



Dr. Reuben Granich and Dr. Julio Montaner

Dr. Lianning Ti

Dr. Patricia Daly

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Dr. Patricia Daly, Dr. Nadia Fairbairn and Dr. Peter Phillips

BC-CfE 2017 Spring HIV/Antiretroviral Update: Overdose epidemic will worsen, continuing hope for expanded HCV treatment and coverage

The 2017 Spring HIV/Antiretroviral update featured a diverse roster of leading health professionals to discuss the latest numbers from the front lines of the opioid epidemic, advances in Hepatitis C screening and progress in meeting 90-90-90 HIV/AIDS targets around the world.

ADDICTION

Dr. Patricia Daly characterized the current state of the opioid crisis in Vancouver as one of the most challenging public health emergencies of her career.

Vancouver is on track to exceed the number of opioid related deaths in 2016, with most of this year's fatalities occurring as a direct result of fentanyl or carfentanil contamination. Over 80 percent of people presenting with overdose are male, and while status First Nations people form only 2 percent of the population, 18 percent of overdoses seen in Vancouver's emergency departments from 2012-2016 were among this group.

While the crisis continues and harm reduction remains a priority, Dr. Daly highlighted the importance of early intervention, reaching out to Indigenous communities, supporting early childhood development, and addressing the needs of vulnerable youth.

Dr. Nadia Fairbairn followed Dr. Daly with a warning that Vancouver's current opioid epidemic resembles another public health crisis from Vancouver's past.

"The opioid crisis has been rivalled in modern history only by the peak of the AIDS epidemic in the 1990's," she said. "Although these epidemics differ in nature, the large scale, highly coordinated response to HIV and AIDS that had such a huge impact on changing its course, may be

instructive today in combating the opioid epidemic."

Dr. Fairbairn discussed loss of tolerance to opioids through detox, incarceration and hospitalization and the resulting increased risk of overdose post-release and increased risk of HIV morbidity and mortality. Fairbairn spoke to an alternative - initiating a "slow taper" using methadone or buprenorphine/naloxone in an outpatient setting - combined with counseling about overdose risk and take-home naloxone training.

SYPHILIS

Dr. Peter Phillips began his syphilis update with the question - is the epidemic under control? The short answer is no. While syphilis rates improved around 2010, they increased fivefold by 2015 in BC, and are projected to further increase in 2016.

Over 86 percent of men diagnosed with syphilis were men who have sex with men (MSM). Forty percent of newly diagnosed cases were also among HIV positive populations.

Phillips suggested new paradigms in treatment and treatment options as well as information about the impact of having HIV on treatment options - need to be explored.

HEPATITIS C

Dr. Lianning Ti shared good news regarding Hepatitis C (HCV) including a reduction in price for life saving drugs for Canadians, the introduction of safer and more tolerable medications, the development of new guidelines around the testing for HCV and the potential for universal coverage under BC's Pharmacare program in 2018-19 for

those living with the virus.

However, there continue to be challenges around testing for HCV. Only 44 percent of people living with HCV are aware of their status. While mortality related to tuberculosis, HIV and malaria is on the decline, HCV-related mortality continues to rise. Despite a large body of evidence and clinical guidelines to support one-time screening for HCV among baby boomers, the Canadian Task Force on Preventive Health Care recommended against screening for this population stating it found "no evidence on the effectiveness of screening HCV in the asymptomatic adult population".

Following Dr. Ti's presentation, Dr. Alnoor Ramji discussed the importance of providing timely HCV treatment to ensure improvement in all-cause mortality and decreases in liver related mortality, liver failure and liver cancer. Ramji says HCV elimination is a reality, provided physicians actively check patients for fibrosis and offer treatment regimens that are simple and effective in 90-95 percent of patients.

