Epidemiology of Hepatitis C
Boston, 2015

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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

• Additional Information
  – Data for Boston residents only and accurate as of 6/15/2016
  – Data reflect rates of reporting, not disease transmission
In Boston, there were 803 cases of hepatitis C reported to BPHC in 2015. This translates into an incidence rate of 130 cases per 100,000 people.
Boston 2015: Reported Cases by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Case Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1100</td>
</tr>
<tr>
<td>2011</td>
<td>1000</td>
</tr>
<tr>
<td>2012</td>
<td>1100</td>
</tr>
<tr>
<td>2013</td>
<td>900</td>
</tr>
<tr>
<td>2014</td>
<td>900</td>
</tr>
<tr>
<td>2015</td>
<td>800</td>
</tr>
</tbody>
</table>
Boston 2015: Gender

- The majority of cases in 2015 occurred in men (65%)
Boston 2015: **Race**

- **White residents** represented the greatest proportion of cases in 2015 (47%)

![](chart.png)

N=803
Most cases were reported in the 30-39 (23%) and 50-59 (24%) age range.
Boston 2015: Genotype

- **Genotype 1** was the most common in Boston in 2015

![Pie chart showing distribution of genotypes]

- Genotype 1: 78%
- Genotype 2: 10%
- Genotype 3: 8%
- Genotype 6: 4%
- Other genotypes: <1%

N=209
Only 22% of all hepatitis C cases were diagnosed at a congregate setting, including homeless shelters, drug treatment facilities, and correctional facilities.

Boston 2015: Diagnoses at Congregate Settings

N=803
• South End had the highest HCV rate at 307 cases per 100,000 compared to any other Boston neighborhood.
Roxbury had the highest HCV rate at 168 cases per 100,000 when congregate settings were excluded.
Boston 2011-2015: Risk Factors

- 41% of 2015 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>
<th>2015^</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injection Drug Use (IDU)</td>
<td>54%</td>
<td>55%</td>
<td>50%</td>
<td>49%</td>
<td>41%</td>
</tr>
<tr>
<td>Household Contact</td>
<td>4%</td>
<td>5%</td>
<td>3%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Sexual Partner</td>
<td>4%</td>
<td>3%</td>
<td>4%</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>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Hemodialysis</td>
<td>1%</td>
<td>&lt;1%</td>
<td>1%</td>
<td>&lt;1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

*Note: These risks are not mutually exclusive
^Based on data as of 6/15/2016 and subject to change
Hepatitis C in Boston Youth 15-25

2011 – 2015
Between 2011 and 2015, there were 488 cases of hepatitis C reported in Boston residents between the ages of 15 and 25.
  - This represents over 10% of all hepatitis C cases during this time period in Boston.
  - About 10% of all hepatitis C cases in 2015 were between the ages of 15 and 25.
Boston 15-25 Year Olds: Cases by Year

N=488

- Whereas the majority of all 2015 cases were men, the gender breakdown in 15-25 year olds was evenly split from 2011 to 2015

*<1% cases categorized as "other/unknown"
From 2011-2015, the majority (72%) of the hepatitis C cases in this age group were in White residents.
Boston 15-25 Year Olds:  
Age at Diagnosis, 2011-2015

- 83% of the 488 hepatitis C cases in this age group were between ages 21-25

- **Genotype 1** was the most common in this age group in from 2011-2015

N=125

- ONLY 37% of all cases in this age group were diagnosed at congregate settings, including drug treatment programs, homeless shelters, and correctional facilities.
Charlestown had the highest HCV rate in this age group at 253 cases per 100,000 per year compared to any other Boston neighborhood.
Charlestown still had the highest HCV rate in this age group at 242 cases per 100,000 per year with congregate settings excluded.
Boston 15-25 Year Olds: **Substance Abuse History**

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</thead>
<tbody>
<tr>
<td>Injection</td>
<td>69%</td>
<td>68%</td>
<td>65%</td>
<td>79%</td>
<td>65%</td>
</tr>
<tr>
<td>Intranasal</td>
<td>10%</td>
<td>18%</td>
<td>18%</td>
<td>15%</td>
<td>10%</td>
</tr>
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</thead>
<tbody>
<tr>
<td>Opiates</td>
<td>65%</td>
<td>55%</td>
<td>59%</td>
<td>55%</td>
<td>31%</td>
</tr>
<tr>
<td>Cocaine</td>
<td>29%</td>
<td>27%</td>
<td>25%</td>
<td>26%</td>
<td>23%</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>14%</td>
<td>10%</td>
<td>10%</td>
<td>6%</td>
<td>4%</td>
</tr>
</tbody>
</table>

*Note: These risks are not mutually exclusive

^Based on data as of 6/15/2016 and subject to change
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?

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