



BC-CfE launches BOOST Quality Improvement Network building on previous BOOST Collaboratives

With BC in the midst of two public health emergencies, one for COVID-19 and one for drug overdose deaths, the BC Centre for Excellence in HIV/AIDS (BC-CfE) has just launched a new Quality Improvement Network for its BOOST Collaborative (Best-Practices in Oral Opioid agonist Therapy).

Led by Dr. Rolando Barrios, the BC-CfE's Senior Medical Director, the Vancouver and Provincial BOOST Collaboratives brought together more than 40 teams to deliver services through mental health and substance use programs, and stabilization and primary care clinics, both in health authority and private practice settings. The new Quality Improvement (QI) Network, launched on June 25th, will build on this work and continue with the common purpose of improving care for clients living with opioid use disorder (OUD) by systematically implementing, measuring and sharing best practices in Opioid Agonist Therapy (OAT).

The arrival of the new BOOST QI Network comes at a crucial time for this province as last month was the deadliest in BC history for illicit drug overdoses. In May 170 people died, with first responders attending to close to 2,300 overdose calls. Since the declaration of the public health emergency in early 2016, there have been more than 5,000 confirmed opioid-related overdose deaths in BC alone.

Hon. Judy Darcy, BC Minister of Mental Health and Addictions, summed up the lead-up to the tragic month by saying, "Before COVID-19, there was so much more to do, but we were heading in the right direction. The overdose death rate was coming down in BC, and the evidence told us that our collective efforts were making

a difference. The rapid scale up and distribution of naloxone and increased access to overdose prevention services (OPS) and treatment showed, through the BC Centre for Disease Control, that we had averted more than 6,000 deaths since the crisis began."

Indeed, since the global COVID-19 pandemic began, BOOST Collaborative partners have seen first-hand its early effects and impacts on the ongoing opioid crisis. With our borders closed, the usual illegal drug supply chains are disrupted leading to an increasingly toxic drug supply on the streets. COVID-19 has also increased unemployment, social isolation, and has exacerbated mental health and addiction issues.

The BOOST QI Network, however, has partners and leaders who have the benefit of experience and accomplishments from working within the BC-CfE's **Treatment as Prevention**[®] mandate.

Dr. Barrios says, "The QI Network is rooted in the experiences and accomplishments of the **Treatment as Prevention**[®] and the STOP HIV/AIDS Collaboratives."

BOOST collaborators stress the importance of using established improvement tools and methods to implement system changes. Doing so is critical in ensuring the maintenance of the gains made over the last couple of years in improving overall care for clients living with OUD.

Evidence shows that a significant proportion of individuals with OUD will reduce illicit opioid use and remain in treatment longer with appropriate doses of opioid agonist therapy such as methadone, buprenorphine/naloxone or slow release oral morphine.

Furthermore, the BOOST QI Network aims to provide equitable access to integrated, evidence-based care to help clients with OUD. The Collaborative's goals are to see 95% of clients with an active OAT prescription, 95% of those clients with an active OAT prescription retained on therapy for greater than 3 months, and 100% of teams with a process to monitor and incorporate the patient voice in their quality improvement work.

QI teams will be supported in their mission to achieve these goals by continued quality improvement coaching, educational webinars, quarterly feedback reports, access to expert faculty, and half-day Learning Sessions.

Another invaluable resource for the BOOST QI Network and its clients is the BC-CfE's Hope to Health Research & Innovation Centre in the heart of Vancouver's Downtown Eastside.

The Research & Innovation Centre provides integrated and accessible healthcare to clients in the inner city with complex healthcare needs. Many of these clients have multiple conditions that can include HIV, hepatitis C, and mental health issues. Staffed by an interdisciplinary team of physicians, nurses, counsellors, and peer navigators, the Research & Innovation Centre provide 'wrap-around' healthcare to clients, ensuring they receive the full continuum of care under one roof.

The BOOST QI Network project team say the early effects of COVID-19, and its impact on the ongoing opioid crisis, demonstrates the importance of using established improvement tools and methods to implement system changes. Doing so is critical in ensuring the maintenance of the gains made over the last couple of years in improving overall care for clients living with OUD.



» "The aim of the QI Network is to sustain the improvements achieved by clinical teams that participated in the BOOST Collaboratives. The enthusiasm, interest and commitment of the participating teams will continue to drive improvements in the way we deliver services and support clients who are on opioid agonist therapies."

— BC-CfE Senior Medical Director Dr. Rolando Barrios

BC-CfE releases new nurse practitioner course for treatment for people living with HIV



education.cfenet.ubc.ca/nurse-practitioner-program/

EXPANDING THE ROLE OF NURSE PRACTITIONERS (NPS) IN HIV CARE



» The BC-CfE clinical education team has a long tradition of working with BC's nurses, supporting the training of BC nurse practitioners (NPs) for HIV prevention. Now, new to NPs and the BC-CfE, is the addition of a training program that will provide unique educational opportunities to NPs to achieve the required proficiencies to initiate and monitor antiretroviral therapy (ART) for people living with HIV (PLWH) in BC.

This Tier 2 program is provided in addition to the existing Tier 1 NP training program for HIV prevention (PEP and PrEP). The BC-CfE recognized NPs have always been at the forefront of managing the primary care of PLWH, particularly in underserved areas of the province where access to family physicians or an HIV specialist is limited. In response to the BC College of Nursing Professionals (BCCNP) request, the BC-CfE developed a formal training program which provides an avenue for NPs to be able to prescribe ART while ensuring specific

competencies are reached. This partnership between the BCCNP and the BC-CfE led to the innovative program.

