



Clinical Pearls & Background Information

- PrEP **reduces HIV acquisition** (e.g. by 90% in MSM/TGW), & can be used with other risk reduction strategies.
- If indicated, **all prescribers may order emtricitabine/tenofovir disoproxil fumarate**, usually one tablet daily, but on-demand dosing is an option for some MSM.
- Emtricitabine/tenofovir alafenamide may be useful e.g. eGFR<60, fracture hx, but **access limited** (coverage/\$).
- PrEP is well tolerated & **prescribed at 3 mos intervals** with monitoring for adherence, **AE**, HIV, STIs, **renal** function, also HCV & **pregnancy** if applicable (see Table 2).

- ~2500 new cases of HIV reported per year in Canada & ~200 in SK.<sup>6-8</sup>
- **Which populations have an ↑ incidence of HIV diagnoses?**
  - **Canada:** ~55% occur in gay/bisexual/MSM. **Other:** those from HIV endemic countries, Indigenous peoples, sex workers, & TGW.<sup>6-8</sup>
  - **Saskatchewan:** ~67% occur in people who inject drugs.
- **What is pre-exposure prophylaxis (PrEP)?** PrEP is a proactive prevention strategy where **HIV-negative persons at ↑, ongoing risk take a once-daily tablet before & after potential HIV exposure** to prevent transmission in combo with others strategies e.g. opioid agonist tx, needle exchange, safer injection practices, consistent condom use, HIV screening.

An Approach to Pre-exposure Prophylaxis (PrEP) *consider both past and future anticipated risk e.g. sex & drug use*

**Step 1: Identify people who are HIV-negative at increased chance of acquisition** i.e. PrEP indication {nPEP if ↑risk exposure ≤72hr}

<b>Men who have sex with men (MSM) &amp; Transgender women (TGW)</b>	<ul style="list-style-type: none"><li>• <b>People who are HIV-negative</b> &amp; have any of the following:<ul style="list-style-type: none"><li>○ <b>HIV Incidence Risk Index for MSM (HIRI-MSM)</b>, score ≥10=2%/yr &amp; score &gt;25=7%/yr risk of incident HIV.<sup>9-10</sup></li><li>○ STI (syphilis or rectal bacterial gonorrhea or chlamydia), especially if diagnosed in the last 12 months.</li><li>○ Use (≥1) of non-occupational post-exposure prophylaxis, associated with ~7%/year risk of incident HIV.<sup>11</sup></li><li>○ Ongoing sexual relationship with HIV-positive individual(s) with risk of HIV transmission (see Table 1).</li></ul></li></ul>
<b>People who are heterosexual</b>	<ul style="list-style-type: none"><li>• <b>People who are HIV-negative</b> in serodifferent relationship(s) reporting condomless vaginal/anal sex where there is non-negligible risk of HIV transmission (see Table 1). <b>Includes attempts to conceive with a HIV-positive person.</b></li></ul>
<b>People who inject drugs</b> <small>RxFiles Patient Q&amp;A: injecting drugs</small>	<ul style="list-style-type: none"><li>• <b>People who are HIV-negative</b> sharing injection drug equipment with a person who has non-negligible risk of HIV transmission. May consider <b>ARCH-IDU</b> Risk Score (≥46 indicates further assessment).<sup>12</sup></li></ul>

• PrEP is **not** indicated in serodifferent (e.g. 1 partner HIV-positive, 1 partner HIV-negative) closed relationships where the person who is HIV-positive is on HIV meds & there is negligible risk of HIV transmission i.e. viral load <40 copies/mL or undetectable x 6 mos & no known STIs. **Undetectable=Untransmittable.**

**Step 2: Conduct baseline investigations** see Table 2, physical exam is usually not required.

- **CI:** HIV-positive; **renal** tenofovir **TDF** eGFR <60mL/min, tenofovir **TAF** eGFR <30mL/min. **Caution:** HBV. **Refer:** **renal** eGFR <60mL/min; **pregnancy.**
- **Screen** (as time allows, doesn't preclude PrEP): mental health e.g. **depression** pg 185; **substance use disorder** pg 218 e.g. **AUD** pg 221, **OUD** pg 136
- **Vaccines:** offer hepatitis A, hepatitis B vaccine if non-immune, & HPV if unvaccinated see **RxFiles Vaccines Chart** pg 79. Refer to public health.

