



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

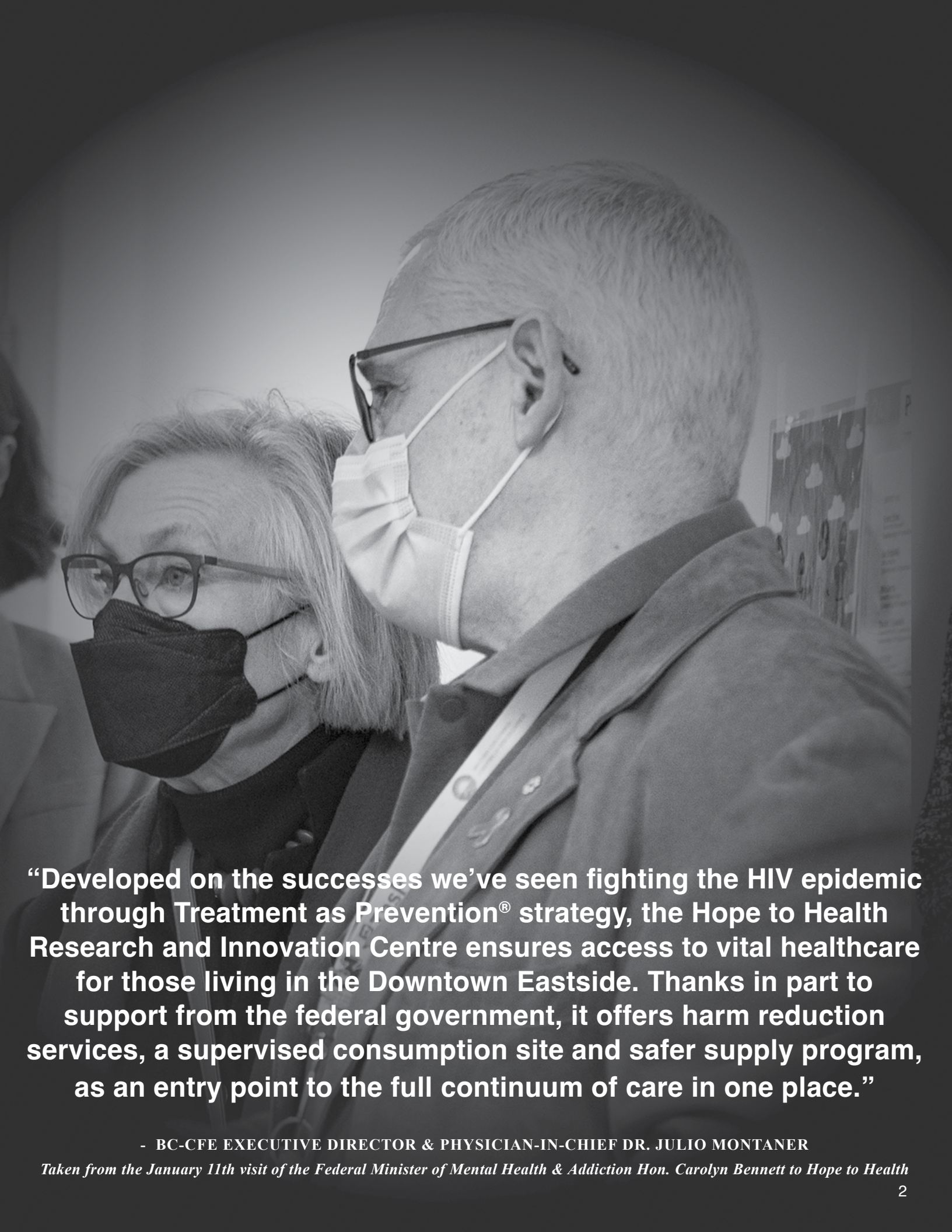


Providence  
Health Care

# BC CENTRE FOR EXCELLENCE IN HIV/AIDS

KEY OUTPUTS, RESEARCH, POLICY & INNOVATION

REPORTING PERIOD 2022 - Q4 | JANUARY 1 - MARCH 31



**“Developed on the successes we’ve seen fighting the HIV epidemic through Treatment as Prevention® strategy, the Hope to Health Research and Innovation Centre ensures access to vital healthcare for those living in the Downtown Eastside. Thanks in part to support from the federal government, it offers harm reduction services, a supervised consumption site and safer supply program, as an entry point to the full continuum of care in one place.”**

**- BC-CFE EXECUTIVE DIRECTOR & PHYSICIAN-IN-CHIEF DR. JULIO MONTANER**

*Taken from the January 11th visit of the Federal Minister of Mental Health & Addiction Hon. Carolyn Bennett to Hope to Health*

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BC-CFE 2022 QUARTERLY REPORT | Q4

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## Dr. Jeffrey Joy

Understanding the transmission dynamics of infectious disease from sampling trees with a Bayesian evolutionary analysis framework: Taming the BEAST. (\$30,000)

## Dr. Kate Salters

Hep C Connect: Innovative health services to optimize care and treatment for under-served patients. Canadian Institutes of Health Research (CIHR) Project Grant. (\$493,423)

## Dr. David Moore

Trajectories of STBBIs, access to health services and psychosocial determinants among gay, bisexual and other men who have sex with men in three Canadian cities. Canadian Institutes of Health Research (CIHR) Project Grant. (\$1,449,674)

## Hope to Health Research & Innovation Centre

An innovative safe supply program to support people with severe opioid use disorder within a low-barrier primary care setting in the Downtown Eastside of Vancouver. Health Canada's Substance Use & Addiction Program funding extension. (\$1,291,500)

## Hope to Health Research & Innovation Centre

Implementation of an interdisciplinary care team for the management of complex pain and opioid use disorder, within a primary care setting in the Downtown East Side of Vancouver. Health Canada's Substance Use & Addiction Program funding extension. (\$2,116,854)



# PRESENTATIONS & EDUCATIONAL SESSIONS

PRESENTATIONS & EDUCATIONAL SESSIONS

## BC-CfE Journal Clubs

### **Presenting Lessons and Learnings from the Hep C Connect Pilot Project**

Dr. Kate Salters  
January 19, 2023

### **Cabotegravir Long-acting Injectable for PrEP – The Challenges of a Long Drug Tail**

Grant Gao  
February 16, 2023

### **HIV Proviral Genetic Compartmentalization in Lung and Blood**

Aniqa Shahid  
March 30, 2023

## HIV/AIDS Webinar Learning Series

### **Update on Preventing Substance Use Related Infections**

Victoria Weaver  
January 25, 2023

### **Complications of Hepatitis B and C Liver Disease**

Dr. Alnoor Ramji  
February 15, 2023

### **HIV PrEP for Trans and Gender Diverse People in BC**

Dr. Andrea Szewchuk and Everett Blackwell  
March 29, 2023

## BC-CfE Hope to Health Learning Series

### **Cultural Humility, Cultural Safety, and Anti-Racism at Work: A Personal and Institutional Journey**

Drs. Rebecca Howse and Eddie Rooke  
January 18, 2023

PRESENTATIONS & EDUCATIONAL SESSIONS

### **Outpatient Management of Acute Psychosis**

Dr. Harish Neelakant  
February 22, 2023

### **Serious Illness Conversations**

Barb Eddy, Wallace Robinson, and Dr. Rose Hatala  
March 8, 2023

## BC-CfE Anniversary Conversation Series

### **Chapter 4 | HIV Prevention: BC's Pre-Exposure Prophylaxis (PrEP) Program**

Drs. David Moore & Junine Toy  
January 18, 2023

## 30th Conference on Retroviruses and Opportunistic Infections (February 19-22, 2023)

### *Oral Presentations*

### **Unpacking Modeling Studies. Clinical Trial Design and Analysis Workshop**

Dr. Viviane Lima

### **Variable reductions in SARS-CoV-2 variant importations following travel restrictions**

Dr. Angela McLaughlin

### *Poster Presentations*

### **Retention in opioid agonist therapy among people living with HIV in British Columbia**

Authors: K. Yazdani, K. Salters, K. Dolguikh, M. Ye, J. Trigg, R. Joe, D. Moore, J. Montaner, R. Barrios

PRESENTATIONS & EDUCATIONAL SESSIONS

**MPOX in the context of population-level HIV treatment and HIV PrEP programs in BC**

Authors: J. Toy, R. Espinoza, P. Sereda, E. Ready, W. Zhang, V. Lim, K. Salters, R. Barrios, J. Montaner

**New HIV diagnoses in the setting of publicly funded PrEP in British Columbia**

Authors: R. Espinoza, J. Trigg, E. Ready, C. Keeney, W. Zhang, C. Brumme, P. Sereda, R. Barrios, J. Montaner

**Effects of Covid-19 mRNA vaccination on HIV viremia and reservoir size in PWH on ART**

Authors: M. Duncan, F. Omondi, N. Kinloch, H. Lapointe, S. Speckmaier, N. Moran-Garcia, T. Lawson, M. DeMarco, J. Simon, D. Holmes, C. Lowe, M. Harris, M. Romney, M. Brockman, Z. Brumme

**CtI selection enriches for HIV integration site features and expanded clones in vivo**

Authors: N. Linden, A. McFarland, A. Danesh, F. Bushman, J. Everett, C. Brumme, P. Zumbo, D. Betel, D. Copertino, Z. Brumme, F. Dündar, R. Jones

**SARS-COV-2 live virus neutralization after four COVID-19 vaccine doses in PWH on ART**

Authors: P. Cheung, H. Lapointe, Y. Sang, S. Ennis, F. Mwimanzi, S. Speckmaier, E. Barad, W. Dong, J. Simons, C. Lowe, M. Romney, C. Brumme, M. Niikura, M. Brockman, Z. Brumme and The COVID-19 Vaccine Immunity Study Team

**Infrequent detection of emergent HIV drug resistance in low viral load specimens**

Authors: H. Sudderuddin, W. Scott, C. Beelen, A. Le, T. Kalynyak, R. Hollebakken, A. Granados, S. Khanna, W. Dong, V. Lima, J. Montaner, C. Brumme

**Sex differences in non-fatal overdoses: A population-based cohort study**

Authors: M. Marziali, K. Kooij, J. Trigg, M. Budu, M. Ye, V. Lima, J. Montaner, R. Hogg

**International Workshop of Observational Databases (IWHOD)**

**(February 19-22, 2023)**

*Poster Presentations***Therapeutic management of psychosis among people living with HIV: A 21-year retrospective analysis in British Columbia, Canada**

K. Salters, G. Sykes, R. White, J. Trigg, Q. Ye, V. Lima, J. Montaner, R. Barrios

**A comparative study of nonfatal overdoses in people with and without HIV in British Columbia, Canada**

Authors: K. Kooij, M. Marziali, J. Trigg, M. Ye, M. Budu, T. McLinden, K. Salters, R. Barrios, J. Montaner, R. Hogg

**Identification of people with HIV in administrative healthcare records:****A population-based data linkage study in British Columbia, Canada**

Authors: S. Emerson, T. McLinden, P. Sereda, K. Kooij, A. Yonkman, D. Moore, J. Toy, K. Salters, R. Hogg, V. Lima, J. Montaner, R. Barrios

**External Presentations****Obstacles and Pathways to Accessing Home and Community Care by Older Adults with HIV/AIDS in BC**

Vancouver Coastal Health directors meeting  
Thrive Study PRAs  
January 4, 2023

**Aging with HIV/AIDS**

Sprott Shaw College - HCA students  
Thrive Study PRAs  
January 13, 2023

**Status of phylogenetic monitoring funding in Canada**

Public Health Agency of Canada  
Dr. Jeffrey Joy  
January 16, 2023

**Impact of sampling strategies on molecular clock rate inference**

The Mathematics of Microbial Evolution:  
Beyond the Limits of Classical Theory  
Workshop  
Dr. Angela McLaughlin  
January 8-13, 2023

**Development and Implementation of Phylogenetic Monitoring in Canada**

Presentation to Genome Canada and  
Genome BC  
Dr. Jeffrey Joy  
January 16, 2023

**The evolution of emerging infectious diseases: a phylogenomic perspective**

Department of Biology Departmental  
Seminar. Simon Fraser University  
Dr. Jeffrey Joy  
January 18, 2023

**Phylogenetic clustering of HIV cases in Nova Scotia**

Presentation to Nova Scotia Public Health  
Dr. Jeffrey Joy  
February 13, 2023

**Molecular epidemiology and phylogenetic monitoring for HIV in Saskatchewan**

Presentation to Saskatchewan Public Health  
Dr. Jeffrey Joy  
February 17, 2023

**A tale of two pandemics - how COVID-19 transformed an HIV scientist's research program**

Lions Gate Hospital Foundation MedEd  
conference  
Dr. Zabrina Brumme  
February 18, 2023

**Global Citizenship & HIV/AIDS**

Vancouver Island University - Workplace  
Essential Skills & Training students  
Thrive Study PRAs  
March 1, 2023

**Impact of age and SARS-CoV-2 breakthrough infection on humoral immune responses after three doses of COVID-19 mRNA vaccine**  
COVID-19 Immunity Task Force (CITF)  
Scientific Meeting  
Dr. Zabrina Brumme  
March 8, 2023

**Neutralization of Omicron Subvariants BA.5 and BQ.1 After Four COVID-19 Vaccine Doses in PLWH Receiving ART (poster)**

CITF Scientific Meeting  
Hope Lapointe  
March 8, 2023

**Dynamics of cellular immune responses elicited by COVID-19 vaccines in older adults and people living with HIV receiving suppressive ART (poster)**

CITF Scientific Meeting  
Dr. Mark Brockman  
March 8, 2023

**Bayesian estimation of proviral integration dates**

BIG23 Conference  
Dr. Brad Jones  
March 29, 2023

**Phylogeographic inference of SARS-CoV2 variant importation dynamics reveals variable effectiveness of Canadian travel restrictions**

BIG23 Conference  
Dr. Angela McLaughlin  
March 28, 2023

**Snack Chat**

Dr. Peter Centre  
Thrive Study PRAs  
March 29, 2023

# PEER-REVIEWED JOURNAL ARTICLES & BOOK PUBLICATIONS

1: Stein O, Sang JM, Wang L, Cui Z, Zhu J, Lal A, Card KG, Lachowsky NJ, Hogg R, Moore DM. Factors associated with improvements in symptoms of anxiety and depression among gay, bisexual and other men who have sex with men (gbMSM) in Vancouver, Canada: A prospective cohort study. *J Affect Disord.* 2023 May 1;328:334-340. doi: 10.1016/j.jad.2023.02.048. Epub 2023 Feb 17. PMID: 36806593.

2: Young J, Wang S, Lanière Delaunay C, Cooper CL, Cox J, Gill MJ, Hull M, Walmsley S, Wong A, Klein MB; Canadian Coinfection Cohort Investigators. The rate of hepatitis C reinfection in Canadians coinfecting with HIV and its implications for national elimination. *Int J Drug Policy.* 2023 Apr;114:103981. doi: 10.1016/j.drugpo.2023.103981. Epub 2023 Mar 7. PMID: 36893502.

3: Naicker D, Sonela N, Jin SW, Mulaudzi T, Ojwach D, Reddy T, Brockman MA, Brumme ZL, Ndung'u T, Mann JK. HIV-1 subtype C Nef-mediated SERINC5 down-regulation significantly contributes to overall Nef activity. *Retrovirology.* 2023 Mar 31;20(1):3. doi: 10.1186/s12977-023-00618-7. PMID: 37004071; PMCID: PMC10067162.

4: Artenie A, Stone J, Fraser H, Stewart D, Arum C, Lim AG, McNaughton AL, Trickey A, Ward Z, Abramovitz D, Alary M, Astemborski J, Bruneau J, Clipman SJ, Coffin CS, Croxford S, DeBeck K, Emanuel E, Hayashi K, Hermez JG, Low-Beer D,

Luhmann N, Macphail G, Maher L, Palmateer NE, Patel EU, Sacks-Davis R, Van Den Boom W, van Santen DK, Walker JG, Hickman M, Vickerman P; HIV and HCV Incidence Review Collaborative Group. Incidence of HIV and hepatitis C virus among people who inject drugs, and associations with age and sex or gender: a global systematic review and meta-analysis. *Lancet Gastroenterol Hepatol.* 2023 Mar 27:S2468-1253(23)00018-3. doi: 10.1016/S2468-1253(23)00018-3. Epub ahead of print. PMID: 36996853.

5: Card KG, Shen T, Barath J, Sang J, Lal A, Moore DM, Lachowsky NJ. Patterns of Event-Level Concurrent Substance Use During Sex Among Gay, Bisexual, and Other Men Who Have Sex with Men in Metro Vancouver. *AIDS Behav.* 2023 Mar 21. doi: 10.1007/s10461-023-04036-w. Epub ahead of print. PMID: 36943600.

6: Munasinghe LL, Toy J, Lepik KJ, Moore DM, Hull M, Bacani N, Sereda P, Barrios R, Montaner JSG, Lima VD. Process description of developing HIV prevention monitoring indicators for a province-wide pre-exposure prophylaxis (PrEP) program in British Columbia, Canada. *PLoS One.* 2023 Mar 15;18(3):e0283025. doi: 10.1371/journal.pone.0283025. PMID: 36920956; PMCID: PMC10016663.

