D) and newborn units.

During 2005, the Centers for Disease Control and Prevention (CDC) published updated recommendations of the Advisory Committee on Immunization Practices (ACIP) for prevention of hepatitis B virus (HBV) infections in children which includes the recommendation to administer hepatitis B vaccine to ***all newborns before hospital discharge.*** *The American Academy of Pediatrics, American Academy of Family Physicians, and American College of Obstetricians and Gynecologists have all endorsed the birth dose recommendation. To obtain a copy, go to* www.cdc.gov/mmwr/PDF/rr/rr5416.pdf.

To protect infants from HBV infection, CDC recommends that all delivery hospitals institute standing orders or admission orders, and protocols to ensure healthcare professionals do the following:

1. *Administer hepatitis B vaccine to* ***all newborns*** *before they are discharged from the hospital.*
2. *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 these infants.*

Admission orders and procedures for women admitted to a birthing facility

For pregnant women who have a HBsAg lab report included in their prenatal records, do the following:

1. Examine a copy of the *original* laboratory report of the pregnant woman's HBsAg[1] test result to verify that the correct test (i.e., HBsAg) was performed and to verify that the testing date was during *this* pregnancy not a previous one. *Do not rely on a handwritten or transcribed HBsAg test result!*
2. Place a copy of the original HBsAg lab report into (1) the pregnant woman's L&D record and (2) the infant's hospital record.
3. If the pregnant woman is HBsAg positive, alert the nursery staff that the newborn is high risk and will need postexposure prophylaxis —both hepatitis B immune globulin (HBIG) and hepatitis B vaccine—within 12 hours of birth.
4. Perform a repeat blood test for HBsAg[1] if the pregnant woman was 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).
5. Instruct the laboratory to call L&D and the nursery with the HBsAg test result ASAP.

For pregnant women who do not have an HBsAg lab report on their prenatal record, do the following:

1. Perform HBsAg[1] testing ASAP on women who do not have a copy of an original HBsAg laboratory report from the current pregnancy included in their prenatal record.
2. Instruct the lab to call L&D and the nursery units with the newly obtained HBsAg test result ASAP.

Admission orders and procedures for newborns

Hospital procedures to follow for ALL newborns

1. Review a copy of the mother's *original* HBsAg[1] lab report to ensure that the correct serologic test was ordered and that it was ordered during this pregnancy.
2. Determine if the newborn needs immediate postexposure prophylaxis within 12 hours of birth. To do this you must know the mother's HBsAg status and the newborn's birth weight. If the newborn weighs less than 2 kg (4.4 lb), see the descriptions below and footnotes 2, 5, 6.
3. Prior to vaccination, give parent a Hepatitis B Vaccine Information Statement.

For newborns of HBsAg-negative mothers

1. Administer single-antigen hepatitis B vaccine (0.5 mL, IM) before hospital discharge to **all** newborns weighing 2 kg (4.4 lb) or more at birth.[2, 3, 4]
2. Document the hepatitis B vaccine dose in the newborn's medical record, including the date, time, and site of administration, as well as the vaccine lot number.
3. Give the mother an immunization record card that includes the hepatitis B vaccination date. Explain the importance of completing the hepatitis B vaccine series to protect her baby. Remind her to bring the immunization record card with her each time her baby sees a provider.

For newborns of mothers with unknown HBsAg status, do the following:

1. 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.
2. Document the hepatitis B vaccine dose in the newborn's medical record, including date, time, and site of administration, as well as the vaccine lot number.
3. Give the mother an immunization record card that includes the hepatitis B vaccination date. Explain the importance of completing the hepatitis B vaccine series to protect her baby. Remind her to bring the immunization record card with her each time her baby sees a provider.
4. Confirm that the laboratory has received blood for the mother's HBsAg[1] test.

(continued on next page)

5. Verify when the mother's HBsAg result will be available and that it will be reported to L&D and the newborn unit ASAP.
6. If the nursery does not receive the report of the mother's HBsAg test at the expected time, call the laboratory for the result.
7. If the laboratory test indicates the mother's HBsAg[1] test result is positive, do the following:
   a. Administer HBIG (0.5 mL, IM) to the newborn ASAP. (Hepatitis B vaccine should have been given within 12 hours of birth.)
   b. Document the HBIG dose in the newborn's medical record. There is little benefit in administering HBIG to the newborn if more than 7 days have elapsed since birth.
   c. Alert the mother's and newborn's physician(s) of the test result.
   d. Follow the instructions below "For newborns of HBsAg-positive mothers," steps 3–7.
8. If the newborn must be discharged before the mother's HBsAg result is known:
   a. Document the parents' contact information (e.g., addresses, telephone numbers, emergency contacts) in case further treatment is needed for the infant.
   b. Obtain the name, address, and phone number of the mother's and the newborn's healthcare providers.
   c. Notify the mother's and newborn's healthcare providers that the mother's HBsAg test result is pending.

For newborns of HBsAg-positive mothers

1. 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.
2. Document the hepatitis B vaccine and HBIG dose in the newborn's medical record, including the date, time, and site of administration, as well as the vaccine lot number.
3. Give the mother an immunization record card that includes the hepatitis B vaccination and HBIG dates. Explain the importance of completing the hepatitis B vaccine series to protect her baby. Remind her to bring the card with her each time her baby sees a provider.
4. 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.
5. Obtain the name, address, and phone number of the newborn's primary care provider.
6. Notify the provider of the newborn'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.
7. Provide advice to the mother. Tell her the following:
   a. That she may breast-feed her infant upon delivery, even before hepatitis B vaccine and HBIG are given;
   b. That it is critical for her infant to complete the full hepatitis B vaccine series on the recommended schedule;
   c. That blood will need to be drawn from the child after completion of at least 3 doses of the hepatitis B vaccine series at age 9–18 months (usually done at a well-child visit) to determine if the child developed a protective immune response to vaccination or needs additional management;
   d. About modes of HBV transmission and the need for testing and vaccination of susceptible household, sexual, and needle-sharing contacts;
   e. That she needs to have a medical evaluation for chronic hepatitis B, including an assessment of whether she is a candidate 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 (4.4 lb) at birth and whose mothers are documented to be HBsAg negative should receive the first dose of vaccine 1 month after birth or at hospital discharge, whichever comes first. The mother's HBsAg test result 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.
4. According to the CDC recommendations, exceptions to administering the birth dose of hepatitis B vaccine are allowed on a case-by-case basis and only in rare circumstances. If the hepatitis B vaccine 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 do not 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 (4.4 lb) 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 (4.4 lb) 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.

For "Sample Text for Developing Admission Orders in Newborn Units for the Hepatitis B Birth Dose" go to www.immunize.org/catg.d/p2131.pdf

Sample Text for Developing Admission Orders in Newborn Units for the Hepatitis B Vaccine Birth Dose

General orders for all newborns

1. Review a copy of the mother's original lab report to ensure that the correct serologic test (HBsAg) was ordered and that it was ordered during this pregnancy. Perform a repeat HBsAg blood test on the pregnant woman (mother) if she was 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).
2. Determine if the newborn is high risk and needs immediate postexposure prophylaxis within 12 hours of birth. The infant is high risk if the mother's HBsAg status is positive or unknown.

For routine newborn hepatitis B vaccination: the mother is HBsAg negative

1. Administer single-antigen hepatitis B vaccine, pediatric, 0.5 mL, intramuscular (IM), in anterolateral thigh no later than hospital discharge. Prior to vaccination, give parent a Hepatitis B Vaccine Information Statement and obtain verbal consent to vaccinate. Give the parent a record of the vaccination. If parent unwilling to give consent, notify physician ASAP. Document vaccine administration or vaccine refusal in hospital record.

For highest-risk infants: the mother is HBsAg positive

1. Administer Hepatitis B Immune Globulin (HBIG) 0.5 mL, IM, in anterolateral thigh in the delivery room or ASAP within 12 hours of birth. Document HBIG administration in hospital record. Give parent a record of the HBIG dose.
2. At same time and in opposite anterolateral thigh, administer single-antigen hepatitis B vaccine, pediatric, 0.5 mL, IM, ASAP within 12 hours of birth. Document vaccine administration in hospital record. Give parent a record of the vaccination.
3. Prior to administering both HBIG and hepatitis B vaccine, give parent a Hepatitis B Vaccine Information Statement and obtain verbal consent to vaccinate. If parent unwilling to give consent, notify physician ASAP. Consider notifying Child Protective Services if parent continues to refuse despite discussion with physician.
4. 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.
5. Obtain the name, address, and phone number of the newborn's primary care provider.
6. Notify primary care provider of newborn's birth, the date and time that HBIG and hepatitis B vaccine doses were administered, and the importance of additional on-time vaccination (infants weighing less than 2 kg (4.4 lbs) will require 4 doses of vaccine as the first dose does not "count") and postvaccination testing of the infant for HBsAg and antiHBs (antibody to HBsAg) after completion of the hepatitis B vaccine series at age 9–18 months.
7. Provide advice to the mother. Tell her the following:
   a. That she may breast-feed her infant upon delivery, even before hepatitis B vaccine and HBIG are given;
   b. It is critical for her infant to complete the full hepatitis B vaccine series on the recommended schedule;
   c. Blood will need to be drawn from the infant following completion of the hepatitis B vaccine series (usually done at a well-child visit at age 9–18 months) to determine if the infant developed a protective immune response to vaccination or needs additional management;
   d. About modes of HBV transmission and the need for testing and vaccination of susceptible household, sexual, and needle-sharing contacts;
   e. She and other infected contacts need to have medical evaluations for chronic hepatitis B, including assessment to determine if they are candidates for antiviral treatment.

