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PrEP Use Approaching 50% Among High-Risk MSM in Western Washington

Darcy W Rao[1], Julia Hood[2], Rachel Wittenauer[1], Kelly Naismith[3], Jon Downs[3], Matthew R Golden[1,2]

[1]University of Washington, Seattle, WA, USA, [2]Public Health—Seattle & King County, Seattle, WA, USA [3]Washington State Department of Health, Olympia, WA, USA

Background

- Many state and local health departments are promoting use of pre-exposure prophylaxis (PrEP) for HIV prevention in groups at high risk of infection.
- In Washington State, the Department of Health and Public Health—Seattle and King County have set of target of 50% PrEP use among high-risk men who have sex with men (MSM) by 2020.[1]
- To evaluate progress towards this goal, **we compared estimates of PrEP awareness, interest, and use from two ongoing surveys of MSM in western Washington.**

Methods

- **Data sources.** We analyzed data collected between 2017 and 2019 from two surveys:
  1. The Washington HIV/STI Prevention Project (WHSPP):[2] a statewide online survey of MSM administered 01/2017-02/2017 (round 1) and 11/2018-01/2019 (round 2).
  2. The Seattle Pride Parade Survey:[1,3] an annual paper-based survey administered to men attending the Pride parade in June of each year.
- **Sample composition.** Samples from both surveys were restricted to cisgender males residing in King, Pierce, and Snohomish Counties (the Seattle Metropolitan area) who reported sex with a man in the past year.
- **Sample sizes.** 726 and 463 respondents were included from the first and second rounds of the WHSPP survey, and 291, 213, and 269 respondents from the 2017, 2018, and 2019 rounds of the Pride Survey, respectively.
- **Analyses**
  - We used a raking procedure to standardize the samples to the average marginal distributions of age, race/ethnicity, education, sexual orientation, and county from across the surveys (Table 1).
  - We classified respondents as high-risk if they reported any of the following in the past year:
    - Bacterial STI diagnosis (gonorrhea, chlamydia, or syphilis)
    - Use of methamphetamine or poppers
    - ≥10 male anal sex partners
    - Condomless anal sex with an HIV-positive or unknown-status partner
  - We calculated the proportion of high-risk men who reported having heard of PrEP, interest in starting PrEP, and/or current use of PrEP.
  - We tested for differences in these outcomes by calendar time and data source using logistic regression.

Table 1: Sample characteristics

	WHSPP (N=1,189)	Pride (n=773)	Reweighted*
County			
King County	80.9%	73.5%	77.4%
Pierce County	9.5%	13.7%	11.4%
Snohomish County	9.6%	12.8%	11.2%
Age			
16 to 24	22.2%	17.9%	19.4%
25 to 34	33.5%	38.3%	35.7%
35 to 44	17.8%	21.2%	19.6%
45 to 54	15.8%	12.8%	14.7%
55 and older	10.7%	9.8%	10.6%
Race/ethnicity			
Hispanic	16.5%	13.7%	14.6%
Non-Hispanic white	69.0%	67.1%	68.8%
Non-Hispanic black	4.2%	3.5%	3.7%
Non-Hispanic other	10.3%	15.7%	13.0%
Gay/homosexual identity	86.2%	85.5%	86.0%
Education			
High school or less	11.9%	16.2%	13.7%
Some college/vocational school	30.9%	35.3%	33.3%
4-year college or higher	57.2%	48.5%	53.0%

Dark shaded cells present the marginal distributions to which each each sample was reweighted using a raking procedure. These distributions were defined as the average of the distributions from each of the included survey cycles. The original, unweighted distributions from the WHSPP and Pride samples are presented for comparison, pooling respondents from all rounds of the respective surveys.

Results

- After raking to adjust for differences in demographic composition, the proportion of respondents classified as high risk was 60% and 57% in the first and second rounds of the WHSPP, and 35%, 45%, and 37% in the three rounds of the Pride Survey.
- The proportion of high-risk MSM who had heard of PrEP increased over time from 84% in 2017 to approximately 96% in 2019 ($p<0.001$; Figure 1).
- The proportion of high-risk men who reported use of or interest in starting PrEP (a measure of total demand) remained stable over time at approximately 66% ($p=0.7$).
- Current use of PrEP increased from 33% in 2017 to 43-46% in 2019 ($p<0.001$).
- After adjusting for demographic variables and calendar time, estimates from the Pride and WHSPP surveys were similar for all three outcomes (p=0.2-0.4).

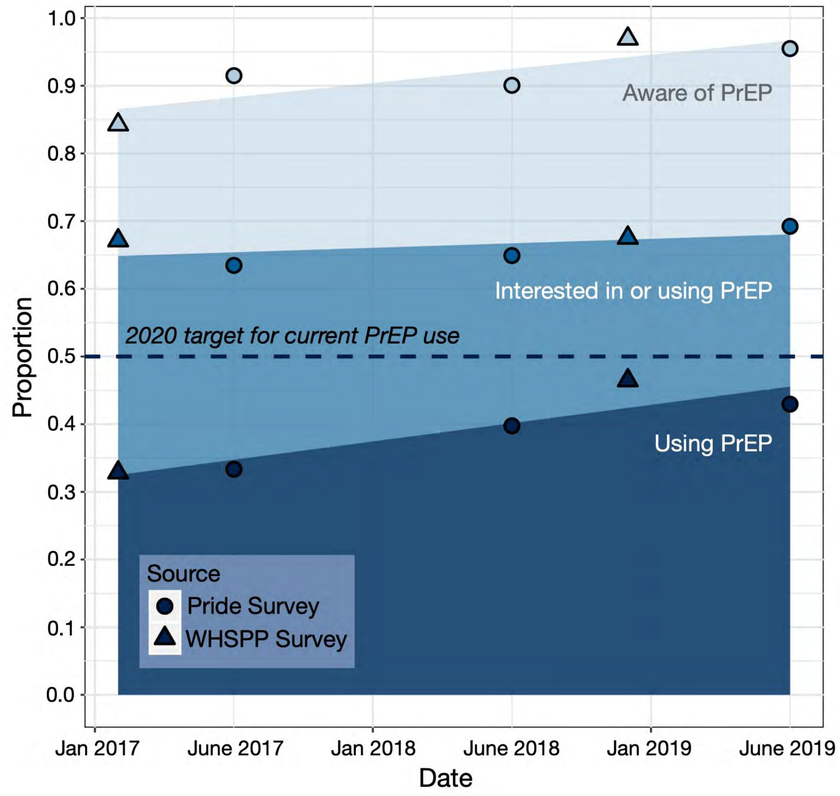


Figure 1. Trends in PrEP awareness, interest, and use among high-risk MSM in western Washington, 2017-2019

Shaded areas are defined using linear trend lines for awareness, interest, and use of PrEP, fitted to estimates from both surveys. The target of 50% PrEP use by 2020 is indicated with the dotted line.

Conclusions

- Awareness of PrEP increased among high-risk MSM in western Washington State from 2017-2019, but did not lead to increases in demand.
- The proportion of high-risk men using PrEP increased, tracking well with local prevention targets.
- The representativeness of samples from both surveys is unknown, but the concordance in estimates supports continued use of these low-cost methods to monitor trends and inform ongoing HIV prevention efforts.

ACKNOWLEDGEMENTS: This work was funded by the University of Washington STD/AIDS Research Training Program (*NIH T32 AI007140)* and the Washington State Department of Health. We would also like to thank the respondents who took the time to complete these surveys.

Contact: Darcy Rao, University of Washington, dpwhite@uw.edu

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