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St. Paul's Hospital, Vancouver, B.C.







Federal funding helps BC-CfE expand safer drug supply in Downtown Eastside

ederal, provincial, and local officials gathered over Zoom on February 1st to announce more than \$15 million in federal funding for four safer drug supply projects for people at risk of overdose in BC. \$3.6 million of this funding, awarded by Health Canada's Substance Use and Addictions Program (SUAP), will support an evidence-informed innovative Safer Drug Supply Program at the BC-CfE's Hope to Health Research & Innovation Complex in Vancouver's Downtown Eastside (DTES). BC-CfE staff at the complex will prescribe and provide pharmaceutical-grade medication as an alternative to the increasingly toxic illegal supply in circulation.

BC, under a public health emergency declared in the Spring of 2016 due to the significant rise in opioid-related overdose deaths, has seen more than 6,500 people fatally overdose since the declaration. Now, with the concurrent public health emergency of the COVID-19 pandemic, the problem of fatal overdoses is getting worse. COVID-19 has made BC's street drug supply more toxic, while simultaneously increasing barriers to services. The latest data from the BCCDC indicates that as many as five British Columbians are dying every day as a result of overdoses.

Starting in October 2019, the Hope to Health Complex has offered primary care to DTES residents with the support of an interdisciplinary team of physicians, nurses, social workers, counsellors, and peer navigators. The model of care provides 'wrap-around' healthcare to clients, ensuring they receive the full continuum of care under one roof. Over 800 clients have been registered since opening. Starting October 2020, the Hope to Health Complex added a Supervised

Consumption Site, as an important new service and an additional entry point to the array of services provided. The new SUAP funding and the Risk Mitigation Interim Guidelines, allows the BC-CfE to expand access to methadone and hydromorphone as well as other pharmacological alternatives to street drugs among individuals chronically using illegal street drugs.

Fiona Dalton, President and CEO of Providence Health Care said, "PHC welcomes this exciting news regarding the much-needed expansion of safer drug supply in the DTES led by the BC Centre for Excellence at the Hope to Health Complex. Helping people transition from the increasingly toxic supply of street drugs to pharmacological alternatives will save lives. This support from Health Canada's Substance Use and Addictions Program is much-needed as BC escalates efforts to control the opioid overdose crisis."

Dr. Julio Montaner, the BC-CfE's Executive Director and Physician-in-Chief, said, "We are grateful for the support from Heath Canada's Substance Use and Addictions Program, a timely investment as we continue to battle British Columbia's opioid overdose crisis. In this context, the expansion of safer drug supply in the Downtown Eastside of Vancouver represents a critically important next step. This program expands the holistic nature of the supports we offer at the Hope to Health Complex, in collaboration with the BC-Government, Providence Health Care and Vancouver Coastal Health. Established with generous funding from two anonymous philanthropic donors, the Hope to Health Complex offers innovative primary health care, a dedicated oral opioid substitution program, and an

ophthalmology clinic, as well as the newly established Supervised Consumption Site and the Safer Drug Supply program. Our ultimate goal is to expand and sustain the gains we have made in the control of HIV/ AIDS in BC, and to continue to expand these efforts to the area of viral hepatitis, within an environment where mental health and substance use are highly prevalent and in urgent need of further innovative programs."

The Zoom announcement of the SUAP funding saw Dr. Hedy Fry, Member of Parliament for Vancouver Centre, speak on behalf of Canada's Minister of Health, Patty Hajdu. Dr. Fry said, "The pandemic has magnified the effects of an already devastating overdose crisis across Canada. In B.C., we've been expanding services as well as advocating for additional federal resources and I'm pleased that Health Canada is working with us to help separate more people from the toxic drug supply. I'm grateful to the frontline organizations whose critical work is so vital to B.C.'s overdose response and the people they serve."

Dr. Fry was joined by Sheila Malcolmson, BC's Minister of Mental Health and Addictions, and Dr. Patricia Daly, the Chief Medical Health Officer of Vancouver Coastal Health. All three agreed on the tenet that substance use disorder is a health condition that can be managed and treated if people are provided with services and supports that best meet their needs. The BC-CfE is doing its part to reduce overdose deaths by providing those living with opioid use disorder with a safer, medical alternative from a licensed prescriber and also by connecting people with critical health and social services.

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BC-CfE researchers examine aging and comorbidities in people living with HIV



Thanks to the introduction of highly active antiretroviral therapy (HAART) in the 1990s and the BC-CfE's Treatment as Prevention® strategy, people living with HIV (PLWH) in BC are now able to live longer lives. With an increased lifespan, morbidity and mortality from non-AIDS comorbidities have emerged as major concerns.

BC-CfE PhD student Ni Gusti Ayu Nanditha (Ditha), who's part of the BC-CfE's EMBARC team (Epidemiological, Mathematical and Biostatistical analysis and Research Collaboration in HIV/AIDS), recognized this issue and recently published a study titled "Excess burden of age-associated comorbidities among people living with HIV in British Columbia, Canada: a population-based cohort study".

This population-based cohort study described and compared trends of nine chronic age-related comorbidities among PLWH against a control group. The population-based nature of this study was one of its major strengths, as it included a large number of participants, a 12-year observation span and the ability to seek connections between several provincial healthcare databases. This access enabled an extensive review of individuals' healthcare use, including physician visits, hospitalizations, and prescription medications.

