NACCHO is comprised of nearly **3,000** local health departments across the United States. Our mission is to serve as a **leader, partner, catalyst, and voice** with local health departments.

There’s value in belonging

Learn more by viewing a short video available on our website.
Local health departments promote and protect the health of people and the communities where they live and work.
Local health departments are on the frontlines of addressing viral hepatitis from prevention to care/cure, and continue to play a key role in moving our nation closer to the goal of eliminating viral hepatitis as a public health threat by 2030. NACCHO supports the role of local health departments in achieving elimination goals through capacity building, guidance, and advocacy.

- Surveillance
- Vaccination & Testing
- Treatment
- Education & Prevention
- Outbreak Response
- Elimination Planning
Poll Q1: Which of the following best describes your job title?

- Perinatal hepatitis B coordinator
- Disease Intervention Specialist
- Nurse
- Epidemiologist
- Other
Poll Q2: If you are representing a health department, please tell us more about your jurisdiction and the population size you serve:

- Small jurisdiction
- Medium jurisdiction
- Large jurisdiction
Poll Q3: How would you describe your community?

- Rural
- Suburban
- Urban
Webinar Series
Local Approaches to Preventing and Eliminating Hepatitis B

The Landscape of Hepatitis B in the United States

Wednesday, March 20th 2019
11:00 AM PT / 2:00 PM ET

Speaker:
Sierra Pellechio, BS, CHES
Health Outreach Coordinator, Hepatitis B Foundation

NACCHO
National Association of County & City Health Officials

Hepatitis B Foundation

Hep B United
The Hepatitis B Foundation
Doylestown, PA

- 6 public health team employees
- 4 communications and development team employees
- 50 scientists

We are a national nonprofit organization dedicated to finding a cure and improving the quality of life for those affected by hepatitis B worldwide. Our commitment includes funding focused research, promoting disease awareness, supporting immunization and treatment initiatives, and serving as the primary source of information for patients and their families, the medical and scientific community, and the general public.
Hep B United: A National Coalition

- 40+ local coalitions & national organizations in 20 states
- **Mission** - Hep B United is a national coalition dedicated to reducing the health disparities associated with hepatitis B by increasing awareness, screening, vaccination, and linkage to care for high-risk communities across the United States.
Role of Health Department

Follow up on newly identified cases of HBV

- In pregnant women → prevent mother to child transmission of HBV, protect health of mother
- Funding dependent, all cases → educate the public, navigate patients into care and management
What is Hepatitis B?

Virus that affects the liver and can lead to liver damage or liver cancer over time

It is vaccine preventable and treatable – yet 32 million people become newly infected each year and only 5% receive treatment!

292 million people globally living with chronic hepatitis B
Why is the Liver Important?

The liver has many roles in the body – you cannot live without your liver!

- **Digests food.**
- **Regulates energy.**
- **Builds muscle.**
- **Breaks down toxins.**
- **Fights infections.**
- **Processes medications.**
- **Stores vitamins.**
- **Helps blood clot.**
Hepatitis B-Related Health Disparities

- Asian Americans & Pacific Islanders carry 50% of chronic hepatitis B burden
  - 1 in 12 Asian Americans have hepatitis B
- 5% - 15% infection rates have been found in African-born community-based studies in the U.S.
Why are Asian American, Pacific Islander, and African Communities Disproportionately Affected?

- Hepatitis B is an ancient virus that has existed in Asia and Africa for thousands of years
- Structural barriers to control
  - Poor awareness, testing and vaccination practices
  - Lack of screening pregnant women
- Cultural and religious values
  - Play a role in the persistence of the virus in these regions
    - Taboos around discussing disease
    - Myths about transmission and origin of hepatitis B
Hepatitis B Symptoms

Possible Symptoms

- Stomach pain
- Yellow eyes or skin (Jaundice)
- Feeling tired
- Nausea
- Loss of appetite
- Fever
- Dark urine
- Clay colored stools

People can live with hepatitis B for many years, even decades without any symptoms.

We tell people not to focus on symptoms as a sign they are infected – the only way to know for sure is a blood test!

The most common symptom is no symptoms at all!
Hepatitis B Basics (Cont.)

Transmission – direct contact with blood and sexual fluids

Direct blood to blood contact with someone who is infected

Sexual transmission
There is a risk during any type of sexual contact

Unsterile medical equipment

Household contact
Sharing hygiene equipment (razors, toothbrushes, earrings etc.)

