

## Research Focus

### Profile: British Columbia Centre for Excellence in HIV/AIDS

See [Perspectives](#) page 2131



BC-CfE

The British Columbia Centre for Excellence in HIV/AIDS (BC-CfE) opened in Vancouver, BC, Canada, in 1992. At that time, the province had the worst HIV epidemic in Canada, with two new HIV diagnoses and one person dying of AIDS every day. Canada and the world were grappling with the HIV crisis. Fast forward 23 years, and the vision and dedication of current director Julio Montaner, his team, and support from BC politicians past and present, have seen HIV rates in BC plummet from more than 800 new cases per year in the 1990s to their current low of under 250—the lowest rate in Canada.

Montaner ensured BC-CfE was the first centre worldwide to pioneer province-wide testing and roll-out of antiretroviral drugs (ARVs) using the treatment-as-prevention strategy that he was instrumental in developing. He suggested a decade ago, and subsequently proved, that it was possible to nearly eliminate HIV transmission with this approach, which is the inspiration behind the UN 90-90-90 target to diagnose 90% of people with HIV, ensure at least 90% receive ARVs, and that at least 90% of those treated are virally suppressed by 2020. This target forms part of the health goal in the Sustainable Development Goals.

Today, the BC-CfE's 260-strong team continues its focus on developing and implementing the latest HIV treatment and prevention strategies coupled with epidemiology and laboratory insights to defeat the epidemic. The centre also offers training programmes for health-care providers in HIV across Canada and globally.

BC-CfE's remit has now expanded to deal with other infectious diseases such as viral hepatitis. 80 000 people might be living with hepatitis C in BC alone, and Montaner is working on a targeted elimination strategy for hepatitis C, in which active

case-finding would be used to offer treatment within an optimised harm reduction environment and expanded addiction medicine services.

The centre is well known for its work on drug addiction, from the more established foes such as heroin through to the newly emerging epidemic of prescription opioid drug addiction, recently described as a public health emergency in Canada. It has worked in close collaboration with InSite, North America's first legal supervised injection site, in Vancouver. Several studies regarding InSite have shown that since it opened fewer people in BC are injecting drugs, more are accessing addiction treatment, and HIV transmission related to injection drug use has plummeted. All this despite the opposition of the previous Conservative Government, which had its bