

The HIV Pre-Exposure Prophylaxis (PrEP) Program in British Columbia



PAN 2018 Fall Meeting
30 October 2018
Kelowna, BC
Junine Toy, PharmD

Timeline - PrEP in BC

Jan-2015	•BC-CfE Guidance for use of PrEP
Feb-2016	•Health Canada approves use of emtricitabine-tenofovir DF for PrEP
Jan-2017	•Phylogenetically targeted PrEP in BC (T-PrEP)
Jul-2017	•Health Canada approval of generic emtricitabine-tenofovir DF products
Oct/Nov-2017	•Updated BC-CfE Guidance for use of PrEP •Canadian Guideline on HIV PrEP and Non-occupational Post-Exposure Prophylaxis (NPEP)
Jan-2018	•BC-CfE PrEP Program Launch

JToy, PAN 2018



BRITISH COLUMBIA
CENTRE for EXCELLENCE
in HIV/AIDS

Together we can stop HIV/AIDS

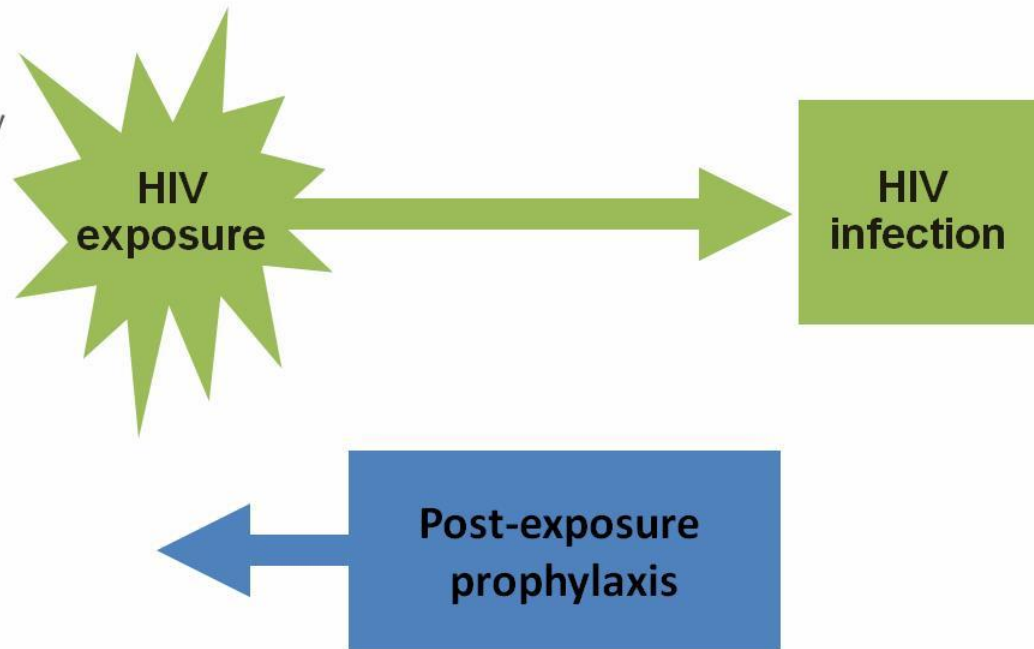


How you want to be treated.



HIV Pre- vs Post-exposure Prophylaxis

- **Post-exposure prophylaxis**
Short-term antiretrovirals (ARVs) initiated immediately after HIV exposure to reduce the risk of infection
- **Pre-exposure prophylaxis**
ARVs initiated prior to HIV exposure and continued after exposure





GUIDANCE FOR THE USE OF PRE-EXPOSURE PROPHYLAXIS (PREP) FOR THE PREVENTION OF HIV ACQUISITION IN BRITISH COLUMBIA

OCTOBER 2017

BC-CfE PrEP Education

- HIV Prevention On-Line Course (Dec 2017)
- Webinar “Getting PrEP’ed for PrEP” (Mar 2018)
- Nurse Practitioner Program

REACH line (Healthcare provider support)

