Sexually transmitted infection transmission dynamics during the COVID-19 Pandemic among urban sexual minorities

00870

Christina M Schumacher, PhD[1], Nicole Thornton, MPH[1], Jessica Duchen, MPH[1], Carla Tilchin, MSPH[1], Khalil G Ghanem, MD, PhD[1], Matthew M Hamill, MBChB, PhD[1], Carl Latkin, PHD[2], Anne Rompalo, MD[1], Sebastian Ruhs, MD[3], Adena Greenbaum, MD[4], Jacky M Jennings, PhD, MPH[1,2]

[1]Johns Hopkins School of Medicine, Baltimore, MD, USA, [2]Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA, [3]Chase Brexton Health Services, Baltimore, MD, USA, [4]Baltimore City Health Department, Baltimore, MD, USA

BACKGROUND

- The impact of COVID-19 mitigation measures on STI transmission and racial disparities remains unknown.
- Disruptions to STI clinical, laboratory and prevention services may have increased STI transmission.
- Simultaneously, STI risk behaviors may have decreased due to social distancing practices, resulting in decreased STI transmission.

Objective: To examine trends in STI risk behaviors, access to sexual health services, and STI positivity overall and by race during- compared to pre-pandemic among urban sexual minority men (SMM).

METHODS

Study Population:

- Sexually active cisgender SMM aged 18-45 years participating in a prospective cohort study in Baltimore City, Maryland, USA.
- Participants completing any study visit during the COVID-19 pandemic (April – December 2020) and ≥ one pre-pandemic study visit (before March 2020) were included.

Data Collection:

- Behavioral surveys (ACASI) and STI testing administered at 3-month intervals.

Measures:

- Four study visit periods: (1) pre-pandemic (Dec 2019 – Mar 2020); during pandemic (2) Apr-Jun 2020, (3) Jul-Sep 2020, (4) Oct-Dec 2020.
- STI risk behaviors: Number of sex partners; new sex partners; casual sex partners.
- Substance use: Any hard substance use; any methamphetamine use.
- Sexual health services: HIV/PrEP care engagement defined as self-reported ART/PrEP use or attending care appointment; reporting any non-study related STI testing.
- GC/CT positivity: Any anatomic site via NAAT prior to Apr 2020. Participants were mailed self-testing kits post July 2020.

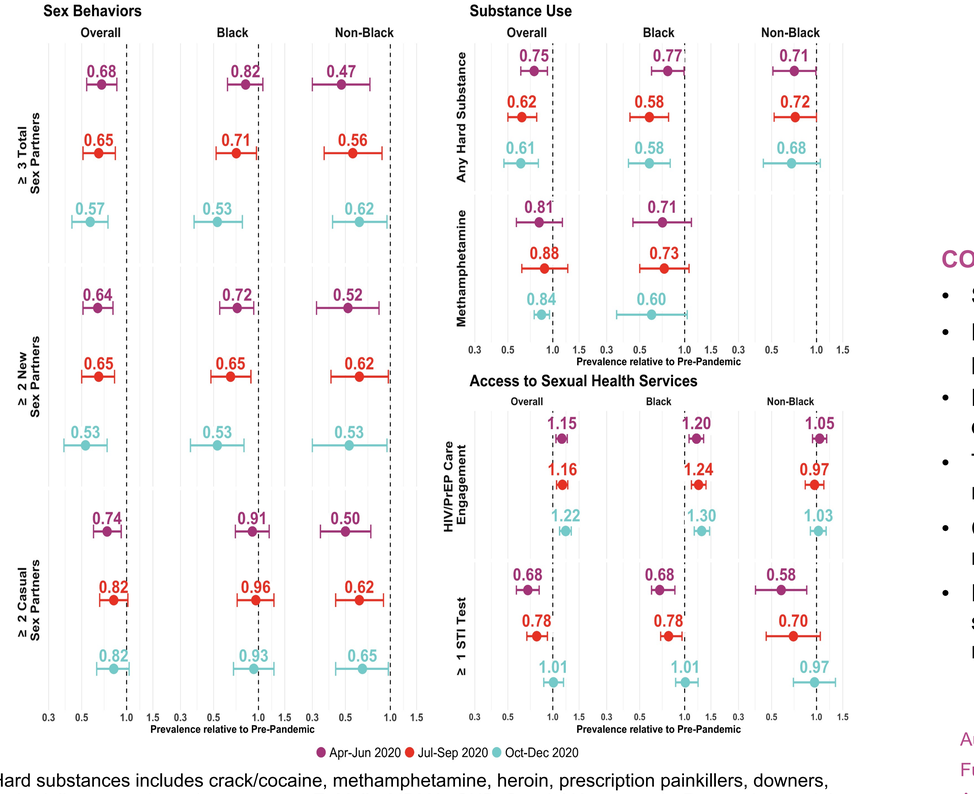
Statistical Analysis:

