

PUBLICLY FUNDED HIV PREP IN BRITISH COLUMBIA: PROGRAM RETENTION AND NEW HIV DIAGNOSES

K. Junine Toy¹, Cora L. Keeney¹, Jason Trigg¹, Wendy W. Zhang¹, Erin Ready¹, Paul Sereda¹, Viviane D. Lima¹, Mark Hull¹, Katherine Lepik¹, Martin St-Jean¹, David M. Moore¹, Chanson Brumme¹, Silvia Guillemi¹, Rolando Barrios¹, Julio S. Montaner¹

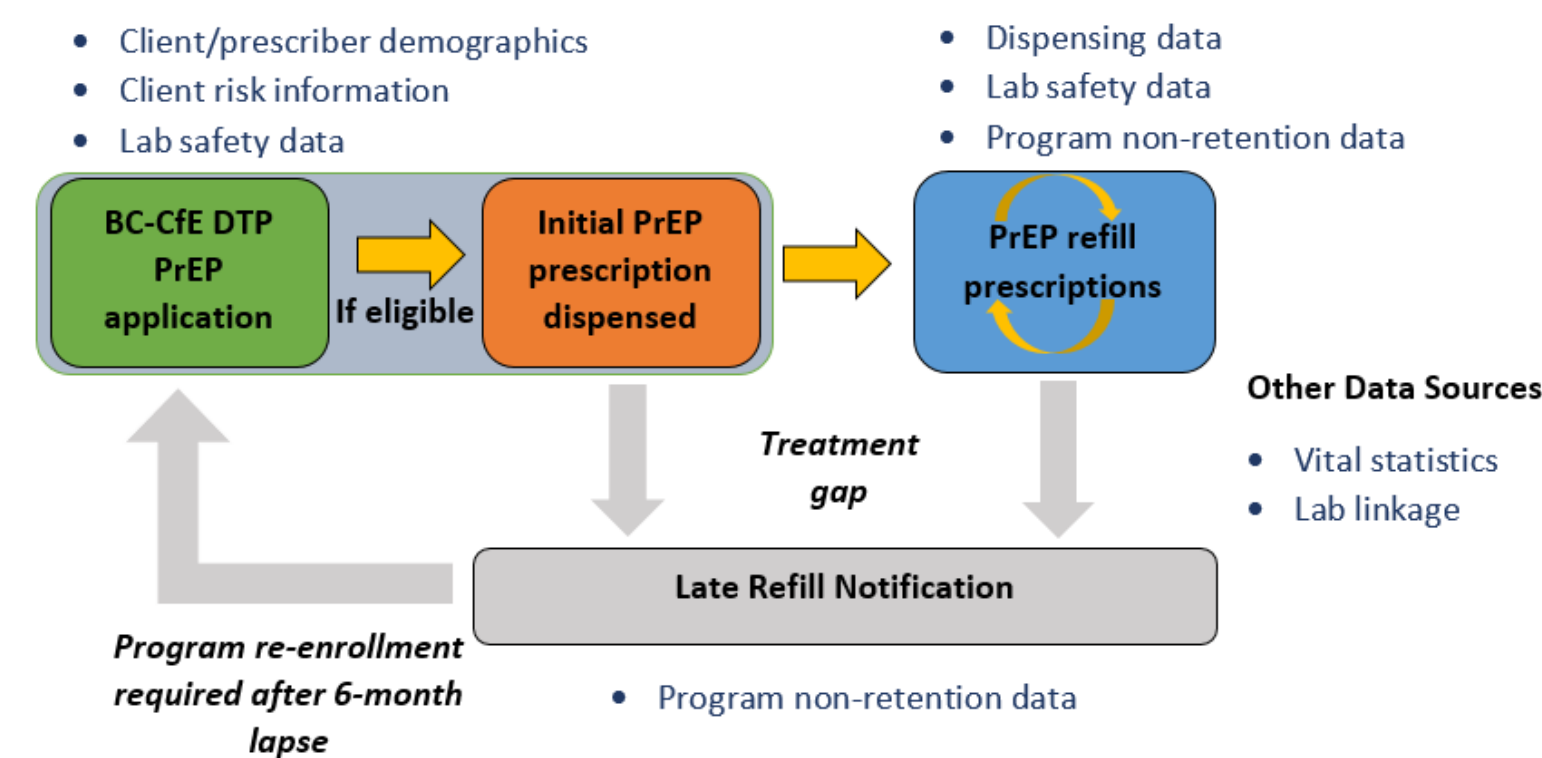
¹BC Centre for Excellence in HIV/AIDS, Vancouver, BC, Canada

Poster Number: 0978

Background

- In January 2018, a province-wide HIV pre-exposure prophylaxis (PrEP) program was launched in British Columbia (BC), Canada, to complement the existing publicly-funded HIV treatment as prevention strategy.
- BC residents were eligible to receive publicly-funded emtricitabine-tenofovir DF through the centralized BC Centre for Excellence in HIV/AIDS Drug Treatment Program (DTP) if they were at risk of HIV acquisition according to BC PrEP Guidelines.
- Client participation in the program increased steadily in the first 18 months, with a median 221 monthly enrollees (range, 163-443).
- We sought to evaluate program retention and the rate of new HIV diagnoses.

Figure 1: BC-CfE DTP PrEP program processes and data sources



Methods

- Individuals enrolled in the BC PrEP program between 1-Jan-2018 and 30-Jun-2019 were characterized by clinical, demographic, and prescriber characteristics.
- Program status at end of follow-up (31-Jan-2020) was determined.
- Multivariable logistic regression was used to evaluate factors associated with program non-retention (defined as >6 month lapse beyond expected PrEP refill date). Known non-daily PrEP users were excluded from this analysis.
- Rate of new HIV diagnoses in the cohort was calculated.

BC PrEP Program Cascade

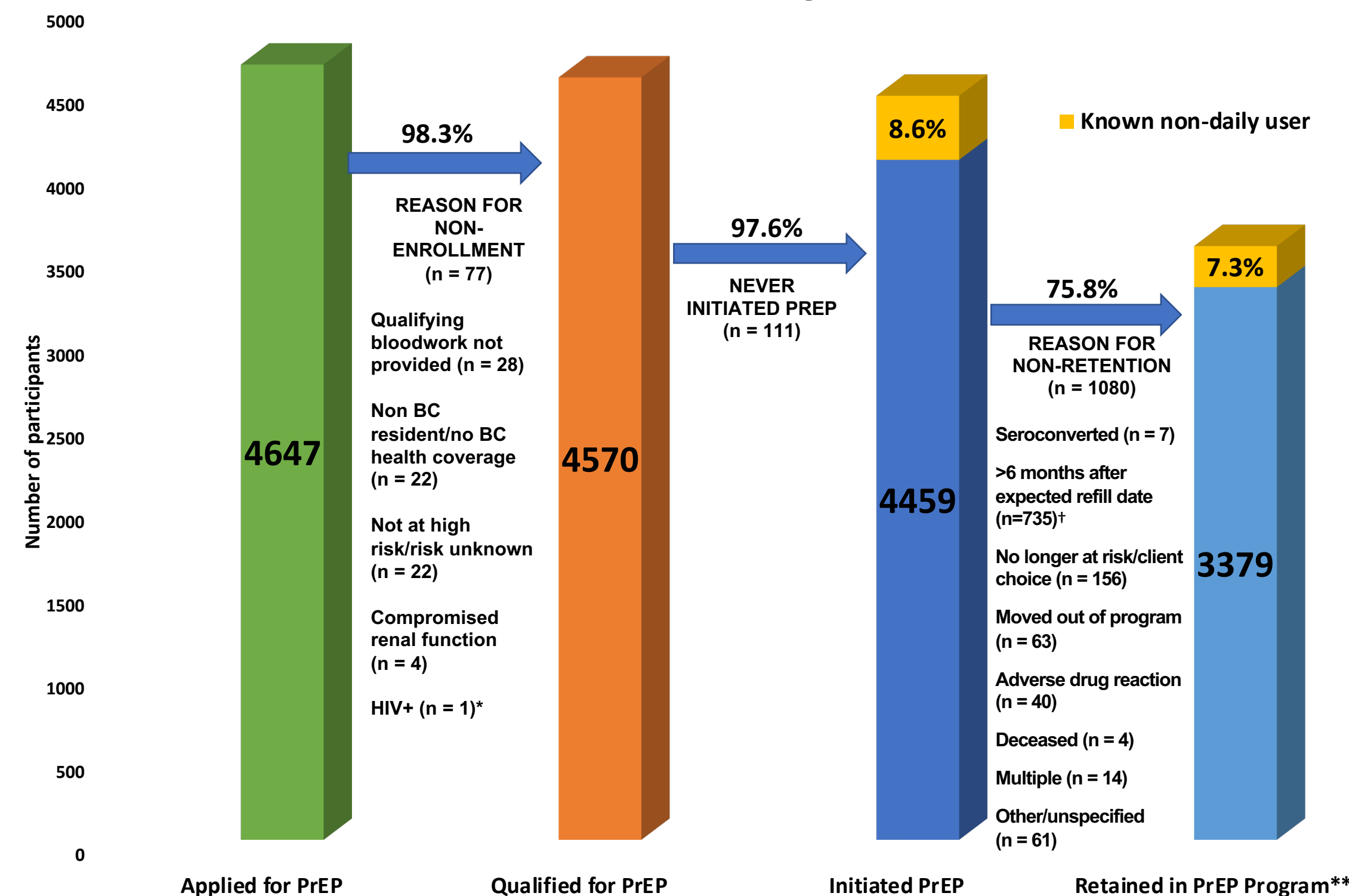


Figure 2: Proportion of participants in the BC-CfE PrEP program engaged at each stage of the PrEP cascade.

Includes applicants between 1-Jan-2018 and 30-Jun-2019, with follow-up until 31-Jan-2020.

*Client diagnosed HIV+ at time of screening for enrollment **Retained in PrEP program defined as <6 month lapse beyond expected refill date.

[†]Includes three participants who seroconverted >6 months after expected PrEP refill date and 134 (18.2%) known non-daily users.

Results

- In the first 18 months, 4647 individuals applied and 4570 qualified for PrEP program enrollment. The 4570 enrollees were median age 33 years (Q1-Q3, 27-44), 98.2% cis-male, 0.6% cis-female, 0.7% trans-female, 0.3% trans-male and 84.5% were PrEP-naïve. Qualifying risk factors are shown in Table 1.
- Of the 4459 participants who initiated PrEP, 75.8% were retained in the program as of 31-Jan-2020 (Figure 2).
- In the multivariate model, factors associated with program non-retention were: non-MSM risk factors [adjusted odds ratio (OR) 4.35 (95% confidence interval (CI), 1.67-11.35)], younger age [OR 1.30 (CI, 1.19-1.41) per 10 year decrement], no prior PrEP use [OR 1.68 (CI, 1.25-2.25)], and the enrolling prescriber having no PrEP prescribing experience (vs >5 prior PrEP clients) [OR 1.31 (CI, 1.03-1.68)].
- There were 12 new HIV diagnoses in the cohort, with 2 occurring in clients who qualified for, but never initiated, PrEP (Table 2).
- Among participants who initiated PrEP, there were 10 HIV seroconversions in 5752 person years of follow-up, with an HIV diagnosis rate of 0.17 per 100 person-yrs (95% CI, 0.08, 0.32).