For high-risk infants: the mother's HBsAg status is unknown

1. Administer single-antigen hepatitis B vaccine (0.5 mL, IM) within 12 hours of birth. For infants weighing less than 2 kg (4.4 lbs) at birth, also administer hepatitis B immune globulin (HBIG 0.5 mL, IM) within 12 hours. Do not wait for test results to return before giving this dose of vaccine (and HBIG for infants weighing less than 2 kg [4.4 lb]). Document vaccine administration in the hospital record. Give the parent a record of the vaccination.

(continued on next page)

2. Confirm that the laboratory has received blood for the mother's HBsAg test.
3. Verify when the mother's HBsAg result will be available and that it will be reported to the newborn unit ASAP.
4. If the laboratory test indicates the mother's HBsAg test result is positive, do the following:
   a. Administer HBIG 0.5 mL, IM, ASAP to the newborn weighing 2 kg (4.4 lb) or more. (Those weighing less than 2 kg (4.4 lb) at birth should have already received HBIG.) (Hepatitis B vaccine should have been given within 12 hours of birth to all infants of mothers with unknown HBsAg status.)
   b. Follow steps 4–7 of previous section (The Mother Is HBsAg Positive).

For additional detailed information about text that you might incorporate into newborn admission orders, including orders for premature infants, refer to *"Guidance for Developing Admission Orders in Labor & Delivery and Newborn Units to Prevent Hepatitis B Virus Transmission"* available at www.immunize.org/catg.d/p2130.pdf.

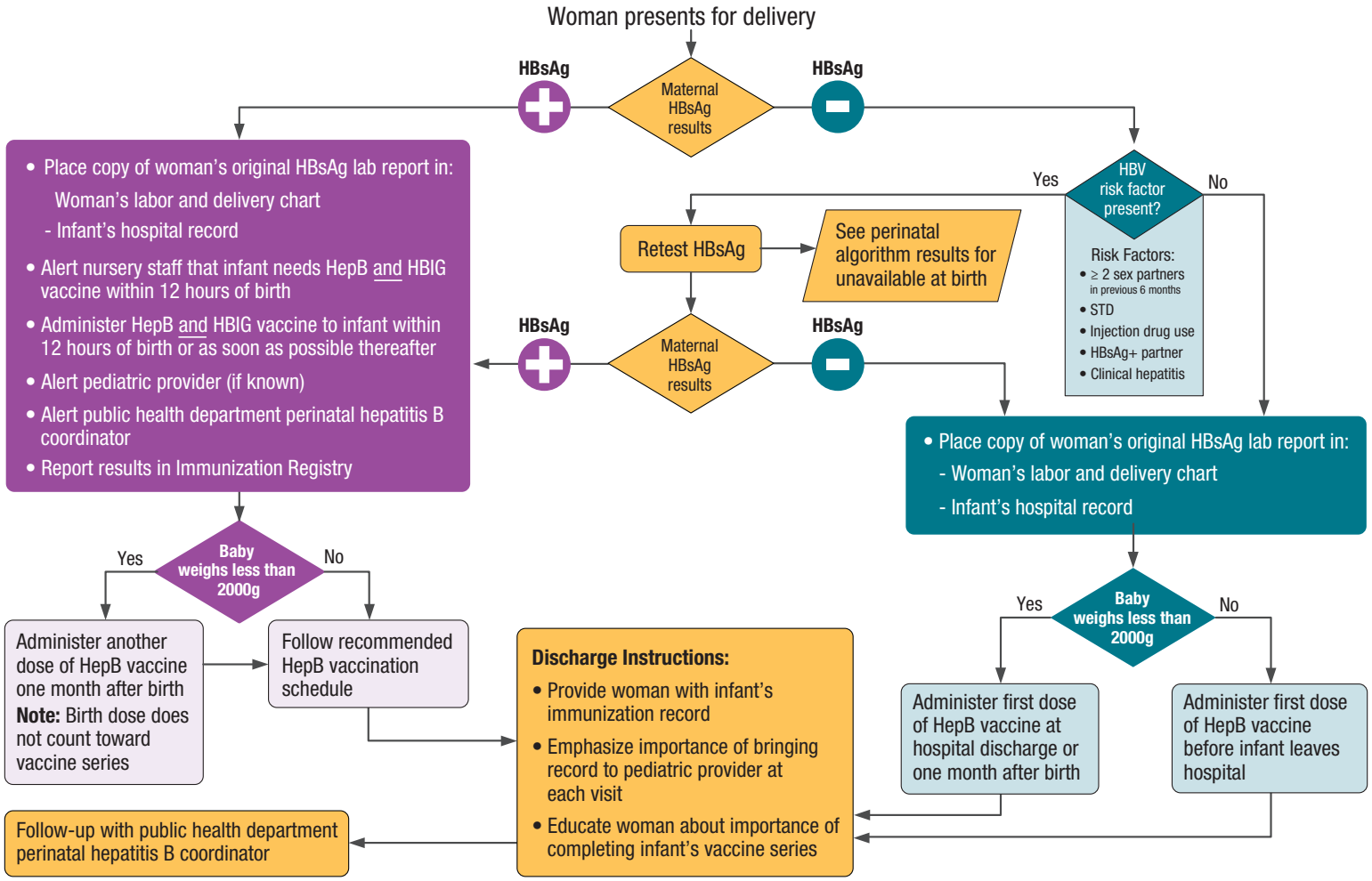
Reference

A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States. Part 1: Immunization of Infants, Children and Adolescents. MMWR, December 23, 2005, Vol. 54(RR-16):1-39, at www.cdc.gov/mmwr/pdf/rr/rr5416.pdf.

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
Centers for Disease Control and Prevention

