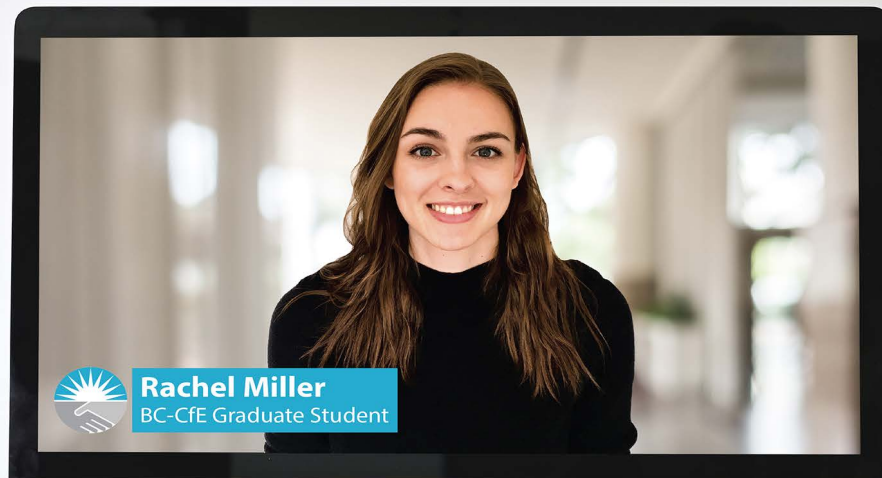




## IAS 2021 11<sup>th</sup> Conference on HIV science 18–21 July



Rachel Miller  
BC-CfE Graduate Student



## BC-CfE researchers attend world's most influential meeting on HIV research

The 11th International AIDS Society (IAS) Conference on HIV Science took place from July 18th to the 21st and BC-CfE researchers attending the virtual conference used the opportunity to present their latest findings.

Taking place virtually from Berlin, IAS 2021 saw around 6,000 participants and opened with remarks from German Chancellor Angela Merkel and included a panel discussion on the COVID-19 and HIV pandemics with global health experts including Dr. Anthony Fauci, the director of the U.S. National Institute of Allergy and Infectious Diseases.

IAS 2021 saw conference delegates showcase the latest advances in basic, clinical and operational HIV research. The virtual setting allowed the global community of scientists, activists, and policy makers to convene safely during the COVID-19 pandemic.

On the topic of **Treatment as Prevention**<sup>®</sup>, multiple sessions showcased the latest research on PrEP usage, its monitoring, and creating personalized care. Other discussions centered on the benefits and drawbacks of long-acting injectables and antiretroviral-containing vaginal rings. In social and behavioural science presentations, global experts reflected on HIV service delivery systems in Zambia, community-led quality improvement programs in Vietnam, and improvements in viral suppression in Uganda.

Several studies presented examined the intersection of the HIV and COVID-19 pandemics, such as evidence from Uganda showing how women face increased risk of gender-based violence and HIV during COVID-19 lockdowns. And as issues of COVID-19 vaccine uptake continue to dominate headlines around the world, IAS

presenters discussed HIV vaccine innovation. One presentation on HIV vaccines looked at potential implications for future vaccine development if current candidates fail.

Rachel Miller, a Graduate Student in the BC Centre for Excellence in HIV/AIDS (BC-CfE) Molecular Epidemiology and Evolutionary Genetics Group, won a scholarship to attend IAS 2021. She also won the prestigious annual "International AIDS Society and Merck Sharpe & Dohme Prize for Operational and Implementation Research in Differentiated Service Delivery" for her abstract titled "SARS-CoV-2 Lockdown Associated with Expansion of HIV Transmission Clusters Among Key Populations". The prize recognizes "outstanding research that addresses key knowledge gaps and links new evidence to strategic programme priorities in differentiated service delivery".

Miller's award winning abstract, which includes Dr. Julio Montaner (BC-CfE Executive Director and Physician-in-Chief) and Dr. Jeffrey Joy (BC-CfE Research Scientist specializing in evolutionary genetics and bioinformatics) as senior co-authors, represents the combined efforts of the BC-CfE as a whole, and showcases the strengths of the BC-CfE's partnerships across health authorities and agencies. It brought together researchers from the BCCDC, Vancouver Coastal Health, the Faculty of Health Sciences at Simon Fraser University, and the Bioinformatics Program and the Department of Medicine at the University of British Columbia. Within the BC-CfE, Miller worked with the Molecular Epidemiology and Evolutionary Genetics Group, the Laboratory Program, and the HIV Drug Treatment Program.

The research examined how COVID-19 related public health guidelines potentially introduced barriers to care and services for people living with, or at risk of acquiring HIV.