- GEE with modified Poisson regression conducted overall and stratified by race (Black/non-Black), with models adjusted for pre-pandemic period.

This analysis provides evidence of significant and sustained declines in STI risk behavior, but no evidence of decreased STI positivity among urban cisgender sexual minority men during compared to pre-pandemic.

Findings underscore the urgent need to evaluate novel strategies for the delivery of STI prevention services without in-person interaction in this population.

Figure 1. Prevalence Ratios of Reported Sex Behaviors, Substance Use[1] and Access to Sexual Health Services (past 3m) During Compared to Pre-Pandemic among USHINE Participants.

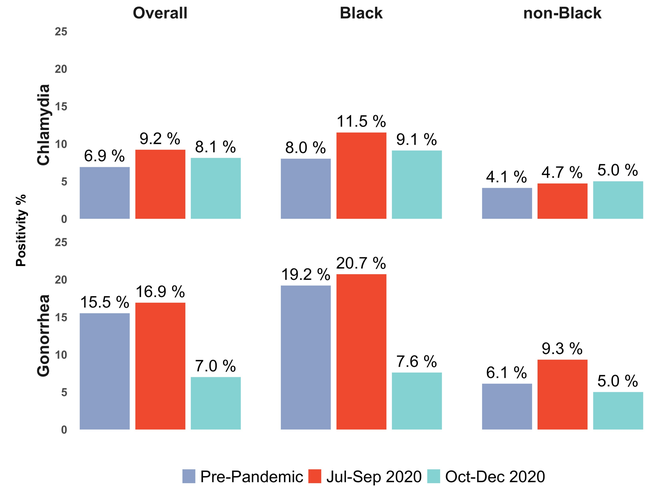


[1] Hard substances includes crack/cocaine, methamphetamine, heroin, prescription painkillers, downers, psychedelics, party drugs (e.g., ecstasy, E, Molly, MDMA, GHB, Special K, poppers). Regression models were not performed for methamphetamine use among non-Black men due to small sample sizes.

RESULTS

- 231 SMM were included.
  - 73.6% (170) Black
  - 31 years median age (IQR: 19-47)
  - 37.7% (87) known to be living with HIV at pre-pandemic visit

Figure 2. Chlamydia and Gonorrhea Positivity (Any Anatomic Site) During Compared to Pre-Pandemic among USHINE participants.



*No differences in positivity were found to be statistically significant.

CONCLUSIONS

- Significant and sustained declines in STI risk behaviors among SMM.
- No evidence of decreased STI positivity during compared to pre-pandemic.
- No evidence that the pandemic has exacerbated existing STI racial disparities.
- This cohort, who had access to testing throughout the pandemic, may not be generalizable to all SMM or other populations.
- Continued monitoring in this population and more broadly is recommended.
- Research to evaluate novel strategies to deliver STI prevention services without in-person interaction in this population is urgently needed.

Author Contact Information: cschuma3@jhmi.edu

Funding: U.S. Centers for Disease Control and Prevention (1U01PS005171-01)

Acknowledgements: The authors wish to thank USHINE participants, without whom this research would not be possible.