



## In 2014, Panama joined forces with British Columbia to conquer HIV/AIDS



Panama joined China, France, Brazil, South Africa, Swaziland, and jurisdictions in the US including San Francisco, New York City, and Washington, DC, in adopting BC's HIV Treatment as Prevention® strategy.



Dr. Julio Montaner, BC-CfE Director; S.E. Javier Díaz, Minister of Health Panama; S.E. Sylvia Cesarato, Canadian Ambassador to Panama; Dr. Aurelio Núñez Maitín, Head, STI, HIV & Viral Hepatitis Program Panama



Dr. Rolando Barrios, BC-CfE Assistant Director

## Today, Panama cites TasP® success in reducing HIV morbidity and mortality

According to health officials, Panama's embrace of Treatment as Prevention® (TasP®) since 2014 has resulted in quicker diagnosis, as well as accelerating the linkage of patients to antiretroviral therapy (ART) clinics. The country's HIV diagnoses curve has stabilized in recent years and officials expect it will decrease in the coming years.

"We have achieved better adherence and there has been an increase in the percentage of patients with undetectable viral loads," says Dr. Aurelio Núñez Maitín, Head of the STI, HIV and Viral Hepatitis National Program in Panama. "The incorporation of the BC-CfE's TasP® strategy in Panama has permitted the decentralization of CD4 counts and pVL tests in the country and the incorporation of a new algorithm for diagnosing HIV. These helped facilitate the beginning of the 90-90-90 strategy in the country."

In addition to widespread HIV testing and immediate access to highly active antiretroviral therapy (HAART) for people living with HIV, the Ministry of Health is initiating a program titled "RAPID". This will focus on initiating patients into treatment immediately after diagnosis and on decentralizing services for people living with HIV so that they can receive treatment from general physicians and family doctors. Panama is increasing support for vulnerable groups such as MSM (men who have sex with men), women and transgender populations to encourage treatment adherence.

Panama, which has a population of 3.8 million, has an estimated 17,000 people living with HIV. Comparatively,

there are approximately 12,000 people living with HIV in B.C., which has a population of 4.6 million.

The BC-CfE and Panama's health authorities jointly developed research and HIV initiatives and created an HIV fellowship program allowing Panamanian HIV scientists to work with BC-CfE researchers and clinicians in Vancouver. During this time, the BC-CfE trained lab staff and students and provided science and support in the development and evaluation of Panama's TasP® strategy. The BC-CfE trained master's students and developed research on the cost-effectiveness of TasP® while also processing lab samples for HIV drug resistance.

In order to further develop the partnership, Panamanian health officials are developing a business case to expand BC-CfE support. The objective is to establish a facility similar to the BC-CfE in Panama, with BC-CfE support in an advisory capacity.

"Our most recent update from the Panama government shows that TasP® is working exactly as we hoped and expected, to bring down the existing morbidity and mortality rates in that country," says BC-CfE Assistant Director, Dr. Rolando Barrios. "Moving forward, existing TasP® infrastructure – and the investment made by the people of Panama – will also help the country grapple with HIV-related challenges as they deal with increased migration from neighboring countries."

Barrios believes there is an opportunity for the BC-CfE to expand the partnership with Panama, especially in

the area of the BC-CfE's phylogenetic "first-of-its-kind" system identifying HIV transmission outbreaks, or "clusters" (groups of recent, related, HIV infections). Adopting the BC-CfE mapping technology will allow Panama, especially during times of population growth, to proactively monitor and track HIV clusters to ensure people are getting the treatment they need while controlling the spread of HIV. Panama is also interested in the adoption of the BC-CfE's Targeted Disease Elimination™ (TDE™) approach that would help the country respond to infectious disease and other high burden diseases affecting the country.

"In addition to developing the program going forward, Panama will also need to address the supply of higher quality HIV drugs," says Dr. Rolando Barrios. "And in that case, global support for Panama will be crucial. Any concerns with slowing down the epidemic are due to the rapid rate of migration being experienced by Panama due to instability in surrounding nations. But, despite these challenges, Panama is a great success story."

