



BRITISH COLUMBIA  
CENTRE *for* EXCELLENCE  
*in* HIV/AIDS

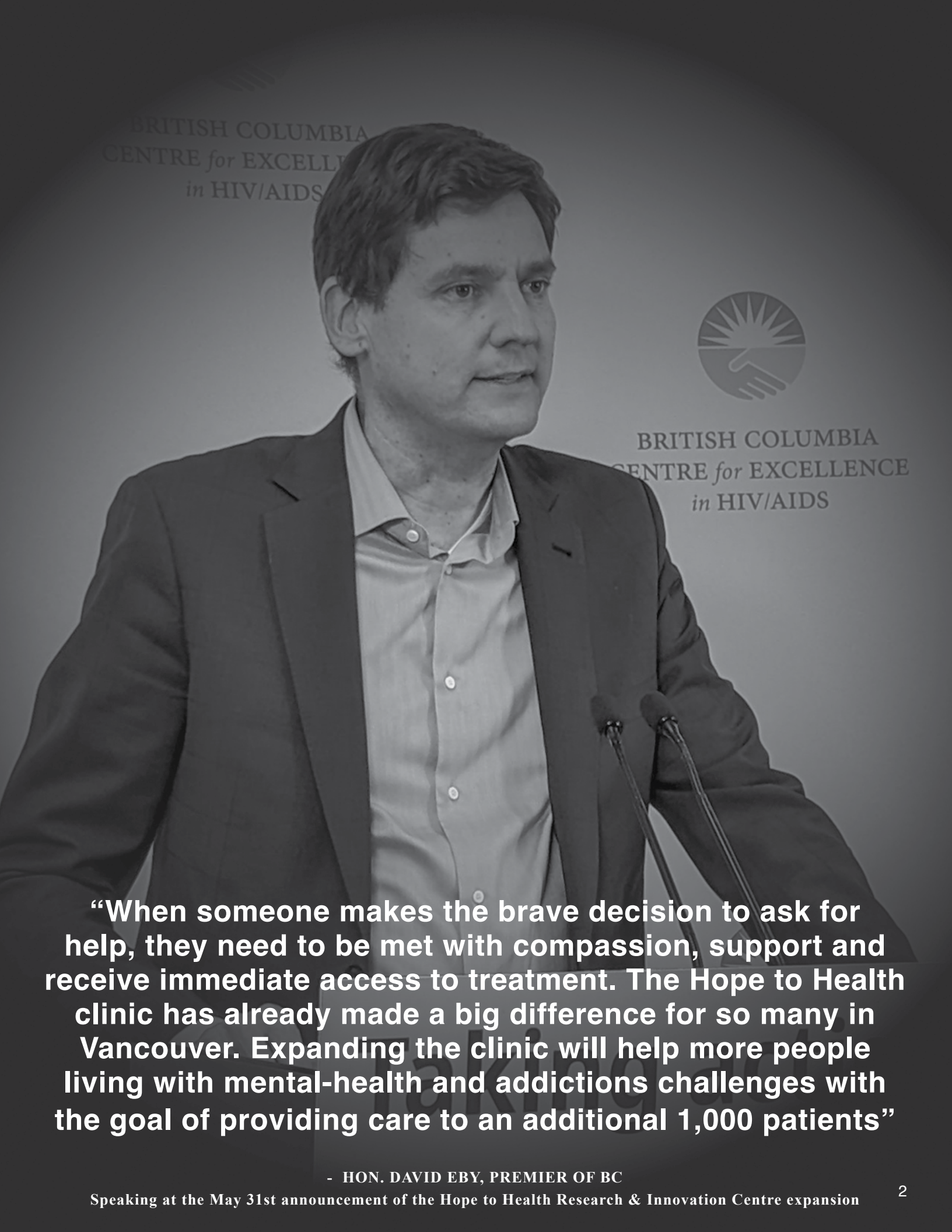


Providence  
Health Care

# BC CENTRE FOR EXCELLENCE IN HIV/AIDS

KEY OUTPUTS, RESEARCH, POLICY & INNOVATION

REPORTING PERIOD 2024 - Q1 | APRIL 1 - JUNE 30



**“When someone makes the brave decision to ask for help, they need to be met with compassion, support and receive immediate access to treatment. The Hope to Health clinic has already made a big difference for so many in Vancouver. Expanding the clinic will help more people living with mental-health and addictions challenges with the goal of providing care to an additional 1,000 patients”**

- HON. DAVID EBY, PREMIER OF BC

Speaking at the May 31st announcement of the Hope to Health Research & Innovation Centre expansion

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BC-CfE 2024 QUARTERLY REPORT | Q1

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# GRANTS, AWARDS & FUNDING

BC-CfE 2024 QUARTERLY REPORT | Q1

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## **Evan Barad**

Simon Fraser University Faculty of Health Sciences'  
Extraordinary Achievement Award for undergraduates

## **Dr. Zabrina Brumme**

Mentor of the Year  
National Institutes of Health (NIH) REACH Martin  
Delaney HIV Cure Collaboratory

## **Dr. Viviane Dias Lima**

Martin M. Hoffman Award for Excellence in Research  
University of British Columbia Department of Medicine

## **Maggie Duncan**

Canadian Institutes of Health Research (CIHR) Doctoral  
Award 2024

## **Dr. Jeffrey Joy**

“Serving those left behind: Developing a precision  
approach to PrEP and ART delivery in Ontario”  
CIHR Team Grant: Embracing Diversity to Achieve  
Precision & Health Equity  
\$20,000

## **Aniqa Shahid**

Canadian Association for HIV Research (CAHR) New  
Investigator Award for Basic Sciences

## **Sara Shayegi-Nik**

CAHR Academic Scholarship

## **Kiana Yazdani**

CIHR Doctoral Award 2024



# PRESENTATIONS & EDUCATIONAL SESSIONS

## BC-CfE Journal Clubs

**Ceftriaxone to prevent early ventilator-associated pneumonia in patients with acute brain injury: a multicentre, randomised, double-blind, placebo-controlled, assessor-masked superiority trial**

Soma Dalai  
May 23, 2024

## HIV/AIDS Webinar Learning Series

### **Updates in HIV Dermatology**

Dr. Aaron Wong  
April 10, 2024

### **Respiratory Virus Vaccines: Recent Update**

Dr. Danuta M. Skowronski  
April 24, 2024

### **HIV Pre-Exposure Prophylaxis: An Update**

Dr. Mark Hull  
May 15, 2024

## BC-CfE Hope to Health Learning Series

### **Moving with Pain – Part 1**

Tori Etheridge  
April 18, 2024

### **Resources in the DTES for Indigenous Women's Health**

Dr. Jani Laramée and Elder Betty  
April 24, 2024

### **Moving with Pain – Part 2**

Tori Etheridge  
May 7, 2024

## **STI Update**

Barbra Arnold & Rochelle Stimpson  
May 22, 2024

## BC-CfE Update

### **BC-CfE Spring Update on Syndemics**

June 7, 2024

#### Presenters:

Drs. Barbra Arnold, Rolando Barrios, Silvia Guillemi, Martha Ignaszewski, Victor Leung, Julio Montaner, Peter Phillips, Junine Toy and Zoran Barazanci, Christina Fulton, Alison Moore, and Minister of Mental Health & Addiction, Hon. Jennifer Whiteside

#### Moderators:

Drs. Marianne Harris and Val Montessori

## External Presentations

33rd Canadian Association for HIV/AIDS Research Conference - London, Ontario (April 25-28, 2024)

Dr. Viviane Dias Lima co-organized the ancillary event “Harmonizing and optimizing the use of HIV cohort studies in Canada”

### *Oral Presentations*

#### **Dynamics of T-cell responses to COVID-19 mRNA vaccines in people living with HIV**

Dr. Mark Brockman

#### **Identifying Syndemic Factors and Their Effect on HIV Sexual Risk Behaviour Among Gay and Bisexual Men Who Have Sex With Men in Vancouver, Toronto and Montreal**

