CHEMSEX: Methamphetamine Use and Abuse in the Lives of Gay Men

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Director, Center for Health, Identity, Behavior &Prevention Studies (CHIBPS)

5th Annual National Men’s HIV Awareness Day Summit 2018
NJDOPH, HIV/AUDS Planning Group
Medical Uses of Methamphetamine

• first prescribed in the USA in the 1930s
• Has been used to treat obesity, ADHD, narcolepsy, idiopathic hypersomnia
• Schedule II (abusable, but has medicinal value); Desoxyn® is still approved by FDA to treat ADHD and obesity
  – Desoxyn [(S)-N,α-dimethylbenzeneethanamine hydrochloride]
  – prescription uses of methamphetamine are typically 2.5 to 15 milligrams per day
  – therapeutic effectiveness weighed against risks
Ads

Keep the “reducer” happy

‘METHEDRINE’ in OBESITY

- For those who eat too much
- For those who are depressed

‘Methedrine’ dispels abnormal craving for food, subtly elevates the mood.

‘Methedrine’ brand Methamphetamine Hydrochloride Tablets 5 mg., scored

for the elephantine appetite, give

“will power by mouth”

Ambar

prescribe

Desoxyn®

hydrochloride

your obese patient needs individualized therapy
What is Crystal Meth?

• Street version of methamphetamine
• translucent crystal similar in appearance to rock candy or salt
• sometimes made into capsules/pills
• yellowish, brownish, or off-white, although it is closer to a pure white powder depending upon its purity/integrity of the cooking process
• Tina, Christina, T, speed, crystal meth, crank, chalk Go Fast
Crystal Meth Producing Products
Makeshift Lab
Super Lab
METH

The 1,000 most recent meth seizures and meth labs

[Map of the United States showing locations of meth seizures and labs, with states colored in different shades and dots indicating specific locations.]
Health Impacts of Meth Use

The Face of a Meth User – 10 years

age 28  age 29  age 30  age 31  age 32
age 33  age 34  age 35  age 36  age 37

Dead at age 38
ANATOMY OF A METH USER

- Extreme loss of appetite
  Malnutrition
  Anorexia

- Self-inflicted wounds from removing hallucinatory
  ‘crank bugs’ / ‘meth bites’
  Sores take longer to heal

- Breakdown of muscle tissue which may lead to kidney failure
  Putrid body odor

- Bone loss from mineral and vitamin deficiencies
  Hair loss

- Extreme rise in body temperature, which can cause brain damage
  Loss of vision
  Tooth decay
  Dry mouth
  Permanent nerve damage

- Respiratory failure
  Toxic vapors scorch or burn the esophagus and lungs
  Crystals form in lungs
  Chest pain
  High blood pressure
  Build-up of fluid in the lungs and brain
  Liver damage
  Kidney and lung disorders

METH RESPECTS NO ONE!

Meth is different; it isn't going away. Once it gets into your community, it stays.
Methamphetamine Impact on Dopamine

Methamphetamine stimulates the release of excess dopamine.
CHIBPS Studies Examining Methamphetamine Use in MSM
## CHIBPS Studies: Designs & Samples

<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Sample</th>
<th>Demographics</th>
<th>Age</th>
<th>Sexual Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tina</td>
<td>Cross-Sectional/Mixed Methods</td>
<td>N = 49 active meth users</td>
<td>African American 27.% API 4% Hispanic 102%</td>
<td>33</td>
<td>Gay 96%</td>
</tr>
<tr>
<td>BUMPS</td>
<td>Longitudinal/Mixed Methods</td>
<td>N = 450 active club drug users</td>
<td>African American 15% API 5% Hispanic 20%</td>
<td>36</td>
<td>Gay 87%</td>
</tr>
<tr>
<td>Pump</td>
<td>Cross-Sectional</td>
<td>N = 311 gym attendees</td>
<td>African American 18% API 5% Hispanic 18%</td>
<td>39</td>
<td>Gay 83%</td>
</tr>
<tr>
<td>Hope</td>
<td>Cross-Sectional/Mixed Methods</td>
<td>N = 52 active meth users</td>
<td>African American or Black 100%</td>
<td>39</td>
<td>Gay 62%</td>
</tr>
<tr>
<td>MASC</td>
<td>Cross-Sectional</td>
<td>N = 60 (30 meth users &amp; 30 meth dependent)</td>
<td>African American 24% Hispanic 17%</td>
<td>40</td>
<td>Gay 80%</td>
</tr>
<tr>
<td>MUSE</td>
<td>Cross-Sectional</td>
<td>N = 100 active meth users</td>
<td>African American 57% API 1% Hispanic 14%</td>
<td>42</td>
<td>Gay 61%</td>
</tr>
<tr>
<td>P18</td>
<td>Longitudinal</td>
<td>N = 600 YMSM</td>
<td>African American 15% API 5% Hispanic 38%</td>
<td>18</td>
<td>Gay 41%</td>
</tr>
</tbody>
</table>
Are you a gay or bisexual man?
Have you had sex with another man
while partying with crystal?
If you have, we'd like to talk to you.
We will pay you $40
for a couple of hours of your time
if you qualify for this study.