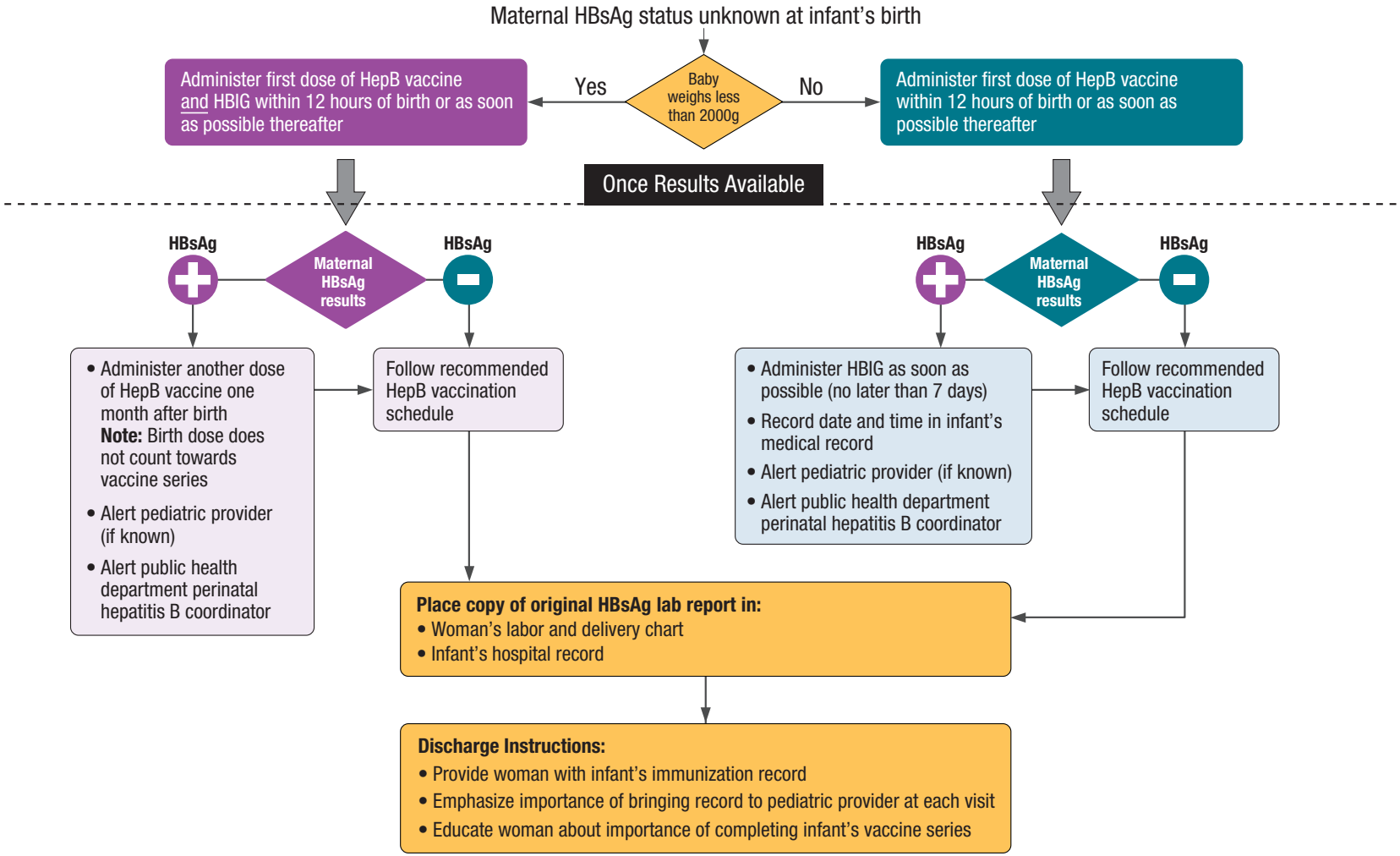


Resources available at www.CDC.gov/hepatitis/perinatalHepB

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

Interpretation of Hepatitis B Serologic Test Results

Hepatitis B serologic testing involves measurement of several hepatitis B virus (HBV)-specific antigens and antibodies. Different serologic "markers" or combinations of markers are used to identify different phases of HBV infection and to determine whether a patient has acute or chronic HBV infection, is immune to HBV as a result of prior infection or vaccination, or is susceptible to infection.

HBsAg **anti-HBc** **anti-HBs**	negative negative negative	Susceptible
HBsAg **anti-HBc** **anti-HBs**	negative positive positive	Immune due to natural infection
HBsAg **anti-HBc** **anti-HBs**	negative negative positive	Immune due to hepatitis B vaccination
HBsAg **anti-HBc** **IgM anti-HBc** **anti-HBs**	positive positive positive negative	Acutely infected
HBsAg **anti-HBc** **IgM anti-HBc** **anti-HBs**	positive positive negative negative	Chronically infected
HBsAg **anti-HBc** **anti-HBs**	negative positive negative	Interpretation unclear; four possibilities: 1. Resolved infection (most common) 2. False-positive anti-HBc, thus susceptible 3. "Low level" chronic infection 4. Resolving acute infection

Adapted from: A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices. Part I: Immunization of Infants, Children, and Adolescents. MMWR 2005;54(No. RR-16).

DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Disease Control and Prevention
Division of Viral Hepatitis

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

www.cdc.gov/hepatitis

- **Hepatitis B surface antigen (HBsAg):** A protein on the surface of hepatitis B virus; it can be detected in high levels in serum during acute or chronic hepatitis B virus infection. The presence of HBsAg indicates that the person is infectious. The body normally produces antibodies to HBsAg as part of the normal immune response to infection. HBsAg is the antigen used to make hepatitis B vaccine.
- **Hepatitis B surface antibody (anti-HBs):** The presence of anti-HBs is generally interpreted as indicating recovery and immunity from hepatitis B virus infection. Anti-HBs also develops in a person who has been successfully vaccinated against hepatitis B.
- **Total hepatitis B core antibody (anti-HBc):** Appears at the onset of symptoms in acute hepatitis B and persists for life. The presence of anti-HBc indicates previous or ongoing infection with hepatitis B virus in an undefined time frame.
- **IgM antibody to hepatitis B core antigen (IgM anti-HBc):** Positivity indicates recent infection with hepatitis B virus (≤6 mos). Its presence indicates acute infection.

Whom do I notify?

Cases should be reported to the **local health department** where the patient resides. If patient residence is unknown, report to your own local health department. Contact information is available at: **localhealth.nj.gov.**

If the individual does not live in New Jersey, report the case to the New Jersey Department of Health and Senior Services at: 609-826-5964.

In cases of **immediately reportable diseases** and other **emergencies** - if the local health department cannot be reached - the New Jersey Department of Health and Senior Services maintains an emergency after hours phone number: 609-392-2020.

What should I tell my patients who have reportable diseases?

For communicable disease control efforts to be maximally effective, health care providers should take time to advise their patients about the legal requirement of disease reporting, what the patient can expect to happen, and how the community may benefit.

Patients who are surprised when they receive a phone call from the local health department about their illness may be less than fully cooperative with the health department, and are often unhappy that their health care provider didn't advise them that they might receive a call from someone at the health department.

Instead of viewing this as a referral for health care follow-up, patients may view it as a breach of confidentiality because they weren't provided the opportunity to understand what is happening and why.

By working together, we can help improve the health of all residents of New Jersey.

Useful Links

Quick Reference Guide to Reportable Communicable Diseases and Work-Related Conditions in New Jersey
www.nj.gov/health/cd/documents/reportable_diseases.pdf

New Jersey Administrative Code Title 8, Chapter 57
www.lexisnexis.com/njoal
(N.J.A.C. updated quarterly)

Local Health Departments in New Jersey
localhealth.nj.gov

Communicable Disease Report Form (CDS-1)
www.state.nj.us/health/cd/forms.shtml

NJDHSS Communicable Disease Service
www.nj.gov/health/cd

HIPAA Privacy Rule & Public Health: Guidance from CDC and US Department of Health and Human Services
www.cdc.gov/mmwr/preview/mmwrhtml/su5201a1.htm

Chris Christie
Governor
Kim Guadagno
Lt. Governor

Mary E. O'Dowd, MPH
Commissioner

7/11 J0390

Reporting Communicable Diseases

To protect the public's health

The health care provider's role in reporting infectious diseases and outbreaks

New Jersey Department of
Health & Senior Services
Public Health Services Branch
Communicable Disease Service
PO Box 369
Trenton, NJ 08625

What is a reportable communicable disease?

A "reportable communicable disease" refers to any disease listed in New Jersey Administrative Code (N.J.A.C.) Title 8, Chapter 57. **See the link on the back panel of this brochure.**

Per these regulations, it is the responsibility of health care providers to notify the local health department where the patient resides.

How and why were these diseases selected?

The NJ Department of Health and Senior Services (NJDHSS) received recommendations from several national organizations, such as the Centers for Disease Control and Prevention (CDC) and the Council of State and Territorial Epidemiologists. NJDHSS also solicited input from New Jersey organizations and interest groups, such as the Medical Society of New Jersey and the New Jersey Hospital Association.

These diseases were selected because actions must be taken to stop further spread of the diseases OR information is needed to evaluate whether existing control measures are working.

Certain diseases must be reported IMMEDIATELY by phone, even if the diagnosis is based only on clinical suspicion. With these diseases there is NO TIME TO WAIT FOR LABORATORY CONFIRMATION. Because preventing the spread of these diseases is so important, the good judgment of the health care provider is enough to initiate a public health response.

Other diseases must be reported within 24 hours of diagnosis. Supporting laboratory work is desirable, but for some diseases, a report based solely upon clinical judgment is acceptable.

Of note, ALL OUTBREAKS (suspect or confirmed) must be reported IMMEDIATELY by phone.

Why is it important for health care providers to report diseases in a timely manner?

The earlier illnesses are reported, the faster public health authorities can act. This allows public health officials to conduct timely investigations and enact prevention and control measures quickly. Such measures may include embargoes of food products, prophylaxis of patient contacts, and closure of public swimming places.

What information must be in the report?

In addition to the name of the disease and the name of the patient, the regulations also require the reporting of the patient's address and telephone number; the patient's age or birth date, race, sex, and ethnicity; date of illness onset; results of laboratory tests that support the diagnosis; and, in the case of sexually transmitted diseases, any treatment provided.

Does HIPAA allow disease reporting?

The HIPAA Privacy Rule permits covered entities (i.e., health care providers, laboratories, and hospitals) to disclose protected health information, without authorization, to public health authorities who are legally authorized to receive such reports for the purpose of preventing or controlling disease, injury, or disability. Examples of public health authorities include the state and local health departments in NJ, and the CDC. **See the HIPAA link on the back panel of this brochure for more information.**

What do health departments do with this information?

Health departments use the reports in a variety of ways. First and foremost, the reports are used to trigger prompt implementation of disease control and prevention measures. When reports are compiled and analyzed, they may provide public health authorities with important information about a disease, including trends, risk factors, and whether existing disease prevention activities are working.

Why do I have to report when the laboratory has already reported the case?

