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Dr. Robert Carlin, MDCM, MPH, CCFP, FCFP
Assistant Professor, Department of Family Medicine, McGill University

CLSC Métro, GMF-U Village-Santé, CIUSSS West-Central

McGill University is on land which long served as a site of meeting and exchange amongst Indigenous peoples, including the Haudenosaunee and Anishinabeg nations.

We acknowledge and thank the diverse Indigenous peoples whose presence marks this territory on which peoples of the world now gather.

https://www.youtube.com/watch?v=uq_fbdEVRmM

Disclosure – Dr. Robert Carlin

- During my presentation, I intend to make therapeutic recommendations for medications that have not received regulatory approval (i.e. “off-label” use of medication).

  Yes, noted thrice in presentation.

- Have you had an affiliation (financial or otherwise) with a pharmaceutical, medical device or communications organization.

  No.

- My background is as a Family Physician who has worked in both primary care and public health, and I come with this perspective. I am not an Infectious Disease Specialist.

Learning Objectives

Classify	Classify various forms of stigma and formulate strategies to create inclusive spaces. (approximately 15 minutes)
Explain	Explain key features in the epidemiology of HIV in Quebec and Canada. (approximately 15 minutes)
Offer	Offer and discuss prevention options for HIV including PrEP and PEP. (approximately 20 minutes)

CanMEDS Framework

COMMUNICATOR	CCFP 4. Engages patients and their families in developing plans that reflect the patient's health care needs, values and goals 4.3 Recognizes and respects diversity, including but not limited to the impact of gender, race, religion, and cultural beliefs, on joint decision making and other interactions RCPSC 1. Establish professional therapeutic relationships with patients and their families 1.3 Recognize when the values, biases, or perspectives of patients, physicians, or other health care professionals may have an impact on the quality of care, and modify the approach to the patient accordingly
ADVOCATE	CCFP & RCPSC 2.2 Improves clinical practice by applying a process of continuous quality improvement to disease prevention, health promotion, and health surveillance activities
MEDICAL EXPERT	CCFP & RCPSC 3. Plans and performs procedures and therapies for assessment and/or management 3.1 Determines the most appropriate procedures or therapies
ADVOCATE	CCFP & RCSPC 1. Respond to an individual patient's health needs by advocating with the patient within and beyond the clinical environment 1.3 Incorporates disease prevention, health promotion, and health surveillance into interactions with individual (patients)

Stigma

POLL #1

- Would you consider yourself comfortable talking about sexual health with all your patients?
- Would you consider yourself comfortable talking about harm reduction strategies with all your patients?
- Do you have the skills to address prevention of HIV for patients in your practice?

Source: Exploring STBBIs and Stigma (Calgary Health and CPHA) https://www.cpha.ca/workshops-reducing-stbbi-related-stigma

A Few Definitions

- Harm reduction – examples: condom distribution, education programs, naloxone programs, needle exchange programs, peer support programs, supervised injection facilities

- Sex-positivity – recognizes sexuality as a central to the human experience, attempts to remove some of the shame often associated with sexuality

Source: Exploring STBBIs and Stigma (Calgary Health and CPHA) https://www.cpha.ca/workshops-reducing-stbbi-related-stigma

A Few Definitions

Trauma-informed care:

"In trauma-informed services, safety and empowerment for the service user are central, and are embedded in policies, practices, and staff relational approaches. Service providers cultivate safety in every interaction and avoid confrontational approaches. Trauma-informed approaches are similar to harm-reduction-oriented approaches, in that they both focus on safety and engagement."

"A key aspect of trauma-informed services is to create an environment where service users do not experience further traumatization or re-traumatization (events that reflect earlier experiences of powerlessness and loss of control) and where they can make decisions about their treatment needs at a pace that feels safe to them."

Source: Trauma-informed practice guide, BC Provincial Mental Health and Substance Use Planning Council, 2013, available at http://bccewh.bc.ca/wp-content/uploads/2012/05/2013_TIP-Guide.pdf

Workshop Exercise from CPHA

- Think of the most important person in your life. Remember this name.
- Think of the three most important things in your life (i.e., activities, hobbies, pets). Remember these three things.
- Describe what you did this past weekend.

- Write what you did on the weekend in the chat.

Source: Exploring STBBIs and Stigma (Calgary Health and CPHA) https://www.cpha.ca/workshops-reducing-stbbi-related-stigma

Workshop Exercise from CPHA

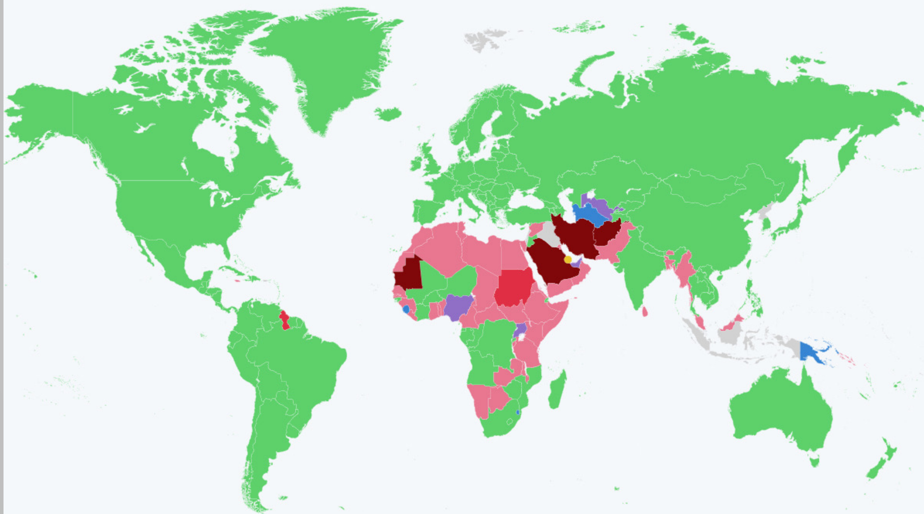
- Did you accidentally talk about anything on your list? Did you feel stressed? Did you have to “police” what you said?

- Do you think that your patients censor themselves? Around gender identity, relationships, sexual orientation, sexual practice, substance use?

Source: Exploring STBBIs and Stigma (Calgary Health and CPHA) https://www.cpha.ca/workshops-reducing-stbbi-related-stigma

The Legal Status Of Homosexuality Worldwide

Global laws regarding homosexual activity in 2020

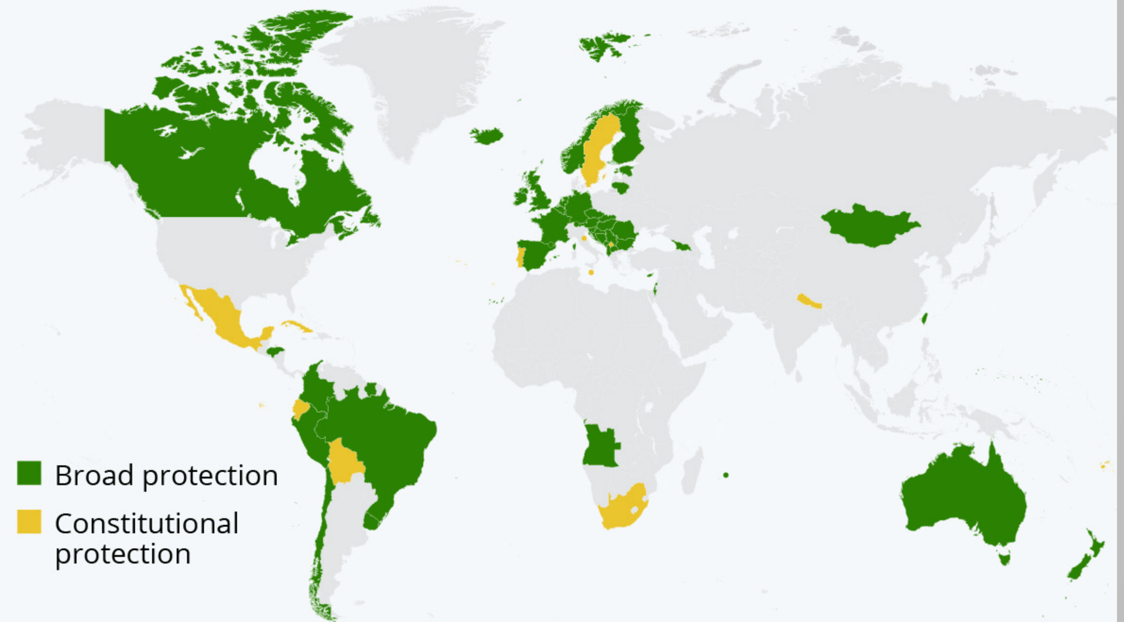


Source: EQUALDEX

statista

Where Sexual Orientation Is Protected by the Law

Countries/territories providing protection against discrimination based on sexual orientation (2020)



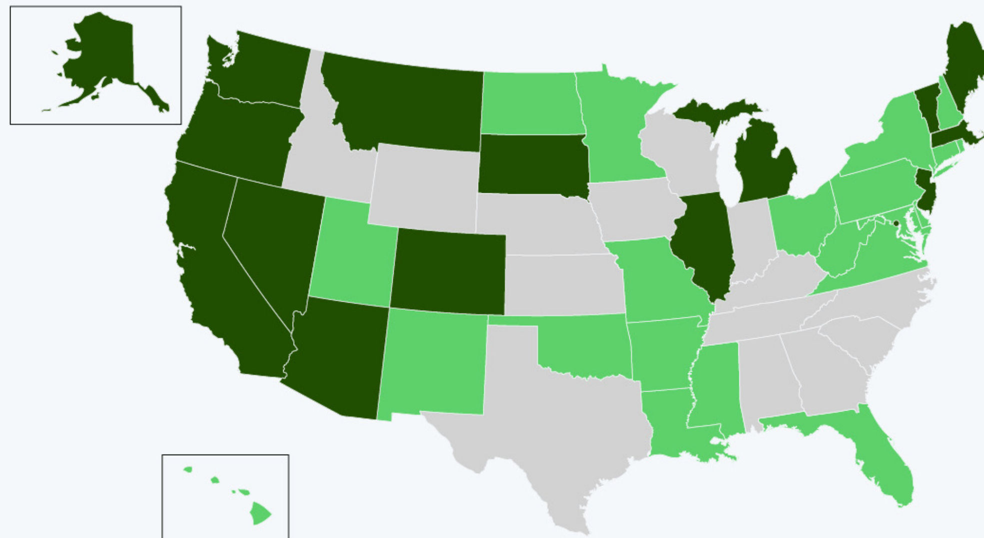
Source: ILGA World

statista

Source: Statista https://www.statista.com/chart/4310/global-laws-against-homosexuality-visualised/; https://www.statista.com/chart/24914/protections-by-law-lgbtqi/

The States Where It's Legal To Smoke Marijuana

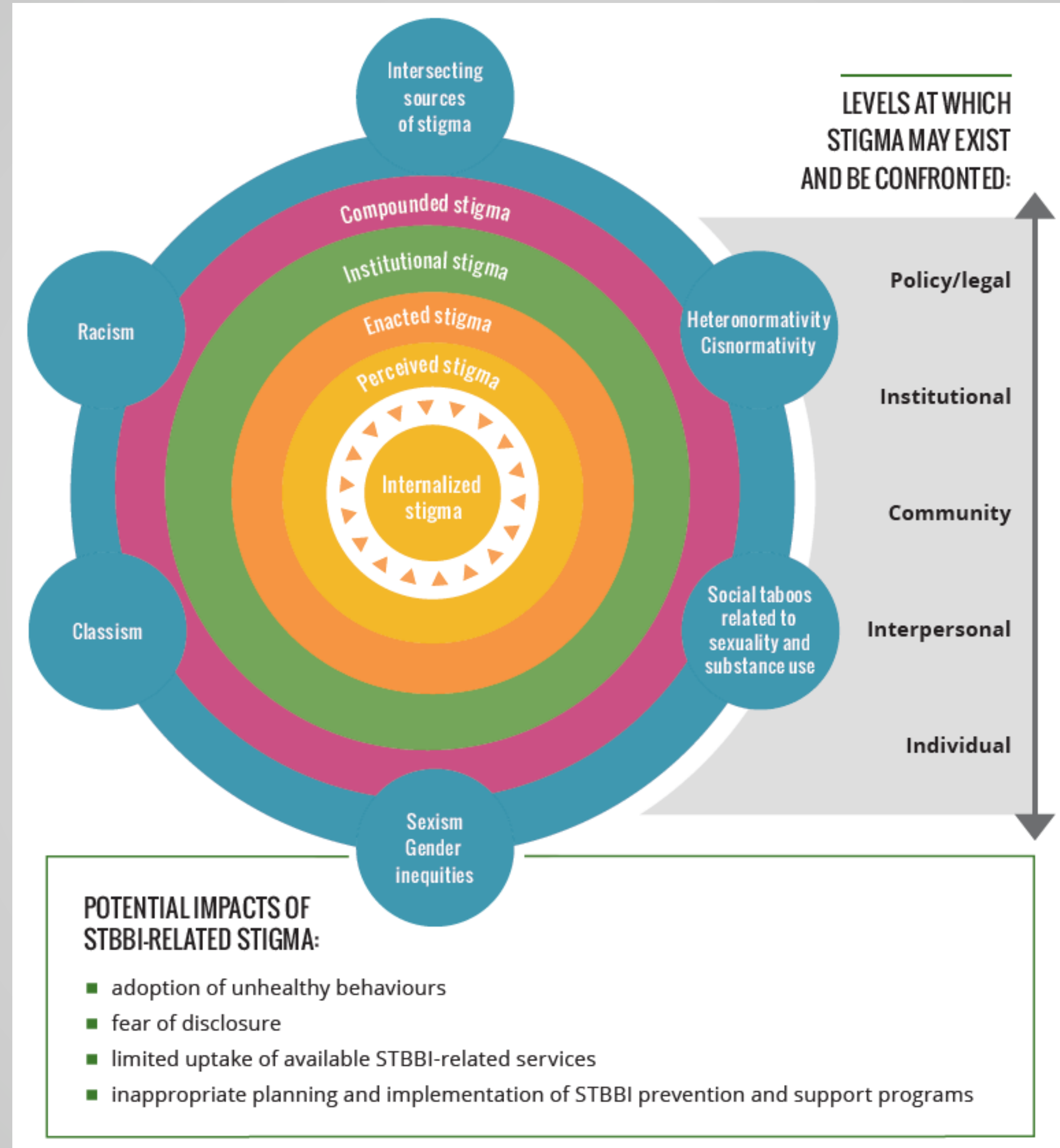
Laws on recreational and medical marijuana use in the U.S.*



* As of Nov 5, 2020. Some states not highlighted allow limited medical marijuana access

Sources: NORML, USA Today

Source: Statista https://www.statista.com/chart/6681/the-states-where-its-legal-to-smoke-marijuana/



Source: Exploring STBBIs and Stigma (Calgary Health and CPHA) https://www.cpha.ca/workshops-reducing-stbbi-related-stigma

What can you do?

1. Clarify your values
2. Use correct terminology and inclusive language
3. Avoid assumptions (gender, orientation, sexual activity, knowledge)
4. Be aware of your body language
5. Respect your patients' right to privacy and confidentiality
6. Ensure patients understand limits to confidentiality
7. Consider your professional obligations
8. Create and maintain inclusive and affirming spaces

Source: Exploring STBBIs and Stigma (Calgary Health and CPHA) https://www.cpha.ca/workshops-reducing-stbbi-related-stigma

Epidemiology

POLL #2

In 2019, new HIV infections in Québec were highest in which age group (including all genders)?

1. between 15 and 24
2. between 25 and 34
3. between 35 and 44
4. between 45 and 54
5. 55 and older

POLL #3

In 2019, what percentage of new HIV infections in Québec occurred in women?

1. 13%
2. 23%
3. 33%
4. 43%
5. 53%

Epidemiology

- Each year, 40 000 Quebecers receive a diagnosis of a STBBI that includes one of the following infections:
  - Chlamydia
  - Gonorrhea
  - Syphilis
  - Lymphogranuloma venereum
  - HIV (human immunodeficiency virus)
  - Hepatitis B and C

Source: MSSS - Infections transmissibles sexuellement et par le sang (ITSS) https://www.msss.gouv.qc.ca/professionnels/itss/infections-transmissibles-sexuellement-et-par-le-sang-itss/?statistiques

Epidemiology – Populations at Risk

- Affects everyone with specific risks for
  - young people aged 15 to 24;
  - young people in difficulty (for example, street youth);
  - men who have sex with men;
  - people who use drugs by injection or inhalation;
  - persons who are incarcerated or have been imprisoned;
  - people from a region where HIV infection is endemic;
  - people who are indigenous;
  - people who are sex workers;
  - trans people.