Felipe Duailibe

**Adapting the Intact Proviral DNA Assay for the HIV-1 subtypes circulating in a Ugandan cohort**

Sarah Gowanlock

**Reducing Gaps In The HCV Cascade-Of-Care Among People Who Use Drugs: Evaluation And Application Of Lessons Learned From A Health Services Implementation Pilot Study**

Alannah Hannigan

**Reconstructing the Transmitted Founder HIV Sequence from Within Host Proviral Sequences sampled during suppressive ART**

Dr. Bradley Jones

**Beyond direct-acting antiviral therapy: Characterizing mental health conditions and depressive symptoms among patients recently treated for hepatitis C virus (HCV)**

Sarah Kelly

**Most People with and without HIV who Experience Nonfatal or Fatal Overdoses are not Identified as People who Use Drugs in Administrative Health Data**

Dr. Katherine Kooij

**Hepatitis C therapeutic outcomes among people concurrently living with HIV: Examining the impact of modern DAA therapy in British Columbia**

Alex Korzuchowski

**Hepatitis C virus incidence among gay, bisexual and other men who have sex with men in Vancouver, Toronto and Montreal: 2017 - 2023**

Dr. David Moore

**Assessing continuity of care among a prospective cohort of people living with HIV in British Columbia, Canada**

Dr. Kate Salters

**The replication-competent HIV reservoir is a genetically restricted, younger subset of the overall pool of HIV proviruses persisting during therapy, which is highly genetically stable over time**

Aniqa Shahid

**Incidence and Contributing Factors of Dementia among People Living With HIV in British Columbia, Canada, from 2002 to 2016: a Retrospective Cohort Study**

Sara Shayegi-Nik

**Characterizing incidence and therapeutic management of psychosis-related disorder among people living with HIV: A retrospective analysis in British Columbia, Canada**

Grace Sykes

*Poster Presentations*

**Trends in Unregulated Substance Use Among a Cohort of Patients Recently Treated for Hepatitis C in British Columbia, Canada**

Shania Au

**Overdose-Related Hospitalizations among People with HIV in Canada**

Michael Budu

**The Stat's Talk Back: Building Capacity with Indigenous Peoples Living with HIV/AIDS in Research Through a Community at the HeART Framework**

Claudette Cardinal

**Lack of T Cell Mutational Escape during Analytical Treatment Interruption in Early Treated HIV**

Joseph Vincent DeFazio

**Investigation of the Sociodemographic, Clinical, and Immunogenetic Factors Influencing HIV Reservoir Size During ART**

Maggie Duncan



**Identifying hospitalization episodes of care in British Columbia, Canada: Implementation among people with and without HIV**  
Scott Emerson

**Documenting the Process and Impact of Community Academic Collaborations within a Project Focused on the Health Impacts of Nonfatal Overdoses Among People Living with and without HIV**  
Navneet Gill

**The impact of housing instability on substance-involved mortality among people with HIV in British Columbia, Canada**  
Silke Hansen

**HIV Research in the Age of Big Data: Developing a Framework for Community-Led Big Data Research through the Eng/aging Project**  
Dr. Kathleen Inglis

**Determinants of Leaving the Emergency Department without Completion of Care among People with and without HIV Attending with a Suspected Overdose**  
Dr. Katherine Kooij

**Incidence and Recurrence Rates of Cardiovascular Disease (CVD) Events Among People Living with and without HIV in British Columbia: A Community-led Study with the Eng/aging Project**  
Miriam Muirhead

**Dynamics of Memory B Cells After Three Doses of COVID-19 Vaccine in People Living With HIV Receiving Suppressive ART**  
Dr. Francis Mwimanzi

**Examining the Immunological Consequences of SARS-CoV-2 Infection Following COVID-19 Vaccination**  
Dr. Francis Mwimanzi

**Sex Differences in Hospitalization Rates Among Females and Males Living With and Without HIV in British Columbia**  
Nicholas Naidu

**Within-host phylogenetic analysis of reservoir-origin viremia in non-B HIV Subtypes**  
Harrison Omondi

**Clinical Outcomes of People Living with HIV by Level of HIV Pharmacy Service in a Centralized Antiretroviral Program in British Columbia**  
Erin Ready

**HIV Pre-Exposure Prophylaxis Medication Persistence in a Population-Level Program in British Columbia**  
Erin Ready

**Impact of Substance Use and Mood/Anxiety Disorders on the HIV Continuum of Care in British Columbia, Canada, from 2001 to 2019**  
Sara Shayegi-Nik

5th meeting of the Canadian Society of Virology - Saskatoon, Saskatchewan (June 2-5, 2024)

Dr. Jeffrey Joy was the organizer and chair of the viral evolution session.