For immediately reportable diseases, the answer is simple. The health care provider will be the first person to make the diagnosis or be the first health care professional to suspect that the illness is occurring. For the remaining reportable diseases, the health care provider often has clinical information that the laboratory doesn't have – information that often is critical for public health authorities to perform their duties in a timely and efficient fashion.

What is expected from a health care provider during a disease investigation?

Health care providers may be contacted by the local health department and asked to provide clinical or diagnostic information regarding a patient. They also may be asked to collect additional clinical specimens to confirm the diagnosis of cases and to participate in prevention activities, including administering vaccines and prophylactic antibiotics.

Quick Reference

Reporting Requirements for Communicable Diseases and Work-Related Conditions

(see New Jersey Administrative Code Title 8, Chapters 57 and 58)

Communicable Disease Service Disease Reporting Requirements and Regulations can be viewed at:
http://nj.gov/health/cd/reporting.shtml

Health care providers required to report: physicians, advanced practice nurses, physician assistants, and certified nurse midwives.

Administrators required to report: persons having control or supervision over a health care facility, correctional facility, school, youth camp, child care center, preschool, or institution of higher education.

Laboratory directors: For specific reporting guidelines, see NJAC 8:57-1.7.

CONFIRMED or SUSPECT CASES TELEPHONE IMMEDIATELY to the LOCAL HEALTH DEPARTMENT

- Anthrax
- Botulism
- Brucellosis
- Diphtheria
- Foodborne intoxications (including, but not limited to, ciguatera, paralytic shellfish poisoning, scombroid, or mushroom poisoning)
- *Haemophilus influenzae*, invasive disease
- Hantavirus pulmonary syndrome
- Hepatitis A, acute
- Influenza, novel strains only
- Measles
- Meningococcal invasive disease
- Outbreak or suspected outbreak of illness, including, but not limited to, foodborne, waterborne or nosocomial disease or a suspected act of bioterrorism
- Pertussis
- Plague
- Poliomyelitis
- Rabies (human illness)
- Rubella
- SARS-CoV disease (SARS)
- Smallpox
- Tularemia
- Viral hemorrhagic fevers (including, but not limited to, Ebola, Lassa, and Marburg viruses)

Cases should be reported to the **local health department** where the patient resides. If patient residence is unknown, report to your own local health department. Contact information is available at: **localhealth.nj.gov.**

If the individual does not live in New Jersey, report the case to the New Jersey Department of Health at: 609-826-5964.

In cases of **immediately reportable diseases** and other **emergencies** - if the local health department cannot be reached - the New Jersey Department of Health maintains an emergency after hours phone number: 609-392-2020.

July 2013
www.nj.gov/health/cd

REPORTABLE WITHIN 24 HOURS OF DIAGNOSIS to the LOCAL HEALTH DEPARTMENT

- Amoebiasis
- Animal bites treated for rabies
- Arboviral diseases
- Babesiosis
- Campylobacteriosis
- Cholera
- Creutzfeldt-Jakob disease
- Cryptosporidiosis
- Cyclosporiasis
- Diarrheal disease (child in a day care center or a foodhandler)
- Ehrlichiosis
- *Escherichia coli*, shiga toxin producing strains (STEC) only
- Giardiasis
- Hansen's disease
- Hemolytic uremic syndrome, post-diarrheal
- Hepatitis B, including newly diagnosed acute, perinatal and chronic infections, and pregnant women who have tested positive for Hep B surface antigen
- Influenza-associated pediatric mortality
- Legionellosis
- Listeriosis
- Lyme disease
- Malaria
- Mumps
- Psittacosis
- Q fever
- Rocky Mountain spotted fever
- Rubella, congenital syndrome
- Salmonellosis
- Shigellosis
- *Staphylococcus aureus*, with intermediate-level resistance (VISA) or high-level-resistance (VRSA) to vancomycin only
- Streptococcal disease, invasive group A
- Streptococcal disease, invasive group B, neonatal
- Streptococcal toxic shock syndrome
- *Streptococcus pneumoniae*, invasive disease
- Tetanus
- Toxic shock syndrome (other than Streptococcal)
- Trichinellosis
- Typhoid fever
- Varicella (chickenpox)
- Vibriosis
- Viral encephalitis
- Yellow fever
- Yersiniosis

REPORTABLE DIRECTLY to the NEW JERSEY DEPARTMENT OF HEALTH

Hepatitis C, acute and chronic, newly diagnosed cases only
Written report within 24 hours

HIV/AIDS
609-984-5940 or 973-648-7500
Written report within 24 hours

- AIDS
- HIV infection
- Child exposed to HIV perinatally

Sexually Transmitted Diseases
609-826-4869
Report within 24 hours

- Chancroid
- Chlamydia, including neonatal conjunctivitis
- Gonorrhea
- Granuloma inguinale
- Lymphogranuloma venereum
- Syphilis, all stages and congenital

Tuberculosis (confirmed or suspect cases)
609-826-4878
Written report within 24 hours

Occupational and Environmental Diseases, Injuries, and Poisonings
609-826-4920
Report within 30 days after diagnosis or treatment

- Work-related asthma (possible, probable, and confirmed)
- Silicosis
- Asbestosis
- Pneumoconiosis, other and unspecified
- Extrinsic allergic alveolitis
- Lead, mercury, cadmium, arsenic toxicity in adults
- Work-related injury in children (< age 18)
- Work-related fatal injury
- Occupational dermatitis
- Poisoning caused by known or suspected occupational exposure
- Pesticide toxicity
- Work-related carpal tunnel syndrome
- Other occupational disease

H5697

VACCINE INFORMATION STATEMENT

Hepatitis B Vaccine

What You Need to Know

Many Vaccine Information Statements are available in Spanish and other languages. See www.immunize.org/vis.

Hojas de Informacián Sobre Vacunas están disponibles en Español y en muchos otros idiomas. Visite http://www.immunize.org/vis

1 What is hepatitis B?

Hepatitis B is a serious infection that affects the liver. It is caused by the hepatitis B virus.

- In 2009, about 38,000 people became infected with hepatitis B.
- Each year about 2,000 to 4,000 people die in the United States from cirrhosis or liver cancer caused by hepatitis B.

Hepatitis B can cause:

Acute (short-term) illness. This can lead to:

- loss of appetite
- diarrhea and vomiting
- tiredness
- jaundice (yellow skin or eyes)
- pain in muscles, joints, and stomach

Acute illness, with symptoms, is more common among adults. Children who become infected usually do not have symptoms.

Chronic (long-term) infection. Some people go on to develop chronic hepatitis B infection. Most of them do not have symptoms, but the infection is still very serious, and can lead to:

- liver damage (cirrhosis)
- liver cancer
- death

Chronic infection is more common among infants and children than among adults. People who are chronically infected can spread hepatitis B virus to others, even if they don't look or feel sick. Up to 1.4 million people in the United States may have chronic hepatitis B infection.

Hepatitis B virus is easily spread through contact with the blood or other body fluids of an infected person. People can also be infected from contact with a contaminated object, where the virus can live for up to 7 days.

- A baby whose mother is infected can be infected at birth;
- Children, adolescents, and adults can become infected by:
  - contact with blood and body fluids through breaks in the skin such as bites, cuts, or sores;
  - contact with objects that have blood or body fluids on them such as toothbrushes, razors, or monitoring and treatment devices for diabetes;
  - having unprotected sex with an infected person;
  - sharing needles when injecting drugs;
  - being stuck with a used needle.

2 Hepatitis B vaccine: Why get vaccinated?

Hepatitis B vaccine can prevent hepatitis B, and the serious consequences of hepatitis B infection, including liver cancer and cirrhosis.

Hepatitis B vaccine may be given by itself or in the same shot with other vaccines.

Routine hepatitis B vaccination was recommended for some U.S. adults and children beginning in 1982, and for all children in 1991. Since 1990, new hepatitis B infections among children and adolescents have dropped by more than 95% – and by 75% in other age groups.

Vaccination gives long-term protection from hepatitis B infection, possibly lifelong.

3 Who should get hepatitis B vaccine and when?

Children and Adolescents

- Babies normally get 3 doses of hepatitis B vaccine:

1st Dose:	Birth
2nd Dose:	1-2 months of age
3rd Dose:	6-18 months of age

Some babies might get 4 doses, for example, if a combination vaccine containing hepatitis B is used. (This is a single shot containing several vaccines.) The extra dose is not harmful.

- Anyone through 18 years of age who didn't get the vaccine when they were younger should also be vaccinated.

Adults

- All unvaccinated adults at risk for hepatitis B infection should be vaccinated. This includes:
  - sex partners of people infected with hepatitis B,
  - men who have sex with men,
  - people who inject street drugs,
  - people with more than one sex partner,
  - people with chronic liver or kidney disease,
  - people under 60 years of age with diabetes,
  - people with jobs that expose them to human blood or other body fluids,

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

- household contacts of people infected with hepatitis B,
- residents and staff in institutions for the developmentally disabled,
- kidney dialysis patients,
- people who travel to countries where hepatitis B is common,
- people with HIV infection.

