

BC-CfE Research Assistants Aniqah Shahid and Nataile Kinloch

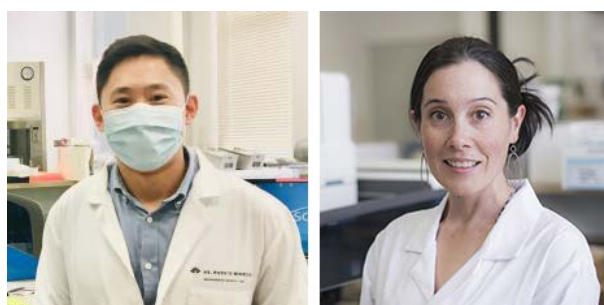
New BC-CfE research seeks to improve COVID-19 nasal swab collection procedures

New research that will help improve sample quality and patient experience in COVID-19 testing was recently published by BC-CfE research assistants Natalie Kinloch and Aniqah Shahid. Kinloch and Shahid are also PhD students in the Faculty of Health Sciences at Simon Fraser University under the supervision of SFU Professor and BC-CfE laboratory director Dr. Zabrina Brumme. Their findings were published in the scientific journal *Open Forum Infectious Diseases*.

Nasopharyngeal swabs are critical to COVID-19 diagnostics, but collection techniques vary. The swabbing procedure is also notoriously uncomfortable. With the goal of improving sample collection quality and patient experience, Kinloch and Shahid teamed up with Dr. Victor Leung, Medical Director of Infection Prevention and Control at Providence Health Care, to evaluate two commonly used swab collection techniques.

Specimen collection involves inserting a long flexible swab through the nostril all the way to the back of the throat to an area called the nasopharynx. This is a depth of about seven centimetres. The procedure must be performed by a trained healthcare professional familiar with the technique and nasal anatomy. There is, however, no consensus on what to do with the swab once it reaches the nasopharynx. In particular, many guidance documents recommend that the swab be rotated in place after contacting the nasopharynx, while others indicate that this is not necessary.

The research team recruited adult volunteers to undergo a nasopharyngeal swab with or without rotation, and asked the volunteers to rate their discomfort during the swab procedure. Kinloch and Shahid also used a laboratory technique called droplet digital polymerase chain reaction (ddPCR) to assess nucleic acid recovery as a marker of swab collection quality.



Drs. Victor Leung and Zabrina Brumme

Their results revealed that swab rotation did not enhance sample quality. Furthermore, responses from the participants suggested that rotation made the procedure less tolerable. The team's first major conclusion was therefore that swabs do not need to be rotated during sample collection.

Kinloch and Shahid's results additionally revealed that discomfort during the swab test varied widely: when participants were asked to rate their discomfort on a scale from zero to 10, their responses ranged from 1 to 10! On average, Asian

participants reported higher levels of discomfort than those who self-identified as White, a finding that may be explained by differences in nasal anatomy among ethnic groups. The team's second major conclusion was that care providers need to be sensitive to such differences in people's experiences. The team is working with Dr. Leung to translate their findings into an improved COVID-19 diagnostic experience for people getting tested.

Of the research, Kinloch said, "As a basic scientist, I often feel quite removed from the people my work will hopefully one day help. It has been very rewarding to contribute directly to the on-going COVID-19 pandemic response and be a part of research that has implications for clinical practice."

As for her contribution to the published study, Shahid said, "This research was indeed a result of a dynamic and collaborative team effort at SFU, BC-CfE and PHC. I am excited to be a part of the scientific community that is actively working to accelerate our current understanding of the COVID-19 pandemic.

This research, funded by Genome BC, was undertaken in partnership with Simon Fraser University and Providence Health Care. Ms. Kinloch is supported by a Vanier Canada Graduate Scholarship and Ms. Shahid by a CIHR Fredrick Banting and Charles Best Doctoral Award.

» "Although it certainly had its uncomfortable moments, I was glad to be a part of this research which will have a positive impact on COVID-19 testing."

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



Dr. Julio Montaner profiled in BIV's *LifeSciences* magazine



» Business in Vancouver's *LifeSciences* magazine recently profiled BC-CfE Executive Director & Physician-in-Chief Dr. Julio Montaner. In the profile, the history of Dr. Montaner's career is traced from his arrival in Vancouver from Argentina in the 1980s, to the creation of Highly Active Antiretroviral Therapy (HAART), up to the global spread of the cost-saving strategy of **Treatment as Prevention® (TasP®)**.

The made-in-BC **TasP®** strategy has been supported by the Joint United Nations Programme on HIV/AIDS (UNAIDS) since 2011, and helped to inspire an ambitious global target of 90-90-90. That target is 90% of people of people living with HIV must be diagnosed, 90% of people of those diagnosed must be on treatment, and

90% of those on treatment must have an undetectable viral load by 2020.

