The Hep B Moms Program: A Primary Care Model for Management of Hepatitis B in Pregnancy

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Charles B. Wang Community Health Center (CBWCHC)
Charles B Wang Community Health Center (CBWCHC) in NYC

- Non-Profit & Federally Qualified Health Center
- Multidisciplinary care - primary care (adult, pediatric, OB/GYN), specialists, social work, dental, mental health
- Serve more than 50,000 patients and 275,000 service visits in 2015
- Research and Evaluation Department
- Health Education, Marketing & Communications Departments
How many chronic hepatitis B (HBV) patients do we see?

Serves a largely Chinese population in greater New York with a high prevalence of HBV

1 in 8 (~13%) CBWCHC patients have current infection (HBsAg+)

1 in 2 (~52%) CBWCHC patients have been exposed to HBV at one point in their life (anti-HBc+)

The OB/ GYN dept at CBWCHC sees…
~1100 pregnancies a year
~13% with maternal HBsAg+

Active CHB patients were seen for an annual physical or follow-up visit from 9/1/15 to 9/1/2017

**HBCP = Hep B Care Program for high risk uninsured chronic HBV patients include care management and subsidized imaging tests
Cases of HBV Infected Infants at CBWCHC (2007-10)

From 2007-2010, 5 infants at CBWCHC acquired HBV via vertical transmission. Cases of VT were examined to identify gaps in care. Hep B Moms program was formed from the lessons learned.

<table>
<thead>
<tr>
<th>Last recorded viral load before delivery (copies/mL)</th>
<th>Discuss antiviral tx</th>
<th>Anti-viral Tx</th>
<th>Date &amp; Type of delivery</th>
<th>HBIG</th>
<th>Sent to China?</th>
<th>Initial HBsAg+ Test (infant)</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>118,000,000</td>
<td>N</td>
<td>N</td>
<td>3/08 CS</td>
<td>Y</td>
<td>Y</td>
<td>35 mo</td>
<td>No antiviral tx and VL &gt;10^8, infant went to China at 6 mos, late serology</td>
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<tr>
<td>1,422,000,000</td>
<td>Y</td>
<td>N</td>
<td>3/09 NSVD</td>
<td>N</td>
<td>N</td>
<td>8 mo</td>
<td>No HBIG given by hosp, no antiviral tx and VL &gt;10^9 copies/ml</td>
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<tr>
<td>911,000,000</td>
<td>Y</td>
<td>LAM for 6 wks</td>
<td>4/09 NSVD</td>
<td>Y</td>
<td>N</td>
<td>10 mo</td>
<td>Antiviral Tx prescribed, but VL still &gt;10^8 c/mL and HBV transmission in sibling</td>
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<tr>
<td>UN</td>
<td>UN</td>
<td>UN</td>
<td>10/09 NSVD</td>
<td>Y</td>
<td>N</td>
<td>9 mo</td>
<td>Mother was not CBWCHC pt.</td>
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<td>UN</td>
<td>N</td>
<td>N</td>
<td>12/10 CS</td>
<td>Y</td>
<td>Y</td>
<td>9 mo</td>
<td>Mother was not CBWCHC pt., but was on antiviral before pregnancy and discontinued during pregnancy</td>
</tr>
</tbody>
</table>

All mothers with lab data were HBeAg+. No infants were breastfed. All infants completed HBV vaccine series.
Hep B Mom Program

• Goal to prevent perinatal transmission and fill the gaps between transitions of care for mother and infant (OB/HBV provider/delivery hospital/pediatrician)
• HBV tested early in pregnancy and assessed for existing care and if not, referred to CBW IM
• Patients are identified from Women’s Health OB Case Management report run biweekly
  • Care Manager provides face-to-face counseling
  • Links patients to hepatitis B care during and after pregnancy
Overview of Primary Care Model for Hepatitis B Care at CBWCHC

Specialist: GI or ID

Hep B Program Director/Departmental Hep B Champion

Hepatitis B Program Manager

Education & Training

Health System Support

Procedures and Protocols

EMR Tools: Forms, Reminders, Registry

MH specialist MH issues associated with hep B, substance abuse, etc.