- Other people may be encouraged by their doctor to get hepatitis B vaccine; for example, adults 60 and older with diabetes. Anyone else who wants to be protected from hepatitis B infection may get the vaccine.
- Pregnant women who are at risk for one of the reasons stated above should be vaccinated. Other pregnant women who want protection may be vaccinated.

Adults getting hepatitis B vaccine should get 3 doses — with the second dose given 4 weeks after the first and the third dose 5 months after the second. Your doctor can tell you about other dosing schedules that might be used in certain circumstances.

4 Who should not get hepatitis B vaccine?

- Anyone with a life-threatening allergy to yeast, or to any other component of the vaccine, should not get hepatitis B vaccine. Tell your doctor if you have any severe allergies.
- Anyone who has had a life-threatening allergic reaction to a previous dose of hepatitis B vaccine should not get another dose.
- Anyone who is moderately or severely ill when a dose of vaccine is scheduled should probably wait until they recover before getting the vaccine.

Your doctor can give you more information about these precautions.

Note: You might be asked to wait 28 days before donating blood after getting hepatitis B vaccine. This is because the screening test could mistake vaccine in the bloodstream (which is not infectious) for hepatitis B infection.

5 What are the risks from hepatitis B vaccine?

Hepatitis B is a very safe vaccine. Most people do not have any problems with it.

The vaccine contains non-infectious material, and cannot cause hepatitis B infection.

Some mild problems have been reported:

- Soreness where the shot was given (up to about 1 person in 4).
- Temperature of 99.9°F or higher (up to about 1 person in 15).

Severe problems are extremely rare. Severe allergic reactions are believed to occur about once in 1.1 million doses.

A vaccine, like any medicine, could cause a serious reaction. But the risk of a vaccine causing serious harm, or death, is extremely small. More than 100 million people in the United States have been vaccinated with hepatitis B vaccine.

6 What if there is a moderate or severe reaction?

What should I look for?

- Any unusual condition, such as a high fever or unusual behavior. Signs of a serious allergic reaction can include difficulty breathing, hoarseness or wheezing, hives, paleness, weakness, a fast heart beat or dizziness.

What should I do?

- **Call** a doctor, or get the person to a doctor right away.
- **Tell** your doctor what happened, the date and time it happened, and when the vaccination was given.
- **Ask** your doctor, nurse, or health department to report the reaction by filing a Vaccine Adverse Event Reporting System (VAERS) form. Or you can file this report through the VAERS web site at **www.vaers.hhs.gov**, or by calling **1-800-822-7967**.

VAERS does not provide medical advice.

7 The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) was created in 1986.

Persons who believe they may have been injured by a vaccine can learn about the program and about filing a claim by calling **1-800-338-2382** or visiting the VICP website at **www.hrsa.gov/vaccinecompensation**.

8 How can I learn more?

- Ask your doctor They can give you the vaccine package insert or suggest other sources of information.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
  - Call **1-800-232-4636 (1-800-CDC-INFO)** or
  - Visit CDC's website at **www.cdc.gov/vaccines**

Vaccine Information Statement (Interim)

Hepatitis B Vaccine

2/2/2012

42 U.S.C. § 300aa-26

Office Use Only

Hepatitis B

Last updated March 2012

What is hepatitis B?

Hepatitis B is a contagious liver disease that results from infection with the hepatitis B virus. When first infected, a person can develop an "acute" infection, which can range in severity from a very mild illness with few or no symptoms to a serious condition requiring hospitalization.

Acute hepatitis B refers to the first 6 months after someone is infected to the hepatitis B virus. Some people are able to fight the infection and clear the virus. For others, the infection remains and is "chronic," or lifelong.

Chronic hepatitis B refers to the infection that occurs when the hepatitis B virus remains in a person's body. Over time, the infection can cause serious health problems.

What are the symptoms of hepatitis B?

Infants and young children usually show no symptoms.

In about 7 out of 10 older children and adults, short-term hepatitis B causes the following:

- Loss of appetite (not wanting to eat)
- Fever
- Tiredness
- Pain in muscles, joints, and stomach
- Nausea, diarrhea, and vomiting
- Dark urine
- Yellow skin and eyes

Symptoms of short-term illness usually appear 3 or 4 months after infection.

How serious is hepatitis B?

Hepatitis B can be very serious. Most people with short-term hepatitis B may feel sick for a few weeks to a several months. Some people get over the illness. For other people, the virus stays in their body for a life time.

People with lifelong hepatitis B usually don't have symptoms, but the virus causes liver damage over time. For these people, there is no cure but treatment can help prevent serious problems.

Each year, 3,000 to 5,000 people in the U.S. die from liver damage or liver cancer caused by hepatitis B.

Benefits of the hepatitis B vaccine

- Saves lives.
- Protects against serious disease.
- Prevents liver disease and cancer.
- Keeps others safe.

Side effects of the hepatitis B vaccine

The most common side effects are usually mild and include the following:

- Sore arm from the shot in up to 1 out of 4 people.
- Fever of 99.9 degrees or higher in about 1 out of 15 people.
- Tiredness and crankiness in about 1 out of 5 people.

How does hepatitis B spread?

Hepatitis B spreads through blood or other body fluids that contain small amounts of blood of an infected person. People can spread the virus even when they have no symptoms.

Babies and children can get hepatitis B in the following ways:

- At birth from their infected mother.
- From bites from an infected person.
- By touching open cuts or sores of an infected person.
- Through sharing toothbrushes or other personal items used by an infected person.
- From food that was chewed (for a baby) by an infected person.
- From ear piercing needles that were not cleaned well

The virus can live on objects for 7 days or more. Even if you don't see any blood, there could be virus on an object.

What is the hepatitis B vaccine?

The hepatitis B vaccine protects against getting hepatitis B. It is a copy of only one small part of the virus. The vaccine cannot give the infection. The hepatitis B vaccine protects children by preparing their bodies to fight the virus.

Almost all children (95 children out of 100) who get three to four doses of the vaccine will be protected from hepatitis B.

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DEPARTMENT OF HEALTH & HUMAN SERVICES·USA

CDC CENTERS FOR DISEASE CONTROL AND PREVENTION

AMERICAN ACADEMY OF FAMILY PHYSICIANS STRONG MEDICINE FOR AMERICA

American Academy of Pediatrics DEDICATED TO THE HEALTH OF ALL CHILDREN™

When should my child get the hepatitis B vaccine?

Children need three to four doses of the hepatitis B vaccine (depending on the brand of vaccine used) at the following ages for best protection:

- The first dose at birth (within 12 hours if the mother has hepatitis B infection);
- A second dose at 1 through 3 months; and
- A third dose at 6 through 18 months of age.

Some children may need a fourth dose. Talk to your child's doctor to find out how many shots your child needs.

Older children who did not get the vaccine as a baby should get it as soon as possible.

Why should my child get the hepatitis B vaccine?

Getting your child the hepatitis B vaccine protects him against serious disease.

Of the more than 1 million people in the United States living with life-long hepatitis B, most got the virus as a child. When infants and young children are infected with hepatitis B, they have a 90% chance of developing a life-long, chronic infection. One out of 4 of these children will have serious liver disease as an adult, including cancer.

Children and adults with life-long hepatitis B can pass on the virus to other people.

If my child does not get the hepatitis B vaccine, will he get the disease?

Children who do not get the vaccine for hepatitis B are at risk for infection. More than 1 million people in the U.S. have life-long hepatitis B. Most don't know it. Therefore, an unvaccinated child may be at risk of getting the disease from someone who has the virus and doesn't even know it.

A shot in the first days of life?

It's hard to imagine putting your newborn through the pain of a shot. But a little stick in the first day of life is an important first step to protecting your baby against a deadly disease.

All babies should get the first shot of hepatitis B vaccine before they leave the hospital. This shot acts as a safety net, reducing the risk of getting the disease from moms or family members who may not know they are infected with hepatitis B. And when a mom has hepatitis B, in addition to the hepatitis B vaccine, the baby should also get the hepatitis B immune globulin (HBIG) within the first 12 hours of life. HBIG is a medicine that gives a baby's body a "boost" or extra help to fight the virus as soon as he or she is born. The HBIG shot is only given to babies of mothers who have hepatitis B.

What can I do to protect my child from hepatitis B?

- ✔ Vaccinate your child on time.
- ✔ Talk with your child's doctor if you have questions.
- ✔ Keep a record of your child's vaccinations to make sure your child is up-to-date.

Is the hepatitis B vaccine safe?

The hepatitis B vaccine is very safe, and it is effective at preventing hepatitis B. Vaccines, like any medicine, can have side effects. But no serious side effects are known to be caused by the hepatitis B vaccine.