7: Sang JM, Wang L, Moore DM, Barath J, Lal A, Hart TA, Skakoon-Sparling S, Noor SW, Chown S, Lambert G, Cox J, Jollimore J, Parlette A, Apelian H, Grace D, Lachowsky NJ. Examining Associations Between



Resilience and PrEP Use Among HIV-negative GBM in Toronto, Montreal and Vancouver. *AIDS Behav.* 2023 Mar 3. doi: 10.1007/s10461-023-04031-1. Epub ahead of print. PMID: 36867322.

8: Azar P, Wong JSH, Mathew N, Vogel M, Perrone J, Herring AA, Krausz RM, Montaner JSG, Greenwald MK, Maharaj AR. 48-hour Induction of Transdermal Buprenorphine to Sublingual Buprenorphine/Naloxone: The IPPAS Method. *J Addict Med.* 2023 Mar-Apr 01;17(2):233-236. doi: 10.1097/ADM.0000000000001072. Epub 2022 Sep 19. PMID: 36149002.

9: Alexandrova Y, Yero A, Mboumba Bouassa RS, Comeau E, Samarani S, Brumme ZL, Hull M, Crawley AM, Langlois MA, Angel JB, Cooper CL, Needham J, Lee T, Singer J, Anis AH, Costiniuk CT, Jenabian MA. SARS-CoV-2 Vaccine-Induced T-Cell Response after Three Doses in People Living with HIV on Antiretroviral Therapy Compared to Seronegative Controls (CTN 328 COVAXHIV Study). *Viruses.* 2023 Feb 19;15(2):575. doi: 10.3390/v15020575. PMID: 36851789; PMCID: PMC9959053.

10: Zhabokritsky A, Clarke R, Rosenes R, Smith G, Loutfy M, Andany N, Falutz J, Klein M, Harris M, Guillemi S, Tan DHS, Arbess G, Walmsley S. Correlates of Healthy Aging in Geriatric HIV (CHANGE HIV)-CTN 314. *Viruses.* 2023 Feb 13;15(2):517. doi: 10.3390/v15020517. PMID: 36851731; PMCID: PMC9968122.

11: Masenga SK, Romanelli A, Kooij KW. Plasma osteopontin in persons with HIV and the risk for cardiovascular disease. *AIDS.* 2023 Feb 1;37(2):355-357. doi: 10.1097/QAD.0000000000003445. PMID: 36541647.

12: Lang R, Hogan B, Zhu J, McArthur K, Lee J, Zandi P, Nestadt P, Silverberg MJ, Parcesepe AM, Cook JA, Gill MJ, Grelotti

D, Closson K, Lima VD, Goulet J, Horberg MA, Gebo KA, Camoens RM, Rebeiro PF, Nijhawan AE, McGinnis K, Eron J, Althoff KN; North American AIDS Cohort Collaboration on Research and Design (NA- ACCORD) of the International Epidemiologic Databases to Evaluate AIDS (IeDEA). The prevalence of mental health disorders in people with HIV and the effects on the HIV care continuum. *AIDS.* 2023 Feb 1;37(2):259-269. doi: 10.1097/QAD.0000000000003420. Epub 2022 Nov 10. PMID: 36541638; PMCID: PMC9782734.

13: Fonseca-Cuevas A, Newsome P, Wang L, Chen MY, Richardson CG, Hull M, McLinden T, Guillemi S, Barrios R, Montaner JSG, Lima VD. Identifying Longitudinal CD4:CD8 Ratio Trajectories Indicative of Chronic Renal Disease Risk among People Living with HIV: An Application of Growth Mixture Models. *Viruses.* 2023 Jan 29;15(2):385. doi: 10.3390/v15020385. PMID: 36851599; PMCID: PMC9963117.

14: Horvath RM, Brumme ZL, Sadowski I. Inhibition of the TRIM24 bromodomain reactivates latent HIV-1. *Sci Rep.* 2023 Jan 11;13(1):556. doi: 10.1038/s41598-023-27765-3. PMID: 36631514; PMCID: PMC9832417.