The NP Training Program gives credence to the important role that NPs have played over the years in caring for people living with HIV. It also provides further support to the BC-CfE's mandate to promote **Treatment as Prevention®**. We have already witnessed great successes in our Tier 1 program. During our first 13-month observation period, 21 NPs achieved prescribing qualifications for PEP and PrEP. As a result, there was a marked increase of unique clients enrolled for PrEP across the province. We anticipate the same success with Tier 2 as it will build capacity for PLWH to access timely ART and quality of care. We are confident that building the capacity of NPs, via the NP Training Program, to prescribe PEP, PrEP and ART, will make a positive contribution to **Treatment as Prevention®** in BC.

SCHOLARSHIP

Rachel Miller receives scholarship from Natural Sciences and Engineering Research Council

» The BC-CfE's Rachel Miller, a master's candidate working in the Molecular Epidemiology and Evolutionary Genetics group, is now a proud recipient of a Natural Sciences and Engineering Research Council (NSERC) CREATE scholarship. Miller is using this opportunity primarily to learn more about the SARS-CoV-2 pandemic.

The NSERC is the major federal agency responsible for funding natural sciences and engineering research in Canada. The agency's scholarship means Miller now has a full year of funding and the opportunity to visit and work with the highly-esteemed Dr. Tanja Stadler at Swiss Federal Institute of Technology (ETH Zurich).

While the world remains under a pandemic, NSERC is leveraging the expertise of researchers in natural science and engineering to address this unprecedented crisis. The Collaborative Research and Training Experience (CREATE) Program is intended for the Canadian researchers of tomorrow. It helps cultivate young researchers like Miller by improving training in areas like communication and collaboration, as well as by providing mentoring and experience.

Dr. Stadler, whom Miller will work with, is a German mathematician and professor of Computational Evolution at the ETH Zurich who is well-known for her work in the field of phylogenetics. Dr. Stadler is a world leader in the development of phylogenetic models and tools. Miller, who is hopeful that

international travel restrictions will not keep her from visiting Switzerland by next summer, plans to spend four months interning with Dr. Stadler and learning all she can about COVID-19 as well as HIV.

Miller says, "I am grateful to receive the financial support and very excited to have the chance to learn from a leader as highly regarded as Dr. Stadler."



BC-CfE Master's Candidate Rachel Miller

Speaking more specifically about her future research, Miller says she "will be using a method recently published by members of Dr. Stadler's lab to accurately estimate epidemiological parameters by using epidemiological data and molecular data simultaneously. This technique is applicable to the study of many different pathogens, so my learning during the internship will be relevant to my work on HIV as well."

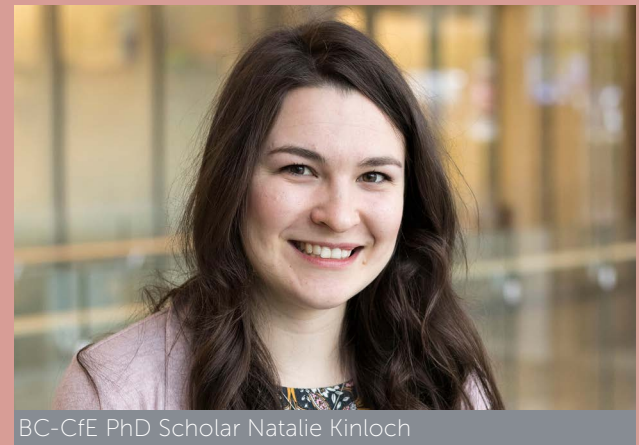
Epidemiological parameters include data such as case fatality and case recovery ratios, a disease's

basic reproduction number, and per day infection mortality and recovery rates.

Miller said, "So far the COVID-19 pandemic has of course made working a little more inconvenient, but it has also made for an interesting opportunity to apply the phylogenetic methods I already use in my graduate work at the BC-CfE outside of HIV."

NSERC researchers work at the cutting-edge of scientific innovation, and the BC-CfE is proud to have Miller as a CREATE scholar working to advance understanding of both COVID-19 and HIV/AIDS.

BC-CfE researcher calls for further improvements to 'game changing' test used to measure the HIV reservoir



BC-CfE PhD Scholar Natalie Kinloch

BC-CfE PhD scholar Natalie Kinloch has written a paper calling for further improvements to a 'game-changing' molecular method used to measure the size of the intact HIV reservoir. As an effective HIV cure will need to eliminate the intact HIV reservoir, methods to accurately measure it are of critical importance.

The new molecular assay, called the Intact Proviral DNA Assay (IPDA), was developed by leading HIV researchers at Johns Hopkins University. The IPDA requires less time, resources, and biological material than the previous gold standard reservoir measurement method, and therefore represented a major advance. It was developed to address the critical need for a precise and scalable method for intact HIV reservoir quantification.

Kinloch's as-yet-unpublished research, which was undertaken in partnership with Weill Cornell University in New York, confirms the method as highly valuable. However, Kinloch demonstrates that naturally-occurring HIV genetic variation causes the assay to fail in a substantial number of cases, up to 28 percent, and in other cases to underestimate reservoir size. Critically, Kinloch shows that these assay limitations could negatively impact results interpretation in clinical trials for an HIV cure.

Kinloch and colleagues conclude that while the IPDA represents an important methodological advance, the impact of HIV's genetic diversity on this assay should be addressed before the IPDA's widespread adoption, particularly in clinical trials that evaluate HIV remission or cure strategies. She underscores the need for collaborative efforts across the field to further refine this new test.

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.cfenet.ubc.ca

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Funding for the BC Centre for Excellence in HIV/AIDS is provided by the BC Ministry of Health.



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