Patient

Patient

Patient

Patient

Care Manager Nursing Staff Family Health Workers

Health Education and Materials
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- Health System Support

Patient

Patient

Patient

Patient
CBWCHC Policies and Procedures for Screening, Vaccination, and Management of Hepatitis B During Pregnancy

PURPOSE:
- Identify pregnant women at risk of hepatitis B virus (HBV) infection and vaccinate those women susceptible to HBV infection
- Identify and manage pregnant women with chronic HBV (CHB) infection
- Reduce the risk of HBV vertical transmission during the perinatal period

SCOPE: All patients receiving obstetrical care

POLICY: The Charles B. Wang Community Health Center (CBWCHC) reviews and adapts guidelines for screening, diagnosis and management of hepatitis B infection from the most current recommendations by the: Centers of Disease Control and Prevention (CDC), Advisory Committee on Immunization Practices (ACIP), American College of Obstetrics (ACOG), and the American Association for the Study of Liver Diseases (AASLD).

PROCEDURE:
1. Coordination of Care for HBV Infection During Pregnancy:
   a. Since the prevalence of Hep B is high in our patient population, all OB providers are to keep current on the management of HBV during pregnancy.
   b. For patients not co-managed with gastroenterologists, hepatologists, or internists, follow up arrangements for after pregnancy care should be made at or before patients’ post-partum visits.
   c. For patients co-managed with other providers, the OB provider maintains the
NY State law requires HBsAg to be tested for EVERY PREGNANCY

Testing for Hepatitis B Virus Infection During Pregnancy
Flowchart for Prenatal Providers

- Routinely test all women in every pregnancy for hepatitis B surface antigen (HBsAg)
- Test in the first trimester, if possible
- Test regardless of past testing status

HBsAg:
- Report HBsAg positive test results to public health department perinatal hepatitis B coordinator
- Provide a copy of lab report indicating woman’s HBsAg status to the hospital where delivery is planned
- Attach alert notice to woman’s medical record to remind delivery hospital that newborn needs HepB and HBIG vaccine within 12 hours of birth
- Instruct delivery hospital to place a copy of lab report in infant’s chart
- Notify pediatric provider (if known)

Recommended Follow-up:
- Provide woman with a card noting her HBsAg status
- Refer woman to a medical specialist for evaluation of chronic hepatitis B
- Educate woman about need to test all contacts (household, sexual, and/or needle sharing)
- Educate woman about importance of completing infant’s vaccine series

HBsAg:
- Maternal HBsAg results
- Start HepB vaccine series
- Retest for HBsAg prior to delivery at least 30 days after most recent vaccine dose

HBsAg:
- Maternal HBsAg results
- Provide a copy of lab report indicating woman’s HBsAg status to hospital where delivery is planned
- Educate pregnant woman about importance of vaccine birth dose

HBV risk factor present?
- Yes
- Per ACIP recommendations
- Risk Factors:
  - ≥ 2 sex partners in past 6 months
  - IUD
  - Injection drug use
  - HBsAg carrier
  - Clinical hepatitis

- No

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

CDC Testing for Hepatitis B Virus Infection During Pregnancy Flowchart for Prenatal Providers
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- **Health Education and Materials**
- **Patient**
  - **Patient**
  - **Patient**
  - **Patient**
- **Education & Training**
- **Health System Support**
- **EMR Tools:** Forms, Reminders, Registry
- **Procedures and Protocols**
- **PCP**
- **MH specialist MH issues associated with hep B, substance abuse, etc.**
Overview of Primary Care Model for Hepatitis B Care at CBWCHC

Education & Training

Health System Support

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Procedures and Protocols

PCP

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Health Education and Materials
HBV Management EMR Support
HBV Registry
# HBV Management EMR Support