To find out more about Project TINA
call (212) 206-7961
all information is
STRICKLY CONFIDENTIAL

Sponsored by New York University and CHEST.
Frequency of Methamphetamine Use

In 3 month period of evaluation, usage was reported as follows:

<table>
<thead>
<tr>
<th>Frequency of Use</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1x/week</td>
<td>33</td>
<td>67.3%</td>
</tr>
<tr>
<td>1-2X/week</td>
<td>9</td>
<td>18.4%</td>
</tr>
<tr>
<td>&gt;2X/week</td>
<td>7</td>
<td>14.3%</td>
</tr>
</tbody>
</table>

Mean number of days of use: 12.22 (SD = 11.51);
Range 1 – 45 days during the 3 month period

– Frequency of use did not vary by age, HIV status, or race ethnicity
– No differences noted in depression, coping, or self-esteem
“I’m probably using it once every two weeks, something like that. Generally, on a weekend. Either, I guess under two circumstances, one is wither at the baths or if somebody comes to my apartment and we do it there.”

--Bob, 32-years-old, HIV-
Methamphetamine Use During Sexual Encounters

During the 3 month period of evaluation, methamphetamine was used during sex:

<table>
<thead>
<tr>
<th>Use During Sex</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rarely</td>
<td>6</td>
<td>12.2%</td>
</tr>
<tr>
<td>Occasionally</td>
<td>13</td>
<td>16.5%</td>
</tr>
<tr>
<td>Always</td>
<td>20</td>
<td>61.3%</td>
</tr>
</tbody>
</table>

Mean number of sexual encounters in which methamphetamine was used: 12.56 (SD =11.50)
Range 1 – 90 encounters

- Relationship between overall use and frequency of use during sex ($r = .55$, $p < .001$)
“I find that my experience of crystal is very context specific. Taking it at the baths is very different from taking it in my apartment with one other person. I think my sexual experience has changed somewhat to profoundly over the time. I find the sexual experiences on crystal quite different from sexual experiences without crystal. I find them much more interesting and engaging.”

--John, 54-years-old, HIV-
# Methamphetamine Use with Other Substances

<table>
<thead>
<tr>
<th>Drug</th>
<th>Percent</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ketamine</td>
<td>88.5%</td>
<td>23/26</td>
</tr>
<tr>
<td>Viagra</td>
<td>88.0%</td>
<td>22/25</td>
</tr>
<tr>
<td>Poppers</td>
<td>81.6%</td>
<td>31/38</td>
</tr>
<tr>
<td>Marijuana</td>
<td>76.3%</td>
<td>29/38</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>72.7%</td>
<td>24/33</td>
</tr>
<tr>
<td>GHB</td>
<td>70.0%</td>
<td>7/10</td>
</tr>
<tr>
<td>Cocaine</td>
<td>67.6%</td>
<td>25/37</td>
</tr>
<tr>
<td>Barbiturates</td>
<td>66.7%</td>
<td>12/18</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>44.4%</td>
<td>4/9</td>
</tr>
<tr>
<td>Crack</td>
<td>40.0%</td>
<td>8/20</td>
</tr>
<tr>
<td>Heroin</td>
<td>33.3%</td>
<td>1/3</td>
</tr>
</tbody>
</table>
“Yeah, I mix and match with other drugs... definitely marijuana you know.. alcohol.. cocaine sometimes .. It just depends. It depends on what ’s available at the time and where I am.”