Researchers synthesized available data from BC's HIV programs together with publicly available data to test SARS-CoV-2 related impacts on HIV transmission over the last year. Following the implementation of lockdown restrictions in late March 2020, there were statistically significant declines in antiretroviral therapy ART initiation, pre-exposure prophylaxis (PrEP) prescriptions, plasma viral load tests, HIV testing episodes, and new HIV diagnoses.

Thankfully, the declines seen for nearly all of these metrics rebounded within the following three months, although below pre-lockdown levels. Phylogenetic analyses revealed increased growth and increases in multiple indicators of transmission events in a limited number of clusters involving people who inject drugs, relative to clusters characterized by gbMSM populations. The difference in level of transmission seen between these groups may be due to differences in how the impact of the restrictions varies by population. For example, while the gbMSM population likely experienced unprecedented decreases in level of contact as a result of restrictions, people who inject drugs likely experienced reduced access to services like supervised consumption sites and harm reduction supplies.

The increased HIV transmission, though limited, shows the need for innovative and targeted solutions to offset potential negative impacts of COVID-19, or any pandemic-related lockdowns on HIV treatment and prevention efforts.

» "Our findings further support the continued expansion of sustainable and equitable TasP<sup>®</sup>-based policy and programmatic efforts, targeting underserved and hard-to-reach populations, as key tools to further reduce AIDS-related morbidity and mortality, as well as HIV transmission, and thus alleviate the overall global burden of HIV/AIDS."

— BC-CfE Graduate Research Assistant Ditha Nanditha in reference to her IAS 2021 Poster Presentation "Accelerating progress towards the United Nations' 90-90-90 target: the impact of a province-wide HIV Treatment-as-Prevention-based initiative in British Columbia, Canada".

The BC-CfE presentations can be viewed at <https://bit.ly/IAS2021-BCCfE>.



## Hepatitis can't wait – BC to eliminate Hepatitis C by 2030



» On July 28th the BC-CfE marked World Hepatitis Day. The day is meant to raise awareness of the global burden of viral hepatitis and also to influence meaningful change in delivering care to those living with the virus. The theme of 2021's World Hepatitis Day was 'Hepatitis Can't Wait'.

BC is committed to achieving the World Health Organization's target of eliminating hepatitis C by 2030. Health Minister Adrian Dix addressed this goal in Legislature in June, citing the \$142.44 million spent in 2019-2020 for medications to treat the hepatitis C virus (HCV) in British Columbia and the BC-CfE's role in this provincial effort.

Incredible strides in HCV treatment have been made, improving treatment considerably, from poorly tolerated interferon-based therapies towards newer curative, oral, direct acting antiviral (DAA) based therapies. The new DAA therapy can achieve cure rates greater than 95% after just 8 to 12 weeks. In BC treatment is free for all eligible patients with chronic HCV.

Despite these remarkable advances, there are nearly 30,000 people in BC living with untreated HCV. Many have been previously diagnosed but lost to follow-up care, and this population may also experience various forms of social and economic marginalization. HCV has also been documented to disproportionately impact Indigenous people and people born in endemic countries, who may have difficulties accessing health care services

In 2019, the BC-CfE opened the Hope to Health (H2H) Complex, an integrated, low-barrier primary care clinic and research and innovation facility, in Vancouver's Downtown East side (DTES). The DTES is home to about 18,000 people, with estimates of HCV within the community are as high as 90%. With a large proportion

of these residents using drugs, the BC-CfE opened a Supervised Consumption Site (SCS) and safer drug supply program within the H2H Complex in 2020.

Based at the H2H Complex, and in response to these health inequities, a new 12-month pilot project now underway has been designed to support HCV education, testing, and access to care among people who use drugs in the DTES. Gaps in testing, linkage to care and treatment uptake for people living with HCV who use drugs represents a considerable impediment to controlling the HCV epidemic in Canada.

Dr. Kate Salters, the newly appointed BC-CfE's HCV-Treatment as Prevention® (TasP®) Project Coordinator, is leading the BC-CfE's efforts to control the HCV epidemic among hard-to-reach populations in BC. Dr. Salters is a Research Scientist with the BC-CfE's Epidemiology and Population Health program and her research focuses on health care engagement and health outcomes among people living with HIV and HCV.

At H2H, Dr. Salters and her team ensure everyone who visits the SCS or is part of the safer drug supply program is offered an HCV test at least once; provide all clients with education about HCV, including steps to reduce risk of acquiring or transmitting HCV; follow-up with all clients through peer and nursing support; and offer treatment to all eligible and interested patients who are diagnosed with HCV on site and support retention and end-of-treatment follow-up through peer and nurse engagement.

Dr. Salters notes, "As we have learned over the last 16 months, public health cannot just consider one public health issue at a time. We need public health responses and research that acknowledges convergent and mutually aggravating epidemics and must consider new approaches that prioritize needs of patients and meet them where they are at."