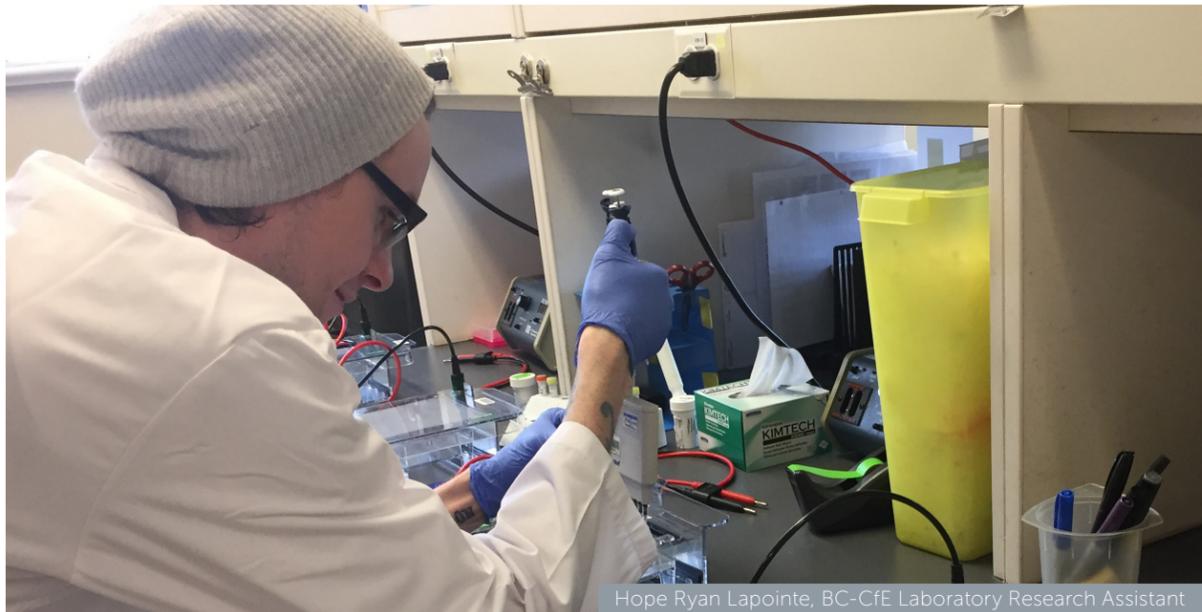
The memorandum of understanding (MOU) signed in 2014 in the global fight against HIV/AIDS, made Panama the first country in Central America to embrace TasP®. The country joined China, France, and Brazil, among others in adopting the strategy as their national HIV/AIDS policy. TasP® has also been implemented by cities across the United States, including San Francisco, New York City, and Washington, D.C.

» "Panama's embrace of TasP® has shown it is possible for countries - large and small - to chart a clear path toward achieving the UNAIDS 90-90-90 targets. With quicker time to diagnosis, immediate connection to care and proactive outreach to groups disproportionately affected by HIV, Panama serves as an inspiration to surrounding nations."

— Dr. Julio Montaner, BC-CfE Director



## Study finds high levels of drug resistance among Ethiopian children failing HIV treatment



Hope Ryan Lapointe, BC-CfE Laboratory Research Assistant

» New research from the BC-CfE, Simon Fraser University (SFU) and Hawassa University in Ethiopia, found high rates of HIV drug resistance in Ethiopian children. These children were failing their first-line of HIV treatment. High levels of drug resistance can limit future HIV treatment options.

“These results are concerning and show we need further research to determine how widespread the issue is globally and secure a firm commitment to **TasP®** in every corner of the world to eliminate the threat of HIV/AIDS,” says Dr. Montaner, Director of the BC-CfE. “In addition to diagnosing people and getting them on treatment to reduce disease progression and transmission, including mother to child transmission, we need to have patients on the most effective treatment right away with adequate follow up and support to maximize the chances of treatment success and prevent the development of HIV drug resistance.”

Researchers studied 94 children under the age of 15 who were failing first-line HIV treatment. The study team found 81 per cent of participants harbored some resistance mutations. Roughly two-thirds harbored resistance to drugs that are used in all first-line HIV

treatment regimens in children - both Nucleoside Reverse Transcriptase Inhibitors (NRTIs) and Non-nucleoside Reverse Transcriptase Inhibitors (NNRTIs). Forty-two per cent of resistant participants (or 30 per cent overall) harbored resistance to all four NRTIs recommended for second-line treatment.

Drug resistance mutations were most prevalent in children who had spent a longer period on HIV treatment and switched treatment regimens in the past.

“It is especially worrisome to see drug resistance in children, especially since the progression to AIDS happens faster compared to adults and because pediatric HIV treatment options are generally limited in resource-constrained settings,” says Dr. Zabrina Brumme, BC-CfE and health sciences professor at SFU.