--Paul, 22-years-old, HIV-
Contexts of Methamphetamine Use

Participants indicated the following locations in which they had used methamphetamine in the previous 3 months most frequently

<table>
<thead>
<tr>
<th>Place</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>At a lover’s/friend’s home</td>
<td>43</td>
<td>87.8%</td>
</tr>
<tr>
<td>At bars</td>
<td>31</td>
<td>63.3%</td>
</tr>
<tr>
<td>At bathhouses</td>
<td>25</td>
<td>51.0%</td>
</tr>
<tr>
<td>At home alone</td>
<td>21</td>
<td>42.9%</td>
</tr>
</tbody>
</table>
Friendship & Methamphetamine Use

Participants also reported friends who used methamphetamine:

<table>
<thead>
<tr>
<th>Friends who use</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Half or most</td>
<td>18</td>
<td>37.0%</td>
</tr>
<tr>
<td>Few</td>
<td>29</td>
<td>52.9%</td>
</tr>
<tr>
<td>None</td>
<td>2</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

- Those with friends who used were also more likely to use methamphetamine more frequently ($r = .43, p < .01$)
“Yeah I’ve done it with the same friends every time that I have done it, and we have done it in different atmospheres. The first time was at their home at a party, the other time well a couple of times we were at their home at a party, and a couple of times were out at sex clubs, commercial establishments, including the last time.”

--Darrel, 28-years-old, HIV+
Number of Anal Receptive Acts among HIV- Participants

- No Tina: 18%
- Tina: 39%

- No Tina: 33%
- Tina: 79%

- No Tina: 36%
- Tina: 58%

Categories:
- HIV- participant
- HIV- partner
- HIV+ partner
- HIV unknown partner
“I been in NY 2 years next month and my crystal use since I’ve moved to NY has sort of crossed over primarily into the sexual arena. I would say that I probably use it 2-3 times a month now and sexual situations. To be very candid with you in p the past year, I sort of found myself drawn to that crystal crowd. And, a lot of times its kind of like a domino effect. I meet more and more people from, this crowd and, it’s a group that tends to be, there’s lots of sex parties.”

--Andrew, 31-years-old, HIV-
## Sequence of Club Drug Use Initiation

<table>
<thead>
<tr>
<th>Drug</th>
<th>First</th>
<th>Second</th>
<th>Third</th>
<th>Fourth</th>
<th>Fifth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystal</td>
<td>15 (3%)</td>
<td>84 (19%)</td>
<td>87 (20%)</td>
<td>124 (29%)</td>
<td>30 (7%)</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>154 (35%)</td>
<td>154 (35%)</td>
<td>54 (12%)</td>
<td>16 (4%)</td>
<td>4 (1%)</td>
</tr>
<tr>
<td>Cocaine</td>
<td>285 (59%)</td>
<td>67 (15%)</td>
<td>53 (12%)</td>
<td>19 (4%)</td>
<td>7 (2%)</td>
</tr>
<tr>
<td>GHB</td>
<td>0 (0%)</td>
<td>7 (2%)</td>
<td>29 (7%)</td>
<td>59 (16%)</td>
<td>93 (21%)</td>
</tr>
<tr>
<td>Ketamine</td>
<td>10 (2%)</td>
<td>96 (22%)</td>
<td>134 (31%)</td>
<td>71 (16%)</td>
<td>9 (2%)</td>
</tr>
</tbody>
</table>

*Note. Each box contains the number of participants who used the drug for the first time.*
Poly-drug Use

• Among methamphetamine users
  – 7.9% reported use with 0 other drugs
  – 14.5% reported use with 1 other drug
  – 18.7% reported use with 2 other drugs
  – 14.8% reported use with 3 other drugs
  – 8.4% reported use with 4+ other drugs
Poly-Drug Use Combinations

<table>
<thead>
<tr>
<th>Drug</th>
<th>Alcohol</th>
<th>Marijuana</th>
<th>Inhalant Nitrates</th>
<th>Viagra</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystal</td>
<td>64.2%</td>
<td>38.2%</td>
<td>34.5%</td>
<td>36.2%</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>55.4%</td>
<td>42.9%</td>
<td>26.8%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Cocaine</td>
<td>68.5%</td>
<td>43.4%</td>
<td>27.3%</td>
<td>18.9%</td>
</tr>
<tr>
<td>GHB</td>
<td>26.0%</td>
<td>21.4%</td>
<td>18.3%</td>
<td>22.1%</td>
</tr>
<tr>
<td>Ketamine</td>
<td>48.4%</td>
<td>35.9%</td>
<td>29.4%</td>
<td>26.2%</td>
</tr>
</tbody>
</table>
## Motivations for Club Drug Use: Physical Domain