15: Hart TA, Noor SW, Tavangar F, Berlin GW, Skakoon-Sparling S, Tan DHS, Lambert G, Grace D, Jollimore J, Sang JM, Kirschbaum AL, Kanji R, Apelian H, Cox J, Moore DM, Lachowsky N. Crystal methamphetamine use and bacterial sexually transmitted infections (STIs) among gay, bisexual and other sexual minority men in Canada. *Drug Alcohol Depend.* 2023 Jan 1;242:109718. doi: 10.1016/j.drugalcdep.2022.109718. Epub 2022 Dec 7. PMID: 36516548.

16: Costiniuk CT, Singer J, Lee T, Langlois MA, Arnold C, Galipeau Y, Needham J, Kulic I, Jenabian MA, Burchell AN, Shamji 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, Vulesevic B, Lebouché B, Angel JB, Routy JP, Cooper CL, Anis AH; COVAXHIV Study Group. COVID-19 vaccine immunogenicity in people with HIV. *AIDS*. 2023 Jan 1;37(1):F1-F10. doi: 10.1097/QAD.0000000000003429. Epub 2022 Nov 18. Erratum in: *AIDS*. 2023 Mar 1;37(3):559. PMID: 36476452; PMCID: PMC9794000.

17: Mwimanzi F, Lapointe HR, Cheung PK, Sang Y, Yaseen F, Kalikawe R, Datwani S, Burns L, Young L, Leung V, Ennis S, Brumme CJ, Montaner JSG, Dong W, Prystajecy N, Lowe CF, DeMarco ML, Holmes DT, Simons J, Niikura M, Romney MG, Brumme ZL, Brockman MA. Impact of Age and Severe Acute Respiratory Syndrome Coronavirus 2 Breakthrough Infection on Humoral Immune Responses After Three Doses of Coronavirus Disease 2019 mRNA Vaccine. *Open Forum Infect Dis*. 2023 Feb 9;10(3):ofad073. doi: 10.1093/ofid/ofad073. PMID: 36910697; PMCID: PMC10003738.

18: Cheung PK, Lapointe HR, Sang Y, Ennis S, Mwimanzi F, Speckmaier S, Barad E, Dong W, Liang R, Simons J, Lowe CF, Romney MG, Brumme CJ, Niikura M, Brockman MA, Brumme ZL; and the COVID-19 vaccine immunity study team. SARS-CoV-2 live virus neutralization after four COVID-19 vaccine doses in people with HIV receiving suppressive antiretroviral therapy. *AIDS*. 2023 Apr 1;37(5):F11-F18. doi: 10.1097/QAD.0000000000003519. Epub 2023 Feb 14. PMID: 36789806; PMCID: PMC9994812.

19: Sang JM, Cui Z, Wang L, Bacani N, Lachowsky NJ, Lal A, Card KG, Roth EA, Montaner JSG, Howard T, Hogg RS, Moore DM. Treatment interruptions and community connectedness among gbMSM living with HIV in Metro Vancouver, Canada. *AIDS Care*. 2023 Jan;35(1):139-147. doi:

10.1080/09540121.2022.2142927. Epub 2022 Nov 7. PMID: 36345611.

20: Chambers C, Deeks SL, Sutradhar R, Cox J, de Pokomandy A, Grennan T, Hart TA, Lambert G, Moore DM, Grace D, Grewal R, Jollimore J, Lachowsky N, Nisenbaum R, Ogilvie G, Sauvageau C, Tan DHS, Coutlée F, Burchell AN. Vaccine effectiveness against 12-month incident and persistent anal human papillomavirus infection among gay, bisexual, and other men who have sex with men. *J Infect Dis*. 2023 Jan 19;jiad005. doi: 10.1093/infdis/jiad005. Epub ahead of print. Erratum in: *J Infect Dis*. 2023 Apr 19;: PMID: 36655513.

21: Jetsupphasuk M, Hudgens MG, Lu H, Cole SR, Edwards JK, Adimora AA, Althoff KN, Silverberg MJ, Rebeiro PF, Lima VD, Marconi VC, Sterling TR, Horberg MA, Gill MJ, Kitahata MM, Moore RD, Lang R, Gebo K, Rabkin C, Eron JJ. Optimizing Treatment for Human Immunodeficiency Virus to Improve Clinical Outcomes Using Precision Medicine. *Am J Epidemiol*. 2023 Mar 15:kwad057. doi: 10.1093/aje/kwad057. Epub ahead of print. PMID: 36922393.

## Drug Treatment Program Monthly Reports

October 2022 (released March 2023)

November 2022 (released March 2023)



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