Study researchers say local healthcare systems in resource-limited countries require global support to develop more robust systems to fully implement **TasP®**. Upon diagnosis, this includes viral load and drug resistance testing to continually monitor how well the treatment is working for the patient, as well as access to new medications and effective treatment options.

## STUDY

## Study finds higher level of sexual self-efficacy does not lower HIV risk for young women

» A research team from the BC-CfE, led by Kalysha Closson, Research Coordinator, Epidemiology and Population Health, recently studied the HIV prevention behaviour, including condom use, partner communication and refusal of unwanted sex, of adolescents in Soweto, South Africa. The study focused on the link between sexual self-efficacy (SSE) – one’s confidence or perceived control over sexual behaviour – and HIV risk.

“A reduction in condom use has been observed in South Africa, which has the highest absolute number of people living with HIV in the world,” says Closson. “This is a concerning development, particularly for young women in sub-Saharan Africa aged 15–24, who face HIV incidence rates up to four times higher than those of men in the same age group, which accounts for an average of 2,000 new infections every week in the country.

There is inconclusive evidence regarding SSE and condom use among adolescents within HIV hyper-endemic settings such as South Africa.

Closson and her colleagues examined 63 studies among youth in sub-Saharan Africa and found that young men may have higher confidence to use condoms compared to young women, and that high SSE in cross-sectional studies may be associated with consistent condom use reports. This was not found to be true for young women, particularly when reported within intervention studies aimed at increasing condom use or reducing HIV risk behaviour.

“The findings from these studies highlight that individual-level efforts aimed at improving young women’s confidence in their ability to reduce their risk for HIV through increased condom use and refusal of unwanted

sex are important,” says Closson. “However, in order for effective behaviour change to occur, efforts need to examine and focus on socio-structural barriers to sexual agency and decision making that prevent young women from translating perceived control into action.”



Kalysha Closson, BC-CfE Research Coordinator

Moreover, there is a clear need for diversity in HIV prevention methods that move beyond male-controlled condoms, according to Closson. Efforts in rolling out new prevention methods, such as pre-exposure prophylactics (in ring, gel and pill formation) need to continue to acknowledge the socio-structural and relational dynamics of sexual decision-making.

Researchers believe future research should examine motivations behind sexual initiation, intimacy, and experiences of intimate partner violence and controlling behaviour. Particularly among adolescent women within age-disparate partnerships who report high sexual self-efficacy, but don’t see it translate into consistent condom use.

AccoAIDS nominees to be celebrated on April 22



(May McQueen, one of the original Prison Outreach workers, volunteered with Positive Living for 30 years. May is in her 90’s now, but always comes by the lounge to visit with members over tea.)

The gala celebrating heroes in the decades-long HIV/AIDS movement in BC will take place at the Vancouver Convention Centre on April 22, 2018.

Organized by Positive Living BC, AccoAIDS honours the achievements, contributions and dedication of the volunteers, organizations, businesses and groups involved in the world of HIV/AIDS advocacy and research since 2002. All proceeds from the event benefit the support programs and services offered by the Positive Living Society of BC, western Canada’s largest charity serving people living with HIV/AIDS.

Past recipients from the BC-CfE include Drs. Julio Montaner, Michael O’Shaughnessy, Rolando Barrios, Silvia Guillemi, Robert Hogg and Richard Harrigan.

## LECTURES &amp; EVENTS

### Forefront Lecture

#### *Expanding Understandings of Violence Against Women*

Speaker: Dr. Andrew Gibbs

Tuesday, April 17, 2018, 12–1PM

Large Lecture Theatre, Providence Level 1, St. Paul’s Hospital

### HIV Care Rounds

#### *Introduction of Generic Antiretrovirals in British Columbia: A Counterfactual Analysis*

Speaker: Dr. Viviane Dias Lima

Wednesday, April 25, 2018, 12–1PM

Conference Room 7, Providence Level 1, St. Paul’s Hospital

### Spring HIV/Antiretroviral Update

Monday May 7, 2018, 8:30AM–4:30PM

Sheraton Wall Centre Hotel, Grand Ballroom-North Tower

Registration and a live stream for those unable to attend:  
<http://bit.ly/Spring2018ARV>

For more information, contact us at [Education@cfenet.ubc.ca](mailto:Education@cfenet.ubc.ca) or visit our website at [www.education.cfenet.ubc.ca](http://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.

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St. Paul’s Hospital Pharmacy Hotline  
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