



Are we close to the end of AIDS?

We need to end AIDS in Canada and establish a global model, writes BC-CfE Director Dr. Julio Montaner

Just two years ago, UNAIDS announced a window of opportunity to end the AIDS epidemic by 2030 by fast-tracking towards meeting the 90-90-90 Target. There was tempered optimism this ambitious goal was within reach. Now, the international HIV community is experiencing a sense of urgency: complacency is moving us perilously close to an HIV rebound.

This was a main focus when experts, advocates and community gathered for the most recent AIDS conference in Amsterdam this past summer. According to the World Health Organization, there are too many people not accessing care which will impede reaching the Target goals of 90% of all those living with HIV being diagnosed, 90% of all those diagnosed accessing treatment and 90% of those on treatment achieving viral suppression.

Some leading governments have stalled funding towards helping to expand access to treatment for ending AIDS. After widening access to treatment in Africa from a baseline of 50,000 to 14 million, funding for PEPFAR, the United States President's Emergency Plan for AIDS Relief, has generally plateaued for the past decade. This, despite the fact that HIV treatment is still not accessible in many health care settings in low- and middle-income countries.

At a time when we have reached consensus on the made-in-BC 90-90-90 Target as a means to end AIDS as a pandemic, the international community's investment is faltering. Canada needs to lead the

charge in asking for the expansion of the funding envelope to provide universal coverage for effective HIV treatment and prevention drugs.

At the last Global Fund Replenishment Conference in 2016, Canada boosted its international funding for fighting HIV by 20%. Canada must be a model in ending AIDS here at home and deliver on the promise of the **Treatment as Prevention® (TasP®)** strategy. The winning and cost-effective TasP® strategy, implemented in BC, involves expanding access to testing and the immediate, universal provision of HIV antiretroviral treatment upon diagnosis. More recently, seven Canadian provinces, including BC, expanded coverage of the HIV prevention drug, PrEP (pre-exposure prophylaxis).

The goal set to end AIDS by 2030 is not an arbitrary one. With a growing global population and strains to be imposed by climate change, we need to end AIDS before resources are shifted.

Climate change will impact progress on global health in ways both expected and unexpected. Food insecurity and drought can make it difficult to use HIV antiretroviral medications, even when available, as many must be taken with food. Triggered by the effects of changes in weather and landscape, mass migration is anticipated to increase.

Beyond the absence of action, discriminatory laws and policies in some world regions are targeting vulnerable groups such as people who use drugs and the LGBTQ community. Eastern Europe and Central Asia are seeing

sharp increases in new HIV cases. By the end of 2017, official estimates from Russia showed around 1 million people living with HIV and only about one third receiving treatment, well below the 90-90-90 Target. Each year the country is seeing around 100,000 HIV cases, one of the highest rates of new infections in the world.

North America is experiencing pockets of HIV growth, for example in regions of Western Canada and the Southern United States. Marginalization and a lack of access to testing, treatment, care and other supports creates an environment for the HIV virus to spread and thrive.

BC can show the world what is possible by reducing our yearly number of new HIV cases to double digits. We have seen a steady decline from around 900 at the peak of the epidemic to around 200 cases in 2016.

Mathematical modelling shows that TasP® when combined with PrEP could catalyze our progress towards ending AIDS. Also, integral to stopping HIV are outreach programs to address the basic needs of the most hard-to-reach populations, including barriers to treatment such as lack of housing or poverty.

This is not a drill. We know what will end AIDS is reducing stigma while expanding access to testing and treatment. Now, we need upfront investment in effective programs that could help locally, nationally and globally. Canada must lead by example by ensuring free access to TasP® and PrEP nationwide to end AIDS and curb the spread of HIV.

» "We are within an important window of opportunity. The world must accelerate along the path towards ending AIDS, as population factors are going to put increasing demands on funding."

— Dr. Robert Hogg, BC-CfE Senior Research Scientist



A decade of effective drug safety monitoring led by the BC-CfE



» Ten years ago, the BC-CfE officially launched the BC-CfE's Pharmacovigilance Initiative to closely monitor the safety of HIV antiretroviral drug treatment. Drug safety monitoring is integral to ensuring the effective implementation of the successful made-in-BC **Treatment as Prevention® (TasP®)** strategy to increase access to HIV testing and treatment.

Assistant Director of the BC-CfE, Dr. Rolando Barrios is the Principal Investigator of the Pharmacovigilance Initiative. He also leads BC-CfE programs in patient safety and continuous quality improvement. Bottom line, Dr. Barrios is constantly looking to improve on existing systems and practices—not leaving out any details.

Alongside Dr. Barrios, BC-CfE Pharmacovigilance Research Coordinator Katherine Lepik, a pharmacist, is responsible for tracking, analyzing and following up on adverse reactions (side effects) to antiretroviral drugs. This involves meticulously investigating such reports—which can come directly from health care providers, caregivers and patients themselves.

"This is a system that helps to confirm the safety and efficacy of the HIV drug treatment program," said Dr. Barrios. "The more information we gather the more we are able to directly improve patient care."

For example, the Pharmacovigilance Initiative has recently published work in the scientific journal *AIDS* describing the side effects of integrase inhibitors, a relatively new class of antiretrovirals. The initiative has also published a series of communications to warn clinicians and patients about dangerous drug interactions with HIV medications.

