Perinatal Hepatitis B: A National Perspective

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Perinatal Hepatitis B Prevention Program
Texas Perinatal Hepatitis B Summit
Austin, Texas
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Presentation Objectives

- Describe the Perinatal Hepatitis B Prevention Program’s required program objectives
- Identify national progress toward achieving the required Perinatal Hepatitis B Prevention Program (PHBPP) objectives
- Identify areas of opportunities to improve PHBPP outcomes
Why is Prevention of Prenatal Hepatitis B Important?

- Infants born to Hepatitis B infected women are at high risk of Hepatitis B virus (HBV) infection.
- 90% of HBV infected infants will develop chronic HBV infection compared to < 5% of people infected at age ≥ 5 years
- Infected infants are usually asymptomatic
- Chronically infected persons are the main reservoir for continued transmission
- Approximately 25% of persons chronically infected as infants will die prematurely from cirrhosis or liver cancer

National Goal to Eliminate Mother to Child Transmission of Hepatitis B

- HHS released original plan in 2011
- Updated in 2014
- Six Priority Areas
- Priority Area 4: Eliminating Transmission of Vaccine-Preventable Viral Hepatitis
  - Goal 4.1: Eliminate mother to child transmission
  - Corinna Dan will present on efforts towards achieving Goal 4.1 tomorrow
Perinatal Hepatitis B Program Background

- Established in 1990
- Funded in CDC Immunization Cooperative Agreements (Section 317 funding)
- Programs in 64 jurisdictions (50 states, 6 cities, 5 territories & 3 freely associated island nations)
- Program works collaboratively with other CDC centers (NCHHSTP)
- Program Required Objectives are based upon selected ACIP recommendations (MMWR, December 23, 2005)
PHBPP Required Objectives (2013-2018)

- Identify HBsAg-positive pregnant women
- Assure Hepatitis B virus exposed infants obtain ACIP recommended Post-exposure Prophylaxis at birth
- Assure HBV exposed infants complete the ACIP recommended hepatitis B vaccine series
- Assure HBV exposed infant obtains Post Vaccination Serologic Testing (PVST)

Source: CDC’s Immunization Program Operations Manual (IPOM) Unit C
OUTCOMES FOR THE PHBPP REQUIRED OBJECTIVES
Identified births to Total Expected Births National PHBPP: 2008-2013

Source: CDC Peritable 2008-2013
Identified births to Total Expected Births Texas PHBPP: 2008-2014

### National Infant Outcomes

<table>
<thead>
<tr>
<th>US Birth Cohort (BC)</th>
<th>Percent of BC with ACiP Post Exposure Prophylaxis (PEP) at Birth</th>
<th>Percent of infants with PEP &amp; Hep B series complete by 12 months</th>
<th>Enrolled infants with Post Vaccination Testing by end of reporting period 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Cohort 2010</td>
<td>96%</td>
<td>84%</td>
<td>60%</td>
</tr>
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<td>84%</td>
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Source: CDC Peritable 2008-2013
### Texas Infant Outcomes

<table>
<thead>
<tr>
<th>Texas Birth Cohort (BC)</th>
<th>Percent of BC with ACIP Post Exposure Prophylaxis (PEP) at Birth</th>
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<th>Enrolled infants with Post Vaccination Testing by end of reporting period</th>
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<tr>
<td>Birth Cohort 2010</td>
<td>95%</td>
<td>85%</td>
<td>62%</td>
</tr>
<tr>
<td>Birth Cohort 2011</td>
<td>99%</td>
<td>80%</td>
<td>59%</td>
</tr>
<tr>
<td>Birth Cohort 2012</td>
<td>96%</td>
<td>77%</td>
<td>57%</td>
</tr>
<tr>
<td>Birth Cohort 2013</td>
<td>96%</td>
<td>83%</td>
<td>65%</td>
</tr>
<tr>
<td>Birth Cohort 2014</td>
<td>98%</td>
<td>87%</td>
<td>75%</td>
</tr>
</tbody>
</table>

*Texas PHBPP Annual Report 2010-2014*
HBV exposed infants without ACIP recommended PEP at Birth

A Lyrical Reminder:

“Don’t Give Up on Us- Baby(ies)… Don’t make a wrong seem right… We’re still worth one more try…”

-David Soul 1976

### National Outcomes: Infants without ACIP Recommended PEP at Birth

<table>
<thead>
<tr>
<th>US Birth Cohort</th>
<th>Percent of BC without Recommended PEP at Birth</th>
<th>Percent of infants without PEP that completed Hep B series by 12 months of age</th>
<th>Percent of Infants without PEP obtained PVST by end of reporting period 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Cohort 2011</td>
<td>4% (N=434)</td>
<td>55% (N=240)</td>
<td>30% (N=131)</td>
</tr>
<tr>
<td>Birth Cohort 2012</td>
<td>4% (N=418)</td>
<td>66% (N=276)</td>
<td>34% (N=142)</td>
</tr>
<tr>
<td>Birth Cohort 2013</td>
<td>4% (N=426)</td>
<td>58% (N=259)</td>
<td>33% (N=140)</td>
</tr>
</tbody>
</table>

