

# Frequency of Bacterial Sexually Transmitted Infections (STIs) Testing Among HIV Pre- Exposure Prophylaxis (PrEP) Users in Ontario

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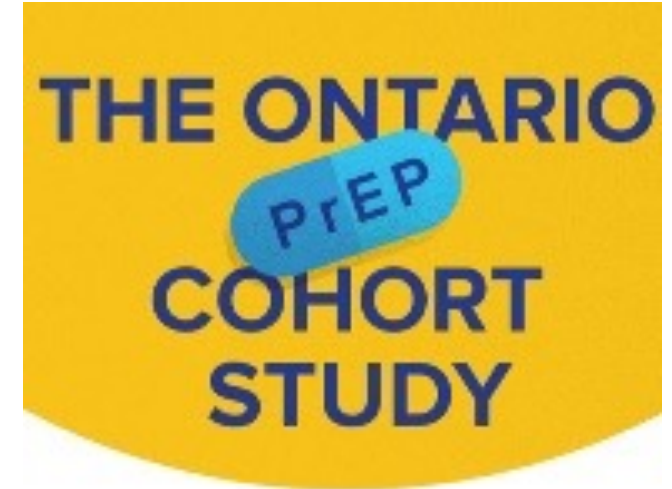
**Conflict of interest: I have no conflicts of interest to declare**

# Introduction

## Background:

- Canadian guidelines on HIV PrEP recommend quarterly STI screening.
- We quantified the frequency of syphilis, gonorrhea, and chlamydia screening among PrEP users.
- We used data from the Ontario PrEP Cohort Study (ON-PrEP), which is an ongoing multi-centre observational cohort study of HIV-negative PrEP users in Ontario, Canada.

**Objective:** To determine testing rates, infection rates, and test positivity per STI for ON-PrEP participants.



# Methods

- Adults using PrEP enrolled into ON-PrEP from 10 sites in 6 Ontarian cities since February 1<sup>st</sup>, 2018.
- Site staff entered STI data into the study database every 6-months for up to 24-months.
- We also obtained STI test data from the Public Health Ontario laboratory (PHOL) via health card linkage to increase data capture and include testing of participants at non-study sites.
- We quantified STI testing and diagnoses with study database and PHOL data collected between participants' enrollment date and February 27<sup>th</sup>, 2021.
- We used generalized estimating equations to determine testing rates, infection rates, and test positivity per STI for each data source among those with at least 1 test, accounting for repeated measures.
- Simultaneous testing of multiple anatomic sites were counted as one test.

# Results

- Of 630 participants, 362-547 (57.5-85.5%) participants had non-zero testing and were included in analyses.
- Testing rates ranged from 1.49-3.74/year while infection rates ranged from 2.75-11.35/100 person-years, varying by data source (Table).

**Table:** STI Testing, Infection, and Positivity Rates<sup>a</sup>

	Testing Rate (per year) <sup>b</sup>	Infection Rate (per 100 person-years) <sup>b</sup>	Test positivity (%)
<b>Syphilis</b>			
Study Database (n=481)	1.49 (1.14, 1.94)	4.88 (3.22, 7.40)	3.19
PHOL (n=463)	3.18 (2.43, 4.14)	2.75 (1.83, 4.12)	1.87
Combined (n= 547)	3.74 (2.63, 5.33)	3.66 (2.31, 5.79)	2.87
<b>Gonorrhea</b>			
Study Database (n=489)	1.63 (1.42, 1.88)	8.22 (6.47, 10.44)	4.19
PHOL (n=362)	1.99 (1.58, 2.52)	10.28 (7.87, 13.41)	5.33
Combined (n= 524)	2.01 (1.68, 2.41)	11.35 (9.16, 14.07)	5.36
<b>Chlamydia</b>			
Study Database (n=491)	2.01 (1.76, 2.30)	6.26 (4.76, 8.22)	3.92
PHOL (n=374)	1.87 (1.57, 2.23)	11.11 (8.57, 14.39)	5.16
Combined (n= 528)	2.13 (1.80, 2.51)	9.98 (7.85, 12.68)	5.07

<sup>a</sup>Adjusted for age at baseline, sex at birth, and mean drug use in the last 6 months; <sup>b</sup>Estimate (95% confidence interval)

# Conclusion

- STI testing and infection rates among PrEP users in Ontario appear to be variable
- Reasons may include patient preferences, provider practices, COVID-19 related disruptions and other factors
- Supplementing the study data with PHOL data enhanced data capture
- Limitations include potential for incomplete data entry and inability to capture anonymous testing data
- Reminders to integrate STI screening into PrEP follow-up visits are critical given high STI rates overall in this population and cohort
- Future integration of data sources may improve our understanding of STI epidemiology among PrEP users

5

## Acknowledgements:

