Opioid Agonist Therapy 101:
An Introduction to Clinical Practice **Workshop**

HIV and Hepatitis C

Special Considerations for the Management of Opioid Use Disorder

Laurie Ireland MD CCFP

Faculty/Presenter Disclosure

- Faculty: Dr. Laurie Ireland MD CCFP
- Relationships with commercial interests:
  - None

Objectives

At the end of this learning activity, the participant will be able to:

- Discuss special considerations in the management of the individual with opioid use disorder and HIV and/or Hepatitis C

Outline

HIV, Hepatitis C

- Natural History
- Epidemiology
- Testing Recommendations
- Treatment in context Opiate Agonist Therapy
- Drug-Drug Interactions
- Prevention

Helena

28 yo woman came in for STBBI testing

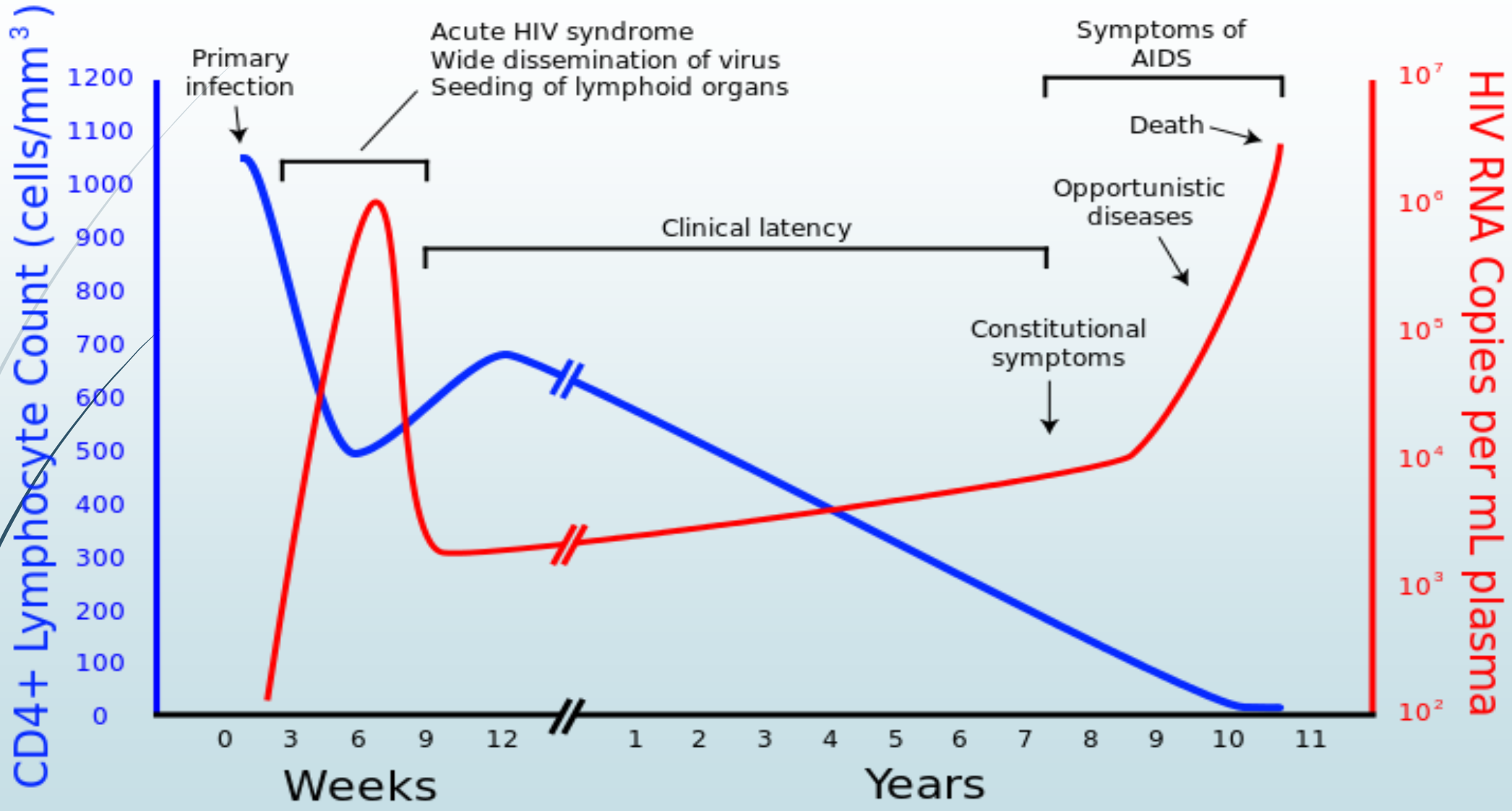
- Boyfriend was recently diagnosed with HIV, not using condoms, no previous testing
- Discloses escalating use of fentanyl over the last year
- Overdosed twice in the last 3 months
- Asking to start Opiate Agonist Therapy (OAT)
- 1 week microinduction, stabilized with further dose titration up to Buprenorphine/naloxone 24/6 mg
- HIV test result is positive

Human Immunodeficiency Virus (HIV)

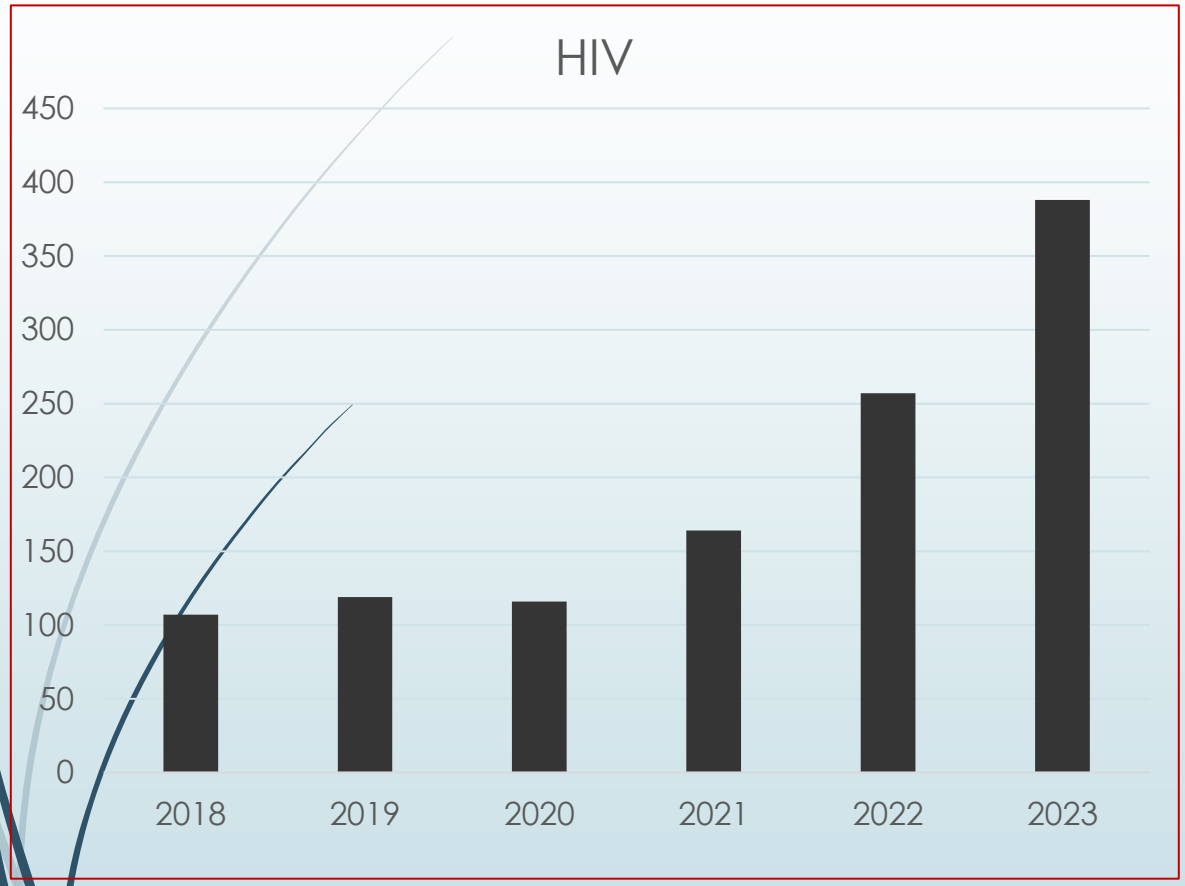
- HIV is a retrovirus, 2 RNA
- Spread through blood, genital or rectal fluids, and breast milk
- Primarily transmitted through unprotected sex or sharing needles or drug use equipment with someone with HIV

- HIV infects T-helper or CD4 cells
- CD4 cells direct & coordinate immune system to fight infection
- As CD4 cells decrease, the body loses its ability to fight infections
- Without treatment at risk opportunistic infections and death

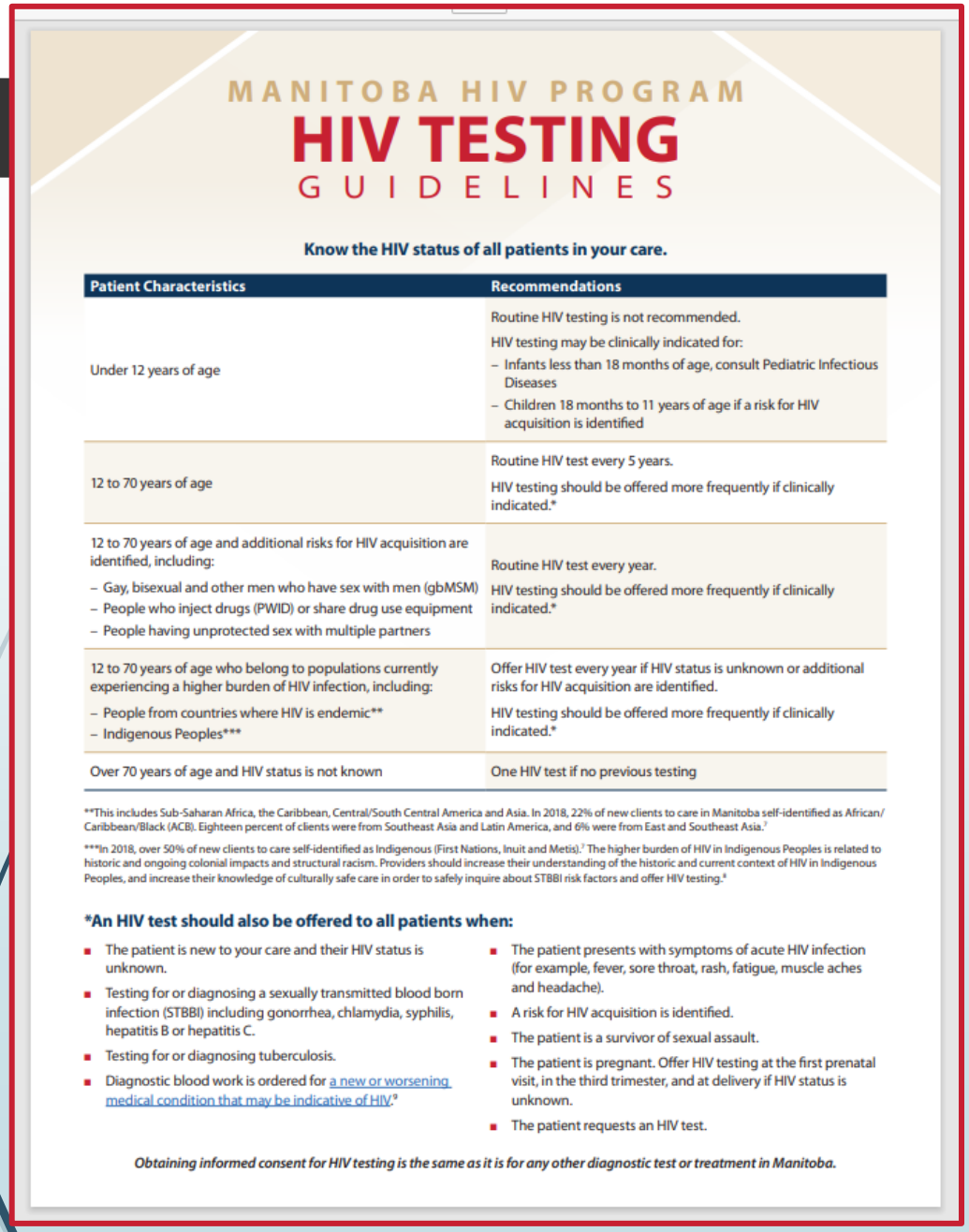
HIV Natural History



HIV Rates Increasing in Manitoba



- 388 new HIV cases in MB in 2023
- Incidence > 3x the national rate
- HIV Program report 2018-2021:
  - ~50 % are female
  - IDU and Heterosexual sex are most common self-disclosed modes of transmission
  - 65% of women and 35% of men self reported injection drug use
  - up to 50% experiencing unstable housing
  - 7 out of 10 self identify as indigenous



MANITOBA HIV PROGRAM

HIV TESTING GUIDELINES

Know the HIV status of all patients in your care.

Patient Characteristics	Recommendations
Under 12 years of age	Routine HIV testing is not recommended. HIV testing may be clinically indicated for: – Infants less than 18 months of age, consult Pediatric Infectious Diseases – Children 18 months to 11 years of age if a risk for HIV acquisition is identified
12 to 70 years of age	Routine HIV test every 5 years. HIV testing should be offered more frequently if clinically indicated.*
12 to 70 years of age and additional risks for HIV acquisition are identified, including: – Gay, bisexual and other men who have sex with men (gbMSM) – People who inject drugs (PWID) or share drug use equipment – People having unprotected sex with multiple partners	Routine HIV test every year. HIV testing should be offered more frequently if clinically indicated.*
12 to 70 years of age who belong to populations currently experiencing a higher burden of HIV infection, including: – People from countries where HIV is endemic** – Indigenous Peoples***	Offer HIV test every year if HIV status is unknown or additional risks for HIV acquisition are identified. HIV testing should be offered more frequently if clinically indicated.*
Over 70 years of age and HIV status is not known	One HIV test if no previous testing

**This includes Sub-Saharan Africa, the Caribbean, Central/South Central America and Asia. In 2018, 22% of new clients to care in Manitoba self-identified as African/Caribbean/Black (ACB). Eighteen percent of clients were from Southeast Asia and Latin America, and 6% were from East and Southeast Asia.[7]

***In 2018, over 50% of new clients to care self-identified as Indigenous (First Nations, Inuit and Metis).[7] The higher burden of HIV in Indigenous Peoples is related to historic and ongoing colonial impacts and structural racism. Providers should increase their understanding of the historic and current context of HIV in Indigenous Peoples, and increase their knowledge of culturally safe care in order to safely inquire about STBBI risk factors and offer HIV testing.[8]

***An HIV test should also be offered to all patients when:**

- The patient is new to your care and their HIV status is unknown.
- Testing for or diagnosing a sexually transmitted blood born infection (STBBI) including gonorrhea, chlamydia, syphilis, hepatitis B or hepatitis C.
- Testing for or diagnosing tuberculosis.
- Diagnostic blood work is ordered for a new or worsening medical condition that may be indicative of HIV.[9]
- The patient presents with symptoms of acute HIV infection (for example, fever, sore throat, rash, fatigue, muscle aches and headache).
- A risk for HIV acquisition is identified.
- The patient is a survivor of sexual assault.
- The patient is pregnant. Offer HIV testing at the first prenatal visit, in the third trimester, and at delivery if HIV status is unknown.
- The patient requests an HIV test.

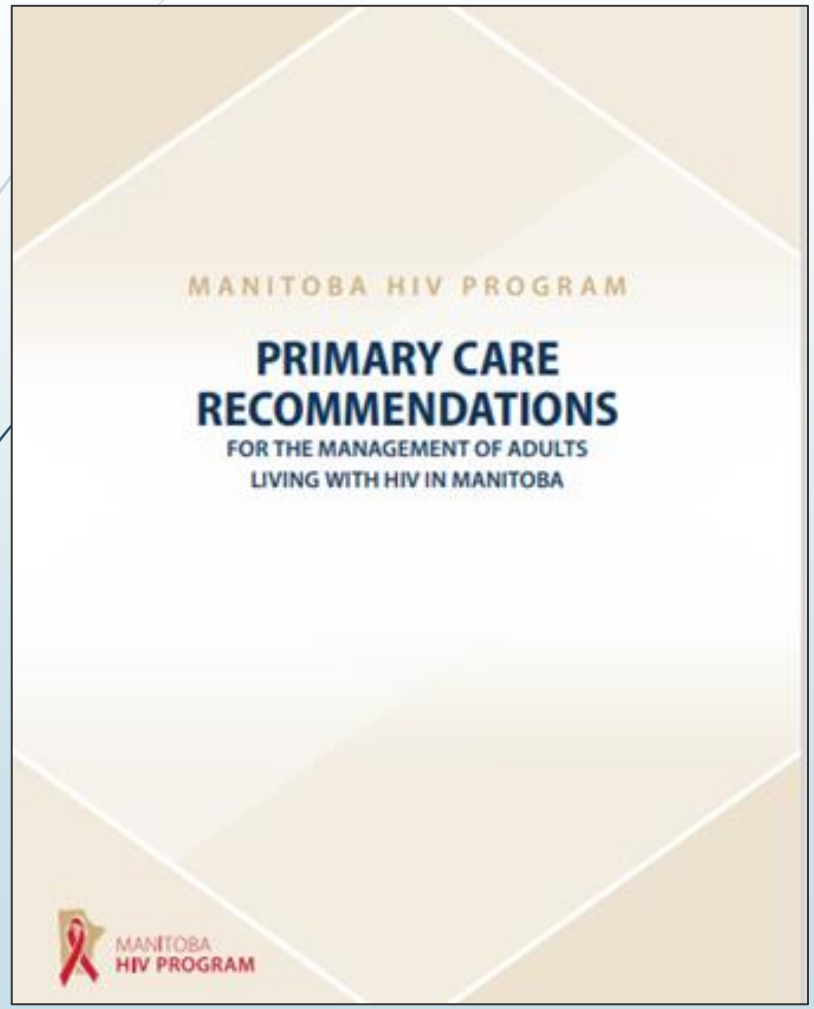
Obtaining informed consent for HIV testing is the same as it is for any other diagnostic test or treatment in Manitoba.

- Complete STBBI (HIV, Hep A/B/C, GC/CT, Syphilis) screen as part of comprehensive intake assessment for OAT

- Offer regular re-screening:
- Every 5 years regardless of risks

- Annually if risks for acquisition
- More frequently, q 3-6 months if high risk:
  - gbMSM
  - Multiple partners
  - IDU
  - Recent STI

Primary Care Recommendations



- Referral pathway
- Baseline Assessments
- Immunizations
- Cancer Screening
- Screening for co-infections and for non-infectious comorbidities
- Special considerations for key populations
- Lab Monitoring schedule

https://mbhiv.ca/healthcare-providers/guidelines/

HIV Positive Test Result

My HIV test is positive, now what?

Finding out you have HIV may be a shock. You are not alone. There is help. With treatment, care and support, you can live long and well with HIV. Here's what else you need to know.

For more information, contact:

- The Manitoba HIV Program: **www.mbHIV.ca** or 1-866-449-0165
- CATIE: **www.catie.ca/** or 1-800-263-1638
- Street Connections: **www.streetconnections.ca**
- Sexuality Education Resource Centre Manitoba (SERC): **www.serc.mb.ca/**
- Canadian HIV/AIDS Legal Network: **www.hivlegalnetwork.ca/**
- Manitoba Harm Reduction Network: **www.mhrn.ca**
- Sex Friendly Manitoba: **www.sexfriendlymb.ca**
- Workplace Disclosure Decision Guide: **www.disclosureguide.realizecanada.org/**
- Financial support for people living with HIV with the PH/A Fund Guidelines: **www.ninecircles.ca/wp-content/uploads/2018/12/PHA-Fund-Guidelines.pdf**

1 **HIV can be treated.** With treatment and support, people living with HIV can live long and healthy lives. HIV treatment is usually very simple, has few side effects, and can prevent HIV from passing to others. This is done by lowering the amount of virus in your body to an undetectable level. When a person's virus becomes undetectable (measured by a blood test), they:

- Cannot pass HIV to their sex partners
- Have a lower chance of passing HIV when sharing equipment for injecting drugs
- Will not pass HIV to a baby during pregnancy or delivery

U = U: Undetectable = Untransmittable

It is important to get care and treatment as soon as you can.

2 **Make sure you are referred to the Manitoba HIV Program.** The person who gave you your test result will refer you to the Manitoba HIV Program so that you can start your HIV care.

If you had a reactive test result from a point of care or HIV self-test, you should see a healthcare provider for confirmatory lab testing. **You can also refer yourself to the Manitoba HIV Program. Call 1-866-449-0165.**

3 **You can keep yourself and others safe.** HIV can be passed to others during sex, by sharing equipment to use drugs, or during pregnancy, birth or breastfeeding. You can help stop HIV from passing to others by:

- Practicing safer sex if you do have sex
- Using new equipment every time if you inject drugs or choosing different ways of using drugs
- Taking your HIV medication regularly
- Feeding your baby formula with support from the Manitoba HIV Program Infant Formula Program
- Using pre-exposure prophylaxis (PrEP) for your HIV-negative sex partner(s)

4 **A public health nurse may contact you.** The nurse will provide you with information about HIV. They will also talk to you about people you may have had contact with and the importance of them being tested for HIV. You do not need to provide your name to people you have had contact with.

5 **You don't have to tell everyone you have HIV,** but you do have a legal duty to tell your sex partner(s) you have HIV before some kinds of sex. Find out more at HIV Legal Network: **www.hivlegalnetwork.ca**

- Inform of diagnosis as soon as possible after positive test
- Reassure
- Counsel on prevention transmission and review for any partners at risk
- Conduct a baseline assessment
- Refer to the MB HIV Program (MBHIVP)

Baseline Assessment

Clinical and laboratory assessments	Recommendation for PLHIV	
Medical history and physical exam	■ Notify patient of positive HIV test result as soon as possible ■ Educate and reassure using MBHIVP's "My HIV test is positive, now what?" brochure ■ Identify current and ongoing risks for transmission and support contact tracing according to public health guidelines – Connect to safe sex and drug-use supplies if indicated	■ Update past medical history, medications, allergies and psychosocial history ■ Confirm date of most recent HIV negative test ■ Assess for symptoms or signs of serious illness, advanced HIV, or OIs – Conduct a review of systems – Perform a focused physical exam including vital signs and oxygen saturation

Baseline Investigations

Baseline Assessment

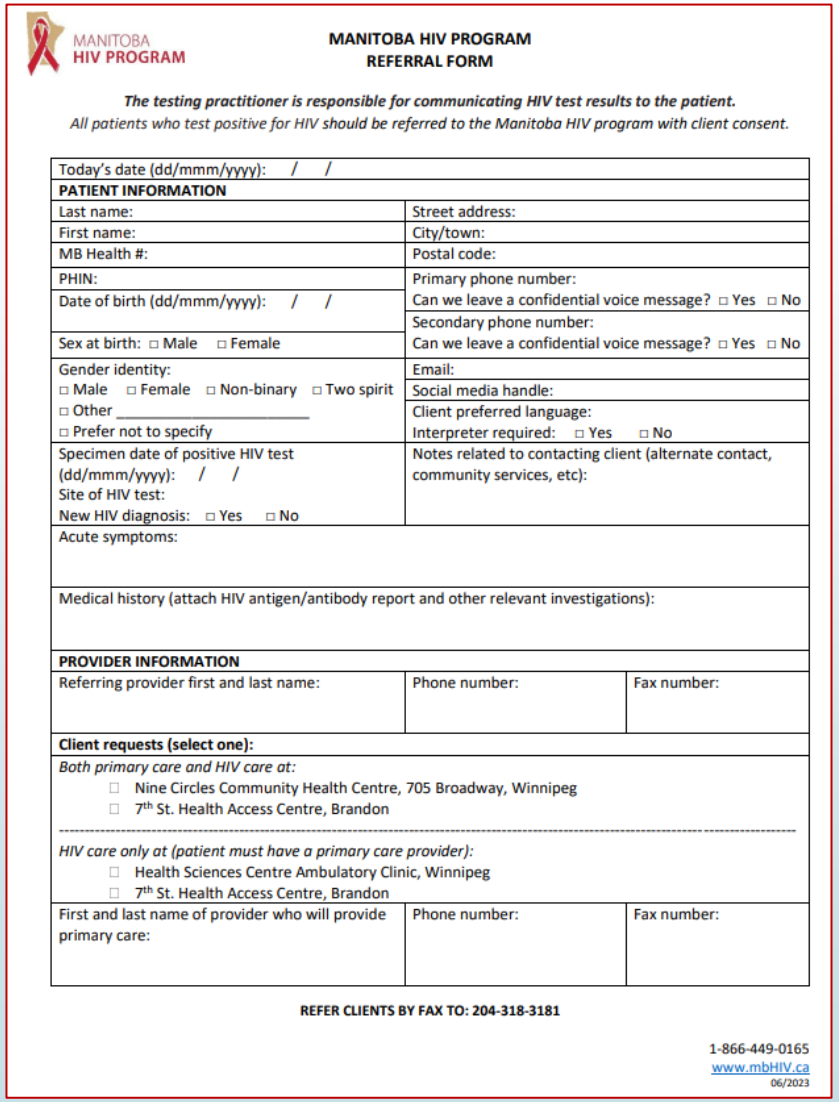
A baseline assessment of people newly diagnosed with HIV should be done as soon as possible after diagnosis and can be done by primary care providers using Table 1. **If on baseline assessment there are concerns for serious illness, advanced HIV, or opportunistic infections (OIs), contact the MBHIVP for an urgent consult.**

Table 1. Baseline assessment and investigations for adults newly diagnosed with HIV [15,16,17]

Clinical and laboratory assessments	Recommendation for PLHIV	
Medical history and physical exam	▪ Notify patient of positive HIV test result as soon as possible ▪ Educate and reassure using MBHIVP's "My HIV test is positive, now what?" brochure ▪ Identify current and ongoing risks for transmission and support contact tracing according to public health guidelines – Connect to safe sex and drug-use supplies if indicated	▪ Update past medical history, medications, allergies and psychosocial history ▪ Confirm date of most recent HIV negative test ▪ Assess for symptoms or signs of serious illness, advanced HIV, or OIs – Conduct a review of systems – Perform a focused physical exam including vital signs and oxygen saturation
HIV specific testing	▪ HIV 4th generation p24 antigen/antibody test (HIV ½ Ag/Ab combo) (in the absence of Cadham Provincial Laboratory report) ▪ CD4 cell count (absolute and percent) (CD3, CD4, CD8)	▪ HIV viral load ▪ HIV genotyping/drug resistance ▪ HIV INSTI resistance ▪ Human leukocyte antigen (HLA)-B5701 test
Screen for co-morbid infections, previous exposure and immunity to other infections	▪ Tuberculosis (TB): – Interferon gamma release assay (IGRA) or tuberculin skin test (TST) – Chest x-ray – Acid-fast bacillus (AFB) test (3 samples) if symptoms or signs of respiratory infection or TB ▪ Hepatitis: – Hepatitis A virus antibody (HAV IgG) – Hepatitis B virus surface antigen (HBsAg), surface antibody (HBsAb Immunity) and core antibody (HBcAb Total)	– Hepatitis C virus antibody (HCV Ab) or Hepatitis C polymerase chain reaction/PCR (HCV PCR/QUANT) test if known hepatitis C antibody positive ▪ Toxoplasma IgG ▪ Measles IgG, mumps IgG, and rubella IgG ▪ Varicella (VZV) IgG ▪ Cytomegalovirus (CMV) IgG
Screen for sexually transmitted and blood borne infections (STBBIs)	▪ Syphilis ▪ Gonorrhea and chlamydia with urine or cervical sample, plus rectal and throat swabs as indicated ▪ Trichomoniasis vaginal swab	▪ Swab of any ulcerative lesions for herpes simplex virus (HSV) and treponema ▪ Cervical cancer: Pap test for all people with a cervix
Screen for non-infectious co-morbidities	▪ Diabetes and cardiovascular disease risk (CVD) assessment: Hemoglobin A1C (HgbA1C), random glucose, cholesterol profile ▪ Liver or renal disease: Complete blood count (CBC) with differential, sodium (Na), potassium (K), chloride (Cl), carbon dioxide (CO2), calcium (Ca), Corrected Ca, phosphorus (PO4), creatinine, alanine aminotransferase (ALT), aspartate aminotransferase (AST), alkaline phosphatase (ALP), gamma-glutamyltransferase (GGT), total bilirubin, direct bilirubin, lactate dehydrogenase (LDH), albumin, urinalysis (U/A), urine albumin-creatinine ratio (UACR)	

- Will be done by HIVP if unable to facilitate in community or patient doesn't attend to lab
- CD4, HIV viral load, resistance and HLA testing
- Screen for coinfections (TB, hepatitis and other STIs)
- Screen for immunity/previous exposure MMR,VZV, toxoplasmosis, CMV
- Hematology and chemistry labs, DM and lipid screen
- Pap test if cervix

MB HIV Program Referral Form



MANITOBA HIV PROGRAM

MANITOBA HIV PROGRAM
REFERRAL FORM

The testing practitioner is responsible for communicating HIV test results to the patient.
All patients who test positive for HIV should be referred to the Manitoba HIV program with client consent.

Today's date (dd/mmm/yyyy): / /	
PATIENT INFORMATION	
Last name:	Street address:
First name:	City/town:
MB Health #:	Postal code:
PHIN:	Primary phone number: Can we leave a confidential voice message? □ Yes □ No
Date of birth (dd/mmm/yyyy): / /	Secondary phone number: Can we leave a confidential voice message? □ Yes □ No
Sex at birth: □ Male □ Female	Email:
Gender identity: □ Male □ Female □ Non-binary □ Two spirit □ Other _____ □ Prefer not to specify	Social media handle: Client preferred language: Interpreter required: □ Yes □ No
Specimen date of positive HIV test (dd/mmm/yyyy): / / Site of HIV test: New HIV diagnosis: □ Yes □ No	Notes related to contacting client (alternate contact, community services, etc):
Acute symptoms:	
Medical history (attach HIV antigen/antibody report and other relevant investigations):	

PROVIDER INFORMATION		
Referring provider first and last name:	Phone number:	Fax number:
Client requests (select one):		
Both primary care and HIV care at: □ Nine Circles Community Health Centre, 705 Broadway, Winnipeg □ 7th St. Health Access Centre, Brandon --- *HIV care only at (patient must have a primary care provider):* □ Health Sciences Centre Ambulatory Clinic, Winnipeg □ 7th St. Health Access Centre, Brandon		
First and last name of provider who will provide primary care:	Phone number:	Fax number:

REFER CLIENTS BY FAX TO: 204-318-3181

1-866-449-0165
www.mbHIV.ca
06/2023

https://mbhiv.ca/healthcare-providers/

MB HIV Program

- Three sites for care:
  - Nine Circles CHC (Winnipeg), HIV and primary care
  - HSC outpatient clinic (Winnipeg), HIV care alone; collaborates with primary care providers
  - 7th St Access Centre (Brandon), HIV and primary care
- Emerging program sites
  - Aboriginal Health and Wellness Centre
  - Thompson Clinic

MB HIV Program (MBHIVP)

- Facilitate a comprehensive HIV intake to rule out Opportunistic Infections (OI)
- Initiate HIV treatment, OI treatment or prophylaxis if indicated
- Provide initial treatment monitoring
- Once patient is stable on treatment, with consistent viral load suppression, the Program will provide recommendations to primary care providers for ongoing treatment and monitoring
- MHIVP remains available for ongoing consultation support from ID, pharmacists and primary care providers who specialize in HIV care.
- Consult the Program at 1-866-449-0165, TIGER connect, non-urgently through eConsult
- Referrals to be Faxed: 204-318-3181

Prophylaxis against Opportunistic Infections

Helena's CD4 count was 175 (13%) cells/ml at intake

initiated PJP prophylaxis with Septra SS one tab once daily

- <200 (15%) Pneumocystis Jirovecii Pneumonia (PJP) prophylaxis
  - Sulfamethoxazole/Trimethoprim. DS or SS 1 tab once daily OR
  - Dapsone 100 mg once daily

- <100 (10%) Toxoplasmosis prophylaxis (if toxo Ab+)
  - Sulfamethoxazole/Trimethoprim DS 1 tab once daily

- <50 (5%) Mycobacterium Avium Intracellulare (MAI) prophylaxis
  - Azithromycin 1200 mg q weekly OR 600 mg 2x/wk OR 250 mg 5x/wk
  - Only required if not starting treatment, and must r/o infection prior
- <50 (5%) Screen for CMV retinitis, refer to opthalmology

HIV Treatment and Prognosis

- 1987 AZT first treatment
- 1996 Highly Active Antiretroviral Therapy (HAART)
- Today Single tablet regimens, 1 pill once daily
- Treatment recommended for all
- Chronic manageable disease
- Life Expectancy approximately 90% of general population in Canada
- Lower life expectancy for women, people who inject drugs, Indigenous ancestry, CD4 count < 350 at time of treatment start
- Undetectable means untransmittable, U=U

Life expectancy of HIV-positive individuals on combination antiretroviral therapy in Canada.
Patterson S[1,2], et al; CANOC collaboration.

Trends in life expectancy of HIV-positive adults on antiretroviral therapy across the globe: comparisons with general population.
Curr Opin HIV AIDS. 2016 May 31.
Wandeler G[1], Johnson LF, Egger M.

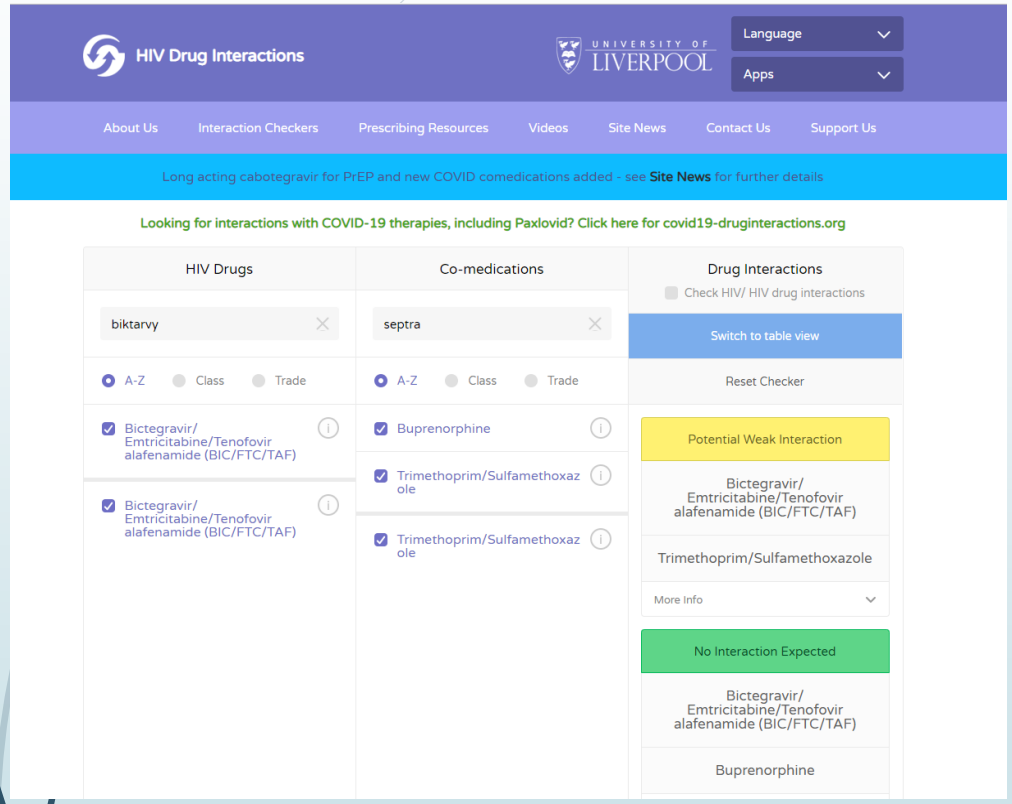
HIV Treatment: Antiretroviral Therapy (ART)

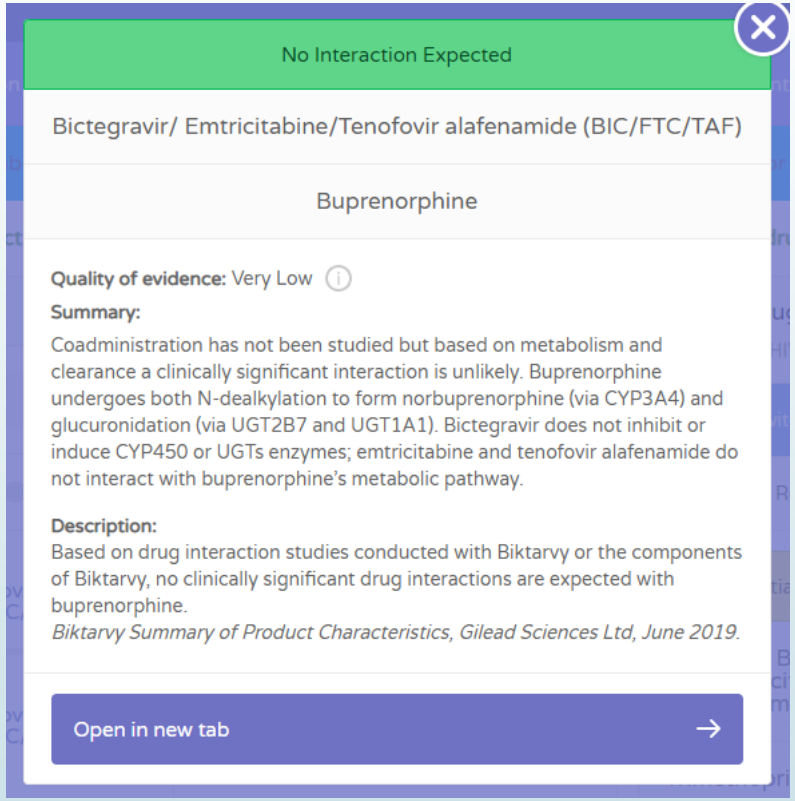
Backbone of 2 drugs, 1 Class	Plus Additional 1 drug, different class
2 Nucleoside Reverse Transcriptase Inhibitors (NRTIs)	1 Non-nucleoside Reverse Transcriptase Inhibitor (NNRTI), OR
	1 Protease Inhibitor (PI), OR
	1 Integrase Inhibitor

For more information:
https://clinicalinfo.hiv.gov/en/guidelines
https://www.bccfe.ca/therapeutic-guidelines/guidelines-antiretroviral-arv-treatment-adult-hiv-infection

Drug-Drug Interactions

University of Liverpool: http://www.hiv-druginteractions.org/checker





MB HIV Program Pharmacist: 204-787-4005, or for patients of Nine Circles: 204-940-6022
eConsult or through Tiger connect

HIV Follow-up Monitoring

- Repeat labs 1 month after treatment start
- HIV Viral Load suppression usually seen within 3 months

  "Target not detected" or "< 20 cp/ml"
- HIV follow-up q 3-6 months, supported by multidisciplinary team to review:
  - Adherence
  - Medications for potential drug-drug interactions
  - Transmission risks, sexual activity, disclosure recommendations
  - Regular STBBI screening, including oral and rectal swabs as indicated
  - Reproductive health/contraceptive needs
  - Immunizations and preventative screening
  - Psychosocial support/programming
  - OAT and other primary care often requires more frequent f/u

OAT improves Treatment Uptake and Outcomes

- People who use drugs are less likely to receive antiretroviral therapy (ART)
- OAT providers well situated to support connection to care and treatment adherence
- Good evidence OAT with buprenorphine or methadone:
  - Increases retention in care
  - Increases ART uptake
  - Improves ART adherence
  - Increases viral suppression

EDITOR'S CHOICE

Impact of Opioid Substitution Therapy on Antiretroviral Therapy Outcomes: A Systematic Review and Meta-Analysis

Andrea J. Low, Gitau Mburu, Nicky J. Welton, Margaret T. May, Charlotte F. Davies, Clare French, Katy M. Turner, Katharine J. Looker, Hannah Christensen, Susie McLean, Tim Rhodes, Lucy Platt, Matthew Hickman, Andy Guise, Peter Vickerman

Clinical Infectious Diseases, Volume 63, Issue 8, 15 October 2016, Pages 1094–1104, https://doi-org.uml.idm.oclc.org/10.1093/cid/ciw416

Review > Curr HIV/AIDS Rep. 2019 Feb;16(1):1-6. doi: 10.1007/s11904-019-00436-7.