Source: CDC Peritable 2011-2013
## Texas Outcomes: Infants without ACIP Recommended PEP at Birth

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<tr>
<th>Texas Birth Cohort</th>
<th>Percent of BC without Recommended PEP at Birth</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Birth Cohort 2011</td>
<td>1% (N=4)</td>
<td>0% (N=0)</td>
<td>0% (N=0)</td>
</tr>
<tr>
<td>Birth Cohort 2012</td>
<td>4% (N=21)</td>
<td>10% (N=2)</td>
<td>10% (N=2)</td>
</tr>
<tr>
<td>Birth Cohort 2013</td>
<td>4% (N=25)</td>
<td>12% (N=3)</td>
<td>12% (N=3)</td>
</tr>
<tr>
<td>Birth Cohort 2014</td>
<td>2% (N=15)</td>
<td>60% (N=9)</td>
<td>47% (N=7)</td>
</tr>
</tbody>
</table>

Source: Texas PHBPP Annual Report 2011-2014
AN OBSERVATION FROM THE 2015 ANNUAL REPORT

ANNUAL IMMUNIZATION PROGRESS REPORT FOR CY2015
ANNUAL ASSESSMENT OF PROGRESS TOWARDS GOALS TO PREVENT PERINATAL HBV TRANSMISSION 2014 & 2013 BIRTH COHORTS

GRANTEE: TEXAS

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Click to open Guidance for Perinatal Hep B Assessment report. You may also click on the Guidance link next to questions that have guidance information.

SECTION ONE: POLICY

(ALL SECTION ONE QUESTIONS LISTED ARE NOW OPTIONAL. PLEASE LEAVE ANSWER BLANK IF YOU CHOOSE NOT TO ANSWER THE QUESTION)
Recommended Immunization Schedules for Persons Aged 0 Through 18 Years
UNITED STATES, 2016

FIGURE 2. Catch-up immunization schedule for persons aged 4 months through 18 years who start late or who are more than 1 month behind —United States, 2016.

The figure below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed after the last dose. Always use this table in conjunction with Figure 1 and the footnotes that follow.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Minimum Age for Dose 1</th>
<th>Minimum Interval Between Doses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dose 1 to Dose 2</td>
<td>Dose 2 to Dose 3</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Birth 4 weeks</td>
<td>8 weeks and at least 16 weeks after first dose. Minimum age for the final dose is 24 weeks.</td>
</tr>
</tbody>
</table>
Minimal Intervals and Valid doses

• The minimum age for the final dose of hepatitis B vaccine is 24 weeks (168 days of age).
• The minimum age for the final dose of hepatitis B vaccine with the 4 day grace period applied is 164 days of age.
• If the final dose of the hepatitis B vaccine series is administered before 164 days of age it is considered invalid and the infant must be revaccinated after 24 weeks of age.
• Hepatitis B vaccine Birth dose administered to a LBW infant (<2,000g) should not be counted as part of the hepatitis B vaccine series.
Opportunities to Improve PHBPP Outcomes

- Identification of HBsAg-positive pregnant women by PHBPP
- Post Vaccination Serologic Testing (PVST)
- Improving outcomes of infants that did not obtain the ACIP recommended PEP at birth
- Assuring all hepatitis B vaccine doses in the series are valid doses
Improving Infant & Program Outcomes

To learn more and to get ideas on how to improve outcomes of HBV exposed infants attend the following presentations at the Summit:

- Elimination of Perinatal Hepatitis B Transmission & the National Viral Hepatitis Action Plan
  - Corinna Dan, HHS

- Strengthening laboratory surveillance and reporting of HBsAg in pregnant women
  - Alaya Koneru, CDC

- Eliminating Transmission of Vaccine-Preventable Hepatitis B between positive hepatitis B infected mothers and their infants in Hospitals
  - Lynn Pollock, Immunization Action Coalition
Improving Infant & Program Outcomes (Continued)

- When administering immunizations or collecting immunization histories on infants double check and make sure that all doses in series are valid doses
- Increase case management contact to infants without PEP at birth
- Find out reasons why infants did not obtain recommended PEP at birth
  - What are the reasons?
  - Are there common reasons among the infants?
  - Can the program implement activities to address the reasons?
2005 ACIP Recommendations
http://www.cdc.gov/mmwr/pdf/rr/rr5416.pdf

Perinatal Hepatitis B Coordinators List
http://www.cdc.gov/hepatitis/partners/perihepbcoord.htm

Coordinator Net Conferences (2014)
http://www.cdc.gov/vaccines/ed/hep-b/

IAC Website: Birth dose initiative
http://www.immunize.org/protect-newborns/

CDC Pink Book
http://www.cdc.gov/vaccines/pubs/pinkbook/hepb.html

ACIP Recommended Immunization Schedule 2016
http://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html

Asian Liver Center
http://liver.stanford.edu/

HHS Viral Hepatitis Action Plan
Contact Information:
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For more information please contact Centers for Disease Control and Prevention

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Visit: www.cdc.gov | Contact CDC at: 1-800-CDC-INFO or www.cdc.gov/info

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.