Adverse reaction reports received by the Pharmacovigilance Initiative can also help guide clinical decisions made by physicians and nurse practitioners. Health care providers can receive information about their patients' adverse drug reaction history through the BC-CfE's Drug Treatment Program (DTP).

The DTP is instrumental in providing universal access to HIV treatment in the province as part of the **TasP®** strategy. "In BC, the centralized management of HIV medications allows the BC-CfE to work closely with HIV

care providers to monitor antiretroviral safety trends and identify early warning signals of possible problems," said Lepik.

The history of the Pharmacovigilance Initiative runs closely parallel to the timeline of the implementation of **TasP®** in BC. In 2006, Dr. Julio Montaner introduced the concept of **TasP®** in a paradigm-shifting paper published in *The Lancet*, calling for providing immediate, universal access to HIV treatment upon diagnosis.

The scientific and medical community had not yet coalesced around the idea of earlier HIV antiretroviral treatment—at the time, many were still delaying initiation of treatment in order to reduce what was thought could be harmful side effects. However, HIV medications had improved from the earlier days of the epidemic and continue to improve today.

In 2007, the Pharmacovigilance Initiative began as a demonstration project funded by the Canadian Patient Safety Institute and then was officially launched at the BC-CfE in 2008.

"The Pharmacovigilance Initiative informs and supports the province-wide **STOP HIV/AIDS®** Initiative, launched in 2013," said Dr. Barrios. "**STOP®** aims to expand access to HIV testing, care and treatment across BC, in particular for the most vulnerable populations. We want to bring people living with HIV access to the best treatments available, most suited to their individual needs."

Drug safety monitoring is a cornerstone for the BC-CfE in expanding access to treatment for individuals living with HIV. "We continue to be vigilant, with a special focus on new drug safety monitoring," said Lepik. The Pharmacovigilance Initiative is now closely monitoring the safety of generic antiretroviral therapies and pre-exposure prophylaxis (PrEP). The emergence of generics has allowed for expanded provincial coverage of PrEP for eligible individuals in seven Canadian provinces. In January of this year, the Government of BC announced it would be offering universal coverage of PrEP at no cost to clients in order to help curb the spread of HIV among at-risk groups.

Adverse drug reports can be submitted directly to the BC-CfE website at this link: <http://bit.ly/drugsafetyreport>.

STUDY

BC-CfE study uncovers reasons for some in gay and bi community not accessing HIV testing

» Research from the BC-CfE's Metro Vancouver-based Momentum Health Study found 80% of gay, bisexual and other men who have sex with men had tested for HIV within the past two years. However, one in ten had *not* tested in the past two years and a further one in ten had *never* had an HIV test.

"Test and treat" is a mantra of the **Treatment as Prevention®** strategy to curb the spread of HIV. In BC, where **TasP®** has been implemented provincially, HIV testing guidelines recommend that all individuals be tested for HIV. These guidelines further recommend that populations with a higher burden of HIV should obtain an HIV test every year. This includes gay, bisexual and other men who have sex with men. Among Momentum Health Study participants, 23.4% are living with HIV. Gay and bisexual men make up the majority of new HIV cases in Vancouver.

Among Momentum study participants, the main reasons for individuals to not test were that they thought they

weren't at risk of HIV or had not yet gotten to it. Men who had not tested in the past two years tended to report fewer male anal sex partners, were less likely to have ever tested for other STIs (sexually transmitted infections) and were more likely to consider themselves to be very unlikely of acquiring HIV in their lifetimes.

Men who had never tested were more likely to be older, to identify as bisexual and to live outside the city of Vancouver. "Individuals who are not closely or actively linked to the gay and bi community may not be directly reached by health messages and interventions around HIV," said Dr. Heather Armstrong, post-doctoral fellow at the BC-CfE and the lead author on the study published in *AIDS and Behavior*. "It's important for testing messages to be inclusive and cognizant of community differences and subcultures."

A plain text summary of this and other research can be found online: <http://bit.ly/MomentumPTS>

Fall 2018 HIV/Antiretroviral Update



On Monday, October 22, 2018, the BC-CfE will be hosting the Fall 2018 HIV/Antiretroviral Update at the Sheraton Wall Centre Hotel. This open educational event is accredited by the College of Family Physicians of Canada and is intended for BC health care providers interested in HIV and antiretroviral therapy.

The program will cover updates on the overdose epidemic and the PrEP program, as well as topics such as: mental health & HIV, HIV cure research, hepatitis C management and emerging issues in antiretroviral therapy.

For those unable to attend in person, there will be a live stream capturing the day's presentations. The full program, list of speakers and details on how to view the live stream can be found at the following link: <http://bit.ly/Fall2018ARVUpdate>

LECTURES & EVENTS

Forefront Lecture

Phylogenetics in Epidemic Monitoring: Integrating Evolution and Epidemiology

Speaker: Dr. Jeffrey Joy

Wednesday, October 17, 2018, 12–1PM

Hurlburt Auditorium, Providence Level 2, St. Paul's Hospital

HIV Care Rounds

Title: TBA

Speaker: Dr. John Harding

Wednesday, November 7, 2018, 12–1PM

Conference Room 8, Providence Level 1, St. Paul's Hospital

For more information, contact us at Education@cfenet.ubc.ca or visit our website at www.education.cfenet.ubc.ca

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 B.C. 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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