Medications for Treatment of Opioid Use Disorder among Persons Living with HIV

Laura Fanucchi [1 2], Sandra A Springer [3 4], P Todd Korthuis [5]

Affiliations + expand

PMID: 30684117 PMCID: PMC6420833 DOI: 10.1007/s11904-019-00436-7

Free PMC article

Helena

HIV care:

- Started Biktarvy (Tenofovir Alafenamide, Emtricitabine and Bictegravir) i tablet once daily administered alongside buprenorphine/naloxone at community pharmacy
- No expected interactions with Buprenorphine
- Integrase inhibitors may interact with + cations (Ca, Fe) and should be spaced apart
- HIV viral load suppressed at < 20 copies/ml within 3 months
- CD4 count increased to 400- 450 cells/mm3, discontinued Septra

OAT:

- Remains stable with no opiate or other substance use for ~2 years
- Then more frequently missing appointments in clinic
- Urine +amphetamines, and disclosing active IDU methamphetamine use
- + Hepatitis C AB, + Core antigen

Hepatitis C

- RNA Flavivirus
- 6 Major genotypes, Genotype 1 accounts for 60% of cases in Canada
- Transmitted when the blood of a person with hepatitis C comes in contact with the blood of another person
- Sexual transmission can occur but is not common. May see in MSM, coinfected with HIV
- IDU or sharing of drug use equipment is main mode of Hepatitis C transmission (80% of new infections)

Natural History:

- Infects liver, leads to progressive liver disease
- 25% will clear the virus, usually within 6 months
- 75% will progress to chronic Infection
  - 10-15% will develop cirrhosis
  - 2-4 % will develop liver failure or hepatocellular carcinoma
- Treatment can cure disease

Hepatitis C Epidemiology

- Globally an estimated 50 million people are living with chronic Hepatitis C
- In 2022 an estimated 242,000 people died from Hepatitis C-related liver disease (cirrhosis or hepatocellular carcinoma)
- Approximately 44% are estimated to be unaware of their infection

- In Canada a total of 7,535 cases of hepatitis C were reported, for a rate of 19.7 cases per 100,000 in 2021
- MB had the highest incident rate at 42.3/100,000 in 2021
- Manitoba Public Health reported a preliminary 600 cases in 2023

https://www.canada.ca/en/public-health/services/publications/diseases-conditions/hepatitis-c-canada-2021-surveillance-data-update.html
https://www.who.int/

Hepatitis C Testing Recommendations

Population Based Screening

- Born between 1945-1975

Risk-Based Screening:

- Current or past injection drug use
- History of incarceration
- History of sexual contact or sharing personal care items with someone HCV-infected
- HIV infection
- Elevated alanine aminotransferase (ALT)

Additional:

- Chronic Hemodialysis, receiving health or personal care services with lack of IPC practices, coming from endemic region, received blood product or transplant in Canada prior to 1992, Infant born to mother with Hep C

http://www.hepatology.ca/
https://www.cmaj.ca/content/190/22/E677

Hepatitis C Baseline Assessment

- History and physical to assess for signs and symptoms of advanced liver disease
- Counsel on risks and prevention of transmission, link to supply distribution as needed
- Review factors that may influence disease progression such as alcohol intake, obesity, and co-infections.
- Baseline labs (CBC, liver enzymes, liver function, creatinine, testing for other STBBIs, pregnancy test if indicated, HCV genotype and quantitative PCR to confirm chronic infection)
- Immunize HepA/B if non-mmune
- Baseline abdominal ultrasound
- Assess stage of fibrosis
- APRI, FIB-4 calculators available at Hepatitis C online: https://www.hepatitisc.uw.edu/page/clinical-calculators/apri
- Refer for treatment

Hepatitis C Treatment in MB

- Viral Hepatitis Investigative Unit, HSC, Ph: 204-787-3630, Fax 204-787-7086
- Mount Carmel Clinic, Ph: 204-589-9428, Fax: 204-582-6006
- eConsult Hepatology – Hepatitis C Treatment advice
  - Email to register: servicedesk@sharedhealthmb.ca

Hepatitis C Treatment

- Direct Acting Agents (DAAs) >90% Cure Rates
- Simplified treatment for non-cirrhotic, treatment naïve, in many jurisdictions Rx by primary care providers
  - Maviret (Glecaprevir/Pibrentasvir – Pan-genotypic, 3 pills QD for 8 weeks
  - Epclusa (Velpatasvir/Sofosbuvir) – Pan-genotypic, 1 pill once daily for 12 weeks
- No need for lab monitoring on treatment, may need adherence support

Criteria Coverage Pharmacare:

- Prescribed by a hepatologist, gastroenterologist, or infectious disease specialist
- Laboratory confirmed Hepatitis C genotype 1,2,3,4,5,6 or mixed genotype
- Quantitative Hepatitis C RNA viral load level within last 6 months
- Some agents have additional criteria (e.g. Fibrosis Score, HIV, Hep B, CKD, DM)

NIHB Coverage:

- Prescribed by a hepatologist, gastroenterologist, or infectious disease specialist, or prescriber experienced in the treatment of Hepatitis C

Hepatitis C Treatment for PWID

- Recent or active IDU NOT an absolute contraindication to HCV therapy.
- Strong evidence from various settings in PWID have demonstrated adherence to treatment with low rates of reinfection, countering arguments that have been commonly used to limit treatment access in this patient population
- Ideally, treatment of HCV-infected persons who inject drugs should be delivered in a multidisciplinary care setting
- Combining HCV treatment with supply distribution and opioid agonist therapy programs in this population has shown great value in supporting treatment and decreasing the burden of HCV disease.

Hepatitis C virus treatment for prevention among people who inject drugs: Modeling treatment scale-up in the age of direct-acting antivirals

Martin NK, Vickerman P, Grebely J, Hellard M, Hutchinson SJ, Lima VD, et al. **Hepatitis C virus treatment for prevention among people who inject drugs: Modeling treatment scale-up in the age of direct-acting antivirals.** Hepatology. 2013;58(5):1598-1609.

Meta-Analysis > Clin Infect Dis. 2021 Jul 1;73(1):e107-e118. doi: 10.1093/cid/ciaa612.