## HBV Flowsheet

**Flowsheet**

<table>
<thead>
<tr>
<th>View</th>
<th>Hep B</th>
<th>Set Attached View</th>
<th>Use Date Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HBV DNA (IU/mL)</strong></td>
<td><strong>Months</strong></td>
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<tr>
<td><strong>HBV DNA (Cp/c/mL)</strong></td>
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<td><strong>AFP Tumorminr</strong></td>
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<td><strong>SGOT (AST)</strong></td>
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<td>23</td>
<td>34</td>
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<td><strong>SGPT (ALT)</strong></td>
<td>24</td>
<td>22</td>
<td>46</td>
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<td><strong>Creat</strong></td>
<td>0.75</td>
<td>0.78</td>
<td>0.75</td>
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<tr>
<td><strong>Albumin</strong></td>
<td>4.4</td>
<td>4.4</td>
<td>4.8</td>
</tr>
</tbody>
</table>

**Notes**:
- **Complete**
- **F0 - F1**
- **Positive**
- **Negative**
- **Declined**

**Date**: 11/25/2017 16:49:00 AM

**By**: LC Direct

**Value**: 30

**Tag**: HBV DNA (IU/mL)
HBV Management EMR Support

HBV Screening Prompt

Protocol "HEP B Screening":
Patients of either sex.
Observation YRENTUSA has a Last Value that Exists over the patients life.
OR Observation HBSAG has Any Value tagged as Is null over the patients life.

Should have the following:

<table>
<thead>
<tr>
<th>Test</th>
<th>Schedule</th>
<th>Last Done</th>
<th>Last Rslt</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBSAG</td>
<td>Every 100 years</td>
<td>-----------</td>
<td>-----------</td>
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</tr>
</tbody>
</table>

Protocol "HCV Testing":
Patients of either sex with an age of greater than 53 years, and less than 73 years.
Should have the following:

<table>
<thead>
<tr>
<th>Test</th>
<th>Schedule</th>
<th>Last Done</th>
<th>Last Rslt</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCV AB</td>
<td>Every 100 years</td>
<td>-----------</td>
<td>-----------</td>
<td>--------</td>
</tr>
</tbody>
</table>
HBV Education Reminders in EMR

- Pre Diabetes
  - DM
  - Hepatitis B
  - HTN
  - Hyperlipidemia

Previous HepB Tracker Status: renewed and given (12/28/2016 2:44:11 PM)

HepBTracker: [Record]

Documents:
- Flowchart
- Orders
- Histories
- Protocols
- Graphs
- Handouts
- Registration

Uptodate

Hep B Self-management Support Resources:
- Discussed Hep B Self-management Support
- Healthy Lifestyle
- Advised tobacco cessation

Pt verbalized understanding and educational pamphlet given

Comments:

Prev Form (Ctrl+PgUp) Next Form (Ctrl+PgDn)

Hepatitis B Patient education given on:
- F/U MD regularly
- Need to have bloodwork routinely to monitor viral load and liver health
- Avoid liver injury, avoid alcohol and smoking, healthy diet and adequate rest
- Avoid self-medication: Herbal supplements and OTC meds may harm liver, notify MD if taking
- Avoid transmission factor: Do not share toothbrushes, razors, nail clippers, or any other object that could possibly become contaminated with blood
- Household screening: Household contacts and family should be screened if needed

Healthy Lifestyle: Be physically active and adequate rest

HepBTracker: patient did not bring tracker to visit 09/10/2016

Pt verbalized understanding and educational pamphlet given By: [AM]
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- Patient
- Patient
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- **Nursing Staff**
- **Family Health Workers**
- **Education & Training**
CBWCHC Hep B Moms Program

HBV (HBsAg) Screening at the Initial Prenatal Visit

Positive

Enrolled in the Hep B Moms Program.