- Vancouver (604) 681-5748
- Outside Vancouver 1-800-665-7677

<http://www.cfenet.ubc.ca/>
<https://education.cfenet.ubc.ca/>

JToy, PAN 2018



BRITISH COLUMBIA
CENTRE for EXCELLENCE
in HIV/AIDS

Together we can stop HIV/AIDS



BRITISH COLUMBIA HIV PRE-EXPOSURE PROPHYLAXIS BASELINE ASSESSMENT TOOL

Assessment Date: _____

Patient Demographics

Client Name: _____ PHN: _____
 Postal Code: _____ Contact Telephone Number: _____
 Date of Birth: _____ (YYYY-MM-DD) Age: _____
 Gender: ☐ Male ☐ Female ☐ Transgender ☐ Identifies as: _____

PrEP Access

Date of Referral (if applicable): _____ (YYYY-MM-DD)
 Referred from: _____
☐ Self-referred ☐ Other service/physician: _____
 PrEP coverage (check all that apply):
☐ Provincial PrEP Program
☐ Private Insurance - If yes, _____% covered
☐ Self-Funded
☐ Other: _____

Medical History

Check all that apply:
☐ Chronic Active Hepatitis B: _____
☐ Hepatitis C: _____
☐ Chronic Renal Impairment/CKD: _____
☐ Diabetes: _____
☐ Hypertension: _____
☐ Depression/Anxiety: _____
☐ Osteoporosis/Low Bone Mass: _____
☐ Other: _____
 Current Medications: _____
 Allergies: _____

Prior STI's Ever

Gonorrhea: ☐ Yes ☐ No ☐ Unknown
 Chlamydia: ☐ Yes ☐ No ☐ Unknown
 Syphilis: ☐ Yes ☐ No ☐ Unknown

HIV Risk

HIRI-MSM Risk Index Calculator (Score ≥ 10 Suggests HIV Infection)

Question	
1 How old are you today?	
2 In the last 6 months, how many men have you had sex with?	
3 In the last 6 months, how many times did you have receptive anal sex (you were the bottom) with a man without a condom?	
4 In the last 6 months, how many of your male sex partners were HIV-positive?	If >1 positive partners, score 8 If 1 positive partner, score 4 If 0 positive partner, score 0
5 In the last 6 months, how many times did you have insertive anal sex (you were the top) without a condom with a man who was HIV-positive?	If 5 or more times, score 6 If <5 times, score 0
6 In the last 6 months, have you used methamphetamines such as crystal or speed?	If yes, score 6 If no, score 0
Add down entries in right to calculate total score:	
	Total Score

PrEP Toolkit March 2018

page 1



BRITISH COLUMBIA
CENTRE for EXCELLENCE
in HIV/AIDS

Drug Treatment Program Outpatient Laboratory Requisition



Baseline

(To be given prior to first appointment)

Laboratory Medicine

Grey highlighted fields must be completed to avoid delays in specimen collection and patient processing. For tests indicated with a grey tick box (), consult provincial guidelines and protocols (www.BCguidelines.ca)

Bill to: ☐ MSP ☐ ICBC ☐ WorkSafeBC ☐ PATIENT ☐ OTHER: _____
 PHN NUMBER: _____ ICBC/WorkSafeBC/RCMP NUMBER: _____
 SURNAME OF PATIENT: _____ FIRST NAME OF PATIENT: _____
 DOB: _____ SEX: ☐ M ☐ F Pregnant? ☐ YES ☐ NO Fasting? _____h pc
 TELEPHONE NUMBER OF PATIENT: _____ CHART NUMBER: _____
 ADDRESS OF PATIENT: _____ CITY/TOWN: _____ PROVINCE: _____
 DIAGNOSIS: _____ CURRENT MEDICATIONS/DATE AND TIME OF LAST DOSE: _____

HEMATOLOGY

☐ Hematology profile
☐ PFAPA ☐ On warfarin?
☐ Fentanyl (query iron deficiency)
 HFE - Hemochromatosis (check ONE box only)
☐ Confirm diagnosis (ferritin test + T2* + DNA testing)
☐ Siblings/parent's C282Y/C282Y homozygote (DNA testing)
☐ Microscopic (dipstick) ☐ Microscopic
☐ Special case (if ordered together)
☐ Pregnancy test

URINE TESTS

☐ Urine culture - list current antibiotic:
☐ Macroscopic → microscopic if dipstick positive
☐ Macroscopic → urine culture if pyuria or nitrite present
☐ Special case (if ordered together)
☐ Pregnancy test

CHEMISTRY

☐ Glucose - fasting (see reverse for patient instructions)
☐ GTT - gestational diabetes screen (20 g load, 1 hour post-load)
☐ GTT - gestational diabetes confirmation (75 g load, fasting, 1 hour & 2 hour test)
☐ Hemoglobin A1c
☐ Albumin/creatinine ratio (ACR) - urine

LIPIDS

☐ one box only For other lipid investigations, please order specific tests below and provide diagnosis:
☐ Baseline cardiovascular risk assessment or follow-up (fasting profile, Total HDL & LDL Cholesterol, Triglycerides, fasting)
☐ Follow-up of treated hypercholesterolemia (Total, HDL & non-HDL Cholesterol, fasting not required)
☐ Follow-up of treated hypercholesterolemia (ApoB only, fasting not required)
☐ Self-pay lipid profile (non-MSP labile, fasting)

THYROID FUNCTION

For other thyroid investigations, please order specific tests below and provide diagnosis:
☐ Suspected Hypothyroidism (TSH first +/- FT4)
☐ Suspected Hyperthyroidism (TSH first +/- FT4, +/- FT3)
☐ Monitor thyroid replacement therapy (TSH only)

OTHER CHEMISTRY TESTS

☐ Sodium ☐ Albumin ☐ Creatinine / uGFR
☐ Potassium ☐ A1c phos ☐ Calcium
☐ ALT ☐ Creatine kinase (CK)
☐ Bilirubin ☐ PSA - known or suspected prostate cancer (MSP labile)
☐ GGT ☐ T. Protein ☐ PSA screening (self-pay)

(below)

OTHER TESTS

☐ ECG ☐ Fecal Occult Blood (age 50 - 74 asymptomatic q2y)
☐ Copy to Colon Screening Program
☐ Fecal Occult Blood (Other indicators)

SCR, HIV Antibody/Antigen EIA, RPR, Hep B Surface Antigen, Hep B Core Antibody, Hep B Surface Antibody, Hep A IgG Antibody, Hep C Antibody, Urinalysis, Urine ACR

SIGNATURE OF PHYSICIAN

DATE SIGNED

DATE OF COLLECTION TIME OF COLLECTION PHLEBOTOMIST TELEPHONE REQUISITION RECEIVED BY (employee/date/time)

• PrEP Client Assessment Tool
• Laboratory Requisition Forms

<http://www.cfenet.ubc.ca/>

JToY, PAN 2018



How you want to be treated.



Together we can stop HIV/AIDS

BRITISH COLUMBIA
CENTRE for EXCELLENCE
in HIV/AIDS



BC-CfE PrEP Program Eligibility

MSM or transgender women

HIV Incidence Risk Index (HIRI)-MSM ≥ 10
Infectious syphilis or rectal bacterial sexually transmitted infection
Known HIV-positive sexual partner, with unsuppressed viral load
Recurrent NPEP use

Persons who inject drugs

Known HIV+ injecting partner, with unsuppressed viral load

Clinical criteria for high risk for HIV acquisition

Heterosexual

Known HIV-positive sexual partner, with unsuppressed viral load

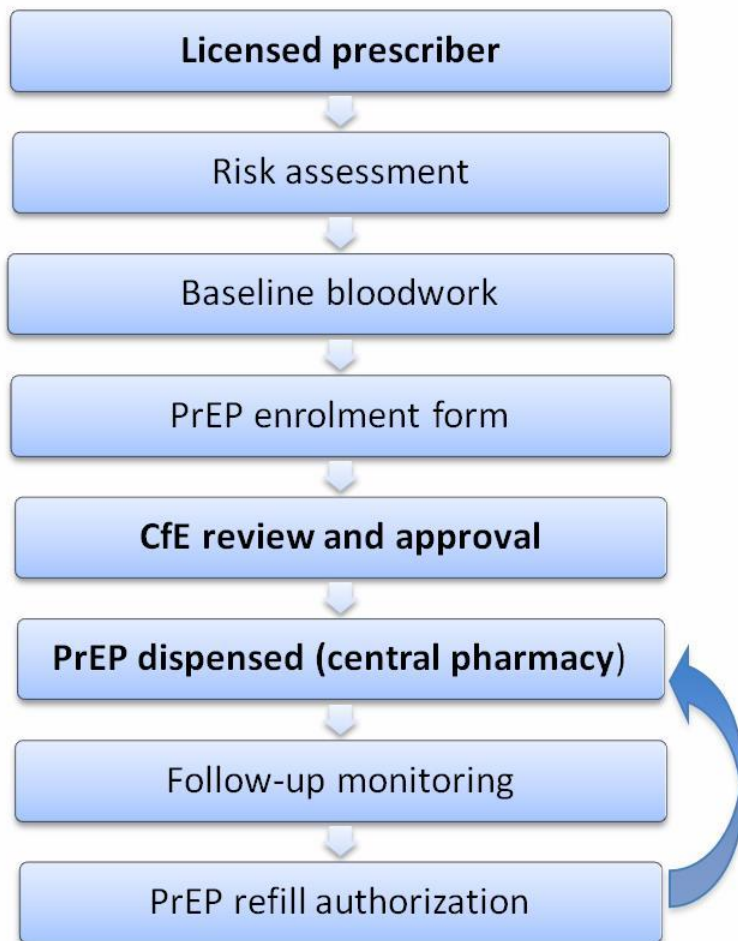
Other criteria

- Adequate renal function (eGFR > 60 mL/min)
- Screened for Hepatitis B infection
- Current negative 4th generation HIV Ag/Ab test
- BC Healthcare or Interim Federal Health Coverage

NPEP= non-occupational post-exposure prophylaxis

MSM= men who have sex with men

BC-CfE PrEP program process



BRITISH COLUMBIA CENTRE for EXCELLENCE in HIV/AIDS		Drug Treatment Program		Providence HEALTH CARE <small>How you want to be treated.</small>
PRE-EXPOSURE PROPHYLAXIS (PrEP) ENROLMENT & PRESCRIPTION REQUEST				
Please return completed form as per instructions on reverse: By Fax: 604-806-9044, Telephone: 604-806-8515				OFFICE USE ONLY PrEP # <input type="text"/>
Patient and Prescriber Information				
Patient: (Legal First or Given Names)		(Legal Last Name)		Telephone:
Patient's Address:			Postal Code	Personal Health Number or Other Billing #
Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female	Transgender: <input type="checkbox"/> M to F <input type="checkbox"/> F to M	Date of Birth: DD MON YYYY		
Pick-up site: <input type="checkbox"/> St. Paul's Hospital Ambulatory Pharmacy <input type="checkbox"/> Prescriber's Office (outside Greater Vancouver):				
Prescribing Physician/Name of Provider:				
Name:		College ID number:		
Address:		MSC number:		
		Telephone:		
		Fax:		
Follow-up prescriber to order medication refills (if different from the physician noted above).				
Name:		MSC#:	Address:	Tel:
Patient Information				
Ethnicity: Does this individual self-identify as an Aboriginal person, that is, First Nations, Métis or Inuit? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown				
HIV Transmission Risk Factors (check all that apply)				
Men who have sex with men (MSM)/ Transgender women: <input type="checkbox"/> HIV Risk Index Score (HIRI-MSM) ≥ 10 (Score: <input type="text"/>) <input type="checkbox"/> Prior Bacterial Rectal STI/Syphilis <input type="checkbox"/> Recurrent PEP Use		Known HIV+ partner not on stable ART and/or viral load not < 200 copies/mL: <input type="checkbox"/> MSM <input type="checkbox"/> Heterosexual <input type="checkbox"/> Injection Drug Use		
		Public Health: <input type="checkbox"/> Targeted PrEP Other risk (specify): <input type="text"/>		
Most recent bloodwork result:				
Creatinine: DD MON YYYY		Negative HIV Serology: DD MON YYYY (4 th generation HIV test within past 15 days)		
eGFR: DD MON YYYY		Hepatitis B SAg Positive: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Prior PrEP: <input type="checkbox"/> No <input type="checkbox"/> Yes		<input type="checkbox"/> Continuing <input type="checkbox"/> Restarting Drug Allergy: <input type="checkbox"/> None Known <input type="checkbox"/> Yes (specify): <input type="text"/>		
Medication Prescription				
Emtricitabine-Tenofovir DF 200-300mg tablet. Take one tablet once daily.				
<input type="checkbox"/> 30 Tablets (for first time PrEP prescriptions)		<input type="checkbox"/> 90 Tablets		
Prescriber's signature: _____ MSC#: _____ Date: DD MON YYYY				
BC-CfE use only: Prescription Expiry Date: (30 days after authorization) <input type="text"/> Authorized by: <input type="text"/> DO NOT DISPENSE AFTER EXPIRY DATE				



PrEP Monitoring

Baseline

HIV Ag/Ab test, renal function, urine ACR, HBV serology
Initial prescription: Emtricitabine/tenofovir DF daily for 30 days
Minimum 7 days before protective levels

at 1 month

HIV Ag/Ab, renal function, STI screening
Review tolerability, adherence
Refill up to 90 days

then at least every 3 months*

HIV Ag/Ab, renal function, STI screening
Review tolerability, adherence, ongoing need
Refill up to 90 days

Other: Pregnancy screening in women; annual HCV screening in MSM and persons who use injection drugs
ACR, albumin/creatinine ratio; STI, sexually transmitted infection

JToy, PAN 2018



Safety

- Emtricitabine-tenofovir DF (FTC-TDF) 200-300mg once daily
 - Approved for use as PrEP if CrCl ≥ 60 mL/min
 - Safety profile established in HIV treatment; renal and bone concerns
- Potential adverse effects of PrEP
 - Gastrointestinal
 - Renal - Signal for minor serum creatinine changes in meta-analysis ¹
 - Bone mineral density changes^{2,3}, appear to be reversible after PrEP discontinuation⁴
- Potential for drug-resistant HIV infection^{5,6,7}

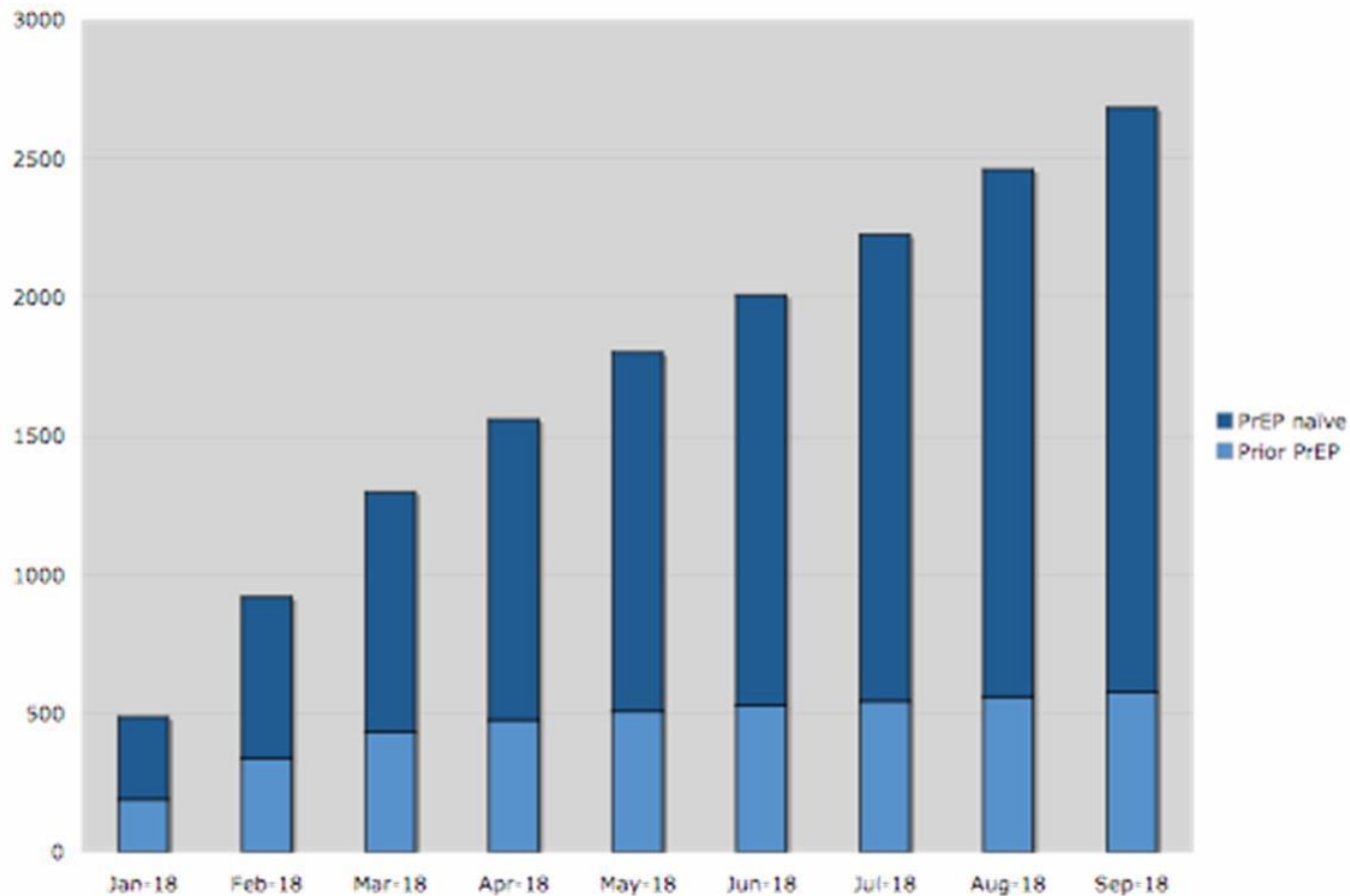
1. Yacoub R, et al., *JAIDS* 2016
2. Mulligan K, et al., *Clin Infect Dis* 2015
3. Kasonde M, et al., *PLOS ONE* 2014
4. Glidden DB, et al., *JAIDS* 2017

5. Knox D, et al., *N Engl J Med* 2017
6. Markowitz M, et al. *JAIDS* 2017
7. Thaden JT, et al. *AIDS* 2018

JToy, PAN 2018



Cumulative PrEP Program Enrolment



BC-CfE Drug Treatment Program (1 Oct 2018)



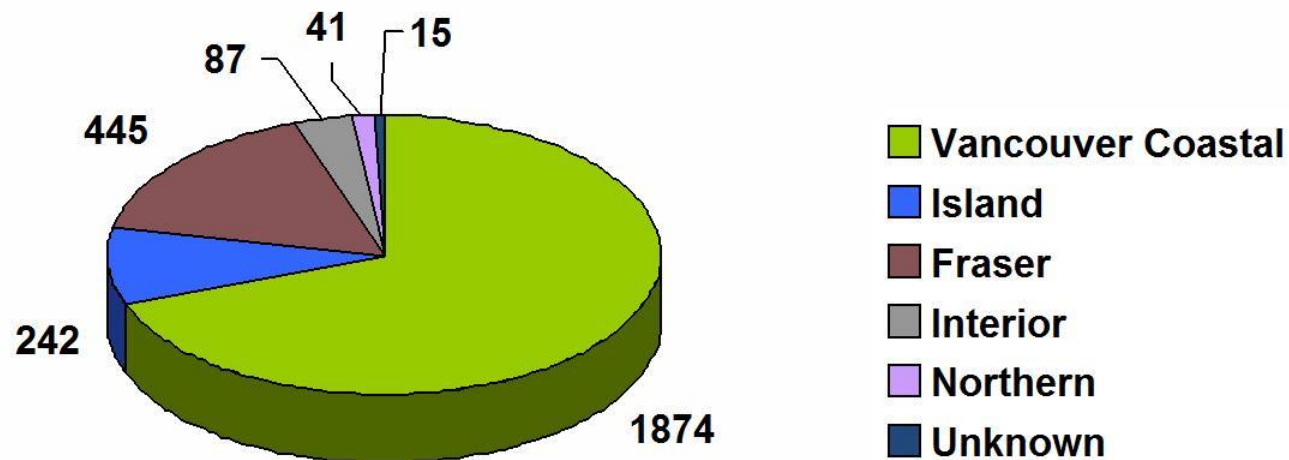
BRITISH COLUMBIA
CENTRE for EXCELLENCE
in HIV/AIDS

Together we can stop HIV/AIDS

Providence
HEALTH CARE
How you want to be treated.



PrEP Applicants by Health Authority



Total: 2704

BC-CfE Drug Treatment Program (1 Oct 2018)