Association Between Opioid Agonist Therapy and Testing, Treatment Uptake, and Treatment Outcomes for Hepatitis C Infection Among People Who Inject Drugs: A Systematic Review and Meta-analysis

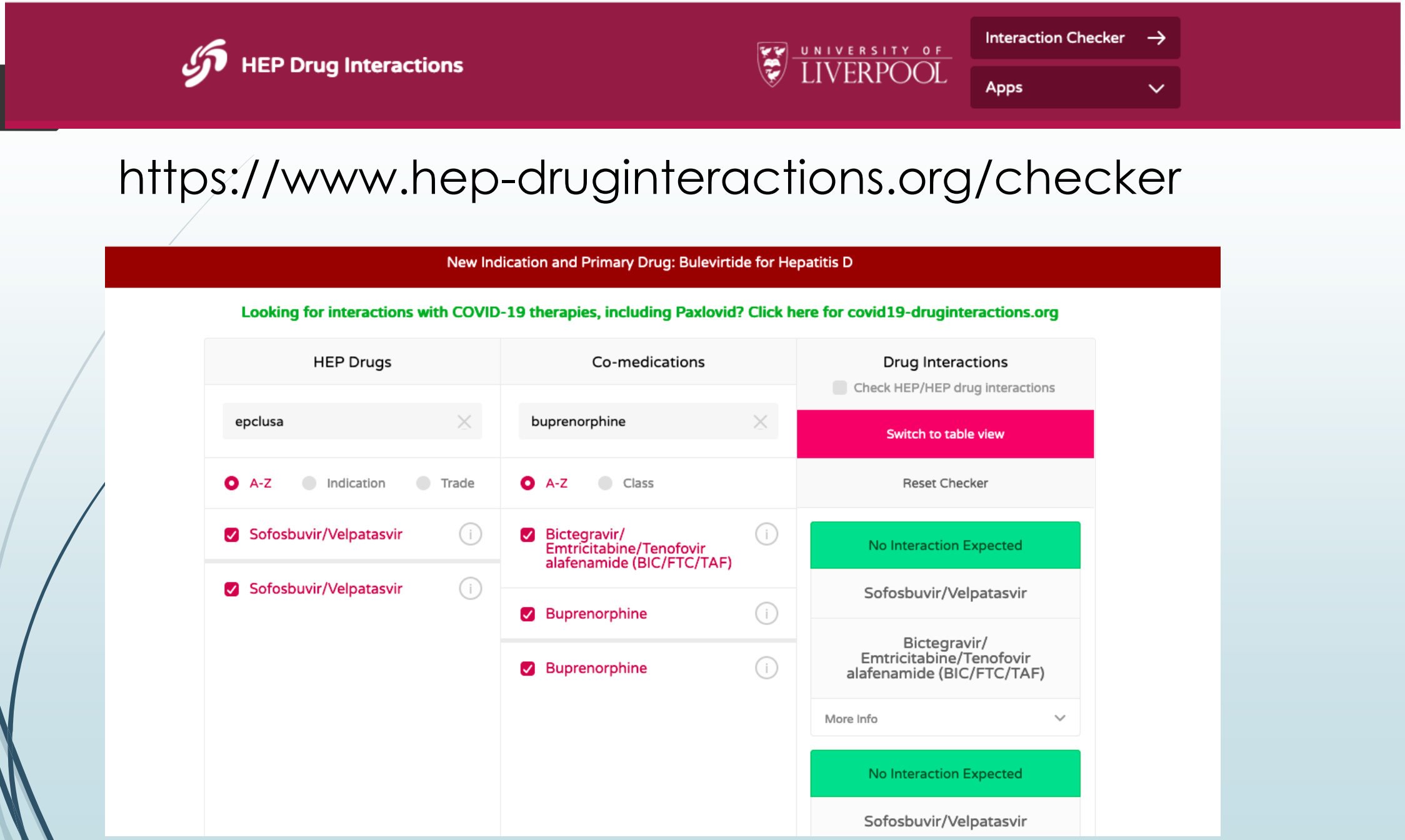
Jason Grebely [1], Lucy Tran [2], Louisa Degenhardt [2], Alexander Dowell-Day [2], Thomas Santo [2], Sarah Larney [2], Matthew Hickman [3], Peter Vickerman [3], Clare French [3], Kerryn Butler [2 4], Daisy Gibbs [2], Heather Valerio [1], Phillip Read [5], Gregory J Dore [1], Behzad Hajarizadeh [1]

Affiliations + expand

PMID: 32447375 PMCID: PMC8246796 DOI: 10.1093/cid/ciaa612

Helena

- HIV remained undetectable on Biktarvy (Bictegravir/Tenofovir alafenamide and Emtricitiabine)
- On Buprenorphine/Naloxone 24 mg once daily, with no opiate use
- Motivated to cure Hep C, engaging more in care, decreasing methamphetamine use
- Hepatology recommended Hepatitis C treatment, opting for Epclusa (Velpatasvir/Sofosbuvir) with lower pill burden but longer treatment course.
- Reviewed by HIV Pharmacist with no expecteddrug-drug interactions
- Cured with 12 weeks of treatment



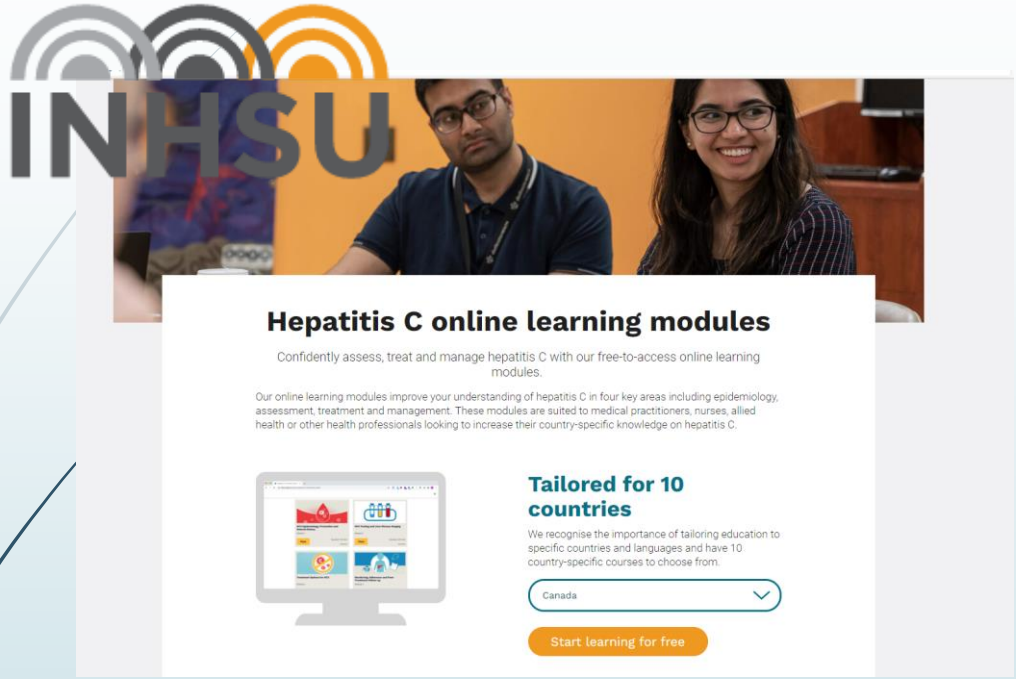
https://www.hep-druginteractions.org/checker

Post Hepatitis C Treatment

- Hepatitis C quantitative PCR 12 weeks after treatment completion to assess for a Sustained Virologic Response (SVR) or Cure
- Patients with ongoing risk for HCV infection should be counseled about risk reduction, and tested for HCV RNA annually or if elevated liver enzyme
- Patients in whom initial HCV treatment fails to achieve cure (SVR) should be evaluated for retreatment by a specialist
- Patients with chronic Hep C not yet treated, should be assessed for disease progression every 6 to 12 months with CBC, liver enzymes and INR
- Patients with cirrhosis require q 6 month ultrasounds to screen for hepatocellular cancer, and referral to GI for endoscopy to screen for varices