Most people who get the hepatitis B vaccine will have no side effects at all. Those that do occur are very mild, such as a low fever (less than 101 degrees) or a sore arm from the shot.

Where can I learn more about the hepatitis B vaccine?

To learn more about the hepatitis B vaccine or other vaccines, talk to your child's doctor.

Call **800-CDC-INFO** (800-232-4636) or go to ***http://www.cdc.gov/vaccines*** and check out the following resources:

- Parent's Guide to Childhood Immunization—Hepatitis B: ***http://www.cdc.gov/vaccines/pubs/parents-guide/default.htm***
- Infant Immunizations FAQs: ***http://www.cdc.gov/vaccines/parents/parent-questions.html***
- Vaccines website for parents: ***http://www.cdc.gov/vaccines/parents***

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and American Academy of Pediatrics strongly recommend all children receive the hepatitis B vaccine according to the recommended schedule.

Protect Your Baby for Life

Hepatitis B and Your Baby

Why should pregnant women be concerned about Hepatitis B?

Hepatitis B is a contagious liver disease that can be easily passed from a pregnant woman to her baby at birth. Fortunately, there is a vaccine to prevent babies from getting Hepatitis B.

How is Hepatitis B spread?

Hepatitis B is spread when blood, semen, or other body fluids from a person with the Hepatitis B virus enter the body of someone who is not infected. The virus is very infectious and is easily spread to others. This can happen through:

- An infected mother passing it to her baby at birth
- Sex with an infected person
- Direct contact with blood from an infected person, even in tiny amounts too small to see

What is Hepatitis B?

"Hepatitis" means inflammation of the liver. Hepatitis B is a liver disease that results from infection with the Hepatitis B virus. Some people are able to fight the infection and clear the Hepatitis B virus. For others, the virus remains in their body and becomes a chronic, or lifelong, illness. Over time, Hepatitis B can cause serious health problems.

How serious is Hepatitis B?

As many as1 in 4 people with Hepatitis B develop serious liver problems including liver damage, liver failure, and even liver cancer. Every year, approximately 3,000 people in the United States die from Hepatitis B-related liver disease.

Prevent Hepatitis B.
Get your baby vaccinated.

How common is Hepatitis B?

It is estimated that 350 million people worldwide and 1.2 million people in the United States are infected with Hepatitis B. For every 1,000 pregnant women that give birth each year, 1 to 2 of them have Hepatitis B.

Are babies at risk for Hepatitis B?

Yes. When a pregnant woman has Hepatitis B it can be spread easily to her baby. Babies and young children can also get Hepatitis B from close contact with family members or others who might be infected. Infants who become infected with Hepatitis B have a 90% chance of developing a lifelong, chronic infection.

Are pregnant women tested for Hepatitis B?

Yes. Many women do not know they are infected, since people with Hepatitis B often have no symptoms. As a result, all pregnant women are given a blood test for Hepatitis B as part of their prenatal care. The test is usually performed during the first prenatal visit. If a woman has not received prenatal care, then she will be tested at the hospital before she delivers her baby.

Why are women tested for Hepatitis B?

Pregnant women are routinely tested for Hepatitis B, along with other diseases. These tests are done to find health problems that can be prevented or treated in both a woman and her baby.

Can Hepatitis B be prevented?

Yes. A vaccine for Hepatitis B has been used for about 30 years. The vaccine has been recommended for infants beginning in 1991. Since then, experts believe that the vaccine has prevented more than half a million children in the United States from getting Hepatitis B.

When does my baby get the first dose of the Hepatitis B vaccine?

CDC recommends that the first dose of vaccine be given to your baby before leaving the hospital.

How many Hepatitis B doses does my baby need?

The vaccine is given as 3 or 4 shots, depending upon the brand of vaccine used. After the first shot is given in the hospital, the next shot is usually given at 1-2 months of age. The last shot is given between 6 months and 18 months of age. Ask your doctor when your baby needs to come back for the next shot in the series.

CDC recommends that babies get the first dose of the Hepatitis B vaccine before leaving the hospital.

Why are these shots important?

Vaccines are one of the most important and effective ways to prevent diseases. Millions of babies have received Hepatitis B shots in the U.S. Experts believe that this vaccine has helped to reduce the number of children getting Hepatitis B by more than 90% over the last 20 years.

For more information

Talk to your health professional, call your health department, or visit www.cdc.gov/hepatitis.

DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Disease Control and Prevention
Division of Viral Hepatitis

www.cdc.gov/hepatitis

October 2010

Publication No. 22-0427

Proteja a su bebé para toda la vida

La hepatitis B y su bebé

¿Por qué deberían las mujeres embarazadas preocuparse por la hepatitis B?

La hepatitis B es una enfermedad hepática contagiosa que se puede transmitir fácilmente de la mujer embarazada al bebé en el parto. Afortunadamente, existe una vacuna para evitar que los bebés contraigan hepatitis B.

¿Cómo se transmite la hepatitis B?

La hepatitis B se transmite cuando la sangre, el semen u otro líquido corporal de una persona que tiene el virus de la hepatitis B ingresa en el cuerpo de otra persona que no está infectada. El virus es muy infeccioso y se transmite fácilmente de una persona a otra. Esto puede suceder de las siguientes maneras:

- La madre infectada transmite el virus al bebé en el parto
- Por la relación sexual con una persona infectada
- Por contacto directo con la sangre de una persona infectada, incluso en pequeñas cantidades imperceptibles a la vista

Spanish – For pregnant women

¿Qué es la hepatitis B?

"Hepatitis" significa inflamación del hígado. La hepatitis B es una enfermedad hepática originada por la infección con el virus de la hepatitis B. Algunas personas pueden combatir la infección y eliminar el virus de la hepatitis B. En otras, el virus permanece en su organismo y da lugar a una enfermedad crónica o de por vida. Con el tiempo, la hepatitis B puede causar graves problemas de salud.

¿Cuán grave es la hepatitis B?

Una de cada 4 personas con hepatitis B desarrolla problemas hepáticos graves, entre ellos, daño hepático, insuficiencia hepática e incluso cáncer de hígado. Todos los años, aproximadamente 3,000 personas en los Estados Unidos mueren a causa de enfermedad hepática relacionada con la hepatitis B.

Prevenga la hepatitis B.
Vacune a su bebé.

¿Cuán común es la hepatitis B?

Se estima que 350 millones de personas en el mundo y 1.2 millones de personas en los Estados Unidos están infectadas con hepatitis B. Por cada 1,000 mujeres embarazadas que dan a luz cada año, 1 de cada 2 tiene hepatitis B.

¿Corren los bebés riesgo de contraer la hepatitis B?

Sí. Cuando una mujer embarazada tiene hepatitis B, el bebé se puede contagiar fácilmente. Los bebés y los niños pequeños también pueden contraer la hepatitis B mediante el contacto cercano con familiares u otras personas que pudieran estar infectadas. Los bebés que se infectan con hepatitis B tienen un 90% de probabilidades de desarrollar una infección crónica de por vida.

¿Se les realiza a las mujeres embarazadas un análisis de detección de hepatitis B?

Sí. Muchas mujeres no saben que están infectadas porque la hepatitis B suele no tener síntomas. En consecuencia, a todas las mujeres embarazadas se les realiza un análisis de sangre para detectar la hepatitis B como parte de su atención prenatal. El análisis generalmente se hace en la primera consulta médica prenatal. Si una mujer no recibió atención prenatal, se le realizará el análisis en el hospital antes de dar a luz.

¿Por qué se les realiza a las mujeres un análisis de detección de hepatitis B?

Para las mujeres embarazadas el análisis de hepatitis B es de rutina, al igual que el análisis de detección de otras enfermedades. Estos análisis se realizan para descubrir problemas de salud que se pueden prevenir o tratar tanto en la mujer como en el bebé.

Publication No. 22-0428

¿Se puede prevenir la hepatitis B?

Sí. Ya hace unos 30 años que se viene utilizando una vacuna para la hepatitis B. Desde 1991 se recomienda aplicar la vacuna a los bebés. Desde esa fecha, los expertos consideran que la vacuna ha logrado evitar que más de medio millón de niños en los Estados Unidos contraigan hepatitis B.

¿Cuándo se le aplica a mi bebé la primera dosis de la vacuna contra la hepatitis B?

Los Centros para el Control y la Prevención de Enfermedades (CDC) ecomiendan que el bebé reciba la primera dosis de la vacuna antes de salir del hospital.

¿Cuántas dosis de la vacuna contra la hepatitis B necesita mi bebé?

Se aplican 3 ó 4 inyecciones de la vacuna, según la marca utilizada. Después de la primera aplicación de la vacuna en el hospital, la siguiente aplicación generalmente se realiza cuando el bebé tiene de 1 a 2 meses. La última aplicación se realiza cuando el bebé tiene entre 6 y 18 meses. Pregúntele a su médico cuándo le corresponde recibir la siguiente aplicación de la vacuna a su bebé.

Los CDC recomiendan que los bebés reciban la primera dosis de la vacuna contra la hepatitis B antes de salir del hospital.

¿Por qué son importantes estas aplicaciones?

Las vacunas son una de las formas más importantes y eficaces de prevenir las enfermedades. La vacuna contra la hepatitis B se ha aplicado a millones de bebés en los EE. UU. Los expertos consideran que en los últimos 20 años esta vacuna ha servido para reducir en más del 90% la cantidad de niños que contraen hepatitis B.

Para obtener más información

Hable con su profesional de la salud, llame al departamento de salud o visite www.cdc.gov/hepatitis.

DEPARTAMENTO DE SALUD Y SERVICIOS HUMANOS
Centros para el Control y la Prevención de Enfermedades
División de Hepatitis Viral

www.cdc.gov/hepatitis

Octubre de 2010

Protect Your Baby for Life

When a Pregnant Woman Has Hepatitis B

Why should pregnant women be concerned about Hepatitis B?

Hepatitis B is a serious liver disease that can be easily passed to others. It is important for a woman to find out if she has Hepatitis B, so she can get medical care. It is also possible for a pregnant woman with Hepatitis B to pass the virus to her baby at birth. Fortunately, there is a vaccine to prevent babies from getting Hepatitis B.

What is Hepatitis B?

"Hepatitis" means inflammation of the liver. Hepatitis B is a contagious liver disease that results from infection with the Hepatitis B virus. When a person becomes infected, the Hepatitis B virus can stay in the person's body for the rest of his or her life and cause serious liver problems.

Can Hepatitis B be spread to babies?

Yes. The Hepatitis B virus can be spread to a baby during childbirth. This can happen during a vaginal delivery or a c-section.

How else is Hepatitis B spread?

Hepatitis B can also be spread when blood, semen, or other bodily fluids from a person with the virus enter the body of someone who is not infected. The virus is very infectious and is passed easily through breaks in the skin or in soft tissues such as the nose, mouth, and eyes.

This can happen through direct contact with blood from an infected person, even in tiny amounts too small to see. Hepatitis B can also be spread through sex with an infected person.

CDC recommends that babies get the HBIG shot and the first dose of Hepatitis B vaccine within 12 hours of being born.

How serious is Hepatitis B?

When babies become infected with Hepatitis B, they have a 90% chance of developing a lifelong, chronic infection. As many as 1 in 4 people with chronic Hepatitis B develop serious health problems. Hepatitis B can cause liver damage, liver disease, and liver cancer.

How common is Hepatitis B?

About 350 million people worldwide and 1.2 million people in the United States are infected with Hepatitis B.

Can doctors prevent a baby from getting Hepatitis B?

Yes. Babies born to women with Hepatitis B get two shots soon after birth. One is the first dose of the Hepatitis B vaccine and the other shot is called HBIG. The two shots help prevent the baby from getting Hepatitis B. The shots work best when they are given within 12 hours after being born.

What is HBIG?

HBIG is a medicine that gives a baby's body a "boost" or extra help to fight the virus as soon as he or she is born. The HBIG shot is only given to babies of mothers who have Hepatitis B.

How can I make sure my family is protected from Hepatitis B?

Get everyone tested for Hepatitis B
Your baby's father and everyone else who lives in your house should go to the doctor or clinic to be tested. Testing your family members helps to tell if they have Hepatitis B. If they do not have Hepatitis B, the doctor will talk to them about getting the Hepatitis B vaccine to protect them from getting the infection.

Cover cuts and sores
Since Hepatitis B is spread through blood, people with Hepatitis B should be careful not to expose other people to things that could have their blood on them. It is important not to share personal items such as razors, nail clippers, toothbrushes, or glucose monitors. Cuts and sores should be covered while they are healing.

Do not chew food for your baby
Tiny amounts of blood can sometimes be in a person's mouth. Do not pre-chew food before you feed it to your baby.

Publication No. 22-0432

How many Hepatitis B shots does my baby need?

Your baby will get 3 or 4 shots, depending on which brand of vaccine is used. After the first dose is given in the hospital, the next dose is given at 1-2 months of age. The last dose is usually given by the time your baby is one year old. Ask your doctor or nurse when your baby needs to come back for each shot.

Does my baby need all the shots?

All the Hepatitis B shots are necessary to help keep your baby from getting Hepatitis B.

Prevent Hepatitis B.
Get your baby vaccinated.

How do I know my baby is protected?

After getting all the Hepatitis B shots, your doctor will test your baby's blood. The blood test tells you and your doctor that your baby is protected and does not have Hepatitis B. The blood test is usually done 1-2 months after the last shot. Be sure to bring your baby back to your doctor for this important blood test.

Hepatitis B is not spread by:

Breastfeeding
It is safe for you to breastfeed your baby. You cannot give your baby Hepatitis B from breast milk.

Cooking and eating
It is safe for you to prepare and eat meals with your family. Hepatitis B is not spread by sharing dishes, cooking or eating utensils, or drinking glasses.

Hugging and kissing
You can hug and kiss your baby, family members, or others close to you. You cannot give anyone Hepatitis B from hugging and kissing them. Also, Hepatitis B is not spread through sneezing or coughing.

For more information

Talk to your health professional, call your health department, or visit www.cdc.gov/hepatitis

DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Disease Control and Prevention
Division of Viral Hepatitis

www.cdc.gov/hepatitis

October 2010

Proteja a su bebé para toda la vida

Cuando una mujer embarazada tiene hepatitis B

¿Por qué deberían las mujeres embarazadas preocuparse por la hepatitis B?

La hepatitis B es una enfermedad hepática grave que se puede transmitir fácilmente a los demás. Es importante que una mujer averigüe si tiene hepatitis B para que pueda recibir atención médica. También es posible que una mujer embarazada que tiene hepatitis B le transmita el virus a su bebé en el parto. Afortunadamente, existe una vacuna para evitar que los bebés contraigan hepatitis B.

Spanish – For pregnant women with Hepatitis B

¿Qué es la hepatitis B?

"Hepatitis" significa inflamación del hígado. La hepatitis B es una enfermedad hepática contagiosa originada por la infección con el virus de la hepatitis B. Cuando una persona se infecta, el virus de la hepatitis B puede permanecer en su organismo durante el resto de su vida y causar problemas hepáticos graves.

¿Se puede transmitir la hepatitis B a los bebés?

Sí. El virus de la hepatitis B se puede transmitir al bebé en el momento del parto. Esto puede suceder en un parto vaginal o en una cesárea.

¿De qué otra forma se transmite la hepatitis B?

La hepatitis B también se puede transmitir cuando la sangre, el semen u otro líquido corporal de una persona que tiene el virus ingresa en el cuerpo de otra persona que no está infectada. El virus es muy infeccioso y se puede transmitir fácilmente a través de cortes en la piel o en los tejidos blandos como los de la nariz, la boca y los ojos.

Esto puede suceder por contacto directo con la sangre de una persona infectada, incluso en pequeñas cantidades imperceptibles a la vista. La hepatitis B también se puede transmitir al mantener relaciones sexuales con una persona infectada.

Los Centros para el Control y la Prevención de Enfermedades (CDC) recomiendan que los bebés reciban la inyección de IGHB y la primera dosis de la vacuna contra la hepatitis B dentro de las 12 horas de su nacimiento.

¿Cuán grave es la hepatitis B?

Cuando los bebés se infectan con hepatitis B, tienen un 90% de probabilidades de desarrollar una infección crónica de por vida. Una de cada 4 personas con hepatitis B crónica desarrolla graves problemas de salud. La hepatitis B puede causar daño hepático, enfermedad hepática y cáncer de hígado.

¿Cuán común es la hepatitis B?

Alrededor de 350 millones de personas en el mundo y 1.2 millones de personas en los Estados Unidos están infectadas con hepatitis B.

¿Pueden los médicos evitar que un bebé contraiga hepatitis B?

Sí. Los bebés cuyas madres tienen hepatitis B reciben dos inyecciones poco después de nacer. Una es la primera dosis de la vacuna contra la hepatitis B y la otra es una inyección de inmunoglobulina antihepatitis o IGHB. Las dos inyecciones sirven para evitar que el bebé contraiga hepatitis B y su efecto óptimo se logra cuando se administran dentro de las 12 horas posteriores al parto.

¿Qué es la IGHB?

La inmunoglobulina antihepatitis o IGHB es un medicamento que "refuerza" el organismo del bebé o le brinda ayuda extra para combatir el virus poco después del nacimiento. La inyección de IGHB se aplica únicamente a los bebés cuyas madres tienen hepatitis B.

¿Qué puedo hacer para asegurarme de que mi familia esté a salvo de la hepatitis B?