### SAFER SUPPLY

## BC-CfE commends expanded access to prescribed safer supply

» The BC-CfE supports the recent decision by the Government of BC to phase in a new policy expanding access to prescribed safer drug supply.

As part of Budget 2021, BC is directing funding of up to \$22.6 million to the province's health authorities over the next three years. According to the Ministry of Mental Health and Addictions, this money will, "support the planning, phased implementation, monitoring and evaluation of prescribed safer supply services."

BC is leading the way on safer supply as the first province in Canada to introduce this public-health measure. It's the opinion of the government, and one which BC-CfE shares, that an expanded safer supply program will save lives by offering a substitute to poisoned street drugs.

Currently, more than five people die every day from overdoses in BC, with the majority of the deaths occurring in Metro Vancouver. At 2,579 deaths since the beginning of 2020, this public health emergency far exceeds Covid-19 deaths. Since it was declared in 2016, so many people have fatally overdosed in BC that these deaths have lowered the average life expectancy in the province.

"At the start of the pandemic, B.C. provided access to some prescribed safer supply medications to save lives from overdose and protect people from COVID-19. Building on what we've learned, we're expanding access to prescribed safer supply to reach more people and

save more lives," said Sheila Malcolmson, Minister of Mental Health and Addictions. "This is one tool within a comprehensive response to the overdose crisis as we continue to also build up a treatment system so everyone can get the care they need. There is more to do, and we won't stop working until we turn this crisis around."

At its Hope to Health Complex (H2H) located in Vancouver's Downtown Eastside, the BC-CfE implements BC's harm reduction policy. The Complex, which opened in 2019, provides primary care, safer drug supply, and supervised consumption services. Clients at H2H, once clinically assessed, may be prescribed alternative drugs, like oral or injectable opioids, as a way to replace street drugs that could be laced with deadly fentanyl.

"With more than 7,000 lives lost to toxic illicit drugs, we need new measures to connect people to the supports they need to stay safe," said Dr. Bonnie Henry, provincial health officer. "Reducing harm for people who use drugs is the right thing to do. Bringing in this new policy to expand prescribed safer supply is a big change for B.C.'s health-care system. It's about meeting people where they are at, reducing risk of toxic drug death and connecting people to the care they need and deserve."

The BC-CfE is pleased to support BC's new prescribed safer supply policy and will continue its efforts to save lives, fight stigma against drug users, and bring an end to BC's overdose emergency.

BC-CfE congratulates Diabetes Canada on establishing Diabetes 360°

## DIABETES CANADA

Building on the BC-CfE's Treatment as Prevention® (TasP®) strategy and the 90-90-90 Target, Diabetes Canada has succeeded in establishing a National Framework for Diabetes supported by the recent passing of Bill C-237 by the Canadian Parliament.

Nearly 11.5 million Canadians, or one in four, are living with diabetes or prediabetes, and our nation's young people face a greater than 50% chance of developing diabetes in their lifetimes. This chronic disease can lead to life-threatening complications if not treated. Diabetes is known to be the leading cause of vision loss and blindness in those 20-65 years of age and that it contributes to 30% of strokes, 40% of heart attacks, and 50% of kidney failure requiring dialysis.

The BC-CfE has been working with Diabetes Canada for the past several years, helping guide the creation of the new National Framework by using the BC-CfE's experience and accomplishment with TasP® and 90-90-90 Target as the basis.

The 90-90-90 Target, developed by Dr. Julio Montaner, the BC-CfE's Executive Director and Physician-in-Chief, was achieved for HIV/AIDS in BC in 2020, which means at least 90 percent of all people living in BC with HIV are diagnosed, at least 90 percent of those diagnosed are on antiretroviral therapy ART and at least 90 percent on ART are virologically suppressed.

Built upon the success of BC-CfE's TasP® strategy and 90-90-90 Targets and applying them to diabetes, the National Framework for Diabetes in Canada is called Diabetes 360°. Diabetes 360° aims to see 90% of Canadians living in an environment which reduces their risk of diabetes, 90% of Canadians aware of their diabetes status, 90% of Canadians with diabetes to be actively engaged in preventing complications, and for 90% of all Canadians to achieve improved health outcomes.

Aligned with TasP®, Diabetes 360° encourages early diagnosis, treatment, and engagement into care to prevent diabetes-related complications that cost the Canadian healthcare system billions of dollars a year.

### BC Centre for Excellence in HIV/AIDS

- > Improve the health of British Columbians with HIV through comprehensive research and treatment programs;
- > Develop cost-effective research and therapeutic protocols;
- > Provide educational support programs to health-care professionals;
- > Monitor the impact of HIV/AIDS on BC and conduct analyses of the effectiveness of HIV-related programs.

Physician Drug Hotline  
1.800.665.7677

St. Paul's Hospital Pharmacy Hotline  
1.888.511.6222

Website  
www.bccfe.ca  
E-mail  
info@bccfe.ca

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