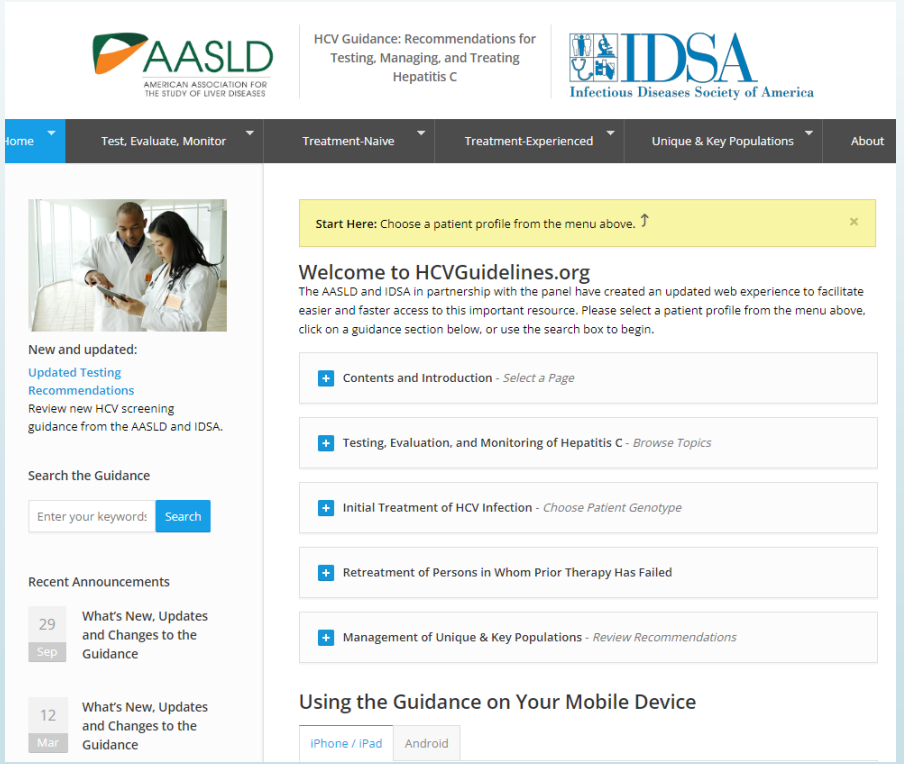
Hepatitis C Resources

https://www.inhsu.org/online-learning-modules/



The management of chronic hepatitis C: 2018 guideline update from the Canadian Association for the Study of the Liver @ https://www.cmaj.ca/content/190/22/e677

https://www.hcvguidelines.org/



Prevention HIV and Hepatitis C

- Condoms
- Supply distribution
- Addictions Treatment
- Opiate Agonist Therapy
- Antiviral based interventions
  - Antiretroviral treatment for HIV prevents onward transmission (U=U)
  - Hepatitis C treatment prevents onward transmission
  - PEP (post-exposure prophylaxis) 4 weeks of ART to prevent HIV
    - started in ER or UC within 72 hours of possible exposure
    - https://www.gov.mb.ca/health/publichealth/cdc/protocol/hiv_postexp.pdf
  - PrEP (pre-exposure prophylaxis) to prevent HIV

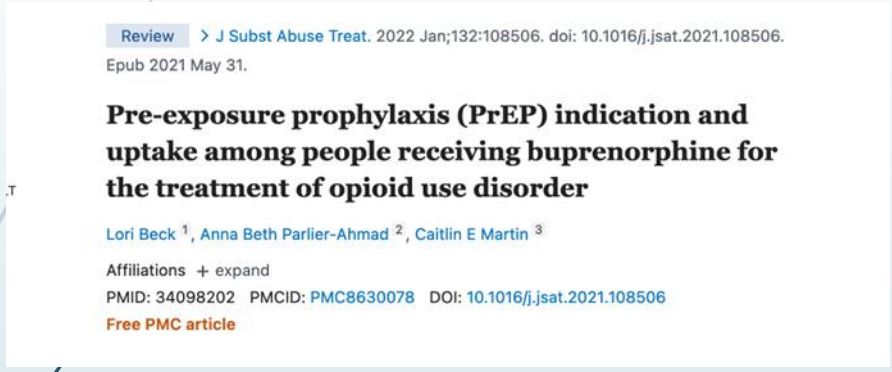
HIV Prevention

Pre-exposure prophylaxis (PrEP)[2]

- PrEP is for prevention of HIV in HIV negative individuals at high risk:
  - gbMSM, transgender women or gender diverse individuals
  - Heterosexual with partner(s) with HIV and a risk for transmission (detectable viral load)
  - People who inject drugs
- Guidelines for use:

  https://mbhiv.ca/healthcare-providers/guidelines/
- Tenofovir DF + Emtricitabine (Truvada) i tab once daily
  - Covered by FNIHB
  - MB HIV Treatment Program fully covers cost

PrEP underutilized for PWID
Potential success alongside OAT



Review > J Subst Abuse Treat. 2022 Jan;132:108506. doi: 10.1016/j.jsat.2021.108506. Epub 2021 May 31.

Pre-exposure prophylaxis (PrEP) indication and uptake among people receiving buprenorphine for the treatment of opioid use disorder

Lori Beck [1], Anna Beth Parlier-Ahmad [2], Caitlin E Martin [3]

Affiliations + expand

PMID: 34098202 PMCID: PMC8630078 DOI: 10.1016/j.jsat.2021.108506

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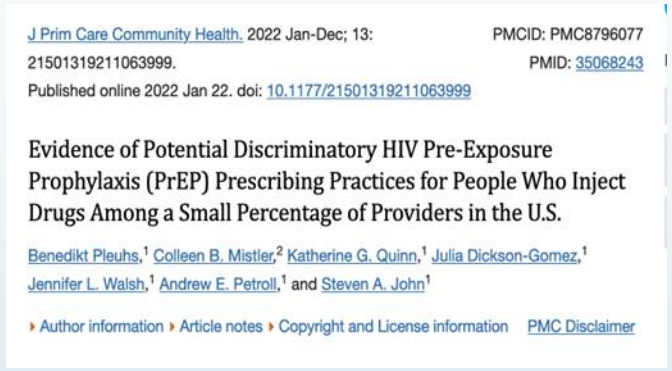

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PMCID: PMC8796077 PMID: 35068243

Evidence of Potential Discriminatory HIV Pre-Exposure Prophylaxis (PrEP) Prescribing Practices for People Who Inject Drugs Among a Small Percentage of Providers in the U.S.

Benedikt Pleuhs,[1] Colleen B. Mistler,[2] Katherine G. Quinn,[1] Julia Dickson-Gomez,[1] Jennifer L. Walsh,[1] Andrew E. Petroll,[1] and Steven A. John[1]

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PMCID: PMC8286349 NIHMSID: NIHMS1712954 PMID: 33907971

The Past, Present, and Future of PrEP implementation Among People Who Use Drugs

Katie B. Biello,[1,2,3,4] Matthew J. Mimiaga,[4,5,6,7] Pablo K. Valente,[1,3] Nimish Saxena,[4] and Angela R. Bazzi[8,9]

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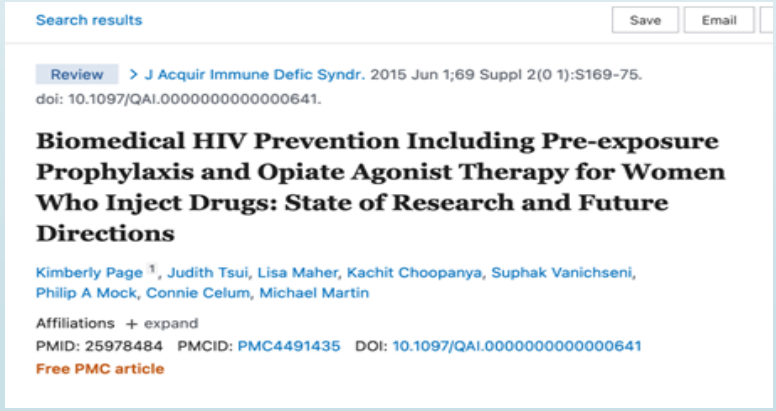

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Review > J Acquir Immune Defic Syndr. 2015 Jun 1;69 Suppl 2(0 1):S169-75. doi: 10.1097/QAI.0000000000000641.

Biomedical HIV Prevention Including Pre-exposure Prophylaxis and Opiate Agonist Therapy for Women Who Inject Drugs: State of Research and Future Directions

Kimberly Page [1], Judith Tsui, Lisa Maher, Kachit Choopanya, Suphak Vanichseni, Philip A Mock, Connie Celum, Michael Martin

Affiliations + expand

PMID: 25978484 PMCID: PMC4491435 DOI: 10.1097/QAI.0000000000000641

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Summary

- Test for HIV and Hepatitis C and other Sexually Transmitted Infections as part of comprehensive OAT intake
- Rescreen at risk populations annually or more frequently if high risk

- People who use drugs do well on antiretroviral therapy for HIV
- Hepatitis C can be cured and treatment should be offered to all people who qualify including people who use or inject drugs

- Offer prevention counselling, link to supply distribution and consider PrEP in HIV negative

- Opiate agonist therapy improves engagement in care, adherence to treatment and outcomes for people with opioid use disorder, HIV and Hep C

- Drug-Drug interactions may be significant and expert consultation is available

Questions?
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