



Dr. Julio Montaner, Director, BC-CfE, was the lead author of the new global plan.

Made-in-B.C. treatment strategy adopted by United Nations to combat HIV/AIDS internationally

UN General Assembly told 90-90-90 plan can end AIDS as an epidemic by 2030 if 'achievable' targets met

The United Nations (UN) unveiled an ambitious new global plan to end the AIDS epidemic by 2030. The plan embraces the made-in-BC Treatment as Prevention (TasP) strategy pioneered by Dr. Julio Montaner and the BC Centre for Excellence in HIV/AIDS (BC-CfE).

The plan was announced on September 25 by Jan Eliasson, Deputy Secretary-General of the UN, to the UN General Assembly in New York and is supported by Michel Sidibé, UNAIDS Executive Director and UN Under-Secretary-General.

The UNAIDS plan is based on modelling that demonstrates that achieving new targets by 2020 will spell the end of AIDS as an epidemic by 2030. A key pillar of the plan embraces HIV treatment as a means to prevent new infections. One of the most influential medical journals and a former UNAIDS special envoy both credit Dr. Julio Montaner for his contributions in authoring the TasP strategy that is the backbone of the global plan.

The UNAIDS plan, titled "Ambitious treatment targets: Writing the final chapter of the AIDS epidemic" is based on three targets:

- By 2020, 90% of all people living with HIV will know their HIV status

- By 2020, 90% of all people with diagnosed HIV will receive sustained antiretroviral therapy
- By 2020, 90% of all people receiving antiretroviral therapy will have viral suppression

"As these new targets reflect, efforts will be needed to explain to individuals and communities that antiretroviral therapy not only keeps people alive, but also prevents further transmission of the virus to sexual partners of people living with HIV and from mother to child," says the plan, popularly dubbed "90-90-90."

Dr. Montaner formally introduced TasP in 2006 at the International AIDS Society conference in Toronto. The TasP strategy involves widespread HIV testing and immediate offer of highly active antiretroviral therapy (HAART) to medically eligible individuals. Early engagement and sustained treatment has been shown to virtually eliminate progression of HIV disease to AIDS and premature death, and at the same time stop transmission of the virus. B.C. has virtually eliminated AIDS and markedly decreased the spread of new HIV infections. The B.C. strategy has been so successful that the province's dedicated HIV/AIDS Ward – which opened in 1997 at St. Paul's Hospital in Vancouver – was recently re-purposed because of the significant decline in new cases of AIDS in the province.

In making the global case for HIV treatment preventing new infections, the UNAIDS proposal cites BC-CfE research in the B.C. setting. "These findings are similar to those reported in the Canadian province of British Columbia, where every 1% increase in the number of people with suppressed virus has been associated with a 1.2% reduction in estimated HIV incidence."

Dr. Montaner was the lead author of the new UNAIDS plan, which was first proposed at the 20th International AIDS Conference in Melbourne, Australia. Montaner, Sidibé and the late Dr. Joep Lange fine-tuned the plan's final details in Geneva days before the conference.

"This plan is realistic and all the targets are achievable. We found a growing number of countries – both in northern and southern hemispheres – that are either on track to achieve 90-90-90 or have approached, met or exceeded one or more of these targets," says Montaner. "The problem is, it's not always the same player achieving the best performance. However, we can learn from each other. This plan sends a clear signal we need to invest in the best possible treatment for all."

In his remarks to the UN General Assembly, U.S. Secretary of State John Kerry commended those who have shown "the commitment to helping to write a new chapter in this fight against AIDS."

90-90-90 continued on pg 2

» 90-90-90 is not just a numeric target, it's a moral and economic imperative. It will drive the HIV-AIDS epidemic into history."

- Michel Sidibé, UNAIDS Executive Director and UN Under-Secretary-General, in a *Globe and Mail* interview.