- Linked to maternal HBV care
  - Identify high risk patients and offer anti-viral treatment
    - Repeat HBV lab tests at 26-28 weeks. If HBV DNA VL > 200,000 IU/mL, treated to prevent vertical transmission

Meet with care manager

- Provide in-person counseling (including breastfeeding)
- Confirms patient receive HBV care and follows recommendation
- Review and confirm infant receive proper prophylaxis

Infant Delivery

- Ensure HBig and HBV Vaccine 1 is given within 12 hours of birth

Pediatric Care

- HBV Vaccine 2 & 3
- Post vaccine HBsAg/ HBsAb serology testing

Negative

Recommended to screen for HBsAb and anti-HBc to screen for immunity and prior infection

Vaccinate if negative HBsAg
Peripartum HBV Surveillance

**Pregnancy**
- Notify mother about hepatitis B positive status and link to IM care
- Counsel and educate mother as well as contact about hep B
- HBV evaluation tests (HBV DNA VL, LFT, HBeAg)

**24-28 week**
- Repeat blood tests (HBV DNA VL, LFT, HBeAg)

**3rd Tri**
- Start Tx if VL > 200,000
- Provide education on medication compliance, safety on breast feeding, notify to get baby serology (HBIG)

**Post-partum**
- Contact mothers to come back for Hep B follow-up and continue hep B care
Algorithm for Hepatitis B Virus during Pregnancy

Figure 1. Adapted from “Algorithm hepatitis B virus during pregnancy,” www.uptodate.com, July 2015

Algorithm for hepatitis B virus during pregnancy

- Pregnant woman
  - First trimester: Check HBsAg
    - HBsAg negative:
      - HepB vaccination of infant at birth
    - HBsAg positive:
      - Check baseline:
        - Liver panel
        - HBV DNA
        - HBeAg and anti-HBe
      - Repeat HBV DNA and liver panel at end of second trimester (26 to 28 weeks)
        - HBV DNA >200,000 int. units/mL (>10^6 copies/mL):
          - Offer antiviral therapy to the mother
        - HBV DNA ≤200,000 int. units/mL (≤10^6 copies/mL):
          - Within 12 hours of birth infant should initiate HepB vaccine series + receive HBIG
          - Within 12 hours of birth infant should initiate HepB vaccine series + receive HBIG
Indications for Antiviral Treatment to Prevent HBV Vertical Transmission

- Women with viral loads of >200,000 IU/ml are recommended for antiviral treatment to decrease the risk of transmission to the baby; however, there must be a discussion on the risks and benefits of antiviral treatment.

- Tenofovir (Pregnancy Category B): Recommended drug due to efficacy to reduce viral load and decreased likelihood of resistance (compared to Telbivudine and Lamivudine)

- **Antiviral treatment is recommended to be initiated at least 10 weeks prior to delivery**
  - Singleton pregnancy: 28-30 weeks GA
  - Twin pregnancy: 24-26 weeks GA
  - Triplet pregnancy: 20-22 weeks GA

- If the sole goal is to prevent vertical transmission, then antiviral therapy in most cases is discontinued postpartum from time of birth to 3 months after delivery. When treatment is discontinued, women should be monitored at least every 3 months for 6 months for hepatitis flares.
<table>
<thead>
<tr>
<th>Name</th>
<th>Viral 1 (V)</th>
<th>Viral 2 (V)</th>
<th>Viral 3 (UI)</th>
<th>VL (E20/06)</th>
<th>ALT</th>
<th>AST</th>
<th>USG</th>
<th>Medication</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>2.0E+01</td>
<td>10/19/2010</td>
<td>2.0E+01</td>
<td>2.0E+01</td>
<td></td>
<td></td>
<td></td>
<td>Vread 300mg (before pregnancy)</td>
</tr>
<tr>
<td>A2</td>
<td>1.0E+01</td>
<td>02/02/2010</td>
<td>2.0E+01</td>
<td>2.0E+01</td>
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<td></td>
<td></td>
<td>Vread 300mg before pregnancy by off-site PCP</td>
</tr>
<tr>
<td>A3</td>
<td>2.0E+01</td>
<td>07/17/2010</td>
<td>2.0E+01</td>
<td>2.0E+01</td>
<td></td>
<td></td>
<td></td>
<td>Vread 300mg</td>
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<tr>
<td>A4</td>
<td>3.0E+01</td>
<td>09/18/2010</td>
<td>2.0E+01</td>
<td>2.0E+01</td>
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<td></td>
<td>Vread 300mg before pregnancy by off-site PCP</td>
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<tr>
<td>A5</td>
<td>2.0E+01</td>
<td>09/18/2010</td>
<td>2.0E+01</td>
<td>2.0E+01</td>
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<td></td>
<td></td>
<td>Vread 300mg</td>
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<tr>
<td>A6</td>
<td>1.0E+01</td>
<td>09/18/2010</td>
<td>2.0E+01</td>
<td>2.0E+01</td>
<td></td>
<td></td>
<td></td>
<td>Vread 300mg before pregnancy by off-site PCP</td>
</tr>
</tbody>
</table>