Tattoos, piercings, barbers, scarification or circumcision practices

Sharing needles

Hepatitis B is NOT in tears, saliva or sweat – NOT spread casually!
Preventing Hepatitis B

- The hepatitis B vaccine is the first “anti-cancer” vaccine
- Safe and effective 3-dose vaccine (not active vaccine)
  - 2 brand options; Engerix-B (GlaxoSmithKline)
  - Recombivax HB (Merck)
  - 3 shots over 4-6 months
- Now a 2 dose vaccine; Heplisav B (Dynavax) approved for adults 18+
  - Now covered by Medicaid
  - Ordered by Physicians
  - Available at Sam’s Club
- You should promote hepatitis B vaccination to adults and family members of people with hepatitis B
High Risk Groups for Hepatitis B

- People born in geographic regions where hepatitis B is more common, with HBsAg prevalence of > 2%
- Sexually active individuals (more than 1 partner in the past six months)
- People who inject drugs
- Men who have sex with men
- Kidney dialysis patients
- People living with HCV, HIV
- Health care providers and emergency responders
- Children adopted from countries where hepatitis B is common
- Inmates and staff of a correctional facility
- Residents and staff of facilities for developmentally disabled persons
Hepatitis B and the Opioid Epidemic

For the first time since 2006, the number of reported cases of acute HBV infection across the country is rising - increased by 20.7% in 2015 alone

Where?
• Kentucky, Tennessee, and West Virginia: 114% increase (2009-2013)
• North Carolina: 56% increase (2014-2016)
• Maine: 489% increase (2015-2016)

Who is it impacting?
• Rural communities
• Younger population (under 40)
• Non-Hispanic whites
• 30-39 years
• Injection drug users
Rising Acute Cases

Acute HBV Rate by State - 2015

- 114% increase in KY, TN, and WV
- 489% increase in ME
- 56% increase in NC
- 78% increase in southeastern MA

Centers for Disease Control and Prevention
Poll Q4: In the past 12 months, has your jurisdiction seen increases in new hepatitis B infections?

A. Yes
B. No
C. Not sure
Adult Vaccination Coverage in U.S.

Hepatitis B Vaccine Coverage (≥3 doses) Among Adults Aged ≥19 years* in the U.S. - NHIS 2016

*19-59yrs and 60+yrs for adults with diabetes

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Overall</td>
<td>24.8</td>
</tr>
<tr>
<td>Travelers</td>
<td>31.1</td>
</tr>
<tr>
<td>Chronic liver conditions</td>
<td>30.3</td>
</tr>
<tr>
<td>Healthcare personnel</td>
<td>61.4</td>
</tr>
<tr>
<td>Diabetes (19-59yrs)</td>
<td>26.2</td>
</tr>
<tr>
<td>Diabetes (60+yrs)</td>
<td>12.4</td>
</tr>
</tbody>
</table>

National Foundation for Infectious Diseases
Most Adults Are Not Vaccinated!

- Universal infant vaccination program in 1991
- Requirements for healthcare workers
- Most of U.S. population is unvaccinated
- Opportunities for transmission and spread of disease
- Complications with coinfections; HCV and HIV
Post Exposure Response Guidelines

- Hepatitis B immune globulin (HBIG) + Vaccine
  - Depending on the exposed person’s vaccination status and source of exposure
  - If person has written documentation of completed HBV vaccination series after possible exposure should complete vaccination booster dose
  - If persons who are in the process of being vaccinated but have not completed the vaccination series should receive both HBIG and hepatitis B vaccine
  - Unvaccinated persons should receive both HBIG and hepatitis B vaccine
  - All should be done as soon as possible after exposure (preferable within 24 hours after possible exposure)
Diagnosing Hepatitis B: Acute vs. Chronic

The age when someone becomes infected determines what type of infection they will have.

**Acute**
An infection that lasts less than 6 months

- Less common
- Usually occurs by getting infected as an adult
- Usually clears from the body within 6 months

**Chronic**
An infection that lasts for life

- More common
- Usually occurs by getting infected during childhood
- Usually lasts for life
Acute Infection

Acquired during the last 6 months

- Requires getting re-tested for the virus 6 months from the date of diagnosis

Not usually treated with antivirals

- Unless patient shows signs of possible liver failure
- Waiting game!
Chronic Infection

All chronically infected individuals need ongoing medical management:

- Liver specialist appointments every 6-12 months
- Includes routine screening for liver cancer

Some chronically infected individuals need treatment:

- FDA approved antivirals can keep the virus under control and prevent liver damage
Outcomes of Chronic HBV Infection

Left untreated, 1 in 4 will develop liver disease or liver cancer

- HBV causes 887,000 deaths each year worldwide due to cirrhosis, primary liver cancer (HCC), and liver failure
- HBV is #1 cause of liver cancer globally – the 2nd deadliest cancer in the world (after lung cancer)
- In the U.S., primary liver cancer is the only cancer rising in incidence and mortality rates
- The relative 5-year survival rate is 16.6%
Treatment and Management

A daily antiviral pill taken for life

- Low side effects
- Very important to not start and stop medication

People who take treatment before they need it will not benefit from it

- A liver specialist must evaluate the patient’s blood tests and liver ultrasound to understand if treatment is needed

Healthy lifestyle is important

- Avoid alcohol and cigarettes
- Be aware of medications that could harm the liver
- Eat a nutritious, low-fat diet
- Get regular physical activity
Poll Q5: Please indicate which HBV cases your health department refers for continued case management?