Source: MSSS - Infections transmissibles sexuellement et par le sang (ITSS) https://www.msss.gouv.qc.ca/professionnels/itss/infections-transmissibles-sexuellement-et-par-le-sang-itss/?statistiques

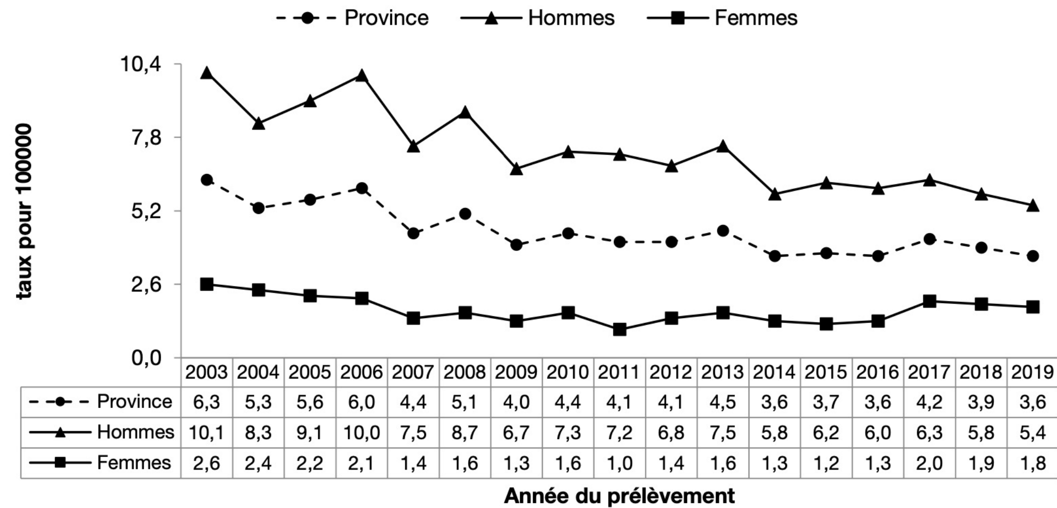


Figure 22 Infection par le VIH : taux d'incidence bruts de nouveaux diagnostics selon le sexe, Québec, de 2003 à 2019

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Province	6,3	5,3	5,6	6,0	4,4	5,1	4,0	4,4	4,1	4,1	4,5	3,6	3,7	3,6	4,2	3,9	3,6
Hommes	10,1	8,3	9,1	10,0	7,5	8,7	6,7	7,3	7,2	6,8	7,5	5,8	6,2	6,0	6,3	5,8	5,4
Femmes	2,6	2,4	2,2	2,1	1,4	1,6	1,3	1,6	1,0	1,4	1,6	1,3	1,2	1,3	2,0	1,9	1,8

HIV

New Diagnoses in 2019

227 Men (74 %)

- 12 % between 15 and 24
- 32 % between 25 and 34
- 23 % between 35 and 44
- 18 % between 45 and 54
- 15 % 55 and older

New Diagnoses in 2019

75 Women (23 %)

- 12 % between 15 and 24
- 19 % between 25 and 34
- 25 % between 35 and 44
- 20 % between 45 and 54
- 24 % 55 and older

Source: INSPQ - Portrait des infections transmissibles sexuellement et par le sang (ITSS) au Québec - 2019 https://www.inspq.qc.ca/sites/default/files/publications/2783-portrait-infections-transmissibles-sexuellement-sang.pdf

HIV

Categories of Exposure in 2019:

71% of cases in men - men who have sex with men (HARSAH)

13% of cases in men - countries where HIV is highly endemic

73% of cases in women - countries where HIV is highly endemic

12% of cases in men – heterosexual exposures not included in above

25% of cases in men – heterosexual exposures not included in above

1% of cases – men and women with IV drug use

3 cases – transexual persons

0 perinatal exposures

90/90/90 Goals - Quebec (est. 2018):

87% seropositive individuals know their diagnosis

85% who know their serostatus are on antiretrovirals

95% of patients on antiretrovirals have a viral load less than 200 copies/ml

Other characteristics of new cases:

Montreal has highest incidence

43% of cases with information available show advanced disease

Source: INSPQ - Portrait des infections transmissibles sexuellement et par le sang (ITSS) au Québec - 2019
https://www.inspq.qc.ca/sites/default/files/publications/2783-portrait-infections-transmissibles-sexuellement-sang.pdf

People living with HIV in Canada

In 2018, an estimated **62,050 people** were living with HIV in Canada

1 in 4 people living with HIV in Canada were **women**

Half of the 62,050 Canadians living with HIV were gay, bisexual, and other **men who have sex with men** (gbMSM)

Canada has shown **improvements in all three 90-90-90 targets** since 2016

When it was estimated that 86% of all people living with HIV knew their status, 84% of those diagnosed were on treatment, and 92% of those on treatment a suppressed viral load[1].

1 in 8 people living with HIV in Canada didn't know their status

In 2018, an estimated **2,242 new HIV infections** occurred

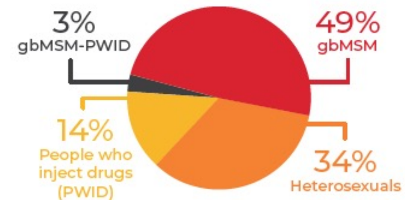
Every 4 hours, one person was infected with HIV

Indigenous Peoples

accounted for 14% of new HIV infections, but only 4.9% of the total Canadian population

1,109 new infections were among gbMSM, representing half **(49%) of all new HIV infections** in 2018, despite making up only 3-4% of the Canadian adult male population

NEW HIV INFECTIONS BY KEY POPULATION



Canada's progress towards meeting the HIV **90-90-90** targets

In 2018 in Canada

87% of people living with HIV **were diagnosed**

85% of people diagnosed with HIV **were on treatment**

94% of people receiving HIV treatment had a **suppressed viral load**

Know your status so you can access treatment, protect your health, and that of your partner(s).

How can you reduce your risk?

- **Get tested**
- **Encourage your partner to get tested**
- **Learn about safer sex methods**
- **Use condoms, other barriers, and lubricants correctly and consistently**
- **Do not share drug-use equipment**

To learn more about HIV and what you can do to prevent the virus, visit: **Canada.ca/hiv**

[1]Updated surveillance data were available for the 2018 estimates, and improvements were incorporated into the methods based on the latest available science and understanding of the epidemic. Revisions to the methodology and data mean that estimates for past years in this infographic may differ from previously published estimates, and the 2018 estimates should not be compared directly with previously published estimates.

Public Health Agency of Canada / Agence de la santé publique du Canada

Canada

People living with HIV in Canada, 2018 | PUB: 200269 | CAT: HP40-283/2018E-PDF | ISBN: 978-0-660-36589-3 | Eng. | PDF

Source: Government of Canada - People living with HIV in Canada: infographic https://www.canada.ca/en/public-health/services/publications/diseases-conditions/hiv-canada.html