Ocúpese de que todos se hagan un análisis de hepatitis B
El padre de su bebé y todas las demás personas que viven en su casa deben ver al médico o ir a una clínica para hacerse el análisis. El análisis sirve para determinar si los miembros de la familia tienen hepatitis B. Si no tienen hepatitis B, el médico les aconsejará aplicarse la vacuna contra la hepatitis B para protegerse de contraer la infección.

No deje cortes y llagas al descubierto
Como la hepatitis B se transmite a través de la sangre, las personas que tienen hepatitis B deben tener cuidado de no exponer a otras personas a cosas con las que podrían entrar en contacto con su sangre. Es importante no compartir elementos personales como máquinas de rasurar, cortaúñas, cepillos de dientes o monitores de glucosa. Los cortes y las llagas deben estar cubiertos mientras cicatrizan.

No mastique los alimentos que va a darle a su bebé
En la boca de una persona a veces puede haber pequeñas cantidades de sangre. No mastique la comida antes de dársela a su bebé.

¿Cuántas aplicaciones de la vacuna contra la hepatitis B necesita mi bebé?

A su bebé se le aplicarán entre 3 y 4 inyecciones, según la marca de la vacuna utilizada. Después de la aplicación de la primera dosis en el hospital, la siguiente dosis generalmente se administra cuando el bebé tiene de 1 a 2 meses. La última dosis normalmente se administra cuando el bebé tiene un año de vida. Pregúntele a su médico o enfermero cuándo le corresponde recibir la siguiente aplicación de la vacuna a su bebé.

¿Se le tienen que aplicar todas las inyecciones a mi bebé?

Sí. Todas las inyecciones son necesarias para evitar que su bebé contraiga la hepatitis B.

Prevenga la hepatitis B.

Vacune a su bebé.

¿Cómo sé que mi bebé está protegido?

Cuando el bebé haya recibido todas las aplicaciones de la vacuna contra la hepatitis B, el médico le realizará un análisis de sangre. El análisis de sangre le indica a usted y a su médico que el bebé está protegido y no tiene hepatitis B. El análisis de sangre generalmente se realiza entre 1 y 2 meses después de la última aplicación. No olvide llevar a su bebé a esta consulta médica para realizar este importante análisis de sangre.

La hepatitis B no se trasmite por:

Dar el pecho
Puede amamantar a su bebé sin correr ningún riesgo. La leche materna no transmite el virus de la hepatitis B al bebé.

Cocinar y comer
No hay ningún problema en preparar las comidas y compartir la mesa con su familia. La hepatitis B no se contagia por compartir platos, utensilios para cocinar o comer, o vasos.

Abrazar y besar
Puede abrazar y besar a su bebé, a sus familiares o a otras personas cercanas. No puede transmitirle a ninguna persona la hepatitis B por abrazarla y besarla. La hepatitis B tampoco se contagia a través de los estornudos o la tos.

Para obtener más información

Hable con su profesional de la salud, llame al departamento de salud o visite www.cdc.gov/hepatitis

DEPARTAMENTO DE SALUD Y SERVICIOS HUMANOS
Centros para el Control y la Prevención de Enfermedades
División de Hepatitis Viral

www.cdc.gov/hepatitis

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Is the hepatitis B vaccine safe?

Hepatitis B vaccine is very safe. The most common side effect is soreness at the injection site or slight fever. Serious side effects are rare.

Where can I get more information?

- Your Health Care Provider
- New Jersey Department of Health
  Vaccine Preventable Disease Program
  609-826-4860
  http://nj.gov/health/cd/vpdp/index.shtml
- Centers for Disease Control and Prevention (CDC)
  http://www.cdc.gov/hepatitis/B/index.htm
- Immunization Action Coalition (IAC)
  www.immunize.org/birthdose

To print this brochure, please visit:

http://nj.gov/health/cd/hepatitisb/index.shtml

http://nj.gov/health/cd/hepatitisb_perinatal/index.shtml

Start protecting your baby at birth with the first dose of the hepatitis B vaccine.

Please consult with your health care provider for your specific needs. This brochure is not a substitute for medical advice.

Special thanks to the Washington State Department of Health for permission to modify this brochure.

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Start protecting your baby at birth with hepatitis B vaccine

What is hepatitis B disease?

Hepatitis B disease is caused by a virus that attacks the liver. It can lead to severe illness, liver cancer and, in some cases, death.

Many people who get hepatitis B do not look or feel sick. Others may have a loss of appetite, stomach pain, extreme tiredness or yellowing of the skin or eyes.

How is hepatitis B spread?

Hepatitis B virus can spread by:

- contact with blood or certain body fluids of an infected person
- an infected mother to her newborn during childbirth
- using unsterile needles for injecting drugs, body piercing or tattooing
- using contaminated razors, toothbrushes, wash cloths and nail clippers
- unprotected sex
- human bites
- living with someone who has hepatitis B infection

Hepatitis B is **NOT** spread through food or water, kissing, sharing eating utensils, breastfeeding or coughing. The virus is not found in sweat, tears or urine.

Why should pregnant women be concerned about hepatitis B?

A mother with hepatitis B can spread the disease to her newborn. Babies are less able to fight hepatitis B infection than older children or adults. If a baby is infected, there is a 90% chance he or she will develop chronic hepatitis B, the most serious form of the disease.

Chronic hepatitis B can eventually lead to serious health problems, including liver damage, liver cancer, and even death.

How could my baby come in contact with the hepatitis B virus?

In many cases, the hepatitis B virus passes from mother to baby during birth when the mother does not know she is infected. In other cases, the virus is spread to the baby during close contact with an infected family member, caregiver or friend. Most people who are infected with hepatitis B do not feel sick and have no idea they carry this virus.

You and your baby are at higher risk for hepatitis B infection if you, your parents or someone you live with was born in:

Africa
Alaska
Eastern Europe
Middle East
South America
South Asia
Western Pacific

What can I do to protect my baby?

Get your baby vaccinated! The hepatitis B vaccine is given as 3 or 4 shots, depending upon the brand of vaccine used. After the first shot is given in the hospital, the next shot is usually given at 1-2 months of age. The last shot is given between 6 months and 18 months of age. Ask your doctor when your baby needs to come back for the next shot in the series.

Infants born to mothers with hepatitis B infection will need to receive the hepatitis B immunoglobulin (HBIG) shot ***AND*** the first dose of hepatitis B vaccine within 12 hours of birth.

CDC recommends that all babies get the first dose of the hepatitis B vaccine before leaving the hospital.

RESOURCES

NEW JERSEY DEPARTMENT OF HEALTH

New Jersey Department of Health Vaccine Preventable Disease Program
609-826-4860
http://nj.gov/health/cd/hepatitisb/index.shtml
http://nj.gov/health/cd/hepatitisb_perinatal/index.shtml

New Jersey Department of Health Office of Local Health
Directory of Local Health Departments
http://www.nj.gov/health/lh/directory/lhdselectcounty.shtml

New Jersey Immunization Information System
https://njiis.nj.gov/njiis/

Healthy New Jersey 2020
http://www.state.nj.us/health/chs/hnj2020/objectives.shtml

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)

Centers for Disease Control and Prevention (CDC) Information for Healthcare Professionals on Perinatal Hepatitis B Transmission
http://www.cdc.gov/hepatitis/HBV/PerinatalXmtn.htm

Delivery Hospital Policies and Procedures to Prevent Perinatal Hepatitis B Virus Transmission
http://www.cdc.gov/hepatitis/HBV/PDFs/DeliveryHospitalPreventPerinatalHBVTransmission.pdf

Full ACIP recommendation - A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5416a1.htm

CDC Vaccine Information Statements (VIS)
http://www.cdc.gov/vaccines/hcp/vis/index.html

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES

Combating the Silent Epidemic of Viral Hepatitis: Action Plan for the Prevention, Care and Treatment of Viral Hepatitis
http://www.hhs.gov/ash/initiatives/hepatitis/

IMMUNIZATION ACTION COALITION (IAC)

Birth Dose
www.immunize.org/birthdose

Protect Newborns
http://www.immunize.org/protect-newborns/

Hospital Honor Roll
http://www.immunize.org/honor-roll/birthdose/

OTHER ORGANIZATIONS

Asian Liver Center Stanford School of Medicine
http://liver.stanford.edu/

Healthy People 2020
www.healthypeople.gov

Hepatitis B Foundation
http://hepb.org/index.html

HepB Moms
http://hepbmoms.org/

HepB United
http://hepbunited.org/

National Quality, Forum (NQF) Measure 0475: "Hepatitis B Vaccine Coverage among All Live Newborn Infants Prior to Hospital or Birthing Facility Discharge"
www.qualityforum.org/MeasureDetails.aspx?actid=0&SubmissionId=287#k=475

Parents of Kids with Infectious Diseases
www.pkids.org