A. Perinatal cases only
B. New HBV cases
C. Perinatal and new cases only
D. Chronic HBV cases
E. All cases
Hepatitis B Testing

3 tests to understand full hepatitis B status
(run from a single blood test)

<table>
<thead>
<tr>
<th>HBsAg (surface antigen)</th>
<th>Anti-HBc (core antibody)</th>
<th>Anti-HBs (surface antibody)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Tests for the virus (active infection)</td>
<td>• Tests for infection at any point in time</td>
<td>• Tests for protection against the virus (from natural infection or vaccine)</td>
</tr>
</tbody>
</table>
# Hepatitis B Test Interpretation

<table>
<thead>
<tr>
<th></th>
<th>HBsAg Surface Antigen</th>
<th>Anti-HBs Surface Antibody</th>
<th>Anti-HBc Core Antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Immune through natural infection</strong></td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><strong>Immune through vaccination</strong></td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td><strong>Active infection</strong></td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td><strong>Unclear – Needs additional testing</strong></td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>
Gaps in Addressing Hepatitis B in the U.S.

- Only 30-35% of chronically infected individuals are aware of their disease
  - Lack of routine screening at the primary care level
  - Asymptomatic nature of disease
- Less than 10% of all infected individuals are diagnosed, able to access care, and receive appropriate treatment
- Lack of primary care doctors, knowledge of healthcare system, culture, language barriers
HBV Care Cascade

Only 30-35% of infected Americans are diagnosed
Less than 10% of all infected Americans are treated

<table>
<thead>
<tr>
<th>Category</th>
<th>Low Estimate</th>
<th>High Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Chronic HBV Infections</td>
<td></td>
<td>1.4-2M</td>
</tr>
<tr>
<td>Number Aware of their Infection</td>
<td>400,000-600,000</td>
<td>350,000-500,000</td>
</tr>
<tr>
<td>Number Potentially Eligible for Treatment</td>
<td>200,000-300,000</td>
<td></td>
</tr>
<tr>
<td>Number Entering into Care</td>
<td></td>
<td>50,000</td>
</tr>
<tr>
<td>Number of Annual HBV Prescriptions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Barriers to Vaccination
- Availability of vaccine
- Cost
- 3 shot series – follow up
- Most adults have not been vaccinated!

Barriers to Testing
- Lack of awareness
- Availability of testing
- Stigma and fear around testing

Cultural & Religious Barriers
- Taboo to discuss illness
- Beliefs around causes of illnesses
- Language barriers
- Mistrust of medical systems

Nature of HBV
- Asymptomatic
- Myths – transmission, management

Structural Barriers
- Health insurance status
- Navigating health system

Poll #6
Poll Q6: Does your health department fund or provide any technical support, education or screening to local service providers to conduct HBV screening?

A. Yes, technical support only
B. Yes, educational efforts only
C. Yes, screening efforts only
D. All of the above
E. No support at this time
Poll Q7: Would your health department be interested in receiving more information about joining local Hep B United coalitions to expand your hepatitis B education and screening capacity?

A. Yes
B. Not at this time
For more information on Hep B United:

- Visit [www.hepbunited.org](http://www.hepbunited.org)
  - Local partners tab – see a list of all cities and states where we currently have coalitions
  - Email [connect@hepbunited.org](mailto:connect@hepbunited.org) for assistance with connecting to a local coalition
Resources

NACCHO HBV Toolkit

Available at: toolbox.naccho.org

Additional HBV information & printable fact sheets

Available at: www.hepb.org

Subscribe to Hepatitis B Foundation, Hep B United and NACCHO Newsletters

Stay tuned for our “Part 2” webinar for additional resources and HBV tips!
Thank you!

Sierra Pellechio, BS, CHES
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Hepatitis B Foundation
Sierra.Pellechio@hepb.org
215-489-4932

Email us additional needs and future webinar suggestions!
Save the Date! Webinar Series Parts 2 and 3

May 1\textsuperscript{st} (2pm EDT)
Part 2: Exploring National and Local Approaches to Perinatal Hepatitis B Prevention

May 22\textsuperscript{nd} (2pm EDT)
Part 3: Hidden Consequences: The Opioid Epidemic and Rising Hepatitis B Rates
Thank you for joining!

For more information:
www.hepb.org
www.hepbunited.org

Hepatitis B help-line (for patient/provider use):
215-489-4900
Info@hepb.org

Contact NACCHO:
Michelle Cantu
Director of Infectious Disease & Immunization
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