HIV

In Canada, 70 percent women living with HIV are between the reproductive ages of 15 and 39. Dr. Melanie Murray spoke about birth control options for HIV positive women, considerations for conception, preparing for pregnancy and pregnancy outcomes in HIV positive women. She pointed out that almost 50 percent of pregnancies among women with HIV are not planned, and that healthcare providers should consider the possibility of pregnancy throughout the reproductive years. Murray says planning for pregnancy must consider pre-

» Countries are now using this 90-90-90 target. Why is that important? Because I think that for the first time we are framing the response to the HIV epidemic and ending AIDS in terms of 'we are responsible for ensuring access to early diagnosis, successful treatment and viral suppression for everybody living with HIV and not just the people that show up at our clinics.' — Dr. Reuben Granich, Public Health Consultant



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conception health (undetectable viral load and adherence to therapy as well as management of co-morbidities), possibility of transmission between partners during conception, transmission from mother to infant and management of infertility issues.

Dr. Reuben Granich discussed the current state of global HIV care continua, global HIV policy and the worldwide progress on the 90-90-90 target.

There are 2 million new HIV infections every year, 37 million people with HIV worldwide and 1.1 million deaths. Roughly 60 percent of people know their status, 50 percent are on treatment and \$20 billion is being spent on HIV globally per year. One of the biggest challenges to "ending AIDS" is the global inconsistency in adopting the policy of testing and offering immediate treatment, but countries are rapidly moving towards this strategy.

Dr. Granich says the end of AIDS is feasible, but for the 90-90-90 target to be truly successful, the goal is to engage and keep 37 million people on life-long treatment until a vaccine and/or cure is available.

Dr. Réka Gustafson delivered Dr. Rolando Barrios' presentation discussing the gaps in the HIV continuum of care in British Columbia. Gustafson highlighted the

significant drop that occurs between linked to care and retained in care among people over 50 and under 30.

An area identified for further study was the low percentage of viral suppressions among women. The numbers show a major drop between diagnosis and linkage to care for women under 30.

Dr. Ronald Werb spoke about the effects of HIV on renal tissues, the immune response to the virus and the reaction within the kidneys as well as the impact of HIV treatment on renal function.

Dr. Greg Bondy discussed the management of obesity and metabolic disorders among people with HIV. Most patients who see body fat redistribution and increased obesity may be seeing these changes due to a higher baseline viral load, anti-retroviral therapy, chronic inflammation, body type, or hormones.

Dr. Robin Hsiung presented an update on HIV-associated neurocognitive disorders (HAND) and the range of disorders that fall under that category - from HIV associated dementia, mild neurocognitive disorders to asymptomatic neuro-cognitive impairment. Hsiung also discussed the current issues related to the diagnosis and management of HAND.

AWARD

BC-CfE's Dr. Bob Hogg receives PCHRI 2017 Research and Mission Award



From L to R: BC-CfE Director Dr. Julio Montaner, UBC Emeritus Professor, Dr. James Hogg, and BC-CfE Senior Research Scientist and award recipient, Dr. Robert Hogg

Dr. Bob Hogg, an internationally recognized researcher, leader in the field of HIV/AIDS and mentor to many at the BC Centre for Excellence in HIV/AIDS and across Canada, received the 2017 Research and Mission Award at the annual Providence Healthcare Research Institute's AGM in June.

The PCHRI Research and Mission Award recognizes Dr. Hogg's decades-long leadership in HIV treatment research and his impact on guiding policy here in British Columbia and around the world," said Julio Montaner, Executive Director, BC-CfE. "Bob continues to work tirelessly on improving outcomes for Canada's most vulnerable populations through continuing high-impact research."

Hogg's most recent work is largely focused on identifying ongoing health inequities, examining the accessibility of treatment and the impact of advancements in HIV/AIDS treatment on sexual behavior and monitoring the rate of new infections among the country's most vulnerable HIV-positive populations.

Dr. Hogg is a Professor, Faculty of Health Sciences at Simon Fraser University and a Senior Research Scientist in the Epidemiology and Population Health program at the BC Centre for Excellence in HIV/AIDS. He also serves as a Principal Investigator of the Canadian HIV Observational Cohort (CANOC) Collaborative Research Centre which aims to improve treatment quality, health outcomes, and engagement with evidence-based programs and services for people living and aging with HIV across Canada.

SCHOLARSHIP

BC-CfE researcher Stephanie Lake announced as 2017 Trudeau Scholar

Stephanie Lake, Research Assistant at the BC Centre for Excellence in HIV/AIDS and a doctoral student in the School of Population and Public Health at UBC, is one of fifteen recipients of the prestigious Pierre Elliott Trudeau Foundation doctoral scholarship in the humanities and social sciences.