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Seroconverted Narratives (N=16)</th>
<th>Seronegative Men (N=16)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Sensation (non-sexual)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%* 88% (n=14)</td>
<td>“focus,” “lose weight,” “party more,” “energy”</td>
<td>94% (n=15) “physical stamina,” “keeps you awake for days,” “rush,” “stay awake,” “energy”</td>
</tr>
<tr>
<td><strong>Sexual Sensation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%* 75% (n=12)</td>
<td>“extremely horny,” “prolongs ejaculation,” “longer sex,” “sexual,” “more aggressive during sex,” “intense [sex]”</td>
<td>63% (n=10) “sexual,” “cold sex,” “intense [sex]”</td>
</tr>
<tr>
<td><strong>Facilitation of Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%* 38% (n=6)</td>
<td>“less inhibited,” “group sex,” “nasty sex,” “makes me feel a little more freakier,” “more free”</td>
<td>19% (n=3) “less inhibited,” “initiating sex more,” “more courage”</td>
</tr>
<tr>
<td><strong>Physical Sensation (non-sexual)</strong></td>
<td>88% (n=14) “focus,” “lose weight,” “party more,” “energy”</td>
<td>94% (n=15) “physical stamina,” “keeps you awake for days,” “rush,” “stay awake,” “energy”</td>
</tr>
</tbody>
</table>
## Motivations for Club Drug Use: Emotional Domain

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Seroconverted Narratives (N=16)</th>
<th>Seronegative Men (N=16)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emotional Enhancement</strong></td>
<td>“insight,” “feel in control,” “makes me feel alive and beautiful,” “I love everyone on crystal,” “self-improvement”</td>
<td>“affectionate,” “considerate,” “open and smart,” “self discovery,” “peaceful,” “creative”</td>
</tr>
<tr>
<td>% (n=9)</td>
<td>56% (n=9)</td>
<td>50% (n=8)</td>
</tr>
<tr>
<td><strong>Emotional Equivalence</strong></td>
<td>“I feel what they’re feeling,” “apart from the party,” “makes me feel accepted with them,” “I did it to basically be around him”</td>
<td>“I like being on the same wavelength,” “It makes me more together with my people,” “in tune,”</td>
</tr>
<tr>
<td>% (n=7)</td>
<td>44% (n=7)</td>
<td>25% (n=4)</td>
</tr>
<tr>
<td><strong>Cognitive Disengagement/Emotional Escape</strong></td>
<td>“relaxing,” “depression,” “I hate my life,” “feel less guilty about what I’m doing,” “they look at you with hatred”</td>
<td>“relaxing,” “relief,” “anti-depressant,” “escapism,” “melancholy,” “like I’m normal”</td>
</tr>
<tr>
<td>% (n=11)</td>
<td>69% (n=11)</td>
<td>56% (n=9)</td>
</tr>
</tbody>
</table>
### Motivations for Club Drug Use: Social Domain

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Common Descriptors of Motivations for Seroconverted Narratives (N=16)</th>
<th>%*</th>
<th>Common Descriptions of Motivations for Seronegative Men (N=16)</th>
<th>%*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Interaction</td>
<td>“makes me outgoing and very talkative,” “makes me feel accepted”</td>
<td>50%</td>
<td>“makes me cool with the people I’m with,” “I will focus on guys,” “I will notice cute guys on the dance floor,” “it’s a fake confidence”</td>
<td>44%</td>
</tr>
<tr>
<td>Overcoming Social Inhibitions</td>
<td>“security,” “I’m kind of bashful,” “people will come over to you,” “makes us more secure,” “more bold, more brave,” “less afraid,” “I would have waited for him to make the first move,” “I’m normally more shy and introverted,”</td>
<td>44%</td>
<td>“relaxes your inhibitions”</td>
<td>31%</td>
</tr>
</tbody>
</table>
Methamphetamine Using Contexts at Baseline

Participants reported use of methamphetamine in the following contexts:

<table>
<thead>
<tr>
<th>Context</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>At a dance club</td>
<td>72.7%</td>
</tr>
<tr>
<td>At bars</td>
<td>61.4%</td>
</tr>
<tr>
<td>At a friend’s/lover’s home</td>
<td>54.3%</td>
</tr>
<tr>
<td>At a circuit party</td>
<td>50.9%</td>
</tr>
<tr>
<td>At a sex club</td>
<td>49.1%</td>
</tr>
<tr>
<td>At a sex party</td>
<td>47.1%</td>
</tr>
<tr>
<td>At home alone</td>
<td>44.3%</td>
</tr>
</tbody>
</table>
Methamphetamine Use & Seroconversion

Of the 274 self-reported HIV-negative men, 11 (4%) tested HIV-positive at baseline:

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>4</td>
<td>36.4%</td>
</tr>
<tr>
<td>White</td>
<td>4</td>
<td>36.4%</td>
</tr>
<tr>
<td>Latino</td>
<td>2</td>
<td>18.2%</td>
</tr>
<tr>
<td>Mixed Race</td>
<td>1</td>
<td>9.1%</td>
</tr>
</tbody>
</table>

