Hepatitis B Project ECHO

January 28th, 2021
12pm Eastern Time
Reoccurring every 4th Thursday
Agenda

Introductions (10 minutes)

Project ECHO Defined and Session Format (2 minutes) Catherine Freeland

Purpose of HBV ECHO (2 minutes) Catherine Freeland

Didactic Presentation: Hepatitis B Epidemiology (15 minutes) Chari Cohen, DrPH, MPH

- At the end of the session, participants will have an understanding of hepatitis B epidemiology (morbidity, mortality, globally and nationally), risk factors and prevention measures associated with hepatitis B infection.

Case Presentation (5-10 minutes) Katie Huynh, PA-C, MS, AAHIVM-S

Case Feedback and Recommendations (15 minutes)
The ECHO Model

Amplication – Use Technology to leverage scarce resources

Share Best Practices to reduce disparity

Case Based Learning to master complexity

Web-based Database to Monitor Outcomes
Introductions

Name, Affiliation
Hepatitis B
Epidemiology

Chari Cohen, DrPH, MPH
Hepatitis B Foundation
Overview

Global Prevalence
National Prevalence
Local Prevalence
Acute v. Chronic Infection
Health Disparities
Hepatitis B Virus

• One of the most common infections globally
• DNA virus that infects the liver, and damages and kills liver cells
• Can be found both in the liver and in the blood of an infected person
• 100x more infectious than HIV
• Can cause acute and chronic infection
• Second most common human carcinogen, after tobacco
  ◦ Responsible for 50-60% of all primary liver cancer worldwide

Image Source: Oligonucleotide Therapeutics Society https://www.oligotherapeutics.org/to-hepb-or-not-to-hepb/
Hepatitis B Disease Progression

Acute infection → Chronic infection → Cirrhosis → Liver cancer (HCC) → Death
Liver transplant
Liver failure ( Decompensation) → Cirrhosis

Global hepatitis B prevalence

Global HBV-Related Mortality

• 1 in 4 people with unmanaged chronic infection will die prematurely from cirrhosis, liver failure, or liver cancer (HCC)

• HCC is the 3rd deadliest cancer worldwide, with a 5-year survival rate of 18%

• Hepatitis B is the #1 cause of liver cancer globally

• Deaths from chronic hepatitis B infection are increasing, with a concerning rising incidence of HCC in Africa and the Western Pacific

• HCC is the only cancer that continues to rise each year in the U.S., in both men and women, in both incidence and mortality

• In 2016, chronic hepatitis B resulted in 884,000 deaths global (66% of viral hepatitis deaths)
Global Cascade of Care in 2016

- Global prevalence – 3%
  - 292M people
- 10% diagnosed
- 4.8M treated (5% of those eligible)

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

U.S. Cascade of Care

Number of Chronic HBV Infections

- **Low Estimate**
- **High Estimate**

- **1.4-2M**

Number Aware of their Infection

- **400,000-600,000**

Number Potentially Eligible for Treatment

- **350,000-500,000**

Number Entering into Care

- **200,000-300,000**

Number of Annual HBV Prescriptions

- **50,000**

Hepatitis B Health Disparities

- Asian Americans & Pacific Islanders carry 50% of chronic hepatitis burden in the U.S.
- Among AAPI and foreign-born African community studies, we see infection rates of 4% - 15%
- AAPI and African communities also face HBV-mortality rates that are six times higher compared to others
  - In the U.S., HCC rates are 6-13x higher among AAPIs
    - 13x higher in Vietnamese men
    - 8x higher in Korean men
    - 6x higher in Chinese men
- These same communities also face many health care access and utilization challenges, including economic and social marginalization, under-insurance and cultural/linguistic barriers

Did you know that 1 in 12 Asian Americans have Hepatitis B?

References:
Acute vs. Chronic Hepatitis B Virus Infection

- Transmitted through percutaneous or mucosal exposures to infected blood or body fluids
- Aprx 90% of exposed infants, but less than 5% of adults, develop chronic infection
- In endemic settings, transmission is primarily perinatal, whereas sexual transmission (and now IV drug use in the U.S.) is the main route in low prevalence areas
Acute Hepatitis B in the U.S.

- From 2006 to 2018: Reports of acute HBV infection increased 56% to 457% in states most impacted by the opioid crisis.

