Hepatitis B and the Opioid Crisis in West Virginia

Kady Pack, MPH
Hepatitis B Epidemiologist
West Virginia Bureau for Public Health
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Objectives

• Describe laws governing reporting communicable diseases
• Review the role of surveillance in case investigation
• Overview of data and burden of disease in WV
• Describe challenges and successes in dealing with hepatitis B in WV
West Virginia Legislative Code of State Rule, 16-3-1; 64CSR7

What
Mandates the reporting of hepatitis B infections

Who
Health care providers, hospitals, clinics, laboratories

When
Within 24 hours of diagnosis or result

Where
The local health department
Hepatitis B Case Investigation Process

**Reporting**
- Required to report by law:
  - Commercial laboratories
  - Providers
  - State Public Health Lab
  - Hospitals

**Investigation**
- **Local Health Department**
  - Education and outreach
  - Disease investigation
  - Contact tracing and partner notification

**Surveillance**
- **State Health Department**
  - Review cases for completeness and accuracy
  - Report all cases to CDC via the Nationally Notifiable Disease Surveillance System (NNDSS)
  - Feedback disease surveillance findings to the public and stakeholders

**Notification**
- **Centers for Disease Control (CDC)**
  - Receives cases via NNDSS
  - Summarizes HBV data nationally
Epidemiology of HBV in West Virginia

Acute HBV and Acute HCV Infections in WV vs the U.S., 2007-2016

*2015 U.S. Census data
** Division of Infectious Disease Epidemiology

Hep B to DIDE**
Electronic lab reporting
Change case definition
Epidemiology of HBV in West Virginia (cont’d)

### Distribution of Acute HBV by Age and Gender, WV, 2016

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Acute HBV Male</th>
<th>Acute HBV Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥60</td>
<td>6.0</td>
<td>9</td>
</tr>
<tr>
<td>50-59</td>
<td>19.6</td>
<td>13</td>
</tr>
<tr>
<td>40-49</td>
<td>29.2</td>
<td>33</td>
</tr>
<tr>
<td>30-39</td>
<td>32.7</td>
<td>29</td>
</tr>
<tr>
<td>20-29</td>
<td>12.5</td>
<td>16</td>
</tr>
<tr>
<td>≤19</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### WV Demographics, 2015

<table>
<thead>
<tr>
<th></th>
<th>Percent of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Population</strong></td>
<td>1,844,128</td>
</tr>
<tr>
<td><strong>Gender and Age</strong></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>50.6</td>
</tr>
<tr>
<td>Male</td>
<td>49.4</td>
</tr>
<tr>
<td>Persons under 18 yrs</td>
<td>20.6</td>
</tr>
<tr>
<td>Persons 65 and over</td>
<td>18.2</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>93.6</td>
</tr>
<tr>
<td>Black/African American</td>
<td>3.6</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>1.5</td>
</tr>
<tr>
<td>Asian</td>
<td>0.8</td>
</tr>
<tr>
<td>Two or more races</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Persons in poverty</strong></td>
<td>18.0</td>
</tr>
<tr>
<td>Live in rural areas</td>
<td>44.0</td>
</tr>
</tbody>
</table>
Epidemiology of HBV in West Virginia (cont’d)

The Rate of Acute Hepatitis B per 100,000 Population, West Virginia - 2016 (n=268)
Perinatal HBV Infection Identified Among Infants vs Pregnant Mothers in Case Management, WV - 2012-2017*

*West Virginia 2017 HBV data are provisional as of 6/7/18.
Epidemiology of HBV in West Virginia (cont’d)

Percent of Acute HBV and Acute HCV Cases with Risk Factors, WV, 2016

- Needlestick: 4% Acute HCV, 5% Acute HBV
- Blood Exposure: 13% Acute HCV, 16% Acute HBV
- Previous STD: 13% Acute HCV, 15% Acute HBV
- Tattoo/piercing: 10% Acute HCV, 15% Acute HBV
- Contact of case: 20% Acute HCV, 20% Acute HBV
- Incarceration: 28% Acute HCV, 33% Acute HBV
- Used street drugs: 38% Acute HCV, 38% Acute HBV
- IDU: 42% Acute HCV, 42% Acute HBV
Drug Overdose Mortality Rate, WV

Age-Adjusted Resident Drug Overdose Mortality Rate, WV and US 2001-2004

Data Source: WV Health Statistics Center, Vital Surveillance System and CDC Wonder
Rates are adjusted by age to the 2000 US Standard Million
Note: WV Rates displayed in this figure do not match CDC WONDER in 2005 and 2009 due to reporting error.
County-Level Distribution of Opioid-Related Overdose Deaths, WV, 2001-2015

Data Source: WV Health Statistics Center, Vital Statistics System 2015 Preliminary Data
• Division of Infectious Disease Epidemiology (DIDE)
• Regional Epidemiologists
• Local Health Departments
• West Virginia Division of Immunization Services (DIS)
• West Virginia Health Statistics Center (WVHSC)
• West Virginia Division of STD, Hepatitis & HIV (DSHH)
Challenges

- Reporting pregnancy status on laboratory results
- High volume of lab reports
- Most people with hepatitis are asymptomatic
- Lost to Follow Up (LTFU) patients
- Those in jail must request to be tested

Successes

- Thorough case investigations
- Electronic Lab Reporting
- Investigation tools and website resources
- CDC viral hepatitis surveillance funding
- Two-dose vaccine
- WV has no religious exemption for vaccines
- State-wide registry for vaccinations
Contact

Kady Pack, MPH
Hepatitis B Epidemiologist
West Virginia Department of Health and Human Resources
Bureau for Public Health
Office of Epidemiology and Prevention Services
Division of Infectious Disease Epidemiology
350 Capitol Street Room 125
Charleston, WV 25301
Phone: 304-558-5358 ext. 1
Fax: 304-558-6335
Email: Kady.Pack@wv.gov
www.dide.wv.gov