Bridging the PrEP Gap: characteristics of men who have sex with men that are not trying to access PrEP but meet clinical recommendations

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LAND ACKNOWELDGEMENT

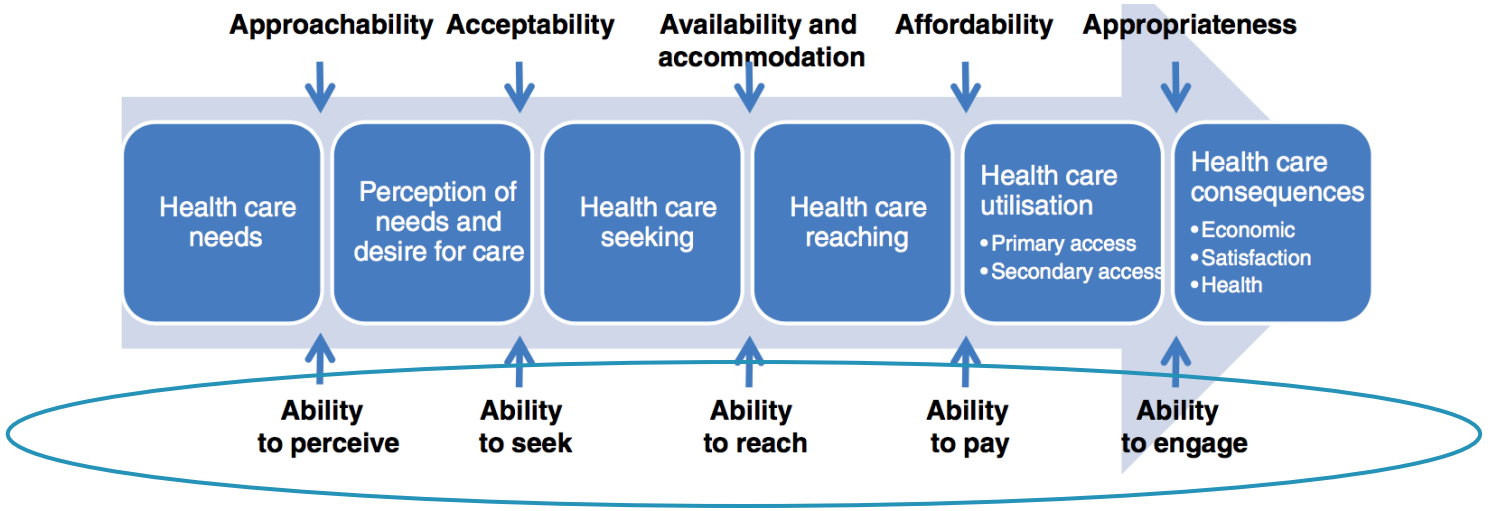
I respectfully acknowledge that we are privileged to work and learn on the traditional lands referred to as Treaty 6 Territory, the territories of the Cree, Dene, Nakota, Salteaux and Ojibwe First Nations and the Homeland of the Métis

Conflict of Interest Disclosures

- In the past 2 years I have been an employee of: **Diréction Régionale de Santé Publique de Montréal**
- In the past 2 years I have been a consultant for: **N/A**
- In the past 2 years I have held investments in the following pharmaceutical organizations, medical devices companies or communications firms: **N/A**
- In the past 2 years I have been a member of the Scientific advisory board for: **N/A**
- In the past 2 years I have been a speaker for: **N/A**
- In the past 2 years I have received research support (grants) from: **N/A**
- In the past 2 years I have received honoraria from: **N/A**
- I agree to disclose approved and non-approved indications for medications in this presentation: **YES**
- I agree to use generic names of medications in this presentation: **YES**
- There are relationships to disclose: **NO**

Background

- The impact of pre-exposure prophylaxis (PrEP) on the reduction of HIV incidence is contingent on access and population uptake
- Models of access to health services help conceptualize the access trajectory (Levesque et al, 2013)



Canadian guideline on HIV pre-exposure prophylaxis and nonoccupational postexposure prophylaxis (Tan et al, 2017)

Men who have sex with men (MSM)

- PrEP is recommended for MSM (*strong recommendation; high quality of evidence*) and transgender women (*strong recommendation; moderate quality of evidence*), who report condomless anal sex within the last six months and who have any of the following:
  - Infectious syphilis or rectal bacterial sexually transmitted infection (STI), particularly if diagnosed in the preceding 12 months;
  - Recurrent use of nonoccupational postexposure prophylaxis (nPEP) (more than once);
  - Ongoing sexual relationship with HIV-positive partner with substantial risk of transmissible HIV; or
  - High-incidence risk index (HIRI)-MSM risk score ≥ 11 (Appendix 1, supplemental Table 2).

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Objectives

1. To describe the PrEP access trajectory among self-reported HIV-negative or HIV-unknown gay, bisexual or other men who have sex with men (GBM) for whom PrEP is clinically recommended

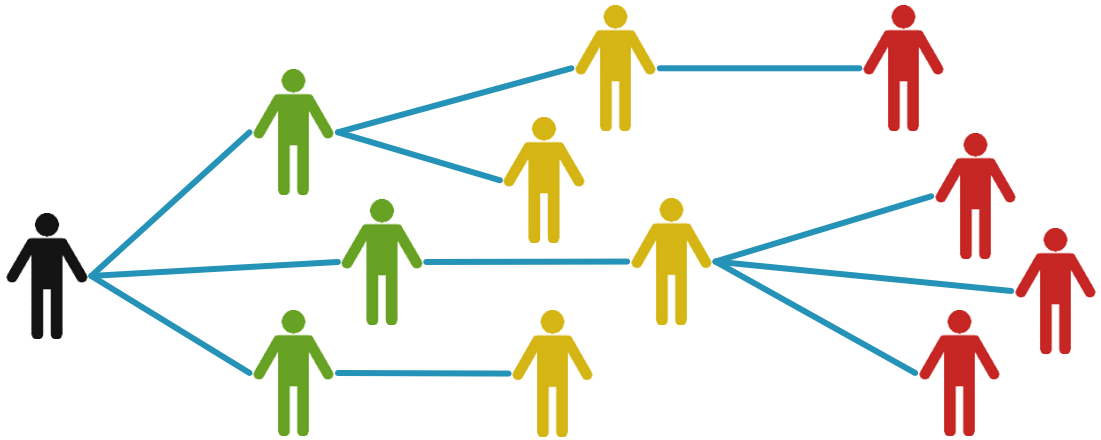
2. To identify factors associated with **not trying to access** PrEP across Montréal, Toronto and Vancouver

The Engage Study

- Cross-sectional study in Vancouver, Toronto, and Montreal
- Participants are HIV- and HIV+ cisgender and transgender men who:
  - Are 16 years of age or older
  - Reported having sex with another man in the past 6 months
- Participants complete computer-assisted surveys and biomedical testing (i.e., STI testing)

The Engage Study

- Participants are recruited by **Respondent-Driven Sampling**
- The current sample:
  - 201 Seeds
  - N = 2,198 (1179 Montreal, 422 Toronto and 597 Vancouver)
  - Recruitment period: February 2017 – February 2019
    Data collection ended in June 2018 in Montreal
    It is ongoing in Toronto and Vancouver



Methods: analytical sample and variables

- **Analytical sample:** Self-reported HIV negative or unknown participants for whom PrEP is recommended

- **Variables:**
  - **Objective 1**
    - Descriptive variables for the PrEP access trajectory: aware of, felt the need for, tried to obtain and used PrEP
  - **Objective 2**
    - Outcome measure: "***In the past 6 months, have you tried to go on PrEP?***"
    - Independent variables of interest: sociodemographic and behavioural factors that have previously been identified to influence access to health services and PrEP (Awe, 2018; Kelley, 2015; Levesque, 2013; Mosley, 2018; Nutbeam, 2000; Stein, 2007; Werner, 2018; Wilton, 2016)

Independent variables

AT THIS TIME, thinking about PrEP as an HIV prevention method, how much do you agree with the following statements? (Please provide an answer for each statement.)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Prefer not to answer
a. I don't feel that I am at high enough risk to use PrEP.	❍	❍	❍	❍	❍	❍
b. I know enough about PrEP to tell if it's right for me or not.	❍	❍	❍	❍	❍	❍
c. PrEP would allow me to have the sex I want.	❍	❍	❍	❍	❍	❍
d. PrEP is well-perceived in the community.	❍	❍	❍	❍	❍	❍
e. If I was taking PrEP, I would most likely stop using condoms.	❍	❍	❍	❍	❍	❍
f. I am afraid that guys being on PrEP will stop using other ways of protecting themselves.	❍	❍	❍	❍	❍	❍
g. I am worried about being negatively judged for taking PrEP.	❍	❍	❍	❍	❍	❍
h. I will choose my sexual partners based on whether they are taking PrEP or not.	❍	❍	❍	❍	❍	❍
i. If I were taking PrEP, I'd talk about it with my sexual partners.	❍	❍	❍	❍	❍	❍