BRITISH COLUMBIA
CENTRE for EXCELLENCE
in HIV/AIDS

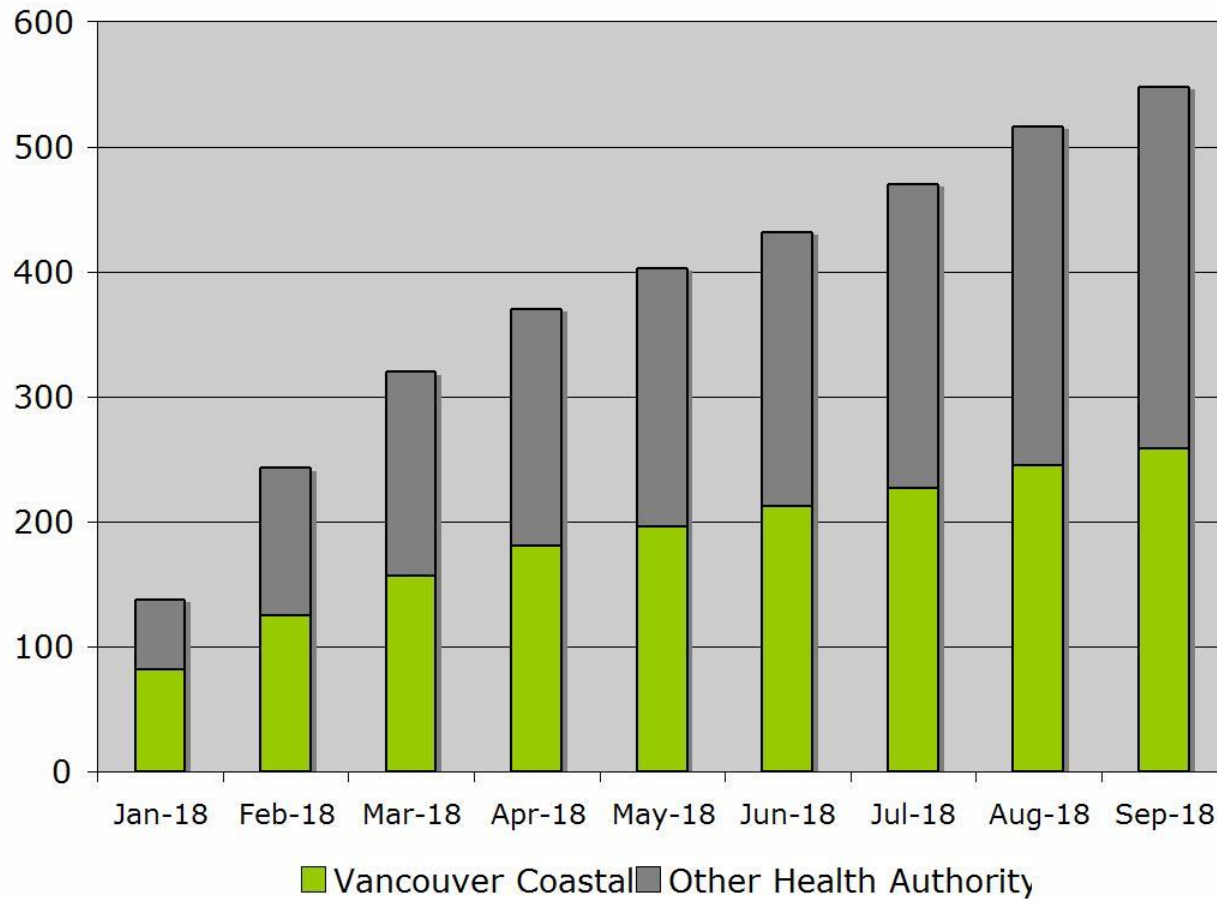
Together we can stop HIV/AIDS



How you want to be treated.



PrEP Prescribers



BC-CfE Drug Treatment Program (1 Oct 2018)



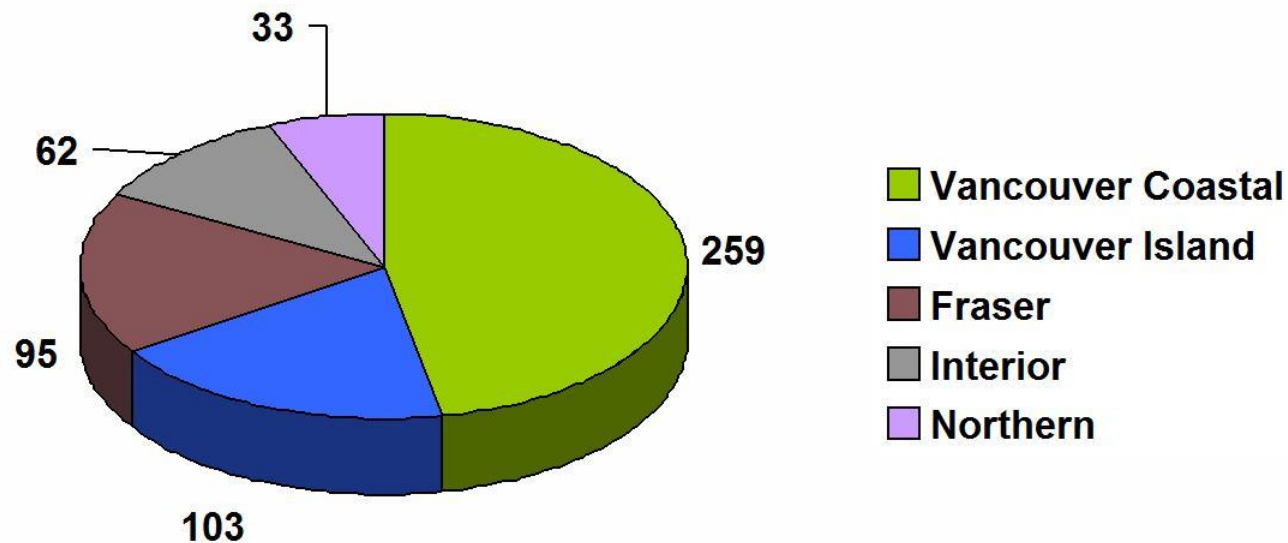
BRITISH COLUMBIA
CENTRE for EXCELLENCE
in HIV/AIDS

Together we can stop HIV/AIDS

Providence
HEALTH CARE
How you want to be treated.



PrEP Prescribers by Health Authority



Total prescribers: 548

Median (Q1-Q3) clients per prescriber: 1 (1,2)



PrEP program participants

Participant characteristics (Jan 1 – June 30, 2018)		n = 1955
Median age (Q1-Q3), years		35 (29-46)
Gender identity, n (%)		
• Cis-gender male		1929 (98.7)
• Transgender female		17 (0.9)
• Cis-gender female		5 (<0.5)
• Transgender male		<5 (<0.5)
• Other gender identity		<5 (<0.5)
PrEP naive, n (%)		1423 (73)
Hep B surface antigen positive, n (%)		14 (0.7)
Mean baseline eGFR (SD), mL/min		97.8 (17.1)

BC-CfE Drug Treatment Program (September 2018)



BRITISH COLUMBIA
CENTRE for EXCELLENCE
in HIV/AIDS

Together we can stop HIV/AIDS

Providence
HEALTH CARE
How you want to be treated.



PrEP Participants by Risk Factor

Qualifying Risk Factor(s) ^a (Jan 1 – Jun 30, 2018)		N=1955	
		n	(%)
MSM / Transgender women			
• HIRI-MSM	10-24	1086	(55.6)
	≥ 25	541	(27.7)
• Prior rectal bacterial STI / infectious syphilis		402	(20.6)
• Recurrent NPEP use		57	(2.9)
• Known HIV+ sexual partner ^b		95	(4.9)
Heterosexual men and women			
• Known HIV+ sexual partner ^b		7	(<0.5)
Persons who use injection drugs			
• Known HIV+ injecting partner ^b		<5	(<0.5)
Public Health (Phylogenetically Targeted PrEP)		25	(1.3)
Other		9	(0.5)

- a. More than one risk factor per client may be specified
 b. Not receiving stable ART and/or viral load not <200 copies/mL

STI, sexually transmitted infection; NPEP, non-occupational post-exposure prophylaxis



Preliminary reports of PrEP discontinuation

PrEP approved Jan 1 - Jun 30, 2018

N = 1955

(Follow-up until Aug 31, 2018)

	n	(%)
PrEP Discontinuation	25	(1.3%)
• No longer at risk	16	
• PrEP not tolerated	4	
• Drug interaction	1	
• Unspecified	4	

- *Document HIV status at PrEP discontinuation*
- *Counsel client on alternative HIV prevention method(s) if indicated*

BC-CfE Drug Treatment Program (Sept 2018)



BRITISH COLUMBIA
CENTRE for EXCELLENCE
in HIV/AIDS

Together we can stop HIV/AIDS

Providence
HEALTH CARE

How you want to be treated.



Summary

- PrEP is an HIV prevention option for persons at high risk of HIV acquisition
- PrEP is available at no cost to qualifying persons as per BC-CfE PrEP Guidelines
- Current recommended PrEP regimen is fixed-dose emtricitabine/tenofovir DF tablet (200mg/ 300mg) once daily
- Monitoring and follow-up should occur at least every 3 months
- Rapid uptake of PrEP seen since program launch
- New clinicians are being engaged into provision of HIV preventative care
- Few reports of PrEP discontinuation so far

JToy, PAN 2018