**Note:** The table continues with further entries and relevant medical information.
Newborn Vaccination and Prophylactic Immunoglobulin to Prevent HBV Vertical Transmission

- Proper prophylaxis and completion of the hepatitis B vaccine series can reduce neonatal infection by 95%. New York State Public Health Law mandates that all pregnant women be tested for hepatitis B infection and that all infants born to infected mothers should be given HBIG and hepatitis B vaccine within 12 hours of birth.

- If HBIG is not given within the recommended 12 hours, it should be given to the infant as soon as possible but no later than 7 days after birth.

- The hepatitis B series should be completed at 6 months of age and infants should receive follow-up HBsAg and antibody to hepatitis B surface antigen (anti-HBs) testing at age 9-12 months to determine if immunization was successful.
Infant Follow up:
HBV Vaccine Completion and Post Vaccination Serologic Testing (PVST)
## Infant HBV Vaccination and Post Vaccination Serologic Testing (PVST) Tracking Database

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<td>2</td>
<td>NBdt</td>
<td>Age</td>
<td>NEpid</td>
<td>NE Name</td>
<td>C/S or NSVD</td>
<td>Complication/Risk</td>
<td>HBsAg</td>
<td>HEPB#1</td>
<td>HEPB#2</td>
<td>HEPB#3</td>
<td>Serology</td>
<td>Serology Results</td>
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Overview of Primary Care Model for Hepatitis B Care at CBWCHC

Specialist: GI or ID

Hep B Program Director/ Departmental Hep B Champion

Hepatitis B Program Manager

Care Manager Nursing Staff Family Health Workers

Health Education and Materials

MH specialist MH issues associated with hep B, substance abuse, etc.

EMR Tools: Forms, Reminders, Registry

Procedures and Protocols

PCP

Patient

Patient

Patient

Education & Training

Health System Support

Education & Training

Health System Support

Patient

Patient

Patient
Overview of Primary Care Model for Hepatitis B Care at CBWCHC

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- **EMR Tools: Forms, Reminders, Registry**
- **Education & Training**
- **Health System Support**

**Patient**

**Patient**

**Patient**

**Patient**

**Patient**

**Patient**

**Patient**
Monthly QA Meetings

- Inter-departmental (IM-OB/GYN-PEDS) monthly meeting to ensure that the Hep B Moms…
  1) Got appropriate HBV DNA VL testing at 24-28 weeks
  2) Started treatment if needed at 28-32 weeks
  3) Meet in person and was counseled
  4) Infants were tracked and ensured they received HBIG and HBV Vaccine 1, 2, 3 as well as 9-12 month serology

- Discuss specific or complicated cases
- Discuss changes in guidelines
Partnership with NYC DOH

• All positive hep B pregnant woman are reported to the NYC DOH.
• DOH reinforces and calls mom to ensure infant is vaccinated and PSVT test is done at 9-12 months.
• Reaches out to household contacts and encourage screening and vaccination
• As of Dec 2017, CBW developed a consent form in agreement with DOH to obtain vaccination and serology test results of infants who were lost to follow up or follow up elsewhere
Project ECHO:
HBV ECHO: Reducing Perinatal Transmission

- Review complex patient cases and receive mentoring and feedback from specialists
- Share models or HBV topic specific lectures followed by Q&A
- Membership to Virtual Learning Community