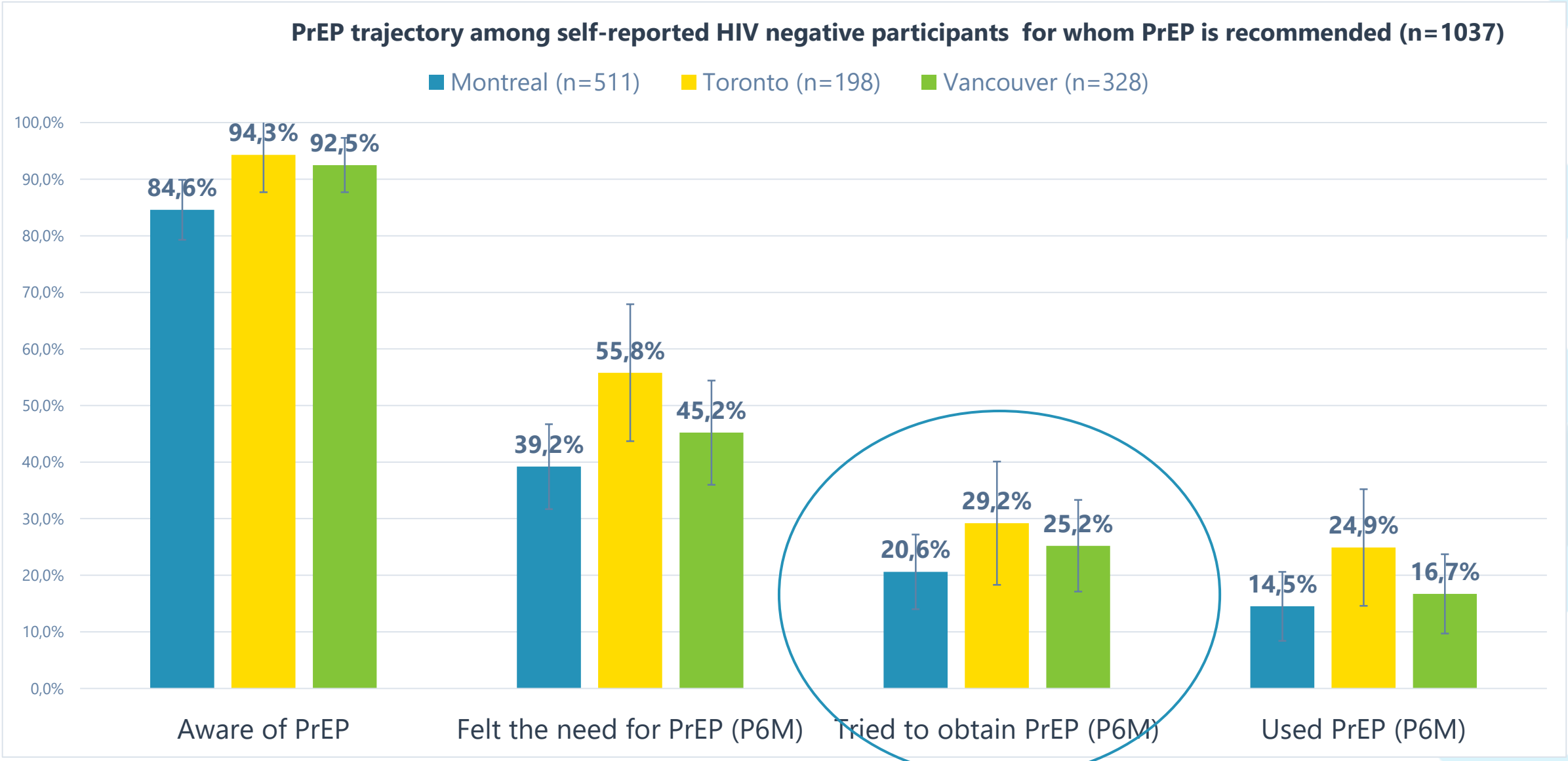
Methods: statistical analyses

- Step 1: Univariable regression analyses stratified by city were conducted to identify potential correlates of **not trying to access** PrEP
  - Factors exhibiting similar relationships (i.e. direction of association) in each city were selected
- Step 2: Univariable regression analysis on pooled data was conducted to identify significant correlates ($p<.05$)
- Step 3: Multivariable logistic regression on pooled data (adjusted for city) was conducted
- All analyses are RDS-adjusted using RDS-II weights (Volz & Heckathorn, 2008)

Results: Study sample

	Montréal			Toronto			Vancouver		
	n	**crude %**	**RDS % (95 % CI)**	**n**	**crude %**	**RDS % (95 % CI)**	**n**	**crude %**	**RDS % (95 % CI)**
Self-reported HIV-/unknown	968	82.1	86.3 (82.9 – 89.8)	341	80.8	80.4 (75.1 – 85.8)	499	83.6	81.1 (75.2 - 87.0)
Met clinical recommendations for PrEP	511	54.7	49.9 (44.1, 55.6)	198	60.2	43.5 (34.3, 52.7)	328	66.7	60.1 (52.3, 67.8)

