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DoxyPEP Uptake Among Male US Veterans Diagnosed with Bacterial STIs: A Cohort Study, 2022-2025

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BACKGROUND

- Doxycycline post-exposure prophylaxis (DoxyPEP) can reduce the risk of bacterial sexually transmitted infections (STIs) among individuals assigned male sex at birth.
- Real-world implementation patterns and barriers to timely access are poorly understood.

OBJECTIVES

- To evaluate the uptake of doxyPEP across a nationwide sample of veterans assigned male sex at birth (male veterans) in the Veterans Affairs (VA) health system with a recent bacterial STI across regions and subgroups.
- To identify factors associated with time-to-prescription after a bacterial STI diagnosis.

METHODS

- **Design**: Retrospective cohort study
  - Utilized clinical and lab data from VA electronic health records
- **Inclusion criteria**:
  - Male veterans diagnosed with at least one bacterial STI between January 1, 2022 and September 30, 2025
    - Gonorrhea or chlamydia (any site)
    - Syphilis (new positive or 4-fold increase in non-treponemal titer)
- **Outcome of interest**:
  - DoxyPEP prescription, any quantity
- **Covariates of interest:**
  - Age, Race/Ethnicity, Region (Northeast, Midwest, South, and West), HIV status, PrEP use
  - HIV status and PrEP use were determined at the time of initial STI diagnosis
- **Analysis**
  - Multivariate logistic regression to assess factors associated with doxyPEP use
  - Multivariate quantile regression to assess time to doxyPEP after initial STI

DoxyPEP uptake in the US South was lower compared with the Northeast and West. DoxyPEP uptake was associated with PrEP use (aOR 23.8) and HIV infection (aOR 7.2), but time to doxyPEP was ~4-5 months longer in those groups.

RESULTS

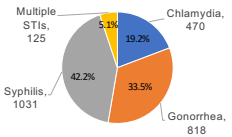
- 29,009 veterans diagnosed with a bacterial STI during the study period, 2,444 (8.4%) prescribed doxyPEP.
- 891 (36.5%) living with HIV, 904 (37.0%) on PrEP.

Table 1: Veterans on doxyPEP (N=2,444)

Characteristic	Prescribed DoxyPEP
Age Category	
18-30	468 (19.1%)
31-40	918 (37.6%)
41-50	469 (19.2%)
51+	589 (24.1%)
Race/Ethnicity	
Black or African American	1027 (42.0%)
White	712 (29.1%)
Hispanic or Latino	388 (15.9%)
Asian	66 (2.7%)
Native Hawaiian or Other Pacific Islander	27 (1.1%)
American Indian or Alaska Native	11 (0.5%)
More than one race	42 (1.7%)
Unknown	171 (7.0%)

Figure 1: Veterans on doxyPEP by STI, HIV status, and PrEP use

1.1 Index STI type



1.2 HIV and PrEP status

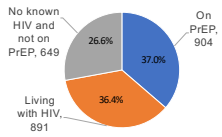
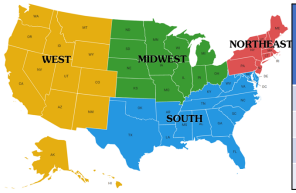


Table 2: Factors associated with doxyPEP uptake

Characteristic	Adjusted OR (95% CI)	p-value
Age Category		
18-30	Reference	Reference
31-40	1.1 (0.96 - 1.27)	0.171
41-50	1.0 (0.85 - 1.17)	0.966
51+	0.54 (0.46 - 0.64)	<0.001*
Race/Ethnicity		
Black or African American	Reference	Reference
White	0.87 (0.77 - 0.981)	0.023*
Hispanic or Latino	0.98 (0.84 - 1.13)	0.740
Asian	1.03 (0.73 - 1.44)	0.846
HIV Positive	7.21 (6.36 - 8.17)	<0.001*
Index STI		
Chlamydia	Reference	Reference
Gonorrhea	2.54 (2.21 - 2.91)	<0.001*
Syphilis	1.86 (1.61 - 2.14)	<0.001*
Multiple	1.85 (1.45 - 2.34)	<0.001*
On PrEP	23.8 (20.9 - 27.1)	<0.001*
Recurrent STI	2.5 (2.25 - 2.77)	<0.001*
Region		
South	Reference	Reference
Midwest	0.92 (0.77 - 1.1)	0.360
Northeast	1.51 (1.27 - 1.81)	<0.001*
West	2.29 (2.04 - 2.57)	<0.001*

Model adjusted for all observed characteristics, relative to specified reference values.
* denotes p<0.05

Figure 2: Proportion of veterans diagnosed with an STI and on doxyPEP, by geographic region



Region	Total with bacterial STI N=29,009	Prescribed DoxyPEP (%) N=2,444
South	15,796	1096 (6.9%)
Midwest	3,768	200 (5.3%)
Northeast	2,515	211 (8.4%)
West	6,840	934 (13.7%)

Table 3: Time to doxyPEP uptake

Characteristic	Median time to doxyPEP, in months (95% CI)	Difference	p-value
On PrEP			
No	11.9 (8.8 – 15.1)		
Yes	16.5 (13.1 – 19.9)	4.6 months	<0.0001
HIV positive			
No	12.1 (9.0 – 15.2)		
Yes	16.4 (12.9 – 19.8)	4.3 months	<0.0001

Limitations

- We did not assess sexual behaviors.
- Veterans without an STI in the study period were excluded.

CONCLUSIONS

- DoxyPEP uptake was lower among veterans >50 years old, White veterans, and those diagnosed with chlamydia.
- DoxyPEP uptake was higher among veterans in the Northeast and West (versus South), with HIV, and on PrEP.
- The median time to doxyPEP was 4.6 months longer for veterans on PrEP and 4.3 months longer for those with HIV.

PLAIN LANGUAGE SUMMARY

- The US South accounted for most STIs and doxyPEP prescriptions, but relative uptake was lower compared with the Northeast and West regions.
- Veterans diagnosed with chlamydia were less likely to be prescribed doxyPEP compared with other STIs.
- Time to doxyPEP was longer among veterans on PrEP and with HIV, compared with veterans not on PrEP or without HIV.

ADDITIONAL KEY INFORMATION

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