- Links experts and specialist teams from an academic hub to primary care providers in local communities through the use of technology
- Primary care clinicians and other healthcare professionals, the spokes in our model, become part of a rich, learning community

https://echo.unm.edu/hbv/
Overview of Primary Care Model for Hepatitis B Care at CBWCHC

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- **Patient**
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- **Patient**
- **Patient**

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- **Health System Support**
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- **Procedures and Protocols**

**CHARLES B. WANG COMMUNITY HEALTH CENTER**
Overview of Primary Care Model for Hepatitis B Care at CBWCHC

Specialist: GI or ID

Hep B Program Director/Departmental Hep B Champion

Hepatitis B Program Manager

Patient

Care Manager Nursing Staff Family Health Workers

Patient

EMR Tools: Forms, Reminders, Registry

Procedures and Protocols

Patient

Patient

Patient

MH specialist MH issues associated with hep B, substance abuse, etc.

Health Education and Materials

Education & Training

Health System Support

PCP

http://www.cbwchc.org/HepatitisB.asp
**CBWCHC Hep B Moms Program – Perinatal Care Management**

<table>
<thead>
<tr>
<th>Name:</th>
<th>PID#:</th>
<th>Provider:</th>
<th>EDD:</th>
<th>ASSESSMENTS</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
<td>Date of Birth:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IM Initial:</td>
<td></td>
<td>Language Provided by:</td>
</tr>
</tbody>
</table>

**When are you first aware of having HBV?**

Explained to patient that HBV is a chronic disease and usually lifelong. Most people with HBV do not have signs or symptoms, and HBV can lead to cirrhosis or liver cancer.

<table>
<thead>
<tr>
<th>Seen IM doctor for HBV before?</th>
<th>□ yes</th>
<th>□ no</th>
<th>Date at CBWCHC</th>
<th>□ other</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, HBV medication given?</td>
<td>□ yes</td>
<td>□ no</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family members w/ HBV or liver disease?**

<table>
<thead>
<tr>
<th>Husband</th>
<th>Parents</th>
<th>Siblings</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ screened</td>
<td>□ vaccinated</td>
<td>□ not sure</td>
<td>□ DOH letter</td>
</tr>
<tr>
<td>□ screened</td>
<td>□ vaccinated</td>
<td>□ not sure</td>
<td>□ DOH letter</td>
</tr>
<tr>
<td>□ screened</td>
<td>□ vaccinated</td>
<td>□ not sure</td>
<td>□ DOH letter</td>
</tr>
<tr>
<td>□ screened</td>
<td>□ vaccinated</td>
<td>□ not sure</td>
<td>□ DOH letter</td>
</tr>
</tbody>
</table>

**Education:**

- □ F/U with MD regularly: Need to have blood work routinely to monitor viral load and liver health
- □ Avoid liver injury: Avoid alcohol and smoking, healthy diet and adequate rest
- □ Avoid self medication: Herbal supplements and OTC meds may harm liver, notify MD if taking
- □ Avoid transmission factor: Do not share toothbrushes, razors, nail clippers, or any object that could possibly become contaminated with blood
- □ Signs and Symptoms: Notify provider if develop nausea, vomiting, abdominal pain, jaundice (skin & eyes turn yellow)
- □ Antiviral medication compliance (if pt taking): Take medications daily and don't miss does, important to avoid HBV resistance

**HBV Tracker:** □ Issued □ Explained

**HBV Mom's Roadmap:** □ Issued □ Explained

**Plans for baby:**

- □ Send to China: When Caretaker □ w/ HBV (reminder to have screening done)
- □ Pediatrician in US: CBWCHC □ Other

*Recommend baby to stay in U.S. (or until vaccination done as seen in Roadmap)*

**Future Appointments:**

- Blood work (HBeAg, VL, ALT, HAV & HCV)
- Ultrasound (RUQ)
- RTC in 3rd trimester (28-32 wks)

**Newborn PID#: ________ Date of Birth: ________
Newborn Name: __________ PCP: __________
IF YOU HAVE HEPATITIS B, PROTECT YOUR BABY
USE THIS CHART TO TRACK YOUR CARE AND YOUR BABY'S CARE

If you have hepatitis B, the virus can be transmitted to your newborn through your blood at birth. The baby can then carry this serious disease for a lifetime. To prevent infection, make sure your baby is protected with immunizations. Also, see your doctor regularly to take care of your hepatitis B and avoid liver damage.