**Spillover and emergence of H5N1 in dairy cattle and other hosts: genomic and phylodynamic inferences** (Oral Presentation)  
Dr. Jeffrey Joy

**Deconstructing the T Cell Response to Covid-19 Vaccines using Single-Cell RNA Sequencing** (Poster Presentation)  
Rachel Waterworth

**Dynamics of Memory B Cells After 3 doses of Covid-19 Vaccine in People living with HIV Receiving Suppressive ART** (Poster Presentation)  
Dr. Rebecca Kalikawe

31st Dynamics and Evolution of Human Viruses Conference - Squamish, BC (June 19-22, 2024)

Dr. Jeffrey Joy was the primary local organizer and conference chair.

**Can we reconstruct the transmitted/founder virus sequence from within host HIV proviral sequences?** (Oral Presentation)

Dr. Bradley Jones

**Towards a 5th UN target: quantifying suppression of local HIV-1 transmission in British Columbia, Canada. Insights from 10 years of phylogenetic monitoring** (Poster Presentation)

Dr. Jeffrey Joy

**Estimation of HIV cases averted in phylogenetic clusters through pre-exposure prophylaxis and missed opportunities for preventions** (Poster Presentation)

Angela McLaughlin

**Dose-dependent antigenic evolution of the SARS-CoV-2 virus** (Oral Presentation)

Dr. Vincent Montoya

**Small viral RNA evolution and the origin of SARS-CoV-2: insights from functional genomics** (Oral Presentation)

Amber Paulson

**A simple phylogenetic approach to infer the integration dates of hypermutated proviruses persisting during antiretroviral therapy** (Poster Presentation)

Aniqa Shahid

### Other Presentations

**Science Meets Parliament - British Columbia Programme**

Canadian Science Policy Centre

Dr Katherine Kooij

April 29-30, 2024

**Molecular epidemiology of HIV in BC: quarterly phylogenetic monitoring update**

BC Phylogenetic Monitoring Committee

Dr Jeffrey Joy

May 2, 2024

**Phylogenetic analyses of the emergence of H5N1 in dairy cattle and other hosts**

Genome Canada

Dr Jeffrey Joy

May 7, 2024

**Outcomes post infusions of Autologous HIV-Specific T Cells Targeting Conserved HIV Epitopes in Individuals with HIV on Antiretroviral Therapy (NCT03485963)**

American Society of Gene and Cell Therapy's 27th Annual Meeting

Dr. Danielle Sohail

May 7-11, 2024

**Progress towards ending HIV in British Columbia**

Joint Funding Management Committee

Dr Jeffrey Joy

May 14, 2024

**Non-B HIV Reservoirs: Genetic Composition, Dynamics and Assay Adaptation**  
NIH REACH Martin Delaney HIV CURE

Collaboratory 2024 meeting

Dr. Zabrina Brumme

May 16, 2024

**Within-Host Evolutionary Dynamics of Recombinant and Hypermutated HIV Genomes Persisting During ART**

NIH REACH Martin Delaney HIV CURE

Collaboratory 2024 meeting

Dr. Zabrina Brumme

May 17, 2024

**Spillover and emergence of H5N1 in dairy cattle and other hosts: genomic and phylodynamic inferences**

Presentation to Phylodynamics for Public Health in Canada

Dr. Jeffrey Joy

May 28, 2024



**Update on phylogenetic monitoring in Canada**

Public Health Agency of Canada

Dr. Jeffrey Joy

May 29, 2024

**Update on H5N1 in North America**

Genome British Columbia

Dr. Jeffrey Joy

June 10, 2024

# PEER-REVIEWED JOURNAL ARTICLES & BOOK PUBLICATIONS

PUBLICATIONS

1: Holder KA, Ding E, Kao D, Shokoohi M, Trigg J, Hogg RS, Morkar J, Grant MD, Kelly DV. Progress towards World Health Organization HIV Infection 95-95-95 measures in Newfoundland and Labrador, Canada. *PLoS One*. 2024 Jun 27;19(6):e0305898. doi: 10.1371/journal.pone.0305898. PMID: 38935671; PMCID: PMC11210758.