Of the 26 men who reported an unknown HIV status, 5 (19.2%) tested HIV-positive at baseline

- African American 3 (60.0%)
- White 2 (40.0%)
FREQUENCY OF URAI

SEROCONVERTS VS. CONFIRMED HIV-NEGATIVE

HIV STATUS

CONFIRMED HIV-

SEROCONVERTS

HIGH

NOT HIGH

STUDY BUMPS
Pump
Substance Use in a Gym-Attending Sample
New York City

<table>
<thead>
<tr>
<th>Substance</th>
<th>Use among participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDE-5</td>
<td>28.3%</td>
</tr>
<tr>
<td>Inhalants</td>
<td>35.0%</td>
</tr>
<tr>
<td>Crack</td>
<td>8.4%</td>
</tr>
<tr>
<td>Cocaine</td>
<td>23.8%</td>
</tr>
<tr>
<td>GHB</td>
<td>7.4%</td>
</tr>
<tr>
<td>Ketamine</td>
<td>7.1%</td>
</tr>
<tr>
<td>Meth</td>
<td>23.8%</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>15.8%</td>
</tr>
</tbody>
</table>
Modes of Meth Use in a Gym-Attending Sample
New York City: Project Pump

% Reporting Usage Mode

- Inserting in Rectum: 24.3%
- IV: 6.8%
- Smoking: 50.0%
- Inhaling: 64.8%
- Using Meth: 23.8%

Halkitis et al, 2008
Psychosocial Status & Methamphetamine Use

<table>
<thead>
<tr>
<th>Variable</th>
<th>Meth Users</th>
<th>Non-Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Coping Skills</td>
<td>11.53</td>
<td>12.43</td>
</tr>
<tr>
<td>Avoidant Coping Skills</td>
<td>6.82</td>
<td>2.89</td>
</tr>
<tr>
<td>Benefits of Barebacking</td>
<td>24.14</td>
<td>4.26</td>
</tr>
<tr>
<td>BSI Anxiety</td>
<td>27.96</td>
<td>14.49</td>
</tr>
<tr>
<td>BSI Depression</td>
<td>2.89</td>
<td>13.31</td>
</tr>
<tr>
<td>BSI Hostility</td>
<td>4.73</td>
<td><strong>14.49</strong></td>
</tr>
<tr>
<td>Masculinity as Physical Appearance</td>
<td>*p&lt;0.05</td>
<td>**p&lt;.01</td>
</tr>
<tr>
<td>Masculinity as Social Behavior</td>
<td>^p=.10</td>
<td></td>
</tr>
<tr>
<td>Masculinity as Sexual Behavior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UCLA Loneliness</td>
<td>4.73</td>
<td></td>
</tr>
</tbody>
</table>

* *p<0.05
** *p<.01
^ *p=.10

STUDY PUMP
Correlates of Recent Methamphetamine Use
Odds Ratios

<table>
<thead>
<tr>
<th>Category</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>2.26</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2.37</td>
</tr>
<tr>
<td>HIV+</td>
<td>1.7</td>
</tr>
<tr>
<td>Masculinity as Sex</td>
<td>1.13</td>
</tr>
</tbody>
</table>
MASC

PROJECT MASC
Methamphetamine Use By Day of the Week
# MUSE Participant Demographics

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Total* n=100</th>
<th>HIV+ n=58</th>
<th>HIV- n=40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>57.0% (57)</td>
<td>69.0% (40)</td>
<td>42.5% (17)</td>
</tr>
<tr>
<td>Latino</td>
<td>14.0% (14)</td>
<td>6.9% (4)</td>
<td>22.5% (9)</td>
</tr>
<tr>
<td>White</td>
<td>14.0% (14)</td>
<td>8.6% (5)</td>
<td>20.0 (8)</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>1.0% (1)</td>
<td>0.0% (0)</td>
<td>2.5% (1)</td>
</tr>
<tr>
<td>Mixed Race/Other</td>
<td>14.0% (14)</td>
<td>15.5% (9)</td>
<td>12.5% (5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sexual Orientation</th>
<th>Total* n=100</th>
<th>HIV+ n=58</th>
<th>HIV- n=40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gay</td>
<td>61.0% (61)</td>
<td>69.0% (40)</td>
<td>50.0% (20)</td>
</tr>
<tr>
<td>Bisexual</td>
<td>33.0% (33)</td>
<td>22.4% (13)</td>
<td>47.5% (19)</td>
</tr>
<tr>
<td>Straight</td>
<td>6.0% (6)</td>
<td>8.6% (5)</td>
<td>2.5% (1)</td>
</tr>
</tbody>
</table>
Meth Use & Seroconversion

Average time between onset of use & seroconversion was 9.07 years (SD = 9.00, Md = 6.00).

