



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

Celebrating 30 years of excellence

This year the BC Centre for Excellence in HIV/AIDS (BC-CfE) is celebrating its 30th anniversary. Since its inception in 1992, the advancements made by BC-CfE staff and its international collaborators have transformed HIV from a rapidly progressing fatal disease, to a chronic and manageable illness that is highly, and easily, preventable.

Given a provincial mandate by the Ministry of Health to "improve the health of British Columbians through the development, on-going monitoring and dissemination of comprehensive investigative and treatment programs for viral diseases," the BC-CfE built a centralized registry that served as a foundation to deliver on that mandate and more. This registry remains at the core of the BC-CfE's operations today and has enabled the research, monitoring and evaluation that sets the BC-CfE apart.

Among the pivotal moments in BC-CfE history, the discovery and introduction of highly active antiretroviral therapy (HAART) ranks among the top. The widespread adoption of HAART following its worldwide introduction at the 1996 Vancouver International AIDS Conference was life-changing for those living with HIV/AIDS. Prior to HAART, the life expectancy of a 20-year-old person diagnosed with HIV was under 10 years. Following the implementation of HAART, life expectancy increased to more than 50 years.

The groundwork for this revolutionary advancement was laid over a decade before the BC-CfE was officially established, when the outlook for people living with HIV/AIDS was quite bleak. In 1981, when HIV cases first appeared in North America, a group of dedicated healthcare providers at St. Paul's Hospital came together to tackle this mysterious illness and in 1986 formed a comprehensive primary care clinic and

specialized research unit which is now known as the John Ruedy Clinic.

Among this team, was Dr. Julio Montaner, current Executive Director and Physician-in-Chief of the BC-CfE, who arrived in Canada in 1981 to begin a career in respiratory medicine. As his pulmonary training coincided with HIV's emergence, little did he know that the clinical cases he would see and solve in the 1980s, would not only inform a 40-year career as one of the world's preeminent HIV/AIDS researchers, but also lead to his leadership of an organization devoted to improving and prolonging the lives of those living with HIV in British Columbia.

After the effectiveness of HAART, the BC-CfE went on to help shape local and global policy with its **Treatment as Prevention**® (TasP®) strategy. In British Columbia, thanks to the BC-CfE's advocacy, the **Seek and Treat for Optimal Prevention of HIV/AIDS**® (STOP HIV/AIDS) program was launched and successfully utilized TasP® to improve HIV testing, linkage to care and treatment uptake.

Adopted by the United Nations, Dr. Montaner was directly involved in shaping the TasP® inspired policy that was the UNAIDS 90-90-90 target by 2020. The 90-90-90 target calls for 90 percent of people living with HIV to be diagnosed through testing, 90 percent of those diagnosed with HIV to be on ART treatment, and 90 percent of those on treatment to achieve sustained virologic suppression, which means they are unable to transmit HIV. BC exceeded this goal which has now become the 95-95-95 goal by 2025, which it is also expected to achieve.

Throughout its three decades, research has been the driving force behind the numerous innovations and discoveries. The Clinical and Research Laboratory has

developed and pioneered tests that have become the standard. An Epidemiological and Population Health program with a broad spectrum of research keeps advancing the expertise and stature of the BC-CfE.

In addition to HIV/AIDS treatment, research and innovation, the BC-CfE has been a champion of numerous social causes, including a role in the fight for Insite, North America's first supervised injection site, that went to the Supreme Court of Canada (and won); advocating for decriminalization of drugs long before the current opioid overdose public health crisis; and fighting for special access for yet-to-be approved treatments for its patients along the way.

Rather than rest on the remarkable achievements related to HIV/AIDS, the BC-CfE continued to apply its expertise with TasP® to accomplish more. Implementing a pre-exposure prophylaxis (PrEP) program in 2018 to further reduce HIV incidence in BC; developing a wholistic, comprehensive approach to care for poorly reached and poorly engaged clients in Vancouver's Downtown East Side at its Hope to Health Research & Innovation Complex; and partnering with other health organizations to apply its expertise & lead quality improvement initiatives that share and apply the TasP® strategy to other viral and social contagions are some examples of the extraordinary work that the BC-CfE has done and continues to do today.

