Substance Abuse Behaviors among Newly Reported Hepatitis C Virus Positive Youth

Kathleen Ross, MPH
Philadelphia Department of Public Health

BACKGROUND

Hepatitis C Virus (HCV) Infection

- Bloodborne transmission
- 3 million chronic cases in United States
- 75% of cases unaware of HCV status
- No vaccine available

“3 of every 4 cases are unaware they are infected”

Hepatitis C Virus & Injection Drug Use

- Mechanisms of transmission
  - Needle use & sharing of drug paraphernalia
- Up to 45% of young injection drug users are HCV+
- Increased incidence of acute HCV
OBJECTIVES

- Describe general epidemiology characteristics and substance abuse behaviors of HCV positive youth in Philadelphia
- Examine differences between injection drug users and non-injection drug users

METHODS

- Newly reported HCV+ laboratory result
- Event date January 1, 2012 - June 30, 2013
- 13 – 30 years of age
- Philadelphia resident
Data Collection

• Case reporting
• Investigation tools
• Investigation approach

Data Management & Analysis

• Communicable Disease Management System
• SAS 9.3

RESULTS

Demographics

• 269 individuals fit inclusion criteria
  – 172 (72%) white
  – 189 (80%) non-Hispanic
  – 143 (53%) female
  – 252 (93%) ≥ 19 years of age
History of Substance Abuse

• History of any street drug use was reported by 174 of 215 (81%) cases
  – Median initiation age: 15 years old
• History of injection drug use was reported by 128 of 174 (74%) cases
  – Median initiation age: 21 years old
  – White cases (OR 8.12; CI 3.99 - 16.45)
  – Non-Hispanic cases (OR 3.70; CI, 2.09 – 6.54)
**Introduction to Injection Drug Use**

- 67 (57%) of 117 cases reported being introduced by friends
  - Males were more likely (OR 2.14; CI, 1.01 – 4.55) to report being introduced by friends

- 21 (18%) of 117 cases reported being introduced by a sex partner
  - Females were more likely (OR 3.22; CI 1.19 – 8.74) to report being introduced by a sex partner

**Injection Drug Use Social Networks**

- 30 (54%) of 56 cases reported injecting mostly with friends
  - Cases 19-25 years of age were more likely (OR 4.47; CI, 1.35 – 14.78) to report injecting mostly with friends

- 13 (25%) of 56 cases reported injecting mostly with a sex partner
  - Cases 26-30 years of age were more likely (OR 9.9; CI 2.29 – 43.00) to report injecting mostly with a sex partner

**Predictors for Injection Drug Use**

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Odds Ratio</th>
<th>Confidence Interval</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>History of incarceration</td>
<td>5.97</td>
<td>2.13 – 16.75</td>
<td>0.0007</td>
</tr>
<tr>
<td>Sexual contact with partner who injects drug</td>
<td>8.44</td>
<td>3.24 – 22.01</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>
Discussion

• Limitations
  – Sample size
  – Recall bias
  – Unable to measure incidence
  – Distinguishing acute vs. chronic infection

• Strengths
  – Descriptive data
  – Generate new hypotheses

Conclusion

• Results suggest that gender and age-group are associated with substance abuse patterns
  – Introduction to injection drugs
  – Injecting networks

• Results suggest a lack of injection safety knowledge
  – Reusing needles/syringes
  – Sharing other drug preparation equipment

Thank You

• Co-authors
  – Ami Patel, PhD MPH

• Acknowledgements
  – Shadia Bel Hamdounia

Contact Information

Kathleen Ross, MPH
Work: Kathleen.Ross@doh.state.nj.us
Personal: Ross.Kathleenmarie@gmail.com
Office: (609) 826-5957