Engage Montréal

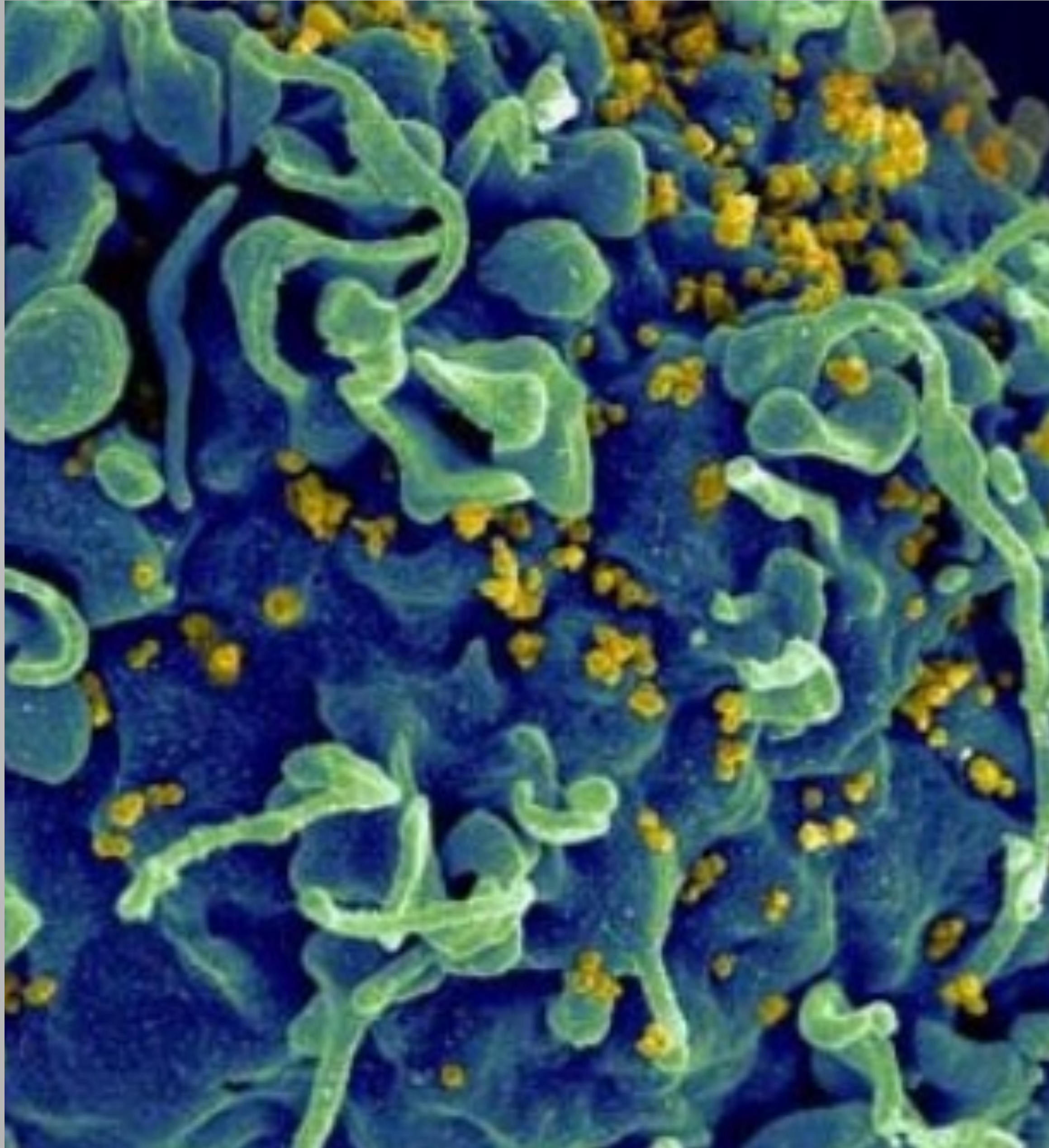
Portrait de la santé sexuelle des hommes de la région métropolitaine de Montréal ayant des relations sexuelles avec des hommes

Cycle 2017-2018
Faits saillants

Source: https://www.inspq.qc.ca/sites/default/files/documents/itss/engage_faitssaillants_mars-2019-b.pdf

Gay, Queer, and Trans Men

- Experienced some form of verbal discrimination in the past year (2017-2018)
  - 42.3% to 59.7% depending on setting
- Have regular access to a health care provider Family Physician or Nurse Practitioner
  - HIV + 93.4%
  - HIV – 54.5%
- For those with a regular care provider, knowledge of sexual orientation by care provider
  - HIV + 96.1%
  - HIV – 80.7%



HIV – U.S. Survey … 2019

41% of HIV-negative 18-22-year-old individuals said they are “not at all” or “only somewhat” informed about HIV.

More than a quarter of HIV-negative 23–36-year-old individuals avoided hugging or talking to an HIV-positive person.

30% said they would prefer not to interact socially with someone living with HIV.

Source: Survey of young adults uncovers stigma and low knowledge surrounding HIV. https://www.id-hub.com/2019/11/25/survey-young-adults-uncovers-stigma-low-knowledge-surrounding-hiv/

Prevention &
Clinical Cases

POLL #4

- Would you consider yourself comfortable talking about HIV prevention strategies with your patients?
- Would you consider yourself comfortable initiating PrEP or PEP with your patients?
- Are you aware of local resources available for your patient in order to initiate PrEP or PEP?

POLL #5

- Ensuring that people with HIV are aware of their status, can access effective treatment, and achieve a suppressed viral load is an effective prevention strategy. Individuals with an undetectable viral load cannot pass HIV onto their partner.

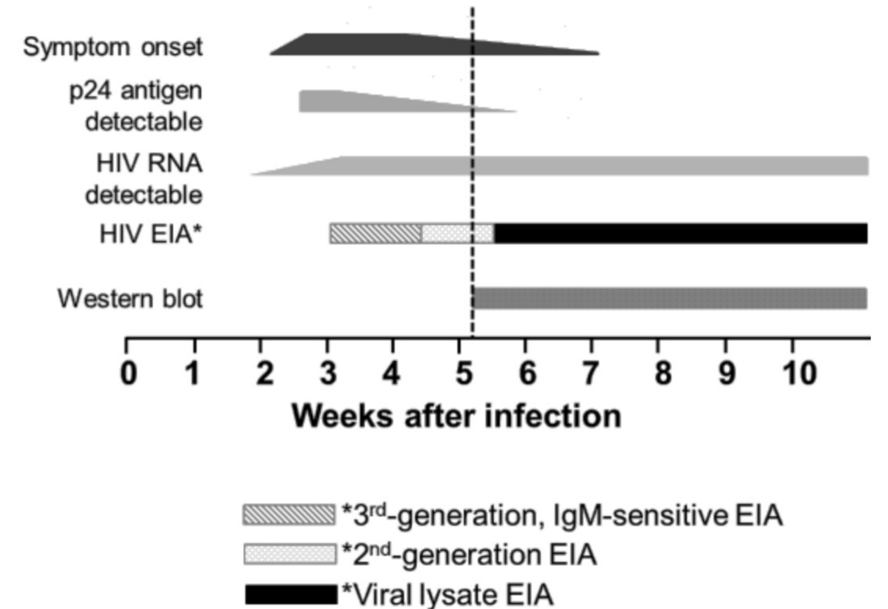
    - True or False

Screening

- HIV screening:
  - 3rd generation test - anti-HIV1 and anti-HIV2; 4th generation test – adds p24 antigen
  - *Window period 3rd generation (earliest @ 3 weeks;* 95% positive @ 6 weeks; 99% positive @ 3 months*)*
  - *Window period 4th generation (earliest @ 2 weeks; usually positive* @ 3 to 4 weeks*)*
- N.B. confirmatory testing at provincial lab (LSPQ)

Screening and testing services in Montréal and Québec:

- https://santemontreal.qc.ca/en/public/support-and-services/testing-for-hivaids-and-stbbis/
- https://santemontreal.qc.ca/en/public/advice-and-prevention/hivaids/#c33975



Sources: Human Immunodeficiency Virus - HIV Screening and Testing Guide https://www.canada.ca/en/public-health/services/hiv-aids/hiv-screening-testing-guide.html#e

Sources: https://publications.msss.gouv.qc.ca/msss/fichiers/2019/19-308-13W.pdf

Self-Testing and Point of Care Testing

COMMENTARY VULNERABLE POPULATIONS

Time for HIV self-testing in Canada: a vision and an action plan

Nitika Pant Pai MD MPH PhD, Réjean Thomas MD

Source: *CMAJ* 2020 November 2;192:E1367-8. doi: 10.1503/cmaj.201160

- Self Test (approved November 2020) / Point of Care Testing:
  - Antibody test, DOES NOT detect p24 antigen (detected 2-4 weeks after exposure)
  - Sensitivity 99.6%; Specificity 99.5% (5 false positive results out of every 1,000 tests)
  - Increasing sensitivity between 3 weeks and 3 months (consider testing at 3 weeks, 6 weeks, and 3 months)
  - Positive results require confirmatory testing

Sources: HIV Testing Ontario https://hivtestingontario.ca/wp-content/uploads/2020/08/Self_Testing_FAQ_Providers_Final_EN.pdf

U=U

- Testimonials of people living with HIV
- https://youtu.be/vqzEvIpxaRs

- CATIE video – Can't Pass It On
- https://youtu.be/mfBI4mbazTk

Source: https://www.cdc.gov/hiv/risk/art/index.html

Risk Estimate with Viral Suppression

Estimate the HIV Risk

Learn the HIV risk of different sexual activities when one partner is HIV positive and one partner is HIV negative (a discordant partnership)

Partner 1 | Partner 2

HIV − + STATUS HIV −

SEXUAL ACTIVITY

Insertive anal sex

FACTOR

Condom NO | Condom NO

ART+UVL YES | PrEP NO

STD NO | STD NO

Acute HIV NO

Risk of Transmitting HIV

There is effectively no risk of sexually transmitting HIV with ART+UVL.