Meth use before seroconversion

Meth use and seroconversion within a year

Meth use after seroconversion

Average time of onset of use was 10.92 years after seroconversion (SD = 6.10; Md = 11)
Project Hope
Methamphetamine Use among Black Gay Men

- Participants reported on average using crystal 8.6 days in the last 30 days (SD 7.8, median 6)
- Participants were on average 33 years old when they started using methamphetamine (range 13-47 years old)
- On average, participants spent $159/month on methamphetamine and $775 on all substances (SD $1067, median$398)
- 40.5% (n=37) of participants traded sex for methamphetamine
- In the last 30 days, participants traded sex for methamphetamine an average of 3.8 times (SD 2.8)
# Socioeconomic Status of Project Hope Participants

<table>
<thead>
<tr>
<th>Total Personal Monthly Income</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $20,000</td>
<td>65.4%</td>
</tr>
<tr>
<td>$20,000-$40,000</td>
<td>25.0%</td>
</tr>
<tr>
<td>Greater than $40,000</td>
<td>7.7%</td>
</tr>
<tr>
<td>Refuse to answer</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Employment Status</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed full or part time</td>
<td>40.4%</td>
</tr>
<tr>
<td>On Public Assistance/Temporary Disability/Unemployment</td>
<td>32.7%</td>
</tr>
<tr>
<td>On permanent disability*</td>
<td>11.5%</td>
</tr>
<tr>
<td>Student/Retired/Unemployed</td>
<td>13.4%</td>
</tr>
<tr>
<td>Refuse to answer</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

*adjusted chi², p<.05, HIV status & employment status
Eligible participants reported that they permanently resided in the following areas of NYC (n=52).

This geographic distribution was supported in an earlier study on gay and bisexual men who use club drugs conducted at NYU, called Project BUMPS.
The Search for Belonging in the Black Gay Community

Challenges (childhood & adolescence)
- Challenging childhood and adolescent developmental situations:
  - Sexual identity traumatization
  - Initiation into alcohol and drug use through peer social networks

“Pressure” (adult challenges)
- Development of identity and overall potential threatened by:
  - Pressure to conform to community & family norms ("being strong," "not airing dirty laundry," "The J-O-B")
  - Pressure to conform to hegemonic images of Black masculinity ("hyper-sexual man," "body type")
  - Pressure to conform to dominant images of black gay masculinity ("chiseled physique," "status")
  - Experience of triple isolation from White gay community, Black community, and Black gay community

“The Perfect Storm” (cognitive/emotional release)
- Methamphetamine use and risky HIV behavior as mechanisms to overcome pressures of norms and stigmatization
“Meth is definitely an outlet. As far as any, like, you know drug is actually, you know, it’s an outlet. You-you don’t have to be enclosed in your skin. You can come out of yourself more....”
"You know, if you don't look white enough, or black enough, um, you know, you'd think it's just because we're all gay. We're all – I mean it seems like we're all peers. But there's still that, there's still that wall, that stumbling block. And the drugs kind of help you break through that wall."
Illicit Drug Use among Emerging Adults

[Graph showing percentage of use over time for various drugs:
- Alcohol
- Marijuana
- Poppers
- Cocaine
- Crack
- Ecstasy
- Ketamine
- Heroin
- GHB
- Methamphetamine]
Illicit Drug Use among Emerging Adults (use by less than 10% of sample)
Illicit Drug Use among Emerging Adults
(used by less than 50% of sample)
Illicit Drug Use among Emerging Adults

Methamphetamine

Baseline (662) 6 mo (527) 12 mo (496)

- Methamphetamine
  - Baseline: 6.00%
  - 6 mo: 3.40%
  - 12 mo: 5.00%
Mean Number of Days of Methamphetamine Use

<table>
<thead>
<tr>
<th></th>
<th>Baseline (662)</th>
<th>6 mo (527)</th>
<th>12 mo (496)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methamphetamine</td>
<td>2.8</td>
<td>3.2</td>
<td>4.4</td>
</tr>
</tbody>
</table>
Summary: Patterns of Methamphetamine Use among MSM