Over the coming months, the BC-CfE will be celebrating its anniversary through various events and publications featuring those who were a part of the story.

Please join the BC-CfE in celebrating 30 years of excellence. Continue to visit our website and follow our social media channels as we thank our clients, the staff, numerous supporters, partners, and friends who've made our work possible.

» "This anniversary is both an opportunity for the BC-CfE to showcase its many significant accomplishments, and to celebrate its dedicated, creative and hardworking staff. It also provides an opportunity to highlight the impact of the BC-CfE's innovation and beyond HIV/AIDS. I'm proud of the work, the achievements and our amazing staff and I'm honoured to be a part of the celebration."

— BC-CfE's Senior Director, Internal and External Relations & Strategic Development, Mark Helberg



Effects of Treatment as Prevention® evaluated in first of its kind analysis

» In what's believed to be a first of its kind analysis, BC-CfE researchers evaluated patient reported HIV care experiences and therapeutic outcomes prior to, and after, implementation of BC's Treatment as Prevention® (TasP®) designed Seek and Treat for Optimal Prevention of HIV/AIDS® (STOP HIV/AIDS) program.

The Government of BC, working with the BC-CfE, initiated STOP HIV/AIDS, a real world application of the TasP® framework at the population-level, in 2010 to improve HIV testing, linkage to care, and treatment uptake.

The analysis titled *Healthcare and treatment experiences among people diagnosed with HIV before and after a province-wide treatment as prevention initiative in British Columbia, Canada* came from the STOP HIV/AIDS Program Evaluation (SHAPE) Study cohort of people living with HIV (PLWH). SHAPE, which ended its data collection phase in September of 2021, sought to explore which factors influence people's decisions and attitudes toward accessing HIV health care and what led people to stay in care. The SHAPE study cohort members had to be 19 years and older, living in BC, and the sampling timeframe for the data dated from mid-2016 to late 2018. All participants consented to linking their survey data to the provincial HIV treatment registry.

Out of 644 SHAPE participants, 325 were included in this analysis. Sixty-one (61) percent were diagnosed with HIV in the pre-intervention era and thirty-nine (39) percent in the post-intervention era. The success and effectiveness of TasP® and STOP HIV/AIDS is striking. For the post-STOP HIV/AIDS group, more participants began ART with less advanced HIV disease (i.e., a higher CD4 count), and

were less likely to experience treatment interruptions at any point in the five years following HIV diagnosis.

Patients who were diagnosed with HIV after the implementation of BC's STOP HIV/AIDS initiative were also more likely to report accessing important services at the time of their diagnosis. This includes a higher proportion of clients who reported having access to specialists and other health professionals, medication adherence support programs, as well as psychosocial supports (such as from social workers and peer support).

The researchers concluded that the implementation of a provincial TasP® initiative, which included low-barrier testing and treatment, with enhanced psychosocial services, significantly improved clinical care experiences and health outcomes among PLWH. Furthermore, this study included a cohort of diverse and socio-demographically representative PLWH engaged in care across BC, with proportional representation by age, gender, HIV risk group, and geography. The successes of TasP® and STOP HIV/AIDS in BC showcase important considerations and opportunities for future TasP® implementation programs within Canada, and around the world, aiming to optimize testing and treatment for all PLWH.

Senior author of the study, Dr. Kate Salters, BC-CfE Research Scientist and Head of the Viral Hepatitis Research Program said, "While these data certainly help to corroborate previous literature demonstrating the positive impact of the TasP® programs in BC, this paper in particular highlights that patients are also noting the differences in their experiences navigating a new HIV diagnosis."

AWARD

Dr. Zabrina Brumme recognized with PHC Research and Mission award



» The BC-CfE's Laboratory Director, Dr. Zabrina Brumme, is this year's winner of the Providence Health Care (PHC) Research and Mission award. The annual award recognizes a PHC scientist who exemplifies the mission and values of Providence Health Care while conducting outstanding research.

Recipients are recognized for their "contribution to scientific knowledge at an exceptional level". As an internationally regarded scientist who has contributed substantially to scientific knowledge over the past 20 years, predominantly in HIV vaccine and cure-related research, Dr. Brumme is a worthy selection for the honour.