Insertive anal sex 138

Insertive anal sex + ART <0.5

Effectively no risk

High risk

Source: https://wwwn.cdc.gov/hivrisk/estimator.html#-mb|rai.con.prep.art

Pregnancy – SOGC Clinical Practice Guideline (January 2018)

- ‘People with HIV who intend to conceive should be aware of the potential stigma and discrimination they may face from people who are less informed about the risks of perinatal and horizontal HIV trans- mission. They may therefore require further counselling to cope with psychosocial issues during the pregnancy or postpartum period (II-3A).’

- ‘Condomless sex or sperm washing should be avoided as the conception method until the partner with HIV has been on combination antiretroviral therapy for at least 3 months with at least 2 viral load measurements below the level of detection at least 1 month apart. Preferably the partner with HIV should have been on combination antiretroviral therapy with a suppressed viral load for 6 months. When rapid viral suppression is achieved through the use of new antiretroviral agents, 2 undetectable viral load measurements at least 1 month apart should still be achieved before initiating condomless sex or sperm washing (II-A).’

Source: No. 354-Canadian HIV Pregnancy Planning Guidelines, J Obstet Gynaecol Can 2018;40(1):94–114, https://doi.org/10.1016/j.jogc.2017.06.033

Case #1

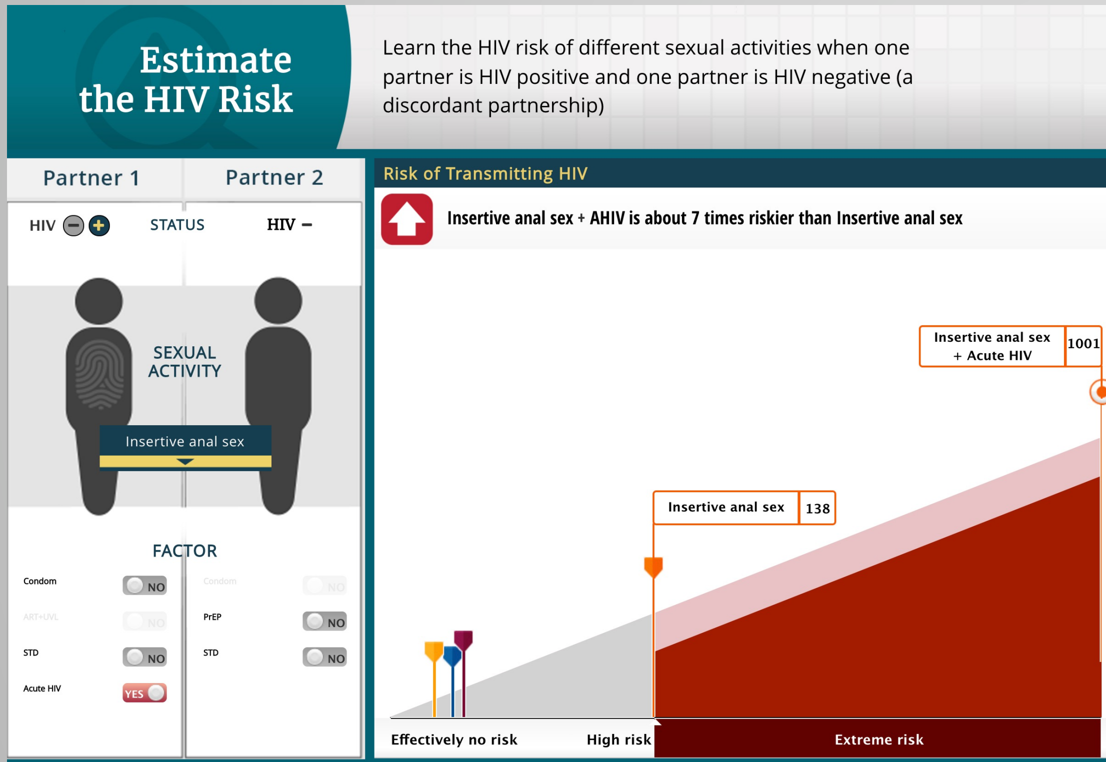
- Q. T. has sought post-exposure prophylaxis at a nearby sexual health clinic after several “accidents” involving unprotected receptive anal sex with casual partners.
  - Is PrEP recommended?
- Y. U. is in a closed relationship with an HIV+ partner who has regular medical follow-up and viral load less than 40 copies/ml. Neither partner have had any recent sexually transmitted infections. They have not used any drugs other than cannabis and alcohol in the past 5 years. They use condoms for anal sex.
  - Is PrEP recommended?

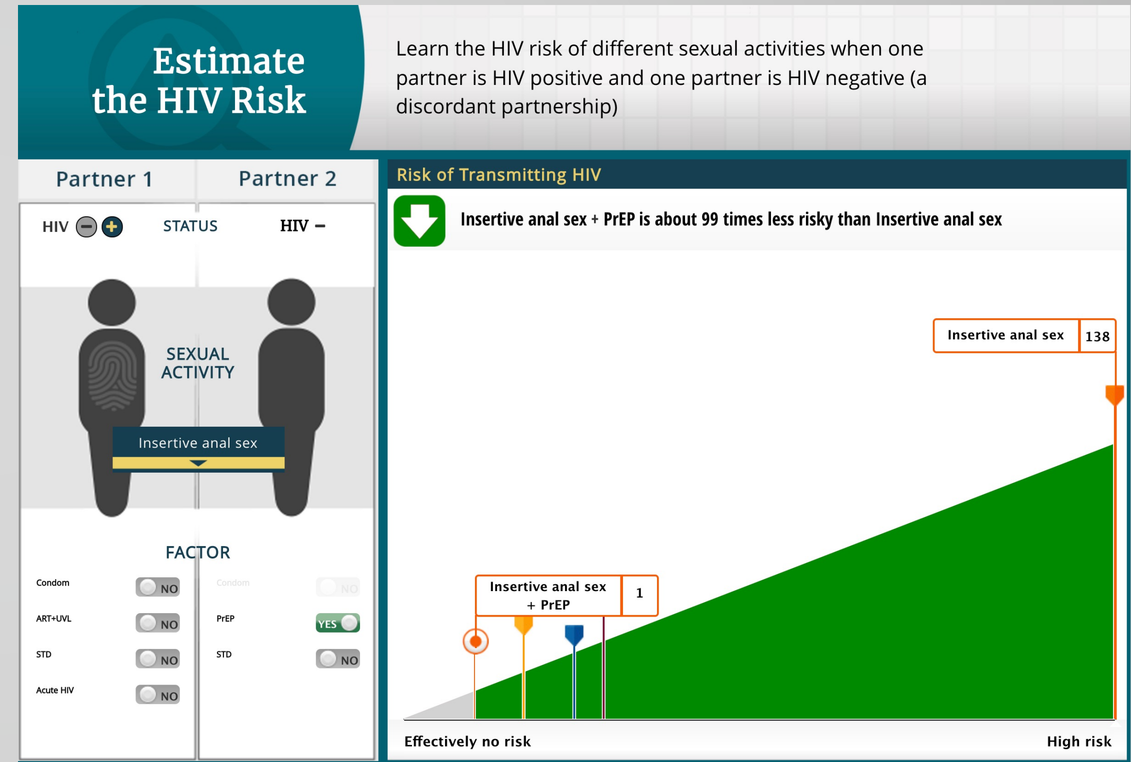
POLL #6

Is PrEP recommended?