**Step 3: Prescribe PrEP & Provide Education** see **RxFiles PrEP Infographic**.

- Usually, prescribe **daily dosing TRUVADA, g 1 tab daily x 1 month initially**, (once follow up done, then prescribe x 3 months i.e. 2 refills).
  - **Daily dosing method for MSM/TGW, people who are heterosexual, & PWID:** for ongoing prevention from exposures.
    - ✓ most robust evidence, daily admin habit, regular sexual activity/drug use **X** off-label for PWID, ↑pill burden, ↑drug exposure, ↑cost.
  - **On-Demand method for MSM only, off-label:** for prevention from 1 sexual encounter (see dosing below).
    - ✓ occasional sexual activity, ↓pill burden, ↓drug exposure (benefit CKD), ↓cost **X** off-label, ↑remembering to take pills, loading dose ↑GI.
    - If ongoing risk, may convert to daily method after taking on-demand loading dose. Expert Opinion, off-label Must take for at least 2 days after last sexual encounter.

**Step 4: Follow-up:** in **clinic/phone at 1mos & then q3mos**, see Table 2. If PrEP is not indicated i.e. person no longer has an ↑ chance of HIV acquisition, **stop PrEP 2d (MSM/TGW) or 7-28d (heterosexual, PWID) after last potential HIV exposure.** Test for HIV in 8-12 weeks.

**Table 1. Likelihood of HIV acquisition depends on:** modified from CMAJ'17

(A) Likelihood the person (i.e. the source) may transmit HIV	
<b>High-risk</b>	HIV viral load >40 copies/mL, HIV status unknown & from population with ↑ HIV prevalence (e.g. PWID, see left for more populations)
<b>Low-risk</b>	HIV viral load <40 copies/mL & concomitant STI at time of exposure
<b>Negligible</b>	HIV viral load <40 copies/mL x6mos & no known STIs many stable, closed couples
(B) Likelihood of HIV transmission based on exposure type	
<b>High-risk</b>	receptive anal (1.38% / act), needle sharing (0.63% / act)
<b>Mod-risk</b>	insertive anal/vaginal, receptive vaginal (≤0.11% / act)
<b>Low-risk</b>	oral sex, oral-anal contact, sex toys, blood on compromised skin

**Table 2. PrEP Investigations & Monitoring** modified from CMAJ 2017

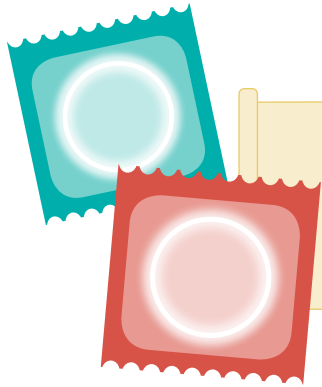
Test	Baseline (day 0)	@ 1 month	q 3 months
<b>HIV test &amp; assess for acute HIV-related signs/symptoms*</b>	✓	✓** monitor for seroconversion	
<b>Hepatitis A serology</b>		-	
<b>Hepatitis B serology</b>		-	
<b>Hepatitis C serology</b>		q12mos; ↑frequency if ongoing risk e.g. shared injection drug supplies	
<b>STIs</b> e.g. gonorrhea, syphilis, chlamydia ± rectal/throat swabs if applicable		-	✓
<b>SCr, eGFR</b> <b>renal</b>		✓	
<b>Urinalysis</b> r/o kidney dx		- / optional <small>expert opinion</small>	
<b>CBC</b>		-	
<b>Pregnancy</b> as appropriate		-	✓
<b>PrEP indication</b> see step 1	✓	psychological benefits may be important for some	
<b>PrEP AEs/tolerability</b>	-	✓	
<b>PrEP adherence</b>	-	✓	

\* ensure HIV negative test within last 7 days (5 -14 days) & no new exposures.  
**Acute HIV related illness/seroconversion:** flu-like sx ≤12wks e.g. fever, myalgia, HA, HS sweats, pharyngitis → clinical decision, may defer PrEP & repeat test 1-3wks.  
**If recent (≤72hr) ↑ risk exposure:** refer for nPEP (**RxFiles: HIV**) and assess for PrEP.  
\*\*have a low threshold for ordering an HIV test if patient taking PrEP reports having a few days of sore throat, mono-like illness, or rash. Expert Opinion

Generic/TRADE	Comments	Adverse Events <b>AE</b> / Contraindications <b>CI</b> / Drug Interactions <b>DI</b> / Monitoring <b>M</b> (see Table 2 above)	Dosing (see Step 3 above)	\$/30d
<b>NUCLEOSIDE / NUCLEOTIDE REVERSE TRANSCRIPTASE INHIBITOR (NRTI) aka "nuc":</b> prevent HIV acquisition by inhibiting HIV reverse transcriptase resulting in viral HIV DNA chain termination.				
<b>Emtricitabine / Tenofovir disoproxil fumarate (FTC/TDF)</b> <b>TRUVADA</b> , <b>g</b> FDA'12, CDN'16 200/300mg tab FDA: ≥35kg PrEP; CDN: ≥18yr <b>-generic</b> → SPDP, NIHB: open benefit with no prescriber limitation & <b>no cost to patient</b> <b>-TRUVADA</b> → SPDP: patient pays \$20/tablet	✓ PrEP: daily dosing for MSM/TGW, & people who are heterosexual. Off-label for PWID, & on-demand dosing method, but guideline supported. <ul style="list-style-type: none"><li>• <b>MSM/TGW:</b> <b>TRUVADA</b> daily vs placebo, ↓HIV transmission <b>NNT=36/1.2yrs</b> (3% vs 5.8%; HR 0.53). Adherence matters, <b>subgroup with detectable drug levels ↓HIV RRR 92% (95% CI 70-99%)</b>. <small>IPrEx</small></li></ul>	<b>AE:</b> <b>Common:</b> HA, GI (abdo pain, flatulence, N/V/D; may take HS or cc; ↑nausea with on-demand <b>NNH=14/9mos</b> 7% vs 1%, daily dose ~2%), & fatigue are <b>transient (~1-2wks)</b> ; ≤2% stop PrEP tx due to <b>AE</b> . <b>DESCOVY:</b> ↑lipids, Wt (1kg). <b>TRUVADA:</b> ?clinical relevance ↓eGFR 1mL/min/yr & ↓BMD usually rev upon D/C; routine BMD not recommended, <b>ensure adequate Ca<sup>++</sup>, Vitamin D, exercise.</b> <b>CI:</b> see above. <b>Caution:</b> HBV (potential flare if D/C, daily dosing preferred); other STIs; <b>adherence</b> (required: MSM/TGW ≥4 doses/wk; others ≥6 doses/wk); <b>&gt;50yrs (less studied); TRUVADA:</b> renal-impacting comorbidities e.g. T2DM, heart failure, HTN; fracture/osteoporosis (consider <b>DESCOVY</b> ); <b>pregnancy: TRUVADA preferred.</b> <b>DI:</b> ↓tenofovir: estrogens/androgen blockers trans feminine; ↑ <b>TRUVADA:</b> hepatitis meds; <b>TRUVADA:</b> nephrotoxins e.g. regular/high-dose NSAIDs, valacyclovir; ↓ <b>DESCOVY:</b> P-gp inducers e.g. phenytoin; ↑ <b>DESCOVY:</b> P-gp inhibitors. <b>No DI:</b> methadone, <b>SUBOXONE</b> , EtOH, <b>contraceptives</b> . <b>M:</b> Table 2 above.	<b>Daily method:</b> 1 tab once daily. <small>IPrEx, PARTNERS</small> <b>Admin ♂ 7days, ♀ 7-20d of tx required to prevent acquisition, encourage condom use</b> <b>On-Demand or "2-1-1" method (MSM only, off-label):</b> 2 tabs taken together 2-24 hours before sexual activity, then 1 tab daily until 2 days after last sexual activity. <small>IPERGAY</small> <b>Daily method:</b> 1 tablet once daily. <small>DISCOVER</small> <b>Admin ♂ 7days of tx required to prevent acquisition, encourage condom use.</b> <i>Note: On-Demand dosing with <b>DESCOVY</b> is off-label and unstudied.</i>	\$250 g, \$860 <small>TRUVADA</small> \$140 g (~15 tabs/mos <small>IPERGAY</small> ) <b>universal coverage</b> \$863
<b>Emtricitabine / Tenofovir alafenamide (FTC/TAF)</b> <b>DESCOVY</b> , <b>renal</b> FDA'19, CDN'20 200/25mg tab <b>X</b> ⊗ ≥35kg (PrEP)	✓ PrEP: daily dosing for MSM/TGW. Off-label for PWID or are heterosexual, & on-demand dosing. <ul style="list-style-type: none"><li>• MSM/TGW: daily non-inferior to <b>TRUVADA</b>. <small>DISCOVER</small></li><li>• Consider if <b>CI</b> or caution with <b>TRUVADA</b> e.g. eGFR &lt;60 or hx of fractures/osteoporosis (<b>ensure coverage</b>).</li></ul>			

# SHOULD I TAKE A PILL TO PREVENT HIV?

**PrEP** = 1 tablet once daily, it contains 2 medicines active against HIV



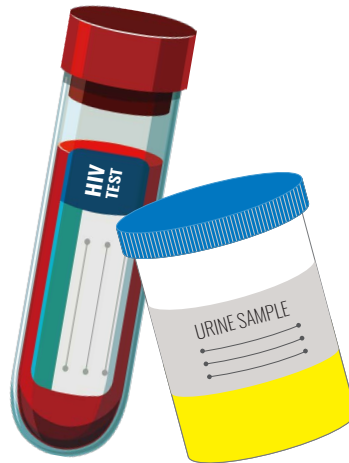
## PrEP prevents HIV

but does not protect you from other sexually transmitted infections the way condoms do.

Before taking PrEP you will be checked to make sure you are HIV negative and that this medicine will be safe for you.

**Regular follow-up with your health care team is important.**

This includes blood work, testing for HIV & sexually transmitted infections, and follow-up appointments about every 3 months.



PrEP can decrease your chance of getting HIV by about 85-90% and it may even be **up to 99% effective** when used exactly as directed.\*



**PrEP**

is

**FREE**

**in Saskatchewan!**



PrEP = Pre-Exposure Prophylaxis for prevention of HIV

It is usually prescribed as emtricitabine + tenofovir disoproxil fumarate or TRUVADA®.

It can also be prescribed as emtricitabine + tenofovir alafenamide or DESCOVY®, but this is less common and not free.

\* in men or trans women who have sex with men

# ARE THERE SIDE EFFECTS?

# DOSING METHODS FOR MEN OR TRANS WOMEN WHO HAVE SEX WITH MEN

You may experience some side effects, but most people don't stop taking PrEP because of them.



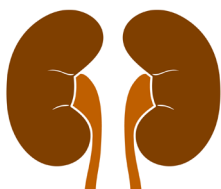
Some people **feel nauseous** or sometimes even **throw up**. Others may get **headaches**.



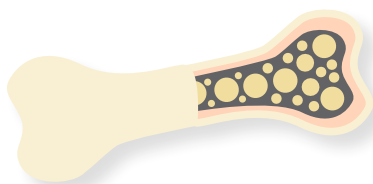
After 1 to 2 weeks, most people find that these mild problems go away.

You can take medicines such as:

- dimenhydrinate GRAVOL® to help with nausea or
- acetaminophen TYLENOL® to help with headache.



PrEP may impact how well your kidneys work, and your health care team will monitor this closely.



PrEP may change your bone strength, but once you stop the medication this usually goes back to normal.

The impact of PrEP on kidney function and bone strength may happen when taken over a long period of time (not immediately).



Check in with your pharmacist, as some medicines like ibuprofen ADVIL® or naproxen ALEVE® can interact with PrEP. Your pharmacist can also help you learn about calcium & vitamin D, and the importance of exercise for healthy bones.

## References

1. N Engl J Med. 2010 Dec 30;363(27):2587-99. 2. N Engl J Med. 2015 Dec 3;373(23):2237-46.

Adapted from Dr. Bradley Little, Spectrum Health

## a) CONTINUOUS

Taken once a day, every day.

Su	Mo	Tu	We	Th	Fr	Sa
PrEP	PrEP	PrEP	PrEP	PrEP	PrEP	PrEP

You must take PrEP for **7 days in a row** before you are **protected** during sexual activity.

Su	Mo	Tu	We	Th	Fr	Sa
PrEP	PrEP	PrEP	PrEP	PrEP	PrEP	PrEP

SEXUAL  
ACTIVITY

SEXUAL  
ACTIVITY

continue...



## b) ON DEMAND\*

Taken as needed.

Su	Mo	Tu	We	Th	Fr	Sa
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PrEP PrEP PrEP  
PrEP DAY 2 DAY 3  
DAY 1  
SEXUAL  
ACTIVITY

**DAY 1** = two tabs  
2 to 24 hours before  
sexual activity  
2 tabs Tues at 9 a.m.  
**SEXUAL ACTIVITY** Tues at 10 p.m.

**DAY 2** = one tab  
24 hours after 1<sup>st</sup> dose  
1 tab Wed at 9 a.m.

**DAY 3** = one tab  
48 hours after 1<sup>st</sup> dose  
1 tab Thurs at 9 a.m.

For **CONTINUOUS** or **ON-DEMAND\*** dosing, you must continue to take PrEP at least 2 days after your last sexual activity in order for it to work properly. \* off-label prescribing

Pre-exposure Prophylaxis (PrEP) for HIV: Drug Comparison Chart

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**Complete Abbreviations:** ♀=female ♂=male 🩺=renal dosing may be required ✓=Health Canada Official Indication ✗=non-formulary in Saskatchewan ⊗=non-formulary for Non-Insured Health Benefits (NIHB) admin=administration  
AE=adverse events ARCH-IDU=Assessing the Risk of Contracting HIV – Injection Drug Users ARVs=antiretroviral AUD=alcohol use disorder BC-CfE=British Columbia Centre for Excellence in HIV/AIDS BMD=bone mineral density  
Ca<sup>++</sup>=calcium CBC=complete blood count cc=with food CDN=Canadian CI=contraindicated CKD=chronic kidney disease CMAJ=Canadian Medical Association Journal d=day D/C=discontinue(d) DI=drug interaction dx=disease  
eGFR=estimated glomerular filtration rate EtOH=alcohol FDA=approved Food & Drug Admin FTC/TAF=emtricitabine/tenofovir alafenamide FTC/TDF=emtricitabine/tenofovir disoproxil fumarate g=generic GI=gastrointestinal  
HA=headache HBV=hepatitis B virus HCV=hepatitis C virus HIRI-MSM=HIV Incidence Risk Index for MSM HIV=human immunodeficiency virus HPV=human papillomavirus hr=hour HS=bedtime HTN=hypertension hx=history  
IAS=International Antiviral Society IM=intramuscular kg=kilogram min=minute mL=millilitres M=monitoring mo(s)=month(s) MSM=men who have sex with men NIHB=non-insured health benefits NNH=number needed to harm  
NNT=number needed to treat nPEP= nonoccupational post exposure prophylaxis NSAID=non-steroidal anti-inflammatory drugs N/V/D=nausea/vomiting/diarrhea OUD=opioid use disorder PrEP=pre-exposure prophylaxis PWID=people who inject drugs q=every r/o=rule out RRR=relative risk reduction SCr=serum creatinine SK=Saskatchewan SPDP=Sask. Prescription Drug Plan STI=sexually transmitted infection sx=symptoms T2DM=type 2 diabetes mellitus tab=tablet  
TGW=transgender woman/women tx=treatment USA=United States of America USPSTF=US Preventive Services Task Force yr(s)=year(s)

Online Extras:

HIV Incidence Risk Index for MSM HIRI-MSM: Available at: <https://smartsexresource.com/health-providers/provider-tools/calculate-hiri-msm-score>

Assessing the Risk of Contracting HIV – Injection Drug Users (ARCH-IDU): Available at: <https://www.albertahealthservices.ca/assets/info/hp/srh/if-hp-srh-hiv-prep-guidelines.pdf>, see appendix C, page 19.

Saskatchewan Resources:

- SK HIV Collaborative: <https://skhiv.ca/>
- PrEP Clinics
  - Regina [HIV PrEP Clinic](#)
    - Call for more information or to book your PrEP consultation: 306-766-3935
    - Patient self-refer
  - Saskatoon [OUTSaskatoon – Sexual Health Clinic](#)
    - Call for more information or to book an appointment: 306-244-7989
- University of Saskatchewan Student Wellness Centre

References for Pre-exposure Prophylaxis (PrEP) for HIV: Drug Comparison Chart

1. IAS-USA 2020. Saag MS, et al. Antiretroviral Drugs for Treatment and Prevention of HIV Infection in Adults: 2020 Recommendations of the International Antiviral Society–USA Panel. *JAMA*. 2020;324(16):1651–1669.
2. SK 2019. Pre-Exposure Prophylaxis: Guideline Review for Primary Care Practitioners in Saskatchewan. Available from: <https://skhiv.ca/pre-exposure-prophylaxis-prep/>
3. USPSTF 2019. US Preventive Services Task Force. Preexposure Prophylaxis for the Prevention of HIV Infection: US Preventive Services Task Force Recommendation Statement. *JAMA*. 2019;321(22):2203–2213.
4. CMAJ 2017. Tan DHS, Hull MW, Yoong D, Tremblay C, O’Byrne P, Thomas R, et al. Canadian guideline on HIV pre-exposure prophylaxis and nonoccupational postexposure prophylaxis. *CMAJ* 2017;189(47):e1448–58.
5. GUIDANCE FOR THE USE OF PRE-EXPOSURE PROPHYLAXIS (PrEP) FOR THE PREVENTION OF HIV ACQUISITION IN BRITISH COLUMBIA. BRITISH COLUMBIA CENTRE FOR EXCELLENCE IN HIV/AIDS (BC-CfE) PrEP GUIDELINES. Available from: [http://bccfe.ca/sites/default/files/uploads/publications/centredocs/prep\\_guidelines\\_17-jun-2020.pdf](http://bccfe.ca/sites/default/files/uploads/publications/centredocs/prep_guidelines_17-jun-2020.pdf).
6. Public Health Agency of Canada. *Summary: estimates of HIV incidence, prevalence and proportion undiagnosed in Canada, 2014*. Ottawa, ON: Public Health Agency of Canada; 2015. Available from: [www.canada.ca/en/public-health/services/publications/diseases-conditions/summary-estimates-hiv-incidence-prevalence-proportion-undiagnosed-canada-2014.html](http://www.canada.ca/en/public-health/services/publications/diseases-conditions/summary-estimates-hiv-incidence-prevalence-proportion-undiagnosed-canada-2014.html). Accessed Feb 1, 2020

