Epidemiology of Hepatitis C
Boston, 2014

Craig Regis, MPH
Infectious Disease Bureau
Boston Public Health Commission
Overview

• Case definitions
• Local data
  – Demographics
  – Rates by neighborhood
• Hepatitis C in youth
Case Definitions

• The following case reports were included in the data

**Confirmed**
• Tests were positive HCV by viral load testing or a significant antibody level followed by a confirmatory test or a single antibody test at a cutoff defined as positive by the manufacturer

**Suspect/Probable**
• Tests were positive for antibody, but additional laboratory information unknown
In Boston, there were 924 cases* of hepatitis C reported to BPHC in 2014.
- This translates into an incidence rate of 150 cases per 100,000 people.

*Data for Boston residents only
Boston 2014: Reported Cases by Year
• The majority of cases in 2014 occurred in men (67%)
• **White residents** represented the greatest proportion of cases in 2014, followed by **Black and Latino residents**
Boston 2014: Age

- **84%** of cases in 2014 occurred in people between the ages of **20 and 59**
Boston 2014: Genotype

- Genotype 1 was the most common in Boston in 2013

N=197
Boston 2014: Diagnoses at Congregate Settings

- ONLY 25% of all hepatitis C cases were diagnosed at a congregate setting, including **homeless shelters**, drug treatment facilities, and correctional facilities.
Boston 2011-2014: Risk Factors

- **43%** of 2014 hepatitis C cases reported injection drug use (IDU) as a risk factor
  - Unknown IDU risk for **44%** of cases

<table>
<thead>
<tr>
<th>Risk*</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014^</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injection Drug Use (IDU)</td>
<td>54%</td>
<td>55%</td>
<td>50%</td>
<td>43%</td>
</tr>
<tr>
<td>Household Contact</td>
<td>4%</td>
<td>5%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Sexual Partner</td>
<td>4%</td>
<td>3%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Transfusion prior to 1992</td>
<td>4%</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Hemodialysis</td>
<td>1%</td>
<td>&lt;1%</td>
<td>1%</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

*Note: These risks are not mutually exclusive
^Based on data as of 3/25/2015
Hepatitis C in Boston Youth 15-25

2004 – 2014
Between 2004 and 2014, there were 1,111 cases of hepatitis C reported in Boston residents between the ages of 15 and 25.

- This represents nearly 10% of all hepatitis C cases during this time period in Boston.
- About 9% of all hepatitis C cases in 2014 were between the ages of 15 and 25.
Boston 15-25 Year Olds: Cases by Year
The majority of the most recent diagnoses in this age range are men (58%) – Typically more even in this age group.

*One case categorized as “other”*
Boston 15-25 Year Olds: Race, 2014

- The majority of the most recent hepatitis C cases in this age group were in **White residents**

![Pie chart showing race distribution]

- **White** 60%
- **Unknown** 24%
- **Latino** 7%
- **Black** 5%
- **Asian** 2%
- **Other** 2%

N=84
79% of the 1,111 hepatitis C cases in this age group were between ages 21-25
Genotype 1 was the most common in this age group in Boston 15-25 Year Olds: Genotype, 2004-2014.

- Genotype 1: 60%
- Genotype 2: 10%
- Genotype 3: 29%
- Genotype 4: 1%
- Genotype 6: 0%

N=221
• ONLY 38% of all cases in this age group were diagnosed at congregate settings, including drug treatment programs, homeless shelters, and correctional facilities.
# Boston 15-25 Year Olds: Risk Factors

*Note: These risks are not mutually exclusive

^Based on data as of 3/25/2015

<table>
<thead>
<tr>
<th>Route</th>
<th>2004-2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014^</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injection</td>
<td>61%</td>
<td>69%</td>
<td>68%</td>
<td>65%</td>
<td>67%</td>
</tr>
<tr>
<td>Intranasal</td>
<td>15%</td>
<td>10%</td>
<td>18%</td>
<td>18%</td>
<td>14%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>2004-2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014^</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opiates</td>
<td>48%</td>
<td>65%</td>
<td>55%</td>
<td>59%</td>
<td>45%</td>
</tr>
<tr>
<td>Cocaine</td>
<td>25%</td>
<td>29%</td>
<td>27%</td>
<td>25%</td>
<td>19%</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>8%</td>
<td>14%</td>
<td>10%</td>
<td>10%</td>
<td>2%</td>
</tr>
</tbody>
</table>
Conclusions

- Consistently high rates of hepatitis C in Boston
- High rates in young adults and baby boomers
- Some neighborhoods disproportionately affected by the epidemic
- Driven by injection drug use
Questions?

Contact: Craig Regis
cregis@bphc.org