Doxycycline Post-Exposure Prophylaxis Continuum of Care among MSM in Philadelphia, 2023

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Tanner B Nassau[1], Kathleen A Brady [1]
[1]Philadelphia Department of Public Health, Philadelphia, PA

BACKGROUND

Doxycycline post-exposure prophylaxis (doxyPEP) is an effective tool for reducing bacterial sexually transmitted infection (STI) incidence among men who have sex with men (MSM).

The rollout of HIV pre-exposure prophylaxis (PrEP) revealed significant disparities in access by race/ethnicity, gender, and socioeconomic status.[1] Implementation of doxyPEP must prioritize understanding the needs and wants of diverse communities to proactively address these disparities.

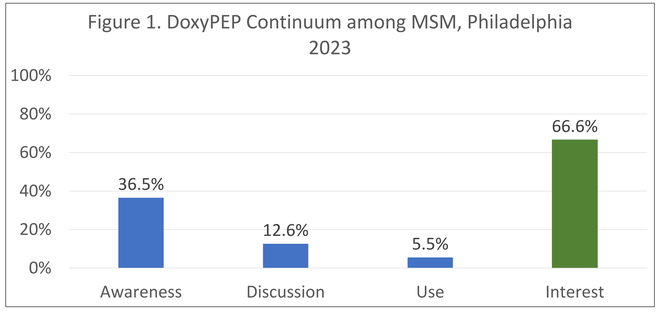
We sought to understand current rates of bacterial STIs (gonorrhea, chlamydia, syphilis) among MSM, generate Philadelphia's first doxyPEP continuum among MSM, and identify gaps in the doxyPEP continuum between subpopulations of MSM in Philadelphia.

METHODS

We used 2023 National HIV Behavioral Surveillance data, collected through venue-based sampling among MSM in Philadelphia, with locally-developed questions regarding knowledge and use of doxyPEP. Individuals were included in analysis if they were ≥ 18 years old, assigned male sex at birth or a transgender man, lived in Philadelphia or Delaware county, and reported sex with a man in the previous 12 months.

We used chi-square and Fisher's exact tests to compare differences in demographics and other characteristics at each step of the doxyPEP continuum. We also describe reported reasons for not wanting to take doxyPEP.

Figure 1. DoxyPEP Continuum among MSM, Philadelphia 2023



Recent bacterial STI diagnoses and interest in doxyPEP outpace doxyPEP use, suggesting important opportunities for education and STI prevention

RESULTS

Of the 452 eligible respondents, 326 (72.1%) answered questions on doxyPEP and were included in analyses.

- More than one in four (**26.0%**) MSM reported a bacterial STI diagnosis in the previous 12 months
- More than one in three (**36.5%**) of all MSM had heard of doxyPEP (Figure 1)
- **12.6%** of MSM had discussed doxyPEP with a provider
- **5.5%** had used doxyPEP in the previous 12 months
- Awareness of doxyPEP was significantly greater among those with more than a high school level of education (**41.7% versus 30.1%**) and those with a recent gonorrhea (**60.0% versus 31.2%**) or chlamydia (**64.3% versus 32.0%**) diagnosis
- Discussion of doxyPEP with a provider was significantly greater among those with a recent STI test (**14.9% versus 3.2%**), a recent gonorrhea or chlamydia diagnosis, and those on HIV PrEP (**18.0% versus 7.1%**)
- Interest in doxyPEP was significantly greater among non-Hispanic white MSM (**81.5%**) compared to non-Hispanic Black (**63.3%**) and Hispanic/Latine (**52.4%**) MSM, and among those with a recent gonorrhea (**80.4% versus 64.0%**) or chlamydia (**85.7% versus 64.0%**) diagnosis
- Among MSM with a recent bacterial STI diagnosis (n=84), significantly fewer Hispanic/Latine MSM were interested in doxyPEP compared to non-Hispanic white MSM (**55.6% versus 100%**)

Table 1. Access to HIV and STI testing and prevention by race/ethnicity

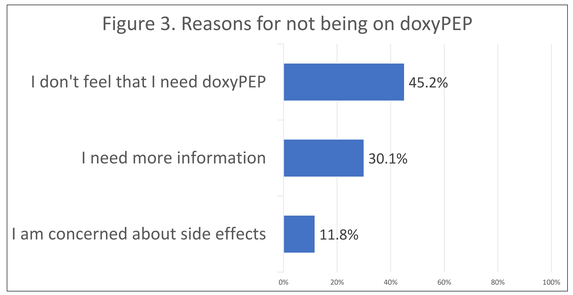
	NH-Black	NH-white	Hispanic/Latine	**Total**
Recent HIV Test	121 (85.2)	44 (83.0)	27 (79.4)	208 (83.9)
Recent STI Test	153 (79.3)	50 (83.3)	39 (84.8)	261 (80.6)
Recent STI diagnosis	48 (25.0)	17 (28.3)	12 (26.1)	84 (26.0)
Recent HIV PrEP Use	45 (33.8)	28 (52.8)	14 (43.8)	93 (39.4)
DoxyPEP Awareness	66 (34.2)	23 (38.3)	21 (44.7)	119 (36.5)
DoxyPEP Discussion	24 (12.4)	6 (10.0)	8 (17.0)	41 (12.6)
DoxyPEP Use	9 (4.7)	*	*	18 (5.5)
DoxyPEP Interest**	114 (63.3)	44 (81.5)	22 (52.4)	199 (66.6)
Total	193 (100)	60 (100)	47 (100)	326 (100)

Notes: NH=non-Hispanic; *cells <6 are suppressed; **percentage for doxyPEP interest is calculated among those who did not report using doxyPEP in the previous 12 months

RESULTS (cont.)

- Gender identity, age, insurance status, housing stability, and HIV status were not associated with any step of the doxyPEP continuum.
- Among those not on doxyPEP, the most common reason was feeling it was not needed (Figure 3)

Figure 3. Reasons for not being on doxyPEP



CONCLUSIONS

DoxyPEP awareness among MSM was low, and discussing doxyPEP with a provider was infrequent, even among those on HIV PrEP or with a recent bacterial STI diagnoses. Interest in doxyPEP far outpaced use.

Small cell counts and missing data make it difficult to draw conclusions for some observations, and the cross-sectional nature of the study limits our ability to know if awareness, discussion, and use of doxyPEP occurred prior to STI diagnoses.

DoxyPEP is one tool in a comprehensive approach to sexual wellness. Monitoring the doxyPEP continuum for disparities should continue. Future research should focus on preferred delivery method, such as community-prescribing models employed during mpox,[2] to improve accessibility and trust with diverse populations.

ADDITIONAL KEY INFORMATION

Contact:
Tanner Nassau, PhD MPH
Tanner.Nassau@phila.gov

Department of Public Health
CITY OF PHILADELPHIA

References:

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2. Garcia-Iglesias J, Ledin C, Gilmore J, Kohli M, Smith E, Weil B, Ventura Garcia L. DoxyPEP: thinking towards implementation. Lancet Infect Dis. 2025 Feb 18:S1473-3099(25)00077-5.