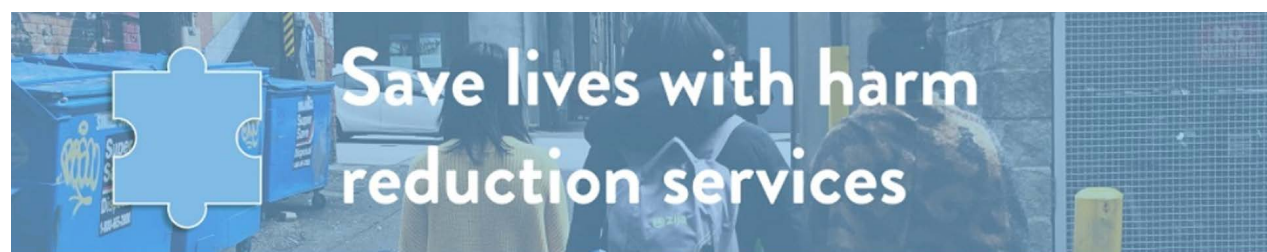
Despite being adopted by the UN and other countries, no other Canadian province is guided by **TasP®** for its HIV/AIDS care programs.

To this, Dr. Montaner said, "It takes political will. Because we were the most affected province, and had a smaller population than some other provinces, it was easier for us to move ahead with this."

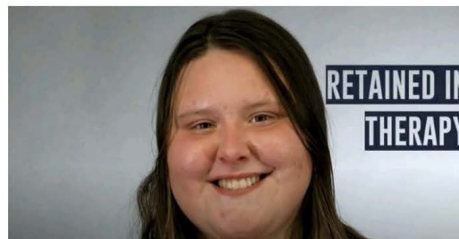
Dr. Montaner and the staff of the BC-CfE hope to replicate the success of **TasP®** by applying its principles to other diseases like hepatitis C, opioid use disorder, and psychosis.

NEWS

BOOST and Coast Mental Health Collaboration Improves Lives of Those Living With OUD



Young Adult Pilot OAT Clinic Indicates Harm Reduction Services Saves Lives



One of 21 young adults benefiting from the pilot OAT clinic.

» More than 1,300 people have died from illicit drug poisoning in BC so far this year.

Some months saw a death toll greater than double the same month the previous year, and June alone had 183 people die of an overdose. This was the highest monthly overdose related death toll in BC's history.

Now, more than ever, community-based harm reduction services and safer drug supply are needed to support people with opioid dependency. Coast Mental Health, a Vancouver-based non-profit founded in 1972, recognizes this urgent need and has recently highlighted its relationship to the BC-CfE's BOOST QI Network.

Best-Practices in Oral Opioid agonist Therapy Collaborative (BOOST) was launched in 2017 as a partnership with the BC-CfE and Vancouver Coastal Health. Twenty healthcare teams across Vancouver joined the Collaborative, unified under the shared goal of improving care for clients living with opioid use disorder.

As a member of the BOOST QI network, the team at Coast Mental Health revealed the difficulties some people have in staying in recovery, and the support needed to stay on track. Among the first steps towards recovery is getting people with opioid use disorder (OUD) onto Opioid Agonist Therapy (OAT), which provides treatments that include Suboxone and methadone to treat opioid dependency, reduce drug-related harms, and support long-term recovery.

Doctors, nurse practitioners, social workers and mental health workers comprise the team supporting those on OAT, as the process can be overwhelming including frequent prescription pick-ups and follow-up healthcare appointments. Healthcare workers in the BOOST network often provide daily check-ins.

Foundry at Inner City Youth and COAST co-manage 19 rooms at the St Helen's Hotel on Granville Street dedicated to youth/young adults aged between 19 and 24, all having experienced severe substance use disorder, mental health concerns, and homelessness.

In 2018, there were 24 overdoses recorded at St Helen's by 11 different youth and tragically there was one youth overdose related death. In early 2019, a OAT youth clinic at St. Helen's was established on site and the data indicates improved engagement with clients and fewer overdoses.

It's thanks to these lessons learned through the Vancouver BOOST Collaborative that local healthcare workers can better identify clients lost to care, and then reconnect them to community healthcare services that are essential in their recovery.

Since its inception in 2017, BOOST has evolved into the BOOST QI Network, a quality improvement network designed to improve on the lessons learned through BOOST with regular meetings and an Annual Congress. The 2020 Annual Congress will occur at the beginning of December, with personal stories from families of persons living with OUD and an opportunity for teams to come together and share success, challenges and learn from one another.

Momentum Health Study examines crystal meth use among gay men during TasP®



A study on the use of crystal methamphetamine by gay, bisexual, and other men who have sex with men (GBMSM) conducted by BC-CfE researchers was recently published in the journal *Substance Use and Misuse*.

The data gathered were from the BC-CfE's Momentum Health Study, a sexual health study of GBMSM in Greater Vancouver. The study has been active since 2012 and in 2017 relaunched as part of the national Engage study.

The researchers wanted to find out if GBMSM living with HIV and also within a **Treatment as Prevention® (TasP®)** environment were more likely to engage in different sexual and substance use behaviors.

To do so, researchers studied data from GBMSM in the Momentum Health Study, and were able to link crystal meth use to depression, sexual escape motivation, transactional sex, STIs, and other substance use. Many men who started using crystal meth reported doing so in order to "escape", in exchange for sex, and as a part of group sex.

The study's results suggest crystal meth use among GBMSM living with HIV is prevalent. However, crucially, the researchers found that crystal meth use remained relatively constant over the study period. There does not appear to be any association with the BC-CfE's **TasP®** public policy and crystal meth use among GBMSM living with HIV in Metro Vancouver. Compatibly, the **TasP®** policy originated by the BC-CfE ensures those who adhere to personally tailored antiretroviral therapy will retain an undetectable viral load and will not be able to transmit HIV.

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

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