2: Hernandez Cordero AI, Li X, Yang J, Yang CX, Shaipanich T, MacIsaac JL, Dever K, Kobor MS, Montaner J, Harris M, Guillemi S, Man SFP, Sin DD, Leung JM. DNA Methylation Demonstrates Bronchoalveolar Cell Senescence in People Living with HIV: An Observational Cohort Study. *Biomedicines*. 2024 Jun 6;12(6):1261. doi: 10.3390/biomedicines12061261. PMID: 38927468; PMCID: PMC11201658.

3: Sonela N, Mann J, Godwe C, Goni OH, Tchakoute M, Nkoue N, de Oliveira T, Brockman MA, Brumme ZL, Ndung'u T, Tongo M. No detectable differences in Nef-mediated downregulation of HLA-I and CD4 molecules among HIV-1 group M lineages circulating in Cameroon, where the pandemic originated. *Front Virol*. 2024 May 29;4:fviro.2024.1379217. doi: 10.3389/fviro.2024.1379217. PMID: 38883214; PMCID: PMC7616105.

4: Luz PM, Apelian H, Lambert G, Fourmigue A, Dvorakova M, Grace D, Lachowsky N, Hart TA, Moore DM, Skakoon-Sparling S, Cox J. HIV Treatment Optimism Moderates the Relationship between Sexual Risk Behavior and HIV Risk Perception among Urban

PUBLICATIONS

HIV-negative Gay, Bisexual, and Other Men who have Sex With Men. *AIDS Behav*. 2024 Aug;28(8):2683-2694. doi: 10.1007/s10461-024-04380-5. Epub 2024 Jun 13. PMID: 38869761.

5: Juwono S, Flores Anato JL, Kirschbaum AL, Metheny N, Dvorakova M, Skakoon-Sparling S, Moore DM, Grace D, Hart TA, Lambert G, Lachowsky NJ, Jollimore J, Cox J, Maheu-Giroux M. Prevalence, Determinants, and Trends in the Experience and Perpetration of Intimate Partner Violence Among a Cohort of Gay, Bisexual, and Other Men Who Have Sex with Men in Montréal, Toronto, and Vancouver, Canada (2017-2022). *LGBT Health*. 2024 Jun 11. doi: 10.1089/lgbt.2023.0265. Epub ahead of print. PMID: 38860358.

6: Lima VD, Zhu J, Barrios R, Toy J, Joy JB, Williams BG, Granich R, Wu Z, Wong J, Montaner JSG. Longitudinal evolution of the HIV effective reproduction number following sequential expansion of treatment as prevention and pre-exposure prophylaxis in British Columbia, Canada: a population-level programme evaluation. *Lancet HIV*. 2024 Jul;11(7):e461-e469. doi: 10.1016/S2352-3018(24)00094-8. Epub 2024 Jun 4. PMID: 38848736.

7: Costiniuk CT, Lee T, Singer J, Galipeau Y, Arnold C, Langlois MA, Needham J, Jenabian MA, Burchell AN, Samji H, Chambers C, Walmsley S, Ostrowski M, Kovacs C, Tan DHS, Harris M, Hull M, Brumme ZL, Lapointe HR, Brockman MA, Margolese S, Mandarino E, Samarani S, Lebouché B, Angel JB, Routy

JP, Cooper CL, Anis AH; COVAXHIV Study Group. Correlates of Breakthrough SARS-CoV-2 Infections in People with HIV: Results from the CIHR CTN 328 Study. *Vaccines* (Basel). 2024 Apr 23;12(5):447. doi: 10.3390/vaccines12050447. PMID: 38793698; PMCID: PMC11125718.

