Increasing Methamphetamine Use among Non-MSM Who Inject Drugs in King County, WA

Sara Glick, PhD, MPH
Division of Allergy and Infectious Diseases
University of Washington

June 15, 2017
ACKNOWLEDGMENTS

Richard Burt  
Kim Kummer  
Joe Tinsley  
Caleb Banta-Green  
Matthew Golden

Funding for this research came from cooperative agreements with the Centers for Disease Control and Prevention (U62CCU023550; 5U62PS000969; 5U1BPS003250).
• Local drug problem indicators suggest recent increased meth use
  - Similar patterns in Denver (Al-Tayyib AA, Substance Use & Misuse 2017)

• Not known if this increase is among MSM or non-MSM, and if these networks are connected through injection equipment sharing
OBJECTIVES

• To describe temporal trends in meth use among PWID in King County among:
  - Men who have sex with men (MSM)
  - Men who have sex only with women (MSW)
  - Women

• To estimate frequency and characteristics of injection equipment sharing among PWID who inject meth
METHODS

• National HIV Behavioral Surveillance (NHBS) IDU surveys
  - N=2,103
  - 2005-2015, 4 cycles
  - PWID in the past year
  - Respondent-driven sampling
  - Questions: Meth use, equipment sharing, sharing partners

• PHSKC Syringe Exchange Program (SEP)
  - N=1,748
  - 2009-2015, 4 surveys
  - NX clients
  - Convenience sample over a two week period
  - Questions: Meth use (alone or in combination), equipment sharing
ANALYSIS

• Restricted to PWID who reported any sex in the past year
  - Stratified by MSM, MSW, and women

• Statistical methods
  - Frequencies
  - Poisson regression with a log link and robust standard errors to assess correlates of meth+heroin use
## SAMPLE CHARACTERISTICS

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>NHBS IDU (2005-2015) N=2,103</th>
<th>King County SEP (2009-2015) N=1,748</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean</td>
<td>42.7 years</td>
<td>37.8 years</td>
</tr>
<tr>
<td>Gender + sex partners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men who had sex with men</td>
<td>217 (10.4)</td>
<td>193 (11.3)</td>
</tr>
<tr>
<td>Men who had sex only with women</td>
<td>890 (42.8)</td>
<td>751 (43.9)</td>
</tr>
<tr>
<td>Women, sexually active</td>
<td>606 (29.4)</td>
<td>437 (25.5)</td>
</tr>
<tr>
<td>No sex in the past year</td>
<td>367 (17.7)</td>
<td>331 (19.3)</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>1,259 (59.9)</td>
<td>1,219 (70.4)</td>
</tr>
<tr>
<td>Unstable housing, current</td>
<td>1,074 (51.1)</td>
<td>605 (35.0)</td>
</tr>
<tr>
<td>Injects daily</td>
<td>1,465 (71.3)</td>
<td>1,166 (67.6)</td>
</tr>
<tr>
<td>Overdosed, past year(^1)</td>
<td>259 (15.7)</td>
<td>293 (17.2)</td>
</tr>
<tr>
<td>HIV-infected(^1)</td>
<td>123 (7.1)</td>
<td>--</td>
</tr>
<tr>
<td>HCV-antibodies(^1)</td>
<td>1,042 (70.7)</td>
<td>--</td>
</tr>
</tbody>
</table>

\(^1\)Only measured in NHBS-IDU2 (2009), IDU3 (2012), and IDU4 (2015).
RESULT #1:
Methamphetamine injection increased substantially

% NHBS-IDU Participants Reporting Methamphetamine Injection in the Past Year
RESULT #1:
Methamphetamine injection increased substantially

% PHSKC SEP Clients Reporting Methamphetamine Injection in the Past Three Months

Note: In 2009, the SEP survey asked about methamphetamine injection ‘since the beginning of the year’ vs. ‘in the past 3 months’.
RESULT #2: Most of the increase in methamphetamine injection was attributable to injecting meth/heroin together ("goofballs")

% PHSKC SEP Clients Reporting Methamphetamine Injection in the Past Three Months

Note: In 2009, the SEP survey asked about methamphetamine injection ‘since the beginning of the year’ vs. ‘in the past 3 months’.
### Characteristics of non-MSM King County SEP Clients Reporting Goofball Injection vs. Meth Alone in the Past 3 Months (2009-15)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Meth + Heroin “Goofballs”</th>
<th>Meth Alone</th>
<th>Prevalence Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=272</td>
<td>N=126</td>
<td></td>
</tr>
<tr>
<td>Age, mean</td>
<td>32.2</td>
<td>37.2</td>
<td>0.98 (0.98-0.99)</td>
</tr>
<tr>
<td>Women</td>
<td>99 (36.4)</td>
<td>57 (45.2)</td>
<td>0.89 (0.77-1.02)</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>191 (71.3)</td>
<td>87 (69.1)</td>
<td>1.04 (0.89-1.21)</td>
</tr>
<tr>
<td>Unstable housing</td>
<td>144 (52.9)</td>
<td>45 (36.0)</td>
<td>1.24 (1.08-1.42)</td>
</tr>
<tr>
<td>Injects daily</td>
<td>215 (79.3)</td>
<td>76 (60.8)</td>
<td>1.39 (1.14-1.68)</td>
</tr>
<tr>
<td>Overdosed, past year</td>
<td>80 (29.4)</td>
<td>24 (19.5)</td>
<td>1.17 (1.02-1.33)</td>
</tr>
</tbody>
</table>

Note: Only includes sexually active men who have sex only with women & women.
RESULT #3: Injection equipment sharing is common among PWID who inject methamphetamines

**NHBS-IDU Participants (2005-15)**
**Equipment Sharing in Past Year**

- **Any injection equipment sharing**
  - **MSM**: 54%
  - **MSW**: 74%
  - **Women**: 79%

- **Any syringe sharing**
  - **MSM**: 27%
  - **MSW**: 42%
  - **Women**: 49%

**PHSKC SEP Clients (2009-15)**
**Equipment Sharing in Past 3 Months**

- **Any injection equipment sharing**
  - **MSM**: 36%
  - **MSW**: 60%
  - **Women**: 59%

- **Any syringe sharing**
  - **MSM**: 17%
  - **MSW**: 33%
  - **Women**: 35%
RESULT #4: Evidence of injection equipment sharing between MSM and non-MSM who inject methamphetamines.
SUMMARY

• Injecting methamphetamines is increasingly common among PWID

• Most of the increase is among:
  - Non-MSM
  - PWID injecting heroin + meth together (goofballs)

• Goofball use associated with overdose

• Sharing injection equipment is common

• Non-trivial rates of equipment sharing between MSM and non-MSM who inject meth
STRENGTHS & LIMITATIONS

STRENGTHS
• Consistent findings across two independent serial cross-sectional surveys of PWID
• Goofball measure in SEP survey

LIMITATIONS
• Limited data on injection equipment sharing partners
• Measures subject to social desirability bias
• Some variance in measures within/between surveys
DISCUSSION & CONCLUSIONS

- Why is methamphetamine injection increasing?
  - Goofballs appear to be a West Coast phenomenon
  - Reflects drug trafficking patterns
  - Coincides with a decline in speedballs (heroin + cocaine)

- Non-MSM men and women who inject methamphetamines may be an emerging population at risk for HIV
  - Sharing injection equipment with meth-using MSM
  - New HIV diagnosis rate among non-MSM PWID in King County is low

- Critical to maintain HIV prevention efforts among PWID
  - Syringe exchange programs
  - HIV testing and viral suppression
  - PrEP
QUESTIONS?

Sara Glick
snglick@uw.edu