- used in some segments of MSM population—perhaps as high as 20%
- transcends race/ethnicity, age, HIV status, SES, educational attainment, and residential area
  - more profoundly impacting Black and Hispanic men, lower SES men, and HIV+ men
  - not as prevalent in YMSM/emerging adult YMSM
- While methamphetamine use is a concern in the MSM population, it is not the a majority and we must be careful to use the term epidemic
Summary:
Patterns of Methamphetamine Use among MSM

• usually used in combination with other substances
  – rarely used in isolation
• often combined with “club,” other illicit and prescribed, drugs
• emerges as drug of choice as MSM move beyond emerging adulthood
• The real question is not why are MSM using methamphetamine but why are gay men so often dependent on substances
Summary: Drivers of Methamphetamine Use among MSM

- associated with a desire to feel connected and desirable—escape loneliness
  - social and sexual engagement
  - cyclical use: weekend and socialization
- associated with mental health burdens a such as depression
  - Perhaps associated with the ongoing stress of the HIV epidemic, stigma, and seroconversion
- Psychosocial and mental health states as well as desire for a certain type of sex may drive use and ultimate addiction
  - Methamphetamine as a coping mechanisms
Summary:
Associations of Methamphetamine Use with Sex among MSM
• highly related to greater sexual adventurism
  – more sex, condomless sex, and “extreme” sex
• may exacerbate transmission of HIV and other STIs
• may be used to ameliorate the burden of being HIV+
• Methamphetamine use and HIV are complexly related and it is not a simple, unidirectional methamphetamine → HIV association
Meth and Opioids
I struggle with opioids – not the addiction, but rather America’s reaction to this addiction. I
While America wages war on opioids, meth makes its comeback

By Drew Kann, CNN

Updated 11:35 AM ET, Wed September 26, 2018
Federal Drug Prosecutions By Primary Drug

- Methamphetamine
- Heroin
- Marijuana

Data: U.S. Sentencing Commission
Meth seizures rising steadily in US

Over the past eight years, there has been a nearly tenfold increase in the amount of methamphetamine seized by US Customs and Border Protection, from 8,900 pounds in 2010 to nearly 82,000 pounds so far in 2018.

*Figures are for fiscal years. 2018 data is from October 1, 2017 through August 31, 2018.

Source: US Customs and Border Protection
Graphic: Will Houp, CNN
National Drug Seizures of Meth Outpace Heroin

- Heroin
- Methamphetamine

Data: National Drug Control Strategy Data Supplement
Meth overdoses increase in Oklahoma

As Mexican cartels flood the state with cheap and powerful methamphetamine, Oklahoma has seen a rise in overdose deaths involving the drug.

*Data for 2017 is not complete. Drug overdoses may involve multiple drugs. These are figures for all overdose deaths involving methamphetamine.

Source: Oklahoma Office of the Chief Medical Examiner
Graphic: Will Houp, CNN
Comparables

• Between 2010 and 2016, federal prosecutions of heroin rose some 300 percent.
  – At the same time, prosecution of methamphetamine also increased – not as steeply, but in greater numbers – from 5,000 cases in 2010 to 7,000 cases in 2016.

• Seizures of meth and heroin escalated between 2010 and 2014, resulting in some 10,000 kilograms (22,000 pounds) of heroin confiscated in 2014
  – as compared with some 50,000 kilograms (110,000 pounds) of meth.

• There has been a sharp increase in fentanyl/fentanyl analogue and heroin deaths between 2013-2017
  – this increase has been accompanied by a sharp rise in meth-related deaths, which increased to 7,542 in 2016 and 10,721 in 2017, tripling from 3,600 deaths in 2013
Despite very clear statistics pointing to the challenges created by methamphetamine addiction, the drug is not in the national dialogue in the manner that heroin and other opioids are. And the reason for that is simple: The infiltration of opioid addiction into suburban, white, middle-class America – the mainstream America – creates a panic in these communities of privilege and power. Meth, on the other hand, lodges itself in more marginalized populations including the rural poor and urban and minority communities. Meth's chokehold on these communities proliferates cycles of disenfranchisement, poverty, and health issues on an already burdened population.