7. Government of Canada, Public Health Agency of Canada. *HIV factsheet: Biomedical prevention of HIV–PrEP and PEP*. November 2019. <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/hiv-factsheet-biomedical-prevention-prep-pep.html>. Accessed Feb 1, 2020.
8. Saskatchewan Ministry of Health. HIV and AIDS in Saskatchewan Infographic -2019. Available: [file:///C:/Users/mhl319/Downloads/HIV-in-Saskatchewan-2019-Infographic%20\(5\).pdf](file:///C:/Users/mhl319/Downloads/HIV-in-Saskatchewan-2019-Infographic%20(5).pdf). Accessed Feb 1, 2020.
9. Smith DK, Pals SL, Herbst JH, Shinde S, Carey JW. Development of a clinical screening index predictive of incident HIV infection among men who have sex with men in the United States. *Journal of acquired immune deficiency syndromes*. 2012;60(4):421-7
10. Lachowsky N, Cui Z, Sereda P, et al. HIV incidence rate and predictors among gay and other men who have sex with men (MSM) in Vancouver: Additional benefit of administrative health data linkage. 25th Annual Canadian Conference on HIV/AIDS Research Abstract EPHP 504; 2016; Winnipeg, Canada.
11. Hull M, Lachowsky N, Moore DM, et al. High incidence of subsequent HIV seroconversion amongst MSM accessing recurrent non-occupational post-exposure prophylaxis (NPEP) in Vancouver, BC. 25th Annual Canadian Conference on HIV/AIDS Research Abstract EPH12; 2016; Winnipeg, Canada.
12. Smith DK, Pan Y, Rose CE, Pals SL, Mehta SH, Kirk GD, Herbst JH. A Brief Screening Tool to Assess the Risk of Contracting HIV Infection Among Active Injection Drug Users. *J Addict Med*. 2015 May-Jun;9(3):226-32.
13. Yang Q, Ogunnaikie-Cooke S, Halverson J, et al. Estimated national HIV incidence rates among key populations in Canada, 2014 [abstract EPH35]. *Proceedings from the 25th Annual Canadian Conference on HIV/AIDS Research (CAHR)*, 2016 May 12–15; Winnipeg
14. Grant RM, et al.; **iPrEx** Study Team. Preexposure chemoprophylaxis for HIV prevention in men who have sex with men. *N Engl J Med*. 2010 Dec 30;363(27):2587-99. doi: 10.1056/NEJMoa1011205. Epub 2010 Nov 23.
15. Molina JM, et al.; **ANRS IPERGAY** Study Group. On-Demand Preexposure Prophylaxis in Men at High Risk for HIV-1 Infection. *N Engl J Med*. 2015 Dec 3;373(23):2237-46. doi: 10.1056/NEJMoa1506273. Epub 2015 Dec 1.
16. Baeten JM, et al.; **Partners PrEP** Study Team. Antiretroviral prophylaxis for HIV prevention in heterosexual men and women. *N Engl J Med*. 2012 Aug 2;367(5):399-410. doi: 10.1056/NEJMoa1108524. Epub 2012 Jul 11.
17. Choopanya K, et al.; **Bangkok Tenofovir** Study Group. Antiretroviral prophylaxis for HIV infection in injecting drug users in Bangkok, Thailand (the Bangkok Tenofovir Study): a randomised, double-blind, placebo-controlled phase 3 trial. *Lancet*. 2013 Jun 15;381(9883):2083-90. doi: 10.1016/S0140-6736(13)61127-7. Epub 2013 Jun 13.