One of 208 applicants from across Canada, Lake was awarded the scholarship to support her research into the health and social impacts of cannabis use, and specifically to investigate the possible benefits of cannabis legalization on opioid overdoses from heroin, fentanyl as well as prescription painkillers.

"While I was writing my master's thesis on the risk of overdose associated with injecting prescription opioids, a large study came out of the US showing that fatal opioid overdoses were reduced by 25 percent in states that legalized medical cannabis, compared to other states, suggesting that cannabis was replacing opioids in those states," says Lake. "Soon after I started my PhD, we elected a government that promised to regulate cannabis, which presented an opportunity to look at how cannabis use and legalization might affect communities dealing with the overdose crisis, such as people who use illicit drugs in the Downtown Eastside."

Findings from the research may be used to inform clinical practices surrounding opioid and cannabis prescribing among marginalized populations, developing harm reduction strategies and contributing to the Canadian framework for cannabis legalization.



Stephanie Lake

Although she will have finished her program before the impact of cannabis legalization can be fully evaluated, Lake hopes her findings will inform the ongoing discussion into legalization, with a focus on more nuanced research into the risks and benefits of cannabis legalization. She says it's important to let the research do the talking as cannabis legalization gets set to become a reality across Canada.

"Questions around public health are often influenced by the media. So far, we have seen an emphasis on some perceived harms of cannabis legalization in the form of cannabis-related impaired driving, for example, but little focus on the potential public health benefits," says Lake. "We want to make sure those potential benefits, especially for marginalized groups, are not overlooked."

RESEARCH FUNDING

BC-CfE's Dr. M-J Milloy awarded an additional \$2.5 M to continue ACCESS research

Dr. M-J Milloy, Research Scientist with the BC Centre for Excellence in HIV/AIDS, recently secured \$2.5 million over five years to continue the BC-CfE's high-priority research study on HIV treatment and disease among people who use illicit drugs.

Dr. Milloy is the Principal Investigator of ACCESS (AIDS Care Cohort to Evaluate exposure to Survival Services) – an ongoing prospective cohort of approximately 1,000 individuals living with HIV who use illicit drugs - funded by the United States National Institutes of Health (NIH). Over the next five years, the study will examine the effectiveness of the next generation of HIV treatment, assess how drug use and addictions treatments are affecting HIV-related outcomes, and investigate how social, structural and economic factors impact people living with HIV who use drugs.

"In this next phase of our research, we will expand to examine what it is like to live with this disease for so long," says Dr. Milloy. "Even if there is no disease progression, there is a constellation of co-morbidities including chronic pain, cardiovascular disease and premature aging. Mapping the presence of these conditions for drug users, and their experience accessing treatment for drug use and HIV, has not been done so far."

The U.S. funded study will be conducted in Vancouver where people who use drugs (PWUD) and live with HIV continue to experience high rates of sub-optimal HIV treatment and diseases outcomes. The city is also the site of an outbreak of HIV among PWUD with high levels of opioid, stimulant and polydrug use. Research will continue into how criminalization and marginalization of drug users effects their health.

"Good evidence increasingly points to the potent role that social, structural and economic exposures, such as homelessness and incarceration, have on HIV-related outcomes and yet these remain under-evaluated," says Milloy. "Medicine is not just a pharmaceutical process. While we need the right drugs, we also need to understand the circumstances in which people's health is created"

BC-CFE AT THE 9TH IAS CONFERENCE ON HIV SCIENCE (IAS 2017)

23-26 July 2017 | Paris, France

Brad Jones - BC-CfE Laboratory Program

Ignacio Rozado - Mathematical Modeler, Epidemiology and Population Health

Dr. Surita Parashar - Research Scientist, Epidemiology and Population Health

Kate Salters - Research Assistant, Epidemiology and Population Health

Ana Ulloa - Research Assistant, Epidemiology and Population Health

Dr. Lianping Ti - Research Scientist, Hepatitis C Research Program, Epidemiology and Population Health

Dr. Silvia Guillemi - Director, Clinical Education and Training Program; Assistant Medical Director at IDC

Dr. Jeff Joy - Research Scientist, Laboratory Program

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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