**DURING PREGNANCY**

- Get blood tests.
  - Hep B Viral Load
  - Liver tests
  - Hep B antigen
  - If your disease is severe, your doctor may talk to you about taking hepatitis B medication.
- Make sure your spouse and those living with you are tested for hepatitis B.
- See a doctor regularly for hepatitis B.

**AT BIRTH**

- Tell the staff at the hospital you have hepatitis B.
- Baby must receive 2 shots within 12 hours of birth to protect from infection.

  - One shot of hepatitis B immunoglobulin (HBIG)
  - 1st shot of the hepatitis B vaccine

  Once baby gets the HBIG shot and hepatitis B vaccine, it is safe to breastfeed. Hospital staff will give you an immunization card to track baby’s shots. Bring this card to all of your baby’s doctor visits.

**AFTER DELIVERY**

- Make sure your baby receives the 2nd shot of the hepatitis B vaccine. This shot should not be given before 6 months, or baby will not be fully protected.
- Make sure baby receives the 3rd shot of hepatitis B vaccine. This is special for babies born to mothers with hepatitis B.

**9-12 MONTHS**

- Make sure baby gets a blood test to check if he or she is protected after the shots.

**IF YOUR BABY IS CARED FOR IN CHINA**

- The caretaker must tell the new doctor that baby’s mother has hepatitis B. It is very important to make sure the baby gets the 2nd and 3rd dose of the vaccine.
- Your baby must get the 3rd shot at 6 months and not earlier.
- Ask the doctor to test your baby by 15 months to check if he or she is protected from hepatitis B. This is not done for all babies, so the caretaker should request it because it is important for your baby. Keep a copy of the results.
- When your child returns to the United States, bring your child’s vaccination records from China, and schedule a check up for your child. Immunization records are needed for children to enter to school.
CBWCHC “The Test” Comic

THE TEST

My first day working at the health clinic and I’m already late.

See, Andrew; she’s a doctor.

So I bet she can’t make bubble tea like I can.

My first day working at the health clinic and I’m already late.

See, Andrew; she’s a doctor.

So I bet she can’t make bubble tea like I can.

INFECTED?

How can that be? I feel fine!

Worry, don’t worry, most people feel fine, but we need to take care of this now.

MOM, IT’S NOT TERRIBLE. LOTS OF PEOPLE ARE INFECTED, BUT THERE IS TREATMENT AVAILABLE TO PREVENT LIVER COMPLICATIONS.

ON THIS IS TERRIBLE.

Actually, you should all be tested if you haven’t already, especially if you or your parents were born in Asia or Africa. Hepatitis A, B, and C affect your liver, but hepatitis B affects 1 in 10 Asians. Many don’t know they are infected and it can cause liver cancer or cirrhosis.

A, B, C, it’s very confusing.

It’s confusing, but important. Let me help you schedule the test.

You might have had it since you were a child; even a baby.

How do I get it?

This is important. You may feel okay, but you can pass it on to your baby, or other people. Like many, you need to talk to your doctor and follow-up with your doctor!

What will we do next?