Research, much of it my own, has documented the impacts of meth on the gay population certainly of little interest to many Americans who hope to "pray gay away." Most recently, our own studies have shown the proliferation of meth into the black gay population, often poor and too often living with HIV. If America doesn't care about gay men, I assure you its racism and adoration of wealth make little time for poor, black, HIV-positive gay men.
Recommendations for Addressing the Meth-Sex-HIV Link in MSM
Biopsychosocial Drivers of the Syndrome in Gay, Bisexual and Other Men Who Have Sex With Men

**Biological Influences**
- Prevalence of Infectious Disease
- Infectiousness
- Susceptibility
- Efficacy of Treatment
- Efficacy of Risk Reduction Strategies

**Behavioral Influences**
- Partner Selection
- Number of Partners
- Sexual Behavior
- Retention in Medical Care
- Treatment Initiation and Adherence
- Choice of Risk Reduction Strategy
- Adherence to Risk Reduction Strategy

**Psychosocial and Structural Influences**
- Knowledge, Attitudes, and Beliefs
- Minority Stress, Homophobia and Racism
- Social Capital and Social Support
- Safe Schools and Legal Protections
- Allocation of Public Resources
- Access to Information and Tools

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Figure 3: Adapted from Hallkötter PN, Wolitski RJ, Millett GA. A holistic approach to addressing HIV infection disparities in gay, bisexual, and other men who have sex with men. American Psychologist, 2013;68/4:261-73.
A Model for Health

• HIV health must be understood as part of total health program for MSM
• A holistic approach addresses the confluence of sexual risk, with drug and mental health risk
• Current HIV prevention strategies are “Band-Aid” solutions to a much deeper and bigger problems
“Drug use treatment can be an efficient tool for leveraging sexual risk reductions... comprehensive prevention strategy should include elements of both [sexual risk taking, drug use]”
Meth & Biomedical Prevention
Meth & Biomedical HIV Prevention

• TasP (treatment as prevention) and in turn U=U, PrEP (pre-exposure prophylaxis) and PEP (post-exposure prophylaxis) can constitute key elements of novel combination HIV-prevention approaches to the goals of reducing infectiousness and reducing acquisition of HIV among people who use substances, including stimulants such as meth.

Shoptaw et al, 2017
Meth & PrEP

- 8905 MSM
  - San Diego 2008-14
- 8.5% meth use in prior 12 months
- HIV risk:
  - Meth users ↑ (vs. non meth users)
  - ↑ after meth initiation
- “Until more effective prevention or treatment interventions are available for methamphetamine users, HIV-uninfected MSM who use methamphetamine may represent ideal candidates for alternative effective prevention interventions (i.e., pre exposure prophylaxis).”

Hoenigl et al, 2017
Access to PrEP

• Black men (2015)
  – 45% of infections
  – 9% of Rx

Meth and TasP

- Methamphetamine-using MSM are at greater risk for acquiring and transmitting medication-resistant strains of HIV (Ghaziani, 2005; Yeon & Albrecht, 2007)

- Interventions for meth-using MSM population should seek to increase ART uptake and adherence
  - Effectiveness of TasP depends on adherence for U=U to be truly realized
Meth and Antiviral Treatment

• 1/3rd intentionally miss taking HIV meds when planning to use drugs such as crystal meth (Kakichman et al 2015)
• Intermitted drug users report lower adherence than non drug users or drug dependent (Halkitis et al., 2008)
• Ritonavir (Norvir) and cobicistat (Tybost) may interact with crystal meth to slow down metabolism (Brachi et al, 2015)
• Increased viral load among meth users (Ellis et al, 200)
Immunologic Aspects of Meth Use

• But meth use may also be independently associated with HIV viral replication and immunologic suppression

• Evident in animal models
  – ▲ FIV replication in cats (Gavrilin et al, 2009)

• Also found in HIV+ ART-suppressed humans (Oliveiria et al, 2015)
  – Meth increases proliferation of CMV, candida, mycobacterium, toxoplasma, HIV
Final Thought

• While biomedical advances provide additional tools for both HIV+ and HIV- individuals to control and curtail the spread of HIV...
  – drug use, and meth use in particular, continues to complicate our attempt to bring an end to AIDS

• Prevention and care efforts must focus on total health and the syndemic
World AIDS Day Commemoration:

HIV and Aging
A Community Forum
November 30, 2018
8:30am-12:30pm

World AIDS Day 30th Anniversary
Rutgers University joins this global event honoring people who live with HIV/AIDS, remembering those who have died from the epidemic, and celebrating the medical advancements that move us closer toward eradication of HIV/AIDS in our lifetime.

Rutgers University - Newark
Ackerson Hall • Room 101
180 University Ave.
Newark, NJ 07102

Registration & Fees:
General Registration - $30
Rutgers Faculty and Staff - $20
Students - Free

Register at nursing.rutgers.edu/CE

Questions? cpdn@rutgers.edu or (973) 972-6655

In support of improving patient care, Rutgers Biomedical and Health Sciences is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.
OUT IN TIME

The Public Lives of Gay Men from Stonewall to the Queer Generation

Perry N. Halkitis