1. Q.T.
2. Y.U.
3. Both
4. Neither

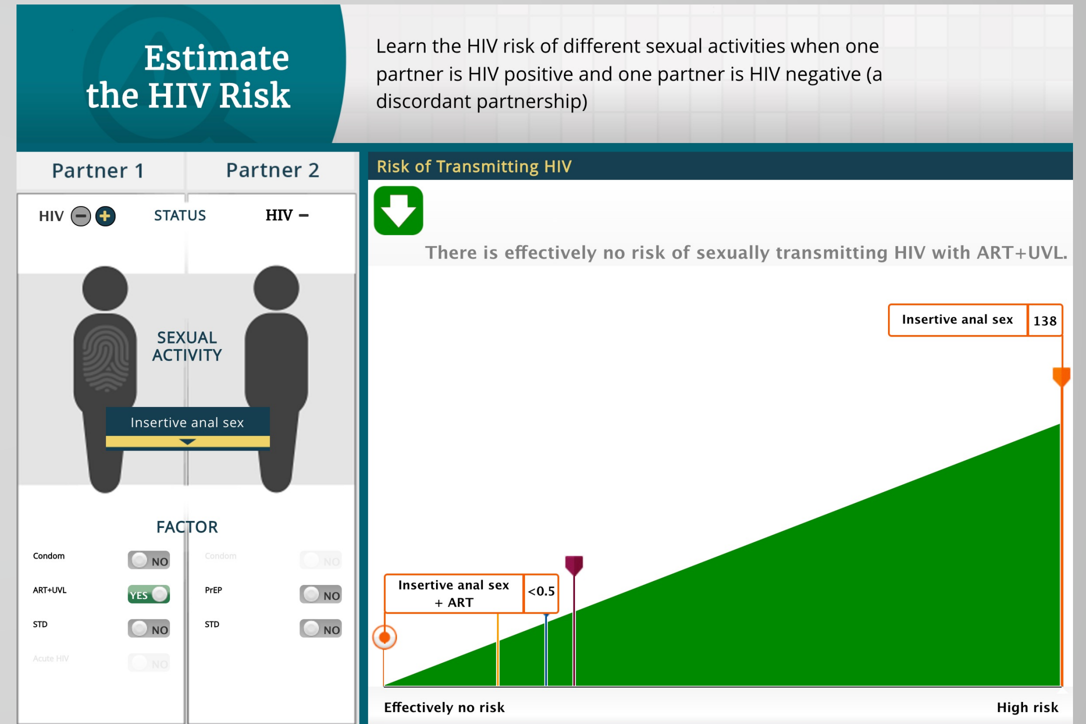
Risk Estimate Q.T. (per 10,000)





Source: https://wwwn.cdc.gov/hivrisk/estimator.html#-mb|rai.con.prep.art

Risk Estimate Y.U. (per 10,000)



Source: https://wwwn.cdc.gov/hivrisk/estimator.html#-mb|rai.con.prep.art

PrEP (Pre-exposure Prophylaxis)

- **U.S. Preventive Services Task Force (USPSTF) 2019**

- recommends that clinicians offer preexposure prophylaxis (PrEP) with effective antiretroviral therapy to patients at high risk of HIV acquisition (A recommendation)

- **Health Canada Overall Benefit-Risk Assessment 2016**

- Once-daily oral Truvada, taken as part of a comprehensive risk-reduction program, significantly reduced new HIV-1 acquisitions compared with placebo in populations of high-risk MSMs and in sero-discordant heterosexual couples. The totality of the data supports the conclusion that the benefits of Truvada for PrEP outweigh the risks. The decision to prescribe Truvada for the prevention of sexual acquisition of HIV infection should carefully weigh the individual's risks for acquiring HIV, their understanding of the importance of adherence to medication, and their potential for development of renal or bone toxicity.

- **Experiences and needs of Canadian men-who-have-sex-with-men, 2017 survey results (CCDR 2019)**

- The gap between the proportion of men who were interested in PrEP (50%-60%) and those who actually used it (10.5%-12.5%) is significant and comprehensive STBBI testing was low.

Sources: https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/prevention-of-human-immunodeficiency-virus-hiv-infection-pre-exposure-prophylaxis; https://hpr-rps.hres.ca/reg-content/regulatory-decision-summary-detail.php?lang=en&linkID=RDS00107; https://www.canada.ca/en/public-health/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2019-45/issue-11-november-7-2019/article-1-canadian-men-who-have-sex-with-men-survey-results.html

PrEP Indications

- Men who have sex with men (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 post-exposure 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.

- PrEP is not recommended in the context of a stable closed relationship with a single partner with no or negligible risk of having transmissible HIV (*strong recommendation; moderate quality of evidence*).

Source: https://www.cmaj.ca/content/cmaj/189/47/E1448.full.pdf

PrEP Indications

- Heterosexual exposure
  - Recommend PrEP for the HIV-negative partner in heterosexual serodiscordant relationships reporting condomless vaginal or anal sex where the HIV-positive partner has a substantial risk of having transmissible HIV (*strong recommendation; high quality of evidence*).
  - PrEP may be considered for the HIV-negative partner in heterosexual serodiscordant relationships reporting condomless vaginal or anal sex, where the HIV-positive partner has a low but non-negligible risk of having transmissible HIV (*weak recommendation; moderate quality of evidence*).

- People who inject drugs (PWID) exposure (off label)
  - PrEP may be considered for PWID if they share injection drug use paraphernalia with a person with a non-negligible risk of HIV infection (*weak recommendation; moderate quality of evidence*).

Source: https://www.cmaj.ca/content/cmaj/189/47/E1448.full.pdf

Risk of Transmissible HIV (who) versus Risk of Transmission (what)

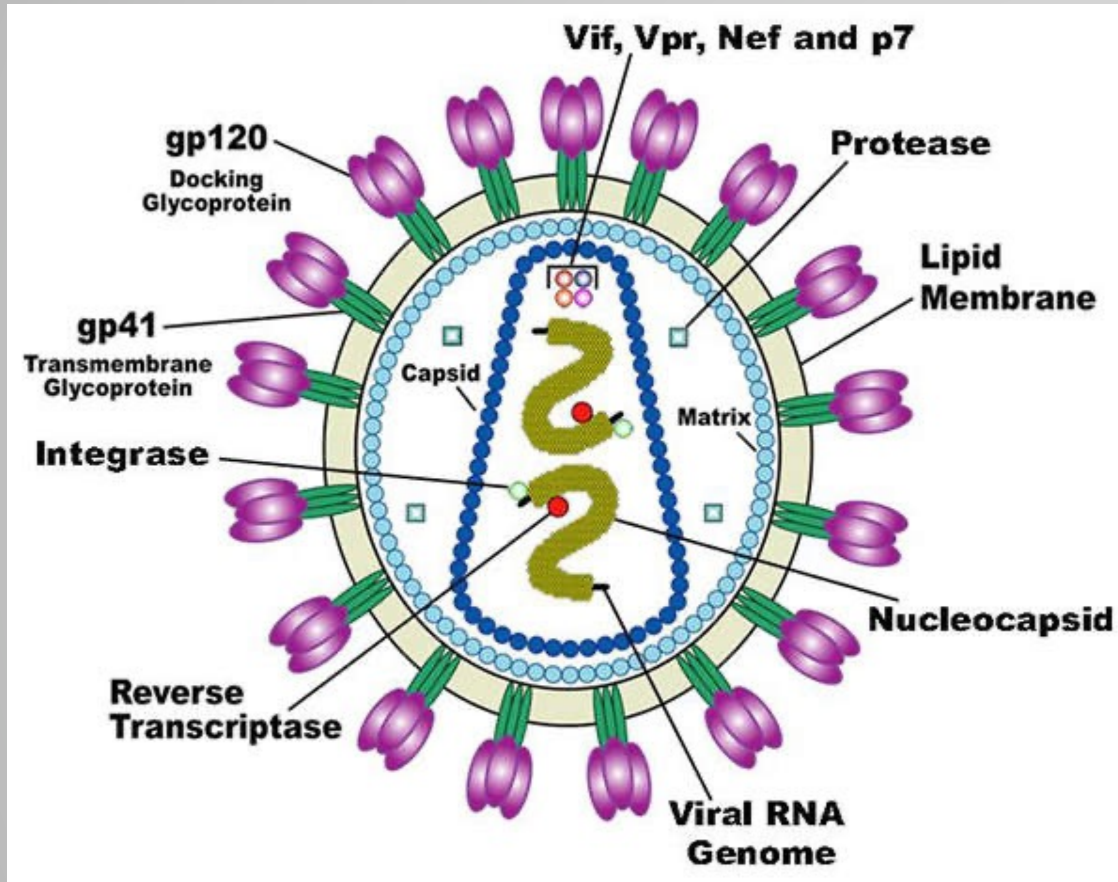
Table 1: Categories of risk that a person has transmissible HIV infection[2–4]

Risk	Examples
Substantial	• HIV positive and viremic (i.e., viral load > 40 copies/mL) • HIV status unknown, but from a population with high HIV prevalence compared with the general population (e.g., men who have sex with men, people who inject drugs)
Low but nonzero	• HIV positive and believed to have a viral load < 40 copies/mL; with concomitant sexually transmitted infection present at the time of exposure.
Negligible or none	• Confirmed HIV negative • HIV positive with confirmed viral load < 40 copies/mL and no known sexually transmitted infections present at time of exposure • HIV status unknown, general population

Table 2: Risk of HIV transmission per act by exposure type from an HIV-positive source[5]

Level	Exposure type	Estimated risk per act, %
High	Anal (receptive)	1.38 (1.02–1.86)
	Needle sharing	0.63 (0.41–0.92)
Moderate	Anal (insertive)	0.11 (0.04–0.28)
	Vaginal (receptive)	0.08 (0.06–0.11)
	Vaginal (insertive)	0.04 (0.01–0.14)
Low	Oral sex (giving)	Precise estimates not available
	Oral sex (receiving)	
	Oral–anal contact	
	Sharing sex toys	
	Blood on compromised skin	

Source: https://www.cmaj.ca/content/cmaj/189/47/E1448.full.pdf



PrEP Treatment

- Regimen for use as PrEP:
  - tenofovir disoproxil fumarate/ emtricitabine (TDF/FTC) 300/200 mg once daily (*strong recommendation; high quality of evidence*).
- As an alternative (off label):
  - TDF/FTC 300/200mg administered "on demand"(two pills taken together 2 to 24 hours before first sexual exposure, followed by one pill daily until 48 hours after last sexual activity) may be considered in MSM (*weak recommendation; high quality of evidence*).

