HIV risk and prevention practices of bisexual men in a Treatment as Prevention environment

Heather L. Armstrong, Ph.D., Nathan J. Lachowsky, Ph.D., Kiffer G. Card, Ph.D., Eric A. Roth, Ph.D., Robert S. Hogg Ph.D., David M. Moore, M.D.

Context of HIV in British Columbia, Canada

- Men who have sex with men are the most affected HIV-risk group in Canada

- In BC, they account for 58% of new HIV diagnoses (BCCDC, 2015)

- BC offers free HIV Treatment as Prevention for all PLWH and has actively promoted this as policy since 2010
Eligibility Criteria

1. Received an invitation to participate.
2. 16 years of age or older.
3. Self-identified as a man (including trans men).
4. Reported sex with >1 man in past 6 months.
5. Provided informed consent.
6. Was able to complete a computer administered questionnaire in English.
Prevalence of Bisexuality (n=774)

Self-report identity:
- 80.4% gay
- 14.7% bisexual
- 4.9% other (e.g., queer)

Attraction to:
- Men only: 66.6%
- Men and Women: 33.4%

Sexual partners past 2 years:
- 77.3% men only
- 22.7% men and women

RDS-adjusted population point estimates
## Demographics – Identity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Gay Men</th>
<th>Bisexual Men</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean)</td>
<td>34</td>
<td>39</td>
<td>0.09</td>
</tr>
<tr>
<td>White Ethnicity</td>
<td>70.1%</td>
<td>66.2%</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Income &lt;$30,000 CAD</td>
<td>66.6%</td>
<td>89.9%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Post-secondary Education</td>
<td>74.2%</td>
<td>46.2%</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

*Roth et al., 2018

*£30,000 CAD → £18,000*
Mental and Physical Health – Bisexual Men

- Higher levels of anxiety and depression (Rich et al., 2019)
- Worse perceived current health (Roth et al., 2018)
Unique and Elevated Substance Use Patterns

• Higher levels of substance use, including ↑ alcohol dependency

• More likely to be daily smokers (62.4% vs. 26.6%, p<.0001)

• Greater use of non-Rx stimulants (crystal meth, cocaine) and heroin

• But LESS use of erectile dysfunction drugs and poppers

(Card et al., 2018b; Colyer et al, 2018; Rich et al., 2019; Roth et al., 2018; (Shariati et al., 2017)
HIV Prevention Awareness

• Less likely test for HIV  \( (aOR:9.65; 95\% CI:3.02, 30.85) \)  
  (Armstrong et al., 2019).

• Less aware of :
  
  – PreP (pre-exposure prophylaxis)
    • HIV-neg: aOR: 0.58; 95% CI: 0.34, 0.98  (Moser et al., 2018)
  
  – PEP (post-exposure prophylaxis)
    • HIV-neg: aOR 0.43; 95% CI 0.23–0.81    (Lin et al., 2016)
  
  – TasP (Treatment as Prevention)
    • HIV-neg: aOR: 0.45, 95%CI: 0.24, 0.85
    • HIV-poz: aOR: 0.15; 95%CI: 0.05, 0.47    (Carter et al., 2015),
    • Less likely to consider it effective \( (aOR:0.12; 95\% CI:0.03, 0.43) \) 
      (Card et al., 2017a)
HIV Risk Behaviours

• Fewer sex partners in general
  – (aOR: 0.55, 95%CI: 0.44, 0.69) (Armstrong et al., 2018b)

• HIV-negative bisexual men reported fewer anal sex partners
  – (aOR: 0.26, 95%CI: 0.10, 0.66) (Card et al., 2016a)

• Less likely to be the receptive anal sex partner
  – (aOR: 0.49, 95% CI: 0.25, 0.93) (Rich et al., 2015)
HIV Risk Behaviours

• Bisexual men were **no more likely** to engage in condomless anal sex with a serodiscordant or unknown HIV-status partner

• Bisexual men were **less likely to** use serosorting, viral load sorting, and anal sex avoidance as HIV prevention strategies

(Card et al., 2017b; Card et al., 2018c; Lachowsky et al., 2016)
HIV Status

• Bisexual and other non-gay identified men were no more likely to be HIV-positive
  – (p=.88; Card et al., 2017d)

• Among those living with HIV, no differences in rates of viral load suppression
  – (Moore et al., 2016)
Limitations

• Sample collected in Vancouver, Canada – may be different than UK environment
  – UK has higher higher rates of viral suppression (~81% vs. 97%)
  – Both have active chem sex scenes

• Participants were required to be sexually active with another man in the past 6 months at baseline
  – Sample not representative of all bisexual men
  – Bisexual men in this study may be more highly connected to the Vancouver gay community

Moore et al., 2016; PHE, 2018
Conclusions

• Despite **fewer anal sex partners** and **less receptive anal sex**, bisexual men experience HIV prevalence similar to gay men
  – Less awareness of biomedical prevention and less testing

• We need to **challenge our assumptions** that all men who have sex with men are the same, both in our empirical **research** and in our **treatment and prevention efforts**
Implications for HIV Prevention

• HIV prevention and education campaigns should **recognize** the **unique sexual health needs** of bisexual men
  – Need to be **patient-centre**
  – Need to be **relevant and appropriate for bisexual men**

• Other syndemic factors (beyond behavioural risk) may be driving elevated HIV prevalence rates
  – Substance use and other mental health concerns
  – Low use/access to health and prevention services
  – Low awareness of HIV prevention strategies
  – Lower SES
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**Co-Investigators**
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Willi McFarland – UCSF, SFDPH
Henry Fisher Raymond – UCSF, SFDPH
Tom Patterson – UCSD
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Terry Howard – community member
Sarah Chown – YouthCO
Everett Blackwell – community member
Jody Jollimore – Community-based Research Centre for gay men’s health
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**Study Staff**
Gbolahan Olarewaju, Allan Lal, Irv Sandstra, Fahmy Baharuddin

**Students**
Kiffer Card, Ben Klassen, Ashleigh Rich, Jamie Forrest

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