Results: Objective 1 -Trajectory of access to PrEP



Results: Objective 2- Factors associated with not trying to access PrEP

Among HIV-negative or –unknown participants for whom PrEP is recommended and who are aware of PrEP (n=985)

	Univariable Unadjusted OR (95% CI)	Multivariable* Adjusted OR (95% CI)
Sociodemographic characteristics		
Age: <30	1.32 (0.99, 1.75)	0.76 (0.46, 1.23)
Level of education: less than post-secondary education	**2.01 (1.31, 3.19)**	1.39 (0.68, 2.90)
Perceived risk of HIV infection		
Does not feel at high enough risk to use PrEP	**9.83 (6.52, 15.41)**	**6.66 (3.67, 12.76)**
Knowledge about PrEP		
Does not know enough about PrEP to tell if it's right for him or not	**1.89 (1.35, 2.70)**	**1.76 (1.00, 3.15)**
Believes PrEP is moderately, a little or not effective at preventing HIV infection	**5.22 (3.62, 7.71)**	**1.91 (1.02, 3.68)**

* The final model was adjusted for city

Results: Objective 2- Factors associated with not trying to access PrEP

	Univariable Unadjusted OR (95% CI)	Multivariable Adjusted OR (95% CI)
Sexual behavioural impact of PrEP use		
Disagrees with the statement "If I was taking PrEP, I would most likely stop using condoms"	**3.05 (2.22, 4.22)**	**3.70 (2.20, 6.33)**
Disagrees with the statement "PrEP would allow me to have the sex I want"	**2.86 (2.00, 4.18)**	1.12 (0.62, 2.04)
Community receptivity of PrEP		
Afraid that guys on PrEP will stop using other prevention methods	**2.21 (1.61, 3.01)**	0.99 (0.58, 1.67)
Implications of ongoing PrEP-use		
Worried about side-effects	**1.90 (1.42, 2.53)**	**1.71 (1.05, 2.81)**
Would have difficulty taking PrEP every day	**3.02 (2.03, 4.60)**	1.62 (0.86, 3.16)

* The final model was adjusted for city

Results: Objective 2- Factors associated with not trying to access PrEP

	Univariable Unadjusted OR (95% CI)	Multivariable Adjusted OR (95% CI)
Access to medical services		
Does not have a primary healthcare provider	**2.15 (1.60, 2.92)**	1.32 (0.79, 2.20)
Does not have medical insurance	**1.49 (1.10, 2.02)**	**1.72 (1.05, 2.83)**
Can't find a doctor that is sensitive and accepting enough of sexual activities to prescribe PrEP	**4.63 (2.50, 9.61)**	**3.81 (1.53, 10.96)**
Does not know where to go to get a prescription for PrEP	**5.87 (4.00, 8.86)**	**3.25 (1.79, 6.10)**

* The final model was adjusted for city

Limitations

- Representativity
- Measurement instruments
- Different recruitment periods
- Pooled analysis of three RDS samples
- Cross-sectional analysis

Conclusion

- Approximately half of the sample met clinical recommendations for PrEP, but less than a third of these tried to access PrEP
- Understanding the discrepancy between clinical recommendations for PrEP and perception of risk remains an important step to optimize this HIV prevention strategy
- Increasing knowledge about PrEP and reducing barriers to medical access were also identified as potential intervention strategies.

Next Steps

- City-specific analysis is an important next step to guide local programs
- Longitudinal analysis

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Canadian Blood Services
it's in you to give

FYI: Factors associated with not trying to get PrEP

Variables considered

- Age
- Sexual orientation[T]
- Ethnicity
- Birthplace
- Education
- Income
- Drug coverage
- Having a primary healthcare provider
- Perceived risk of HIV infection
- Knowledge about PrEP
- Distance from clinics[V]
- Sexual behavioural impact of PrEP use
- Community receptivity of PrEP[T,V]
- Implications of ongoing PrEP-use (side effects, daily medication, on-going follow-ups)
- Cost[T]

Variables considered in step 3 (pooled analysis)

- Age
- Education
- Drug coverage
- Having a primary healthcare provider
- Perceived risk of HIV infection
- Knowledge about PrEP
- Sexual behavioural impact of PrEP use
- Community receptivity of PrEP
- Implications of ongoing PrEP-use (side effects, daily medication, on-going follow-ups)