Table 1: Program-Qualifying Risk Factor(s) for HIV Acquisition at Enrollment*	(n = 4570)
Men who have sex with men, transgender women (n, %)	4527 (99.1)
Median HIV Incidence Risk Index for MSM (HIRI-MSM) score (Q1-Q3)	19 (15 – 25)
HIRI-MSM score 10 – 24 (n, %)	3073 (67.2)
HIRI-MSM score ≥25 (n, %)	1038 (22.7)
Infectious syphilis or rectal bacterial sexually transmitted infection (n, %)	918 (20.1)
HIV-positive sexual partner** (n, %)	246 (5.4)
Recurrent non-occupational post-exposure prophylaxis (NPEP) use (n, %)	141 (3.1)
Heterosexual men and women who have an HIV-positive sexual partner (n, %)**	
Persons who inject drugs who have an HIV-positive injecting partner (n, %)**	25 (0.5)
Public health referral following phylogenetic identification of an HIV cluster (n, %)	6 (0.1)
Other risk factors (n, %)	27 (0.6)
	39 (0.9)

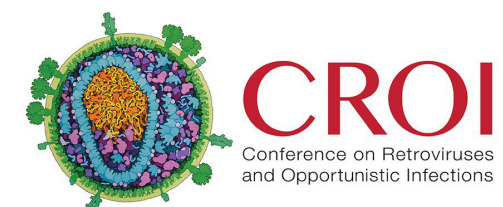
* More than one risk factor per client may be reported
 ** Partner not receiving stable antiretroviral therapy and/or viral load not < 200 copies/mL

Table 2: Summary of new HIV diagnoses in the BC PrEP Program	(n = 12)						
Case	Age	Risk category	HIRI-MSM score	Days from PrEP initiation to HIV+ date	Total number of pills dispensed	Days from last HIV- test date to HIV+ test date	Primary resistance mutations at HIV+ diagnosis
A	31	MSM/IDU	42	199	120	28	No
B	26	MSM	35	377	120	143	No
C	24	MSM/IDU	34	336	30	354	K103S
D	39	MSM	30	473	300**	229	M184V
E	38	MSM	28	263	30	288	No
F	33	MSM	38	N/A [†]	30	76	No
G	25	MSM	N/A*	311	90	103	No
H	31	MSM	19	N/A ^{††}	0	94	No
I	32	MSM/IDU	23	68	30	70	No
J	21	MSM	25	224	120	62	K103N
K	25	MSM	21	295	120	209	No
L	26	MSM	26	309	240	27	No

PrEP, pre-exposure prophylaxis; MSM, men who have sex with men; IDU, history of injection drug use; HIRI-MSM, HIV Incidence Risk Index for MSM; STI, sexually transmitted infection
 *Not provided (other qualifying risk) ** Drug in possession at time of diagnosis
[†]First PrEP prescription picked up but never started ^{††}Client never picked up PrEP medication

Conclusion

- In this publicly funded, centrally distributed PrEP program, participant retention was high at 18 months, and the rate of new HIV diagnoses low relative to seroconversion rates observed in similar populations. For context, HIV incidence in high-risk MSM (i.e. HIRI-MSM score ≥10) in a local cohort was approximately 2 per 100 person-yrs prior to roll-out of publicly funded PrEP (1)
- Non-MSM clients, younger clients and clients who had not used PrEP prior to enrolment were at higher risk of program non-retention and thus may benefit from enhanced support.



Links:
 • BC Centre for Excellence in HIV/AIDS. PrEP Program Information. Found at <http://cfenet.ubc.ca/hiv-pre-exposure-prophylaxis-prep>
 • Correspondence to Dr. Julio Montaner: jmontaner@cfenet.ubc.ca
 1. Lachowsky NJ et al. HIV incidence rate and predictors among gay and other men who have sex with men (MSM) in Vancouver: additional benefit of an administrative health data linkage. 25th Annual Canadian Conference on HIV/AIDS Research. 12 May 2016, Winnipeg

