Comparing Methods for Estimating Sexual Transmission Risk among US Adults with HIV

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Background

- Accurate assessment of sexual risk behaviors associated with HIV transmission is essential for ending the HIV epidemic (EHE) in the United States.
- Reducing participant burden is important to consider when assessing sexual risk behaviors among people with HIV.
- **We explored whether last sexual partner data were sufficient to accurately assess high-risk sex among adults with diagnosed HIV.**

Methods

Data source

- Medical Monitoring Project, a national surveillance system that provides representative estimates of characteristics among adults with diagnosed HIV
- Data collected May 2015–June 2018

Data domains

- Participant demographic characteristics and sexual behaviors with each of the last 5 sexual partners
- For those with >5 sexual partners, aggregated information on sexual behaviors with additional partners
- viral loads
- High-risk sex defined as:

1) Having ≥1 detectable viral load (≥200 copies/mL) and

2) Having condomless anal or vaginal sex with an HIV-negative or HIV-unknown sexual partner not reported to be using pre-exposure prophylaxis (PrEP)

Estimates

- Prevalence of high-risk sex overall and by age, race/ethnicity, and sexual behaviors
- Incremental contributions of asking about each additional sexual partner to the overall high-risk sex measure

Asking only about the last sex partner underestimates HIV transmission risk among people with HIV—particularly for MSM and young adults.

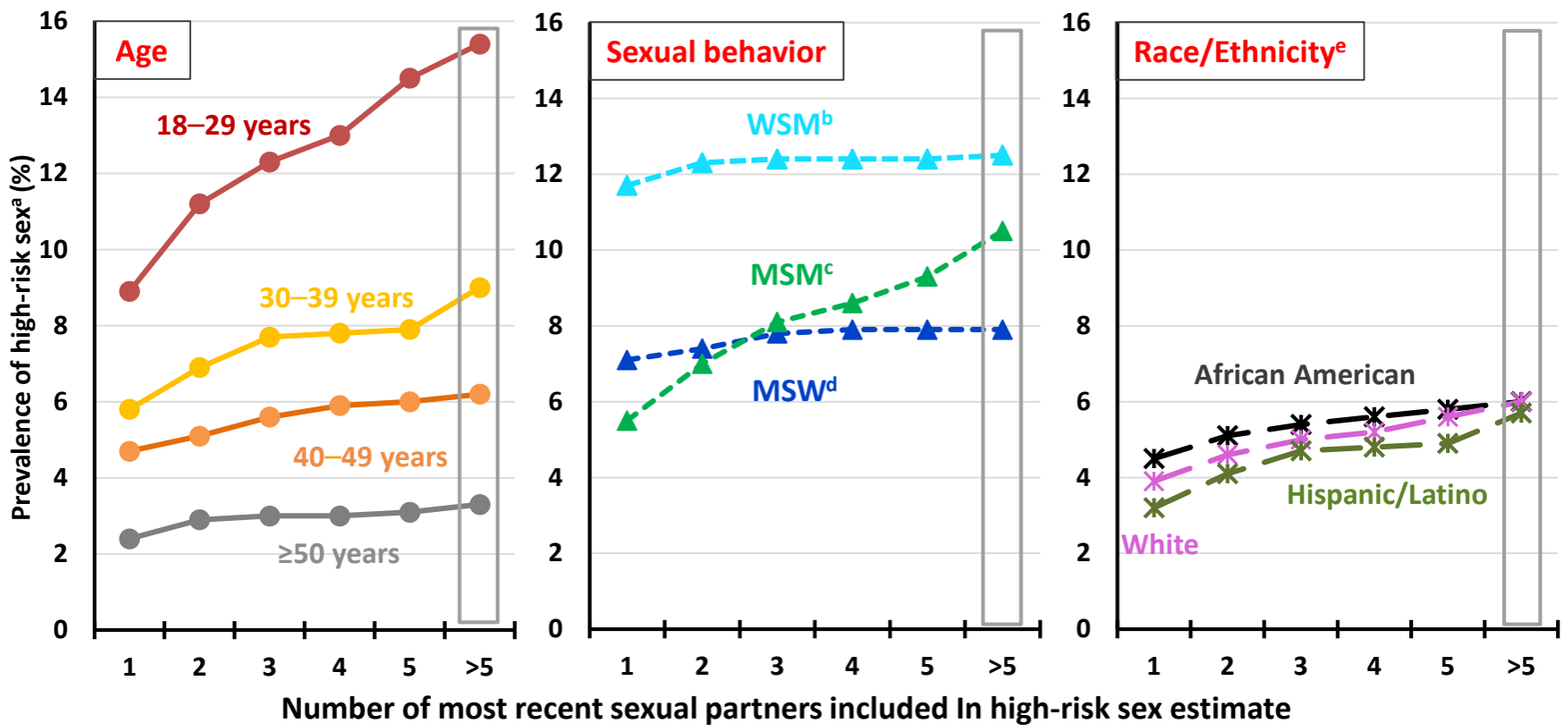
Results

- 58% had anal or vaginal sex in past 12 months, among whom 44% reported >1 sexual partner and 12% reported >5 sexual partners.
- MSM, whites, and people aged 18–29 years were more likely to report having multiple partners.
- The prevalence of high-risk sex was 6% overall, 11% among MSM, 13% among WSM, and 15% among persons aged 18–29.
- Estimates of high-risk sex were lower when information from the last partner only vs. all partners was assessed.

Conclusion

Using sexual risk information on all sexual partners more accurately estimates sexual risk compared to using information on only the last sex partner.

Percent of U.S. adults with diagnosed HIV who reported high-risk sex, by number of sex partners analyzed, 2015–2018



[a] PrEP use was only measured among the 5 most recent partners.
[b] Women who had vaginal or anal sex with men in past 12 months.
[c] Men who had vaginal or anal sex with at least 1 man in past 12 months.
[d] Men who had vaginal or anal sex with only women in past 12 months.
[e] Categories are mutually exclusive. Hispanics or Latinos might be of any race.

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