



BC-CfE work continues to evolve to help fight against and adjust to COVID-19

As of the last week of August the number of people with active COVID-19 infections in BC is at a record high, and we've now passed more than 200 deaths since the pandemic began. BC's total caseload is higher now than it was in March, when the province declared a state of emergency.

TransLink and BC Ferries implemented mandatory mask policies also, requiring all passengers to wear masks while on board. Next month, all of BC's K-12 schools are set to reopen with a gradual, but full, return to in-class instruction for all students.

Despite the discouraging news of rising case counts, and the sometimes uncomfortable and stressful adaptations we've all had to make during this pandemic, the staff at the BC Centre for Excellence in HIV/AIDS (BC-CfE) continue their vital work in treatment, research, outreach, and promotion of **Treatment as Prevention**®.

Per-SVR is a viral hepatitis study led by Dr. Kate Salters, a research scientist with the BC-CfE's Epidemiology and Population Health program. Researchers in this multi-year study are working to learn more about the experiences of people, particularly those from highly marginalized populations, who have been treated with the new direct acting antiretroviral hepatitis C medications. Recruiting and research work on this study were paused due to the pandemic, but now, after approval from provincial authorities, and safely operating from our Hope to Health Centre on Powell Street, Per-SVR has resumed.

Thrive is a community-based research study focused on improving health outcomes among older adults living with HIV. Thrive researchers adapted to the pandemic and the project has received ethics approval to conduct phone interviews to accommodate physical distancing guidelines.

The Momentum/Engage Studies look at the sexual health of gay, bisexual and other men who have sex with men in Greater Vancouver and has been active since 2012. The BC-CfE's Dr. David Moore leads this work and, after modifying workspaces and practices to ensure compliance with the latest safety directives, the studies are set to restart soon.

COVID-19 has also changed aspects of the work done by the BC-CfE's Drug Treatment Program. As noted in media reports, there has been a drop of 30 per cent in pre-exposure prophylaxis (PrEP) prescriptions in BC between April and May and a 70 per cent drop in new initiations into the program.

Lacking research to provide direct proof, it's believed the populations which would have been taking PrEP have been listening to health officials' orders to stay home and limit physical interactions. Dr. Junine Toy, senior manager for the Drug Treatment Program at the centre, didn't speculate as to the reason for the decline in PrEP prescriptions but did say the change in the volume aligned with the response to COVID-19.

The accredited BC-CfE laboratories are another area where staff have had to make changes to accommodate COVID-19. In an update to doctors, prescribers, and people living with HIV, Laboratory

Director Dr. Zabrina Brumme said increasing global demand for SARS-CoV-2 diagnostic testing has, for the second time during this pandemic, affected the availability of critical reagents required for HIV plasma viral load testing.

Due to this, Dr. Brumme has requested a decrease in the frequency of HIV Plasma Viral Load Testing in stable patients on a stable antiretroviral therapy regimen. The BC-CfE's HIV and HCV Precision Medicine Testing Services has not been affected and the centre's medication dispensing services for its HIV Treatment and Prevention programs is continuing as usual.

Dr. Jeff Joy, a BC-CfE senior research scientist specializing in evolutionary genetics, molecular epidemiology and bioinformatics, has been studying how COVID-19 spread around the globe, in particular how it arrived in North America and Europe. Furthermore, Dr. Joy and his research group have been using genomic analyses to quantify the effects of public health interventions and to study how the virus is evolving through time.

Dr. Joy's as-yet-unpublished study suggests contact tracing efforts after the first cases of COVID-19 appeared in both the US and Germany were successful. Later introductions of the virus led to the outbreaks that are responsible for the epidemics in the US and Europe. In the US case these later introductions took place after travel bans were put in place.

This kind of epidemiological research, so critical during a pandemic, will help in guiding policies to keep populations safe and fatalities down.



» "Our work highlights that early interventions can play a critically important role in controlling epidemics, such early interventions buy precious time to prepare and respond. This study emphasizes the importance and usefulness of viral surveillance architectures."

— BC-CfE Research Scientist Dr. Jeff Joy

BC-CfE researcher first to identify link between severe intimate partner violence and all-cause mortality among women living with HIV

» Globally, one in three women will experience some form of intimate partner violence in their lives. Some North American studies indicate this may be much more likely for women living with HIV. Despite improvements in HIV disease outcomes among women living with HIV in BC, multiple interacting inequities continue to disproportionately impact the health, wellbeing, and survival of women living with HIV. Experiences of intimate partner violence have been previously found to be associated with reduced likelihood of achieving viral suppression and lower adherence to life saving antiretroviral medication. Although some studies have investigated the link between experiences of intimate partner violence and HIV outcomes, there has been no study to date which has sought to investigate the association between experiences of intimate partner violence and mortality among women living with HIV.



PhD Student Kalysha Closson

However, a recent BC-CfE publication found that among women living with HIV in the province, multiple experiences of intimate partner violence (sexual, physical, and emotional) was associated with increased likelihood of dying. Led by PhD student Kalysha Closson, the paper is entitled 'Severe intimate partner violence is associated with all-cause mortality among women living with HIV' and was published in AIDS. The paper is the first, to the BC-CfE's knowledge, to demonstrate an association between multiple experiences of intimate partner violence and all-cause mortality.

Women participating in the Longitudinal Investigations into Supportive and Ancillary Health Services (LISA) study were asked about their history of violent

experiences during a cross-sectional questionnaire that was delivered to 1,000 people living with HIV in BC between 2007-2010. Using linked data to the BC-CfE's drug treatment program, participants in LISA were passively followed from time of interview until death, most recent contact with the DTP, or December 31st, 2017. During this follow up period 25% of the 252

women (trans inclusive) in LISA, who were not lost to follow up, had passed away. Nearly a third of women who reported experiencing all three forms of intimate partner violence passed away during the follow-up period. Age-adjusted mortality rates among women who experienced severe intimate partner violence were over twice as high (44.7 per 1,000 women-years) than women reporting no history of intimate partner violence (20.9 per 1,000 women-years) and nearly six times higher than women in the province (7.4 per 1,000 women-years). After adjusting for potential confounders, women experiencing severe intimate partner violence were over two times more likely to have died over the study period.

These results highlight the pervasiveness and severity of experiences of intimate partner violence among women living with HIV. If international targets to end both AIDS and gender-based violence by 2030 are to be achieved, critical efforts are needed to prioritize women living with HIV in the response. This is particularly important during the COVID-19 pandemic, as global rates of intimate partner violence are rising, and access to care is limited.

During this time innovative trauma-aware approaches centered on the priorities and needs of women living with HIV are profoundly needed.

PROFILE

Dr. Val Montessori, St. Paul's Hospital new Head of Division of Infectious Diseases

» Earlier this year Providence Health Care announced Dr. Val Montessori as the new Head of its Division of Infectious Diseases in the Department of Medicine at St. Paul's Hospital (SPH). We spoke with Dr. Montessori to find out what inspires and informs her work as she takes on this important new role.

From a very early age, Dr. Montessori had an interest in microbiology and infectious diseases (ID). Her father was a pathologist and her childhood summers were spent assisting him with laboratory work, giving her a flavor for research and basic benchwork and how they can be married with clinical care. She discovered that medicine could provide her with endless opportunities to combine both her love for people and passion for research.

When Dr. Montessori first arrived at SPH as a medical resident, she was assigned to the Division of Infectious Diseases where she had the opportunity to work alongside Dr. Julio Montaner, BC-CfE Physician-in-Chief & Executive Director and Dr. Peter Phillips, the former Head of the Division of Infectious Diseases at SPH. A huge focus of their work at that time, and indeed today, was to provide best-in-class treatment and care for people with HIV and AIDS.



Dr. Val Montessori

Speaking about her early experiences working alongside ID Specialists at the forefront of HIV research and care, Dr. Montessori explained why she was drawn to this area of medicine above others. At the time, pioneering treatment options such as combination antiretroviral therapy and highly active antiretroviral therapy (HAART) were not clinical tools available to prescribers. Developing treatment plans for patients was extremely challenging clinically, but also emotionally.

Many of her patients had experienced significant hardships in their personal lives due to the stigma associated with an HIV diagnosis, which was more

prevalent then than it is today. Above all else, they were so grateful of the respectful and compassionate care they received from physicians and other healthcare workers in SPH.

Speaking about her new role, Dr. Montessori said, "I am truly delighted and honored to take up this role at SPH. Dr. Phillips has done an exceptional job building this Division into the strong team it is today. My huge focus in the months and years ahead will be to establish as much balance as possible in the lives of my team. As physicians, we are often pulled in many different directions, across clinical practice, research and teaching, on top of our own personal commitments.

"As we navigate the COVID-19 pandemic, into unknown and indeed uncertain territories, I believe there has never been a more heightened awareness locally and globally of the significant value of ID experts in our healthcare system and the essential contributions they make to safeguard public health during these difficult times. It is absolutely crucial to nurture and protect our healthcare, which includes ID Specialists, who are caring for patients on the frontline as this pandemic unfolds."

Dr. Montessori hopes to see greater integration of molecular biology into everyday clinical practice. In HIV care, it has become the gold standard to use precision medicine techniques to inform a patient's treatment plan, which yields better outcomes. She believes greater integration of clinical practice with available and evolving laboratory analysis will be applied to other infectious diseases to further improve the care provided to patients across a whole spectrum of conditions, from hepatitis to pneumonia.

The BC-CfE wishes Dr. Montessori continued success in her new position, leading a vital department in the treatment and care of those living with infectious diseases in BC.

The BC-CfE recognizes International Overdose Awareness Day August 31st



International Overdose Awareness Day, held on August 31st each year, seeks to raise awareness of overdoses and reduce the stigma of a drug-related death. The day also acknowledges the grief of those who've lost or had a loved one suffer a permanent injury due to an overdose. Most importantly, International Overdose Awareness Day spreads the message that overdose deaths are preventable.

In BC, 175 people lost their lives in July due to an illegal drug supply more toxic than ever. Prior to the COVID-19 pandemic, overdose deaths were decreasing in BC for the first time since 2012. The efforts of many healthcare workers and researchers, including the BC-CfE's BOOST (Best Practices in Oral Opioid Agonist Therapy) Collaborative, were saving lives and making a significant difference in people's experiences as drug users.

As Hon. Judy Darcy, Minister of Mental Health and Addictions, said, "Social isolation, disconnection from community and in-person supports, financial pressures, growing mental health challenges, and a drug supply that is becoming more and more toxic, have all contributed to an increase in substance use and increased risk."

In the coming months, the BC-CfE will announce new initiatives related to the critical efforts toward ending overdose deaths. Already, we have outreach teams, help to train registered nurses and licensed practical nurses in safe supply guidance, support innovative harm reduction programs, and work to connect vulnerable populations with the health-care system. The BC-CfE will continue this vital work, and will augment its existing services to do even more.

During this pandemic, International Overdose Awareness Day is needed now more than ever. The BC-CfE will continue to help people who use substances by giving them support, not judgment.

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

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