- 729% increase in ME from ’15-‘17
- 114% increase in KY, TN, WV from ‘09-‘13
- 56% increase in NC from ‘14-‘16
- 78% increase in southeastern MA in 2017

Centers for Disease Control and Prevention
Reported Acute Hepatitis B: Philadelphia 2014-2019

- CDC estimates – for every acute case report, there are 6.6 unreported cases*
- 175% increase in confirmed acute hepatitis B cases from 2017-2019
- Current increases driven by people who use drugs (PWUD) and persons 30 to 39 years of age
- Challenges to identifying cases → symptoms often not present

Source: Philadelphia Department of Public Health

Chronic Hepatitis B in Philadelphia

- >25,000 individuals living with chronic hepatitis B infection
- 66% of persons living with chronic infection are currently out of care
- Areas most impacted: communities from Africa, Asia, and Eastern Europe
# Hepatitis B in Philadelphia

## Surveillance-based HBV Data, Philadelphia

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
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<tbody>
<tr>
<td><strong>Acute Cases</strong></td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td><strong>PHBPP mother-infant pairs</strong></td>
<td>164</td>
<td>155</td>
<td>174</td>
<td>141</td>
<td>144</td>
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<tr>
<td><strong>New Chronic Cases</strong></td>
<td>884</td>
<td>789</td>
<td>809</td>
<td>730</td>
<td>782</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>480</td>
<td>471</td>
<td>470</td>
<td>432</td>
<td>459</td>
</tr>
<tr>
<td>Female</td>
<td>401</td>
<td>317</td>
<td>336</td>
<td>295</td>
<td>316</td>
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</tbody>
</table>

- PA has the 4th highest newly reported chronic cases in the nation
- Philadelphia accounts for 74% (n=865) of Pennsylvania 1,164 cases
- PDPH is aware of 25,132 (1.6%) residents of Philadelphia living with HBV**

*2016 CDC Viral Hepatitis report
**Data provided by the Philadelphia Department of Public Health
Philadelphia Community-Based Testing

<table>
<thead>
<tr>
<th>Region of Birth</th>
<th>HBsAg +</th>
<th></th>
<th>HBsAg -</th>
<th></th>
<th>Total</th>
<th></th>
<th>p</th>
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<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
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<tr>
<td>Americas</td>
<td>0</td>
<td>0.00%</td>
<td>166</td>
<td>6.0%</td>
<td>166</td>
<td>6.0%</td>
<td>&lt;.0001</td>
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<tr>
<td>Africa</td>
<td>25</td>
<td>10.5%</td>
<td>282</td>
<td>10.2%</td>
<td>307</td>
<td>11.1%</td>
<td></td>
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<tr>
<td>European</td>
<td>0</td>
<td>0.0%</td>
<td>4</td>
<td>0.1%</td>
<td>4</td>
<td>0.1%</td>
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<tr>
<td>Eastern Mediterranean</td>
<td>0</td>
<td>0.0%</td>
<td>6</td>
<td>0.2%</td>
<td>6</td>
<td>0.2%</td>
<td></td>
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<tr>
<td>South East Asia</td>
<td>7</td>
<td>2.9%</td>
<td>296</td>
<td>10.7%</td>
<td>305</td>
<td>11.0%</td>
<td></td>
</tr>
<tr>
<td>Western Pacific</td>
<td>204</td>
<td>85.4%</td>
<td>1981</td>
<td>71.4%</td>
<td>2186</td>
<td>78.7%</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>1.3%</td>
<td>42</td>
<td>1.5%</td>
<td>45</td>
<td>1.6%</td>
<td></td>
</tr>
</tbody>
</table>

**Table:** Descriptive characteristics and HBV prevalence of sample population in Philadelphia, PA from 2008-2019

- Sample of 3,019 high-risk individuals in Philadelphia
- Overall infection was 7.9% (N=229)
- 59% (N=1,704) had protective antibodies (immunity)
- Infected individuals were more likely to be male, have a family history of HBV, less likely to be insured (74.1%) and more likely to report having limited access to healthcare (69.9%)
Resources for your practice

CDC Know Hepatitis B Campaign: https://www.cdc.gov/knowhepatitisb/materials.htm.

Provides vaccine cards, multi-lingual fact sheets (Korean, Chinese, Vietnamese, Burmese, Hmong, Khmer, Lao, Amharic, Arabic, French, Somali, Swahili)

Hepatitis B Foundation: www.hepb.org

Newly diagnosed patients, can call the Hepatitis B Foundation’s consultation phone line (215)489-4900, or email: info@hepb.org

Algorithm for PCP: hepatitisb.uw.edu/page/primary-care-workgroup/guidance
Hepatitis B Case Presentation

Katie Huynh, PA-C, MS, AAHIVM-S
Call for cases:

Please email Catherine.Freeland@hepb.org if you would like to submit a case for presentation.

CME Credit:

Post-Test: https://www.surveymonkey.com/r/6V2XHVJ

Next Session: Feb. 25th @12PM ET