Through the course of the research, Ditha and her colleagues found PLWH experienced higher prevalence and earlier age at diagnosis of non-AIDS comorbidities than their HIV-negative controls. For instance, we now know PLWH experienced 10 times the burden of liver diseases compared with HIV-negative controls (25.3% vs 2.1%). This was the greatest disparity seen among all chronic diseases. Prevalence of COPD, liver and kidney diseases were found to be substantially elevated among PLWH with a history of injection drug use.

Ditha said, "Overall, this study stresses the need for optimized general clinical screening for chronic diseases at an earlier age among people living with HIV(PLWH). Additionally, our study illustrates a vigorous and replicable methodology that will improve the validity of studies of disease burden, particularly those using administrative health data. In the continuous efforts to address the gaps in care for aging PLWH in BC, our study contributes approaches which address some potential biases that may arise when comparing PLWH to HIV-negative individuals including consideration of differences in the demographics and healthcare engagement level of these populations."

COVID-19 UPDATE

The BC-CfE's continued response to COVID-19

BC-CfE leadership gathered virtually in late January to discuss and share with all BC-CfE staff the Centre's continued response to the COVID-19 pandemic. Dr. Julio Montaner, the BC-CfE's Executive Director & Physician-in-Chief, began the discussion by updating the audience on how HIV treatments and highly active antiretroviral therapy (HAART) have been adapted for this new COVID era.

Dr. Montaner shared that people living with HIV (PLWH) on HAART have the same COVID-19 outcomes as those living without HIV. Treatment for the SARS-CoV-2 virus, and prevention techniques, like social distancing and enhanced hygiene practices, are the same, regardless of HIV status.

Next, Dr. Montaner discussed a recently published editorial written by Drs. Alan Bernstein and André Veillette and Prof. Bartha Knoppers. All are members of Canada's COVID-19 Vaccine Task Force and expressed their shared position against the delay or altering of the two-dose schedule for the Pfizer and Moderna mRNA vaccines.

As the editorial explained, and Dr. Montaner concurred, Canada faces significant barriers in the delivery of the vaccines by the federal government, and in the vaccination program rollout by the provinces and territories.

Despite the barriers in vaccine distribution and rollout, Dr. Montaner, in his personal opinion as a physician, stands against calls for altering the two-dose schedule for the mRNA vaccines. Before COVID-19, vaccines based on RNA technology have never been tried on humans before, and altering vaccination schedules risks damaging approved protocols based on rigorous experimentation.

Dr. Peter Phillips, Clinical Professor in the Division of Infectious Diseases at the University of British Columbia, spoke on the subjects of COVID-19 vaccinations and treatments. Dr. Phillips noted Canada's high rate of "vaccine hesitancy", that is, reluctance to take the vaccine due to fear or other reasons. This rate is as high as 50%, even among health care workers. Dr. Phillips noted the historic speed with which the vaccine was developed, but assured the audience that the only "short-cut" taken by vaccine developers was the lack of long-term safety data. Of course, the lack of this data is due to the relative newness of COVID-19. And to withhold a working vaccine would mean an immoral loss of life on a massive scale.

Dr. Junine Toy, the Senior Manager of the BC-CfE's Drug Treatment Program, detailed how PLWH need to keep at least a month's worth of ART and all of the concomitant medications. This is a precautionary measure against possible supply-chain disruptions caused by the COVID-19 pandemic. Dr. Toy reported that thankfully the BC-CfE's Drug Treatment Program has not encountered any disruptions so far.

Finally, Dr. Zabrina Brumme, the BC-CfE's Laboratory Director, said the Centre's precision viral medicine services are back to being fully operational, and that testing volume and results turnaround are now consistent with pre-COVID-19 levels. In addition to maintaining the Centre's labs, Dr. Brumme's team has also developed a new method of quantitative viral load assays for SARS-CoV-2 using the relatively new technology of droplet digital PCR (polymerase chain reaction). This new method will enable BC-CfE researchers to learn more about COVID-19 as viral load assays for the virus are not yet widely available.

RESEARCH

BC-CfE researchers collaborate to determine impact of COVID-19 vaccines in residents of long-term care facilities in BC



Dr. Zabrina Brumme

BC-CfE researchers are working alongside colleagues from the University of British Columbia, Providence Health Care, and Simon Fraser University to investigate how elderly peoples' immune systems respond to COVID-19 vaccines. The researchers will also assess the viral, immunological and social factors that have contributed to COVID-19 outbreaks in long-term care facilities in order to better understand why and how the disease has been fatal to so many residents.

Funded through the Government of Canada's COVID-19 Immunity Task Force, this critical research into BC's long-term care facilities, will collect blood samples from long-term care residents before and again periodically after vaccination.

"We will use innovative and emerging laboratory tests to assess vaccine-induced immunity over time," said Dr. Zabrina Brumme, Laboratory Director at the BC Centre for Excellence in HIV/AIDS and Professor in the Faculty of Health Sciences at SFU, who is also one of the study's co-Principal Investigators.

Principal Investigator Marc Romney, MD, Clinical Associate Professor at UBC and Medical Leader for Medical Microbiology and Virology at St. Paul's Hospital, noted, "What we learn in this study will inform stakeholders on how best to protect individuals who live and work in long-term care facilities from COVID-19, prevent future outbreaks, and hopefully save lives."

BC Centre for Excellence in HIV/AIDS

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