Source: https://www.cmaj.ca/content/cmaj/189/47/E1448.full.pdf

Source: https://www.clinicaltrialsarena.com/projects/truvada-prevention-hiv/

PrEP Monitoring

- Baseline:
  - serology HIV, hepatitis A, hepatitis B, hepatitis C, syphilis; screening for gonorrhea and chlamydia; complete blood count; ALT; creatinine; urinalysis; +/- pregnancy
- 30 days (if symptomatic or abnormal at baseline):
  - serology HIV; creatinine
- Every 3 months:
  - serology HIV, syphilis; screening for gonorrhea and chlamydia; creatinine; +/- pregnancy
- Always:
  - indication, adherence, other prevention strategies, symptoms of seroconversion

Source: https://www.cmaj.ca/content/cmaj/189/47/E1448.full.pdf

Table 2: Risk of HIV transmission per act by exposure type from an HIV-positive source[5]

Level	Exposure type	Estimated risk per act, %
High	Anal (receptive)	1.38 (1.02–1.86)
	Needle sharing	0.63 (0.41–0.92)
Moderate	Anal (insertive)	0.11 (0.04–0.28)
	Vaginal (receptive)	0.08 (0.06–0.11)
	Vaginal (insertive)	0.04 (0.01–0.14)
Low	Oral sex (giving)	Precise estimates not available
	Oral sex (receiving)	
	Oral–anal contact	
	Sharing sex toys	
	Blood on compromised skin	

Table 1: Categories of risk that a person has transmissible HIV infection[2–4]

Risk	Examples
Substantial	• HIV positive and viremic (i.e., viral load > 40 copies/mL) • HIV status unknown, but from a population with high HIV prevalence compared with the general population (e.g., men who have sex with men, people who inject drugs)
Low but nonzero	• HIV positive and believed to have a viral load < 40 copies/mL; with concomitant sexually transmitted infection present at the time of exposure.
Negligible or none	• Confirmed HIV negative • HIV positive with confirmed viral load < 40 copies/mL and no known sexually transmitted infections present at time of exposure • HIV status unknown, general population

POLL #6

Is PrEP recommended?

1. Q.T. – substantial risk of partner with transmissible HIV, risk from exposure type high or moderate with HIRI-MSM risk index of at least 10
2. Y.U. – negligible or no risk of partner with transmissible HIV, risk from exposure type low
3. Both
4. Neither

Source: https://www.cmaj.ca/content/cmaj/189/47/E1448.full.pdf

Case #2

- T. J. presents anxiously after a one-night sexual encounter the night before presentation to your clinic. They usually use condoms for HIV and STI prevention. However, the condom ripped last night while receiving anal sex. They are requesting PEP.
- M. T. presents to your clinic after a consensual sexual encounter. They preformed oral sex on a partner who did not ejaculate in their mouth. The person was not known to have HIV according to the patient. They express concerns about risks of acquiring HIV and ask about PEP.

POLL #7

Is PEP recommended?

1. T.J.
2. M.T.
3. Both
4. Neither

PEP (off label)

- Within 72 hours of a moderate or a high-risk exposure with a person who has a substantial risk of having transmissible HIV (consider for low but non-negligible risk)

Sexual Assault:

- HIV PEP is recommended when the assailant is known to be HIV-infected and significant exposure has occurred (e.g., oral, anal, and/or vaginal penetration without a condom or condom status unknown/broken)
- PEP may also be available on a case-by-case basis for other high-risk exposures (e.g., source a known injection drug user, multiple assailants and/or significant injury) and vaginal, anal or oral penetration has occurred
- Recommendations vary by province, and the decision to offer PEP should be made in conjunction with an HIV specialist and/or provincial/territorial/regional protocol
- If HIV PEP is used, it should be started as soon as possible – no later than 72 hours after exposure – and continued for 28 days

Sources: https://www.cmaj.ca/content/cmaj/189/47/E1448.full.pdf ; https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines/sexually-transmitted-infections/canadian-guidelines-sexually-transmitted-infections-43.html

Risk of Transmissible HIV (who) versus Risk of Transmission (what)

Table 1: Categories of risk that a person has transmissible HIV infection[2–4]

Risk	Examples
Substantial	• HIV positive and viremic (i.e., viral load > 40 copies/mL) • HIV status unknown, but from a population with high HIV prevalence compared with the general population (e.g., men who have sex with men, people who inject drugs)
Low but nonzero	• HIV positive and believed to have a viral load < 40 copies/mL; with concomitant sexually transmitted infection present at the time of exposure.
Negligible or none	• Confirmed HIV negative • HIV positive with confirmed viral load < 40 copies/mL and no known sexually transmitted infections present at time of exposure • HIV status unknown, general population

Table 2: Risk of HIV transmission per act by exposure type from an HIV-positive source[5]

Level	Exposure type	Estimated risk per act, %
High	Anal (receptive)	1.38 (1.02–1.86)
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Low	Oral sex (giving)	Precise estimates not available
	Oral sex (receiving)	
	Oral–anal contact	
	Sharing sex toys	
	Blood on compromised skin	

Source: https://www.cmaj.ca/content/cmaj/189/47/E1448.full.pdf

Tableau 6. Indication de la PPE anti-VIH à la suite d'un contact sexuel

Exposition	Statut VIH de la source	Traitement de la personne exposée		
		Recommandé	Non recommandé	À envisager††
Anale insertive/ réceptive	Négatif		X†	
	Positif	X*		
	Inconnu			X‡
Vagin-pénis réceptive/ insertive	Négatif		X†	
	Positif	X*		
	Inconnu			X‡
Orale réceptive avec éjaculation	Négatif		X**	
	Positif			X*, ‡‡
	Inconnu			X§
Orale réceptive sans éjaculation	Négatif		X	
	Positif		X	
	Inconnu		X	
Orale insertive avec/ sans éjaculation	Négatif		X	
	Positif		X	
	Inconnu		X	
Annilingus	Négatif		X	
	Positif		X	
	Inconnu		X	
Cunnilingus	Négatif		X	
	Positif		X	
	Inconnu		X	
Partage d'objets sexuels§§	Négatif		X†	
	Positif	X*		
	Inconnu			X§

Table 4: Risk assessment for beginning nPEP initiation*

Likelihood that source person has transmissible HIV (from Table 1)	Risk from exposure type (from Table 2)	
	High or moderate	Low
Substantial	Initiate nPEP	nPEP not required
Low	Consider nPEP	nPEP not required
Negligible or none	nPEP not required	nPEP not required

Note: nPEP = nonoccupational postexposure prophylaxis.
*Combining risk arising from exposure type and probability that the source has transmissible HIV to determine when to initiate nPEP.

* La PPE anti-VIH n'est pas indiquée lorsque la personne vivant avec le VIH prend un traitement antirétroviral comme prescrit et que sa charge virale, mesurée par des analyses consécutives de laboratoire tous les quatre à six mois, se maintient à moins de 200 copies par millilitre de sang. Dans ces conditions, il n'y a pas de preuves de transmission.

† La PPE est recommandée si la source fait partie d'un groupe à risque et a présenté des symptômes de primo-infection au cours des trois derniers mois.

‡ La PPE est recommandée si la source fait partie d'un groupe à risque.

§ La PPE peut être envisagée si la source fait partie d'un groupe à risque.

** La PPE peut être envisagée si la source fait partie d'un groupe à risque et a présenté des symptômes de primo-infection au cours des trois derniers mois.

†† Lorsque la PPE anti-VIH est envisagée, elle doit être administrée après évaluation des avantages et des inconvénients.