90-90-90 *continued from pg. 1*

Stephen Lewis, the former UN secretary general's special envoy for HIV/AIDS, praised Dr. Montaner for TasP, which has increasingly been adopted by governments and non-profit agencies around the world. China, Brazil, Spain, France, Panama, Australia's State of Queensland – as well as the U.S. cities of New York, San Francisco and Washington D.C. – have already adopted TasP.

"I don't think Canadians understand the impact of what Julio has done," Lewis said in *Georgia Straight*, a Vancouver weekly newspaper.

In an editorial on the milestone announcement of 90-90-90 in Melbourne, *The Lancet* makes first mention of Dr. Montaner's groundbreaking work. In "Ending the AIDS Epidemic," editor-in-chief Richard Horton writes there are papers that *The Lancet* is "immensely grateful" to have published.

"One such *Lancet* paper is Julio Montaner's truly landmark 2006 viewpoint entitled, rather modestly now looking back, 'The case for expanding access to HAART to curb the growth of the HIV epidemic.' The idea of treatment as prevention was born," writes Horton of the evolution of TasP to the world stage.

Based on the consolidated guidelines recently put forward by the World Health Organization to initiate HIV treatment sooner in order to save more lives and prevent more infections, 90-90-90 replaces Treatment 2015, the UNAIDS campaign aimed at reaching 15 million people with HAART by 2015. Global efforts to increase the number of people getting access to life-saving HAART have advanced quickly, with 12.9 million people now receiving HIV treatment compared with 5.2 million in 2009, according to UNAIDS data.

"We're almost there in reaching the 2015 goal," says Montaner. "In conversations about 'what next,' we convinced ourselves that we needed not only a very aggressive new target, but a better one. We wanted a target that was comprehensive and no longer uni-dimensional. We wanted to incorporate a cascade of care and virological suppression so we ensure people get durable, sustainable and best-available treatment for their benefit, and ultimately transform the HIV/AIDS pandemic into a low endemic sporadic disease by 2030."

Health Ministers for both South Africa and Brazil, two countries with high HIV rates, have already endorsed the UNAIDS plan.

Overdose risk increases on 'cheque day'

Study findings released recently in *The International Journal of Drug Policy* reveal the risk of drug overdose among injection drug users increases dramatically on and immediately following the days income assistance cheques are distributed in B.C., which is usually the last Wednesday of each month.

Researchers at BC-CfE's Urban Health Research Initiative (UHRI) observed the risk of overdose among people injecting drugs at InSite, Vancouver Coastal Health's supervised injection facility, was more than twice as great on or immediately after "cheque day."

The increased risk could not be explained simply by a higher number of injections occurring, but rather riskier injections taking place at this time. (It should be noted no overdose deaths have been recorded at InSite since the facility's opening in 2003.)

"There is a clear pattern of elevated risk of drug overdose around cheque issue day," says senior author Dr. Thomas Kerr, director, UHRI. "Given the impacts for individual health and related social consequences, many of which may be related to most people receiving their payments at the same time, there is a strong justification for exploring alternative approaches to how income assistance is delivered in BC."

The study is based on comprehensive drug use and overdose data collected at InSite by facility operators between March 2004 and December 2010 and income assistance issue dates provided by the province.

In response to public and community concerns regarding overdoses and other drug-related harms coinciding with cheque day, researchers at UHRI have received funding from the Canadian Institutes of Health Research to conduct a randomized controlled trial to examine the impact of changing the timing of income assistance distribution.

Study volunteers randomized to the intervention arm of the study will volunteer to have their income assistance payments deposited directly into a personalized account at a partner credit union and distributed on a schedule that differs from regular income assistance issue dates. Other study participants will have their income assistance disbursed as usual, as a single monthly cheque.

Preparations for the study are underway with research partners including the Portland Hotel Society Community Services, Vancity, Vancouver Coastal Health and the Vancouver Police Department. The study is scheduled to begin recruitment in spring 2015.

'Alarmingly' high risk of hepatitis C infection among street youth

The high prevalence and incidence of hepatitis C virus (HCV) infection found among Vancouver street youth underscores the need for new health care interventions, says a new BC-CfE study published in the *British Medical Journal* (Open).