18. Mayer KH, et al. Emtricitabine and tenofovir alafenamide vs emtricitabine and tenofovir disoproxil fumarate for HIV pre-exposure prophylaxis (**DISCOVER**): primary results from a randomised, double-blind, multicentre, active-controlled, phase 3, non-inferiority trial. *Lancet*. 2020 Jul 25;396(10246):239-254. doi: 10.1016/S0140-6736(20)31065-5. PMID: 32711800.
19. Product Monograph. **TRUVADA**. Gilead Sciences Inc. Date of Revision: July 5, 2018.
20. Product Monograph. **DESCOVY**. Gilead Sciences Canada, Inc. Date of Revision: November 27, 2020.
21. Article, Know How Descovy and Truvada Stack Up for HIV Pre-Exposure Prophylaxis (PrEP), Pharmacist's Letter. Canada, November 2019
22. Bloch M. Prescribing pre-exposure prophylaxis for HIV. *Aust Prescr* 2020;43:200-3.<https://doi.org/10.18773/austprescr.2020.057>
23. Morrison J, Schonbe A. A Pharmacist's Guide to Pre-Exposure Prophylaxis (PrEP) and Non-Occupational Post-Exposure Prophylaxis (nPeP). *Pharmacy Practice and Business National Continuing Education Program*. March 2020.
24. Alosa Health. Are you PrEPared? A powerful way to prevent HIV transmission. 2017.
25. Alosa Health. Are you PrEPared? Evidence-based prevention of HIV infection in at risk individuals. 2017.
26. DynaMed [Internet]. Ipswich (MA): EBSCO Information Services. 1995 - . Record No. T901962, Preexposure Prophylaxis (PrEP) for HIV; [updated 2018 Nov 30, cited Jan 10, 2021]. Available from <https://www.dynamed-com.cyber.usask.ca/topics/dmp~AN~T901962>. Registration and login required.
27. Uptodate. Administration of Pre-exposure Prophylaxis against HIV Infection. Accessed Jan 10, 2021.
28. Uptodate. Patient Evaluation and Selection for HIV Pre-exposure Prophylaxis. Accessed Jan 10, 2021.
29. Khalili J, Landovitz RJ. HIV Preexposure Prophylaxis-The Role of Primary Care Clinicians in Ending the HIV Epidemic. *JAMA Intern Med*. 2019 Nov 18. doi: 10.1001/jamainternmed.2019.5456. Epub ahead of print. PMID: 31738380.
30. Tumarkin E, Siedner MJ, Bogoch II. HIV pre-exposure prophylaxis (PrEP). *BMJ*. 2019 Jan 17;364:k4681. doi: 10.1136/bmj.k4681. PMID: 30655299.
31. Heendeniya A, Tumarkin E, Bogoch II. HIV preexposure prophylaxis in Canadian primary care and community settings. *Can Fam Physician*. 2019 Apr;65(4):271-272. PMID: 30979761; PMCID: PMC6467657.
32. Marcus JL, Katz KA, Krakower DS, Calabrese SK. Risk Compensation and Clinical Decision Making - The Case of HIV Preexposure Prophylaxis. *N Engl J Med*. 2019 Feb 7;380(6):510-512. doi: 10.1056/NEJMp1810743. PMID: 30726699; PMCID: PMC6396306.
33. Smith, D., Pan, Y. et al. (2015). A briefing tool to assess the risk of contracting HIV infection among active injection drug users. *Journal of Addiction Medicine*, 9(3), pp. 226-232.
34. Seifert SM, Chen X, Meditz AL, Castillo-Mancilla JR, Gardner EM, Predhomme JA, et al. Intracellular Tenofovir and Emtricitabine Anabolites in Genital, Rectal, and Blood Compartments from First Dose to Steady State. *AIDS Res Hum Retroviruses*. 2016;32(10-11):981-91.