Charles B. Wang
Community Health Center

王嘉康社区健康中心
<table>
<thead>
<tr>
<th>Date</th>
<th>Test Name</th>
<th>Result</th>
<th>Description</th>
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<tbody>
<tr>
<td>Date</td>
<td>ALT (IU/L)</td>
<td>Level</td>
<td>Liver function tests measure inflammation in your liver. If the result is elevated, it means your liver is affected.</td>
</tr>
<tr>
<td>Date</td>
<td>HBV Viral Load (IU/mL)</td>
<td>Level</td>
<td>This test shows how much hepatitis B virus you have in your blood. If your viral load starts to increase, your doctor may need to re-evaluate your treatment.</td>
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<tr>
<td>Date</td>
<td>Ultrasound</td>
<td>Check</td>
<td>It can help detect cirrhosis or cancer in the liver.</td>
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<tr>
<td>Date</td>
<td>Hepatitis C</td>
<td>Test</td>
<td>Those with hepatitis B should test for hepatitis C.</td>
</tr>
<tr>
<td>Date</td>
<td>AFP (ng/mL)</td>
<td>Level</td>
<td>This test can help detect liver cancer.</td>
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<tr>
<td>Date</td>
<td>Medication Name</td>
<td>Dosage</td>
<td>Health condition and family history.</td>
</tr>
<tr>
<td>Date</td>
<td>Start Date</td>
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<tr>
<td>Date</td>
<td>End Date</td>
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**Treatment Summary**

Your doctor will decide if treatment is needed based on your test results, health condition, and family history.

**Medication Management**

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<th>Dosage</th>
<th>Start Date</th>
<th>End Date</th>
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CBWCHC Protecting Your Baby from Hepatitis B – What Pregnant Women Need to Know

Even if you have hepatitis B, you can have a healthy baby!

If you have hepatitis B, your baby needs an extra shot called Hepatitis B Immune Globulin (HBIG) to protect him or her against the infection. There should be a total of 4 shots by the time your baby is 6 months old. Your baby will have more than a 95% chance of being free of hepatitis B.

Remember, your baby needs to get the HBIG shot and the first vaccine shot within 12 hours after being born.

Follow these steps to protect your baby against hepatitis B:
- Tell your doctor and the hospital that you have hepatitis B before you give birth.
- Make sure your baby gets the two shots within 12 hours after birth.
- Tell the doctor who will care for your baby that you have hepatitis B.
- Be sure that your baby gets another two shots by the age of 6 months.
- Make sure your baby has a blood test between the ages of 9 months and 18 months to see if he or she has been protected.

It is safe to breastfeed your baby!

If your baby gets the HBIG shot and hepatitis B vaccine within 12 hours of birth, it is safe to breastfeed right away. Take good care of your nipples to avoid cracking and bleeding. Ask your doctor if you should still breastfeed if you have cracked nipples or open sores on your breast.

Last, don’t forget to see your doctor regularly about your hepatitis B condition. Take medicine as prescribed by your doctor. Do not take any herbal products or medicine without telling your doctor. They may damage your liver.
Hepatitis B and Breastfeeding

- Although HBsAg can be detected in breast milk, there is no evidence that HBV can be transmitted by breastfeeding. Per WHO and CDC, breastfeeding is acceptable and encouraged.
- Among infants receiving post-exposure prophylaxis, there is no known increased risk of infection among breastfed infants.
- Immunization of the baby at birth should protect the infant from possible exposure to HBV from cracked or bleeding nipples. All mothers who breastfeed should be instructed on proper nipple care.
- May consider stopping anti-viral treatment after delivery if the mother wishes to breastfeed in order to minimize exposure of the medication through breast milk.

557 women completed the program and delivered
• 145 (26%) on antiviral treatment during pregnancy

552 babies born to these mothers
• 83.5% (461) completed vaccine series and received PVST while 16.5% (91) were lost to follow up
  ▪ 319 babies completed vaccine series and received PVST at CBWCHC
  ▪ 142 babies completed vaccine series and received PVST offsite (results obtained through NYCDOHMH in aggregate)

• Of the 83.5% with PVST, no known cases of HBV vertical transmission
Conclusions & Recommendations

• Comprehensive management of HBV+ pregnancies involves coordination between obstetrics, HBV provider, delivery hospital, pediatrics and local department of health

• Accurate information exchange amongst all providers is crucial

• Ideally, coordinate data exchange w DOH HBV perinatal program, clinical laboratories

• Culturally relevant patient education can engage mothers and help ensure recommendations are followed
For more information

CBWCHC Website: [http://www.cbwchc.org/HepatitisB.asp](http://www.cbwchc.org/HepatitisB.asp)

Contact:
Janice Lyu, MS
Senior Hepatitis B Program Associate
Email: jlyu@cbwchc.org