8: Datwani S, Kalikawe R, Waterworth R, Mwimanzi FM, Liang R, Sang Y, Lapointe HR, Cheung PK, Omondi FH, Duncan MC, Barad E, Speckmaier S, Moran-Garcia N, DeMarco ML, Hedgcock M, Costiniuk CT, Hull M, Harris M, Romney MG, Montaner JSG, Brumme ZL, Brockman MA. T-Cell Responses to COVID-19 Vaccines and Breakthrough Infection in People Living with HIV Receiving Antiretroviral Therapy. *Viruses*. 2024 Apr 24;16(5):661. doi: 10.3390/v16050661. PMID: 38793543; PMCID: PMC11125792.

9: Gill EE, Jia B, Murall CL, Poujol R, Anwar MZ, John NS, Richardsson J, Hobb A, Olabode AS, Lepsa A, Duggan AT, Tyler AD, N'Guessan A, Kachru A, Chan B, Yoshida C, Yung CK, Bujold D, Andric D, Su E, Griffiths EJ, Van Domselaar G, Jolly GW, Ward HKE, Feher H, Baker J, Simpson JT, Uddin J, Ragoussis J, Eubank J, Fritz JH, Gálvez JH, Fang K, Cullion K, Rivera L, Xiang L, Croxen MA, Shiell M, Prystajecky N, Quirion PO, Bajari R, Rich S, Mubareka S, Moreira S, Cain S, Sutcliffe SG, Kraemer SA, Joly Y, Alturmessov Y, Consortium C, Consortium C; VirusSeq Data Portal Academic and Health network; Fiume M, Snutch TP, Bell C, Lopez-Correa C, Hussin JG, Joy JB, Colijn C, Gordon PMK, Hsiao WWL, Poon AFY, Knox NC, Courtot M, Stein L, Otto SP, Bourque G, Shapiro BJ, Brinkman FSL. The Canadian VirusSeq Data Portal & Duotang: open resources for SARS-CoV-2 viral sequences and genomic epidemiology. *ArXiv [Preprint]*. 2024 May 8;arXiv:2405.04734v1. PMID: 38764594; PMCID: PMC11100916.

10: Logie CH, Sokolovic N, Casale A, Ndung'u M, Kennedy VL, Underhill A, Fallon B, Cardinal C, Webster K, Cotnam J, Kaida A, de Pokomandy A, Loutfy M. Clinical HIV outcome trajectories associated with a history of child protective service out-of-home care: Longitudinal cohort findings with women living with HIV in Canada. *HIV Med*. 2024 May 17. doi: 10.1111/hiv.13660. Epub ahead of print. PMID: 38757480.

11: Finlayson-Trick E, Tam C, Wang L, Dawydiuk N, Salters K, Trigg J, Pakhomova T, Marante A, Sereda P, Wesseling T, Montaner JSG, Hogg R, Barrios R, Moore DM. Access to care and impact on HIV treatment interruptions during the COVID-19 pandemic among people living with HIV in British Columbia. *HIV Med*. 2024 May 9. doi: 10.1111/hiv.13654. Epub ahead of print. PMID: 38720646.

12: Munasinghe LL, Yin W, Nathani H, Toy J, Sereda P, Barrios R, Montaner JSG, Lima VD. The impact of the COVID-19 pandemic on HIV treatment gap lengths and viremia among people living with HIV British Columbia, Canada, during the COVID-19 pandemic: Are we ready for the next pandemic? *Soc Sci Med*. 2024 Jun;350:116920. doi: 10.1016/j.socscimed.2024.116920. Epub 2024 Apr 29. PMID: 38703468.

13: Zhabokritsky A, Klein M, Loutfy M, Guaraldi G, Andany N, Guillemi S, Falutz J, Arbess G, Tan DHS, Walmsley S. Non-AIDS-defining comorbidities impact health related quality of life among older adults living with HIV. *Front Med (Lausanne)*. 2024 Apr 16;11:1380731. doi: 10.3389/fmed.2024.1380731. PMID: 38690177; PMCID: PMC11058201.

14: Zhu J, Takeh BT, David J, Sang J, Moore DM, Hull M, Grennan T, Wong J, Montaner JSG, Lima VD. Impact of screening and doxycycline prevention on the syphilis

epidemic among men who have sex with men in British Columbia: a mathematical modelling study. *Lancet Reg Health Am*. 2024 Apr 4;33:100725. doi: 10.1016/j.lana.2024.100725. PMID: 38590322; PMCID: PMC11000203.

15: Cunningham NE, Lamb J, Staller A, Krajden M, Hogg RS, Towle A, Lima VD, Salters K. Expanding access to healthcare for people who use drugs and sex workers: hepatitis C elimination implications from a qualitative study of healthcare experiences in British Columbia, Canada. *Harm Reduct J*. 2024 Apr 4;21(1):75. doi: 10.1186/s12954-024-00991-2. PMID: 38575970; PMCID: PMC10996275.

16: Medeiros P, Koebel J, Yu A, Kazemi M, Nicholson V, Frank P, Persad Y, O'Brien N, Bertozzi B, Smith S, Ndung'u M, Fraleigh A, Gagnier B, Cardinal C, Webster K, Sanchez M, Lee M, Lacombe-Duncan A, Logie CH, Gormley R, de Pokomandy A, Kaida A, Loutfy MR. Experiences and resultant care gaps among women with HIV in Canada: concept mapping the Canadian HIV Women's Sexual and Reproductive Health Cohort Study (CHIWOS) findings. *BMJ Open*. 2024 Apr 3;14(4):e078833. doi: 10.1136/bmjopen-2023-078833. PMID: 38569698; PMCID: PMC11146408.

17: Hyshka E, Moore DM, Knight R, Neudorf C, Urbanoski K. The need for an expanded, evidence-based public health response to the overdose crisis and the toxic drug supply in Canada. *Can J Public Health*. 2024 Apr;115(2):181-185. doi: 10.17269/s41997-024-00880-y. PMID: 38558389; PMCID: PMC11027761.

18. Sinno J, Daroya E, Wells A, Hull M, Lachowsky NJ, Tan DHS, Grace D. "To do so in a patient-centred way is not particularly lucrative": The effects of neoliberal health care on PrEP implementation and delivery. *Soc Sci Med*. 2024 Apr;347:116749. doi: 10.1016/j.socscimed.2024.116749. Epub 2024 Mar 4. PMID: 38492264.

19. Dharma C, Smith PM, Escobar M, Salway T, Landsman V, Klassen B, Lachowsky NJ, Gesink D. Improving prevalence estimates of mental health and well-being indicators among Sexual Minority Men: A Propensity Weighting Approach. *Am J Epidemiol*. 2024 Jun 6:kwae107. doi: 10.1093/aje/kwae107. Epub ahead of print. PMID: 38844559.

20. Montiel A, Ablona A, Klassen B, Card K, Lachowsky NJ, Brennan DJ, Grace D, Worthington C, Gilbert M. Reach of GetCheckedOnline among gay, bisexual, transgender and queer men and Two-Spirit people and correlates of use 5 years after program launch in British Columbia, Canada. *Sex Transm Infect*. 2024 May 31;100(4):208-215. doi: 10.1136/sextrans-2023-056007. PMID: 38604697; PMCID: PMC11187377.

## Drug Treatment Program Monthly Reports

December 2023 (released April 2024)

January 2024 (released June 2024)

February 2024 (released June 2024)

## PrEP Semi-Annual Report

Fourth Quarter 2023

## BC-CfE Pharmacovigilance 2023 Annual Report

(released May 2024)

## Drug Treatment Program Guidance

Cabotegravir plus rilpivirine (PrCabenuva) in PLWH with viremia (released June 5, 2024)

## Green Office Initiatives

The BC-CfE took part in the Spring Go By Bike Week (June 3-9, 2024) with eight riders logging a total of 53 trips over 498 kilometres. According to HUB Cycling, these efforts collectively burned 14,945 kcal and would have saved 108kg of greenhouse gases.



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