HCV infection is a leading cause of illness and death worldwide. Death from HCV has recently surpassed that from HIV in the United States. According to the study, Vancouver street youth are a particularly vulnerable population at elevated risk for HCV acquisition owing to a high prevalence of injection drug use.

From September 2005 to November 2011, 940 youth were recruited into the At-Risk Youth Study (ARYS), a cohort of street-involved youth in Vancouver. All youth completed blood tests to detect the presence of HCV infection at the start of the study. One hundred youth (10.6%) were found to be HCV positive at study enrolment. Of 512 youth who were HCV-negative at baseline and retested during the study period, 56 (10.9%) were HCV negative at baseline and found to have become infected with HDV.

"The risk for HCV acquisition among street youth in this setting was alarmingly high. This population should be a critical focus for evidence-based strategies to prevent and treat drug addiction and mitigate injection-related harm to avoid making the HCV epidemic worse than it is now," says Dr. Scott Hadland, lead author of the study and researcher with BC-CfE's Urban Health Research Initiative.

Researchers observed that daily injection of heroin, cocaine and crystal methamphetamine were all strongly associated with risk of HCV infection. The study was one of the first to also examine the association between the injection of prescription opioids (for example, OxyContin or morphine) and HCV infection. Contrary to the observations of researchers in other settings where prescription opioids have emerged as a primary concern, findings from this study reveal that in Vancouver, the risk of HCV infection from injection of prescription opioids was less than that of traditional street drugs, including heroin, cocaine, and crystal methamphetamine.

The prevalence of prescription opioid injection remained relatively unchanged during the study period. That being said, researchers stressed prescription opioid injection should be the focus of further study to explore this emerging and poorly understood practice.

The study highlights challenges in making drug prevention, treatment and harm reduction services accessible to street youth, who are a transient and difficult-to-reach population. Effective services are often developed for adult drug users and may be less accessible to this population. Barriers to accessing services for young drug users include excessively long waiting lists and locations that are inconvenient for youth. Existing drug treatment and harm reduction services should be extended in a way that is sensitive to the unique circumstances of youth.

AWARDS

Richardson recruited to addiction research initiative

Dr. Lindsey Richardson, Oxford-trained researcher and BC-CfE Urban Health Research Initiative (UHRI) research scientist, has been recruited as a tenure-track assistant professor of Sociology at the University of British Columbia (UBC).

"We are thrilled to have recruited Dr. Richardson to UBC Sociology," says Dr. Francesco Duina, professor and head, UBC Department of Sociology. "Her world-class training and track record of teaching and research excellence will strengthen our existing specializations in work and health as well as bolster our globally engaged department that likewise possesses a strong local focus."

Dr. Richardson, who received a Michael Smith Foundation for Health Research Career Scholar Award in June, will lead a research program dedicated to identifying how employment and the other ways people make money affect addiction, HIV outcomes and related health risks and harms.

Hayashi recognized by Royal Society of Canada

BC-CfE research scientist Kanna Hayashi is one of three winners of the Royal Society of Canada's Alice Wilson Award. The society's Academy of Social Sciences annually recognizes women of outstanding academic qualifications who are entering a career in scholarship or research at the postdoctoral level.

Hayashi's primary research interests include social epidemiology, community-based research, public health and human rights, and health of marginalized populations including people who use drugs.

LECTURES & EVENTS

Learning Session Three of the HIV Continuum of Care Collaborative

Wednesday October 22, 8:30 a.m. – 5 p.m.
Delta Vancouver Airport, Richmond

For more information, please visit: <http://stophivaid.ca/registration-information-learning-session-3/>

What's New in Addiction Medicine?

Tuesday, October 28, 12-1 p.m.
Hurlburt Auditorium, St. Paul's Hospital
Guest Speaker: Dr. Sharon Vipler

This lecture is open to the public and RSVPs are encouraged. For more details and to RSVP to this event, please visit www.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

Website
www.cfenet.ubc.ca

E-mail
info@cfenet.ubc.ca

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