‡‡ La PPE peut être envisagée. La prescription des antirétroviraux est optionnelle et doit être basée sur une décision prise en commun par la personne exposée et le médecin.

§§ Contact d'un objet sexuel avec les sécrétions génitales d'un partenaire (personne source), puis pénétration de cet objet dans le vagin ou l'anus de l'autre partenaire (personne contact).

Source: https://www.cmaj.ca/content/cmaj/189/47/E1448.full.pdf ; https://publications.msss.gouv.qc.ca/msss/fichiers/2018/18-338-01W.pdf

PEP (off label)

- Two nucleoside reverse transcriptase inhibitors:
  - TRUVADA: tenofovir disoproxil fumarate/ emtricitabine (TDF/FTC) 300/200 mg once daily x 28 days

PLUS

- Third agent:
  - ISENTRESS: raltegravir 400 mg po twice daily (strong recommendation) x 28 days
  - ISENTRESS HD: raltegravir 1200 mg po once daily (weak recommendation)

Source: https://www.cmaj.ca/content/cmaj/189/47/E1448.full.pdf

PEP (off label)

Table 5: Nonoccupational postexposure prophylaxis regimens: preferred and alternate agents*

Drug category†	Preferred	Alternate
Two nucleoside reverse transcriptase inhibitors	TDF/FTC 300/200 mg PO once daily (*strong recommendation; low quality of evidence*)	Zidovudine/lamivudine 300/150 mg PO twice daily (*weak recommendation; low quality of evidence*) or TDF 300 mg PO once daily + lamivudine 300 mg PO once daily (*weak recommendation; low quality of evidence*)
Third drug	Darunavir 800 mg PO once daily + ritonavir 100 mg PO once daily (*strong recommendation; high quality of evidence*) or Dolutegravir 50 mg PO once daily (*strong recommendation; low quality of evidence*) or Raltegravir 400 mg PO twice daily (*strong recommendation; high quality of evidence*)	Atazanavir 300 mg PO once daily + ritonavir 100 mg PO once daily (*weak recommendation; low quality of evidence*) or Darunavir/cobicistat 800/150 mg PO once daily (*weak recommendation; very low quality of evidence*) or Elvitegravir/cobicistat 150/150 mg (coformulated with TDF/FTC 300/200 mg) PO once daily (*weak recommendation; low quality of evidence*) or Lopinavir/ritonavir 800/200 mg PO once daily (*weak recommendation; strong quality of evidence*) or Raltegravir HD 1200 mg PO once daily (*weak recommendation; very low quality of evidence*)
NOT recommended		
Abacavir, didanosine, efavirenz, nevirapine, stavudine		

Note: FTC = emtricitabine, nPEP = nonoccupational postexposure prophylaxis, PO = per os (orally), TDF = tenofovir disoproxil fumarate.
* A thorough medication history (including prescription drugs, supplements, herbal preparations) should be taken before selecting an nPEP regimen because of the potential for drug–drug interactions.
†A complete nPEP regimen includes two nucleoside reverse transcriptase inhibitors plus a third drug.

Source: https://www.cmaj.ca/content/cmaj/189/47/E1448.full.pdf

PEP Monitoring

- Baseline:
  - serology HIV, hepatitis A, hepatitis B, hepatitis C, syphilis; screening for gonorrhea and chlamydia; complete blood count; ALT; creatinine; +/- pregnancy
  - *** obtain a complete medication history to verify for drug interactions ***

- Week 2 (if symptomatic or abnormal at baseline):
  - ALT; creatinine

- Week 12:
  - serology HIV, hepatitis C

Source: https://www.cmaj.ca/content/cmaj/189/47/E1448.full.pdf

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Risk	Examples
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POLL #7

Is PEP recommended?

1. T.J. – substantial risk of partner with transmissible HIV, risk from exposure type high
2. M.T. – negligible or no risk of partner with transmissible HIV, risk from exposure type low
3. Both
4. Neither

Source: https://www.cmaj.ca/content/cmaj/189/47/E1448.full.pdf

Montréal / Québec Resources

- Testing :
  - https://santemontreal.qc.ca/en/public/support-and-services/testing-for-hivaids-and-stbbis/
- Links to clinical resources:
  - https://santemontreal.qc.ca/en/public/advice-and-prevention/hivaids/#c33975
- HIV/AIDS Consultation – Chronic Viral Illness Service:
  - *1-800-363-4814*
  - https://www.mcgill.ca/infect-diseases/care-and-services

Sexual Health
– Not Just HIV

Vaccination and Harm Reduction Counselling

- Hepatitis B
- Human papilloma virus
- Hepatitis A
  - Vaccination memory aid:
  - https://publications.msss.gouv.qc.ca/msss/fichiers/2019/19-308-04W.pdf
- Condoms and means to reduce sexual exposure
- Drug use and sexual and blood exposures
- Contraceptive counselling

Source: https://publications.msss.gouv.qc.ca/msss/fichiers/2019/19-308-04W.pdf

Source: https://images.app.goo.gl/uvibfsUrXW4mhXbdA

Safety Concerns & Social Supports

- Stressful life event – end of a relationship is a risk for suicide
  - Assess suicide risks including male, unmarried, living alone, unemployed, underlying mental health condition (affective disorder, schizophrenia, personality disorder)
  - Assess protective factors – family support, having children at home, strong religious faith, sense of responsibility, problem solving skills

- Homophobia and transphobia
  - https://www.quebec.ca/en/family-and-support-for-individuals/violence/homophobia-and-transphobia/assistance

- Sexual assault – consider risk and referral to local teams or services (https://www.cvasm.org)
  - 28.9% of female assaults are by a spouse / ex-spouse
  - 24% of women by the time of young adulthood

- Intimate partner violence– consider referral to local teams or services
  - 93,000 cases reported to police in 2016 in Canada
  - Risks include unplanned pregnancy, unhealthy family relationships and interactions, marital conflict (fights, tension, and other struggles)

Sources: https://www.bmj.com/content/bmj/suppl/2017/03/30/bmj.j1128.DC1/suicide_v23_web.full.pdf; https://www.aafp.org/afp/2012/0315/afp20120315p602.pdf; https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines/sexually-transmitted-infections/canadian-guidelines-sexually-transmitted-infections-43.html; https://www.cdc.gov/violenceprevention/intimatepartnerviolence/riskprotectivefactors.html; https://www.justice.gc.ca/eng/rp-pr/jr/jf-pf/2019/docs/mar01.pdf; https://www.quebec.ca/en/family-and-support-for-individuals/violence/homophobia-and-transphobia

Review

Review Question 1

Your patient grew up in a country with the death penalty for consensual same-sex sexual activity. Upon questioning him about his intimate social relationships, he suddenly is reluctant to provide you with details. This example could be considered the following.

1. Internalized stigma
2. Perceived stigma
3. Enacted stigma
4. Institutionalized stigma
5. Layered or compounded stigma

Review Question 2

In 2019, what percentage of new HIV infections in Québec occurred in women?

1. 13%
2. 23%
3. 33%
4. 43%
5. 53%

Review Question 3

Which of the following are effective ways to prevent HIV in the population?

1. Accompanying patients in knowing their status and accessing effective treatment with suppression of viral load.
2. Condom use.
4. PEP (post-exposure prophylaxis) within 72 hours following an exposure to HIV.
5. PrEP (pre-exposure prophylaxis).
6. Regular testing for HIV if ongoing risk exposure.

Review Question 4

PrEP regimens include the following?

1. doxycycline 100 mg po twice-daily
2. emtricitabine / tenofovir alafenamide (FTC/TAF) 200/25 mg (Descovy) once daily
3. tenofovir disoproxil fumarate/ emtricitabine (TDF/FTC) 300/200mg (Truvada) once daily
4. tenofovir disoproxil fumarate/ emtricitabine (TDF/FTC) 300/200mg (Truvada) administered "on demand"(two pills taken together 2 to 24 hours before first sexual exposure, followed by one pill daily until 48 hours after last sexual activity)
5. zidovudine (AZT) 300 mg po twice-daily

Review Question 5

Which of the following statements concerning PEP are false?

1. PEP is effective when taken with 72 hours
2. PEP regimens must be taken for four weeks (28 days)
3. PEP is indicated after a moderate or a high-risk exposure with a person who has a substantial risk of having transmissible HIV
4. PEP regimen is tenofovir disoproxil fumarate/ emtricitabine (TDF/FTC) 300/200mg (Truvada) once daily

THANKS! MERCI! QUESTIONS?

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