Her research integrates molecular biology, epidemiology and computational approaches to study HIV genetic diversity and evolution with the ultimate goal of informing the design of vaccines and curative approaches. Dr. Brumme's body of work, which includes nearly 200 peer-reviewed publications, initially focused on HIV's capacity to evade immune recognition through mutation, a process called "immune escape". Her research team created viral genomic "maps" that identified specific sites and pathways of immune escape in HIV, and studied how immune selection pressures shape HIV evolution in individuals and populations over time. Understanding these processes can inform the design of HIV vaccines that can protect against genetically diverse and ever-changing strains.

In addition to the exceptional contribution to scientific knowledge, the PHC Research and Mission award is given to a scientist that "displays the quality of a team player, is reliable, and contributes to the success of the organization in the context of PHC's mission and vision." This description epitomizes Dr. Brumme throughout her career and especially during the COVID-19 pandemic as her research focus expanded to respond to the

emerging and evolving situation. She brought together PHC and Simon Fraser University (SFU) laboratories to improve COVID-19 diagnostic test collection techniques, develop a quantitative SARS-CoV-2 assay, and implement full genome sequencing to support outbreak investigations in health care settings.

When COVID-19 vaccines were first made available in BC to priority populations, she co-led a PHC-based team, funded by the COVID-19 Immunity Task Force (CITF), to monitor vaccine responses in older adults, including residents of long-term care. Similarly, when COVID-19 vaccines were rolled out to the general population in BC, she led a team of scientists at PHC and SFU to monitor vaccine responses in people living with HIV. Both of these vaccine studies are still ongoing and results have helped inform public health decision making in BC and Canada around COVID-19 vaccination.

Dr. Victor Leung, President of the PHC Medical Staff Association and Medical Director, Infection Prevention Control, said of his colleague, "Dr. Brumme is an inspiring leader who is full of energy and passion. I had the opportunity to work with her at the start of the pandemic and she has been most helpful and insightful with the research and clinical teams. I look forward to learning more from her."

As the winner of this year's PHC Research and Mission award Dr. Brumme was offered a \$2,000 prize toward attending an international conference, however, she declined this financial reward. Instead, at her request, the funds have been put towards the St. Paul's Foundation It's Happening campaign.

A video of Dr. Brumme speaking about her career, made as part of the PHC Research and Mission award, can be found here: bit.ly/2022ResearchandMission.

Privacy expertise shared at IAPP Canada Privacy Symposium



The International Association of Privacy Professionals (IAPP) held its annual gathering of data privacy professionals in Toronto late last month and Caitlin Pencarrick Hertzman, the BC-CfE's Manager of Information Access and Privacy, presented at the symposium.

In addition to her work with the BC-CfE, Pencarrick Hertzman is a consultant to organizations in the private and public sector, specializing in developing and implementing Privacy Management and Accountability Programs. She is also a member of the IAPP's Canadian Advisory Board.

Privacy is a paramount concern for the BC-CfE, as it works with people living with highly stigmatized diseases like HIV/AIDS, opioid use disorder, and schizophrenia/psychosis. Pencarrick Hertzman's personal and career goal is to contribute to a just and civil society. Because of this, she prefers to work with organizations and not-for-profits which are actively removing barriers for folks experiencing oppression.

Pencarrick Hertzman's symposium session, which she co-wrote with lawyer Sara A. Levine, QC, examined how organizations can best benefit from the work and advice of privacy professionals and lawyers, and how to leverage their complimentary skills sets and experience to stay at the forefront of privacy.

The session noted the risks for privacy practitioners in providing advice without a law background and the breakdown of roles and responsibilities for privacy practitioners and lawyers. Additionally, the potential savings that legal counsel can bring to an organization in the long run was highlighted, all while focusing on how organizations can best protect their data subjects.

"Privacy professionals and lawyers have the opportunity and the responsibility to protect individuals and their right to privacy, and to protect organizations while supporting them in furthering their mandate. Everyone benefits when we work together to develop trust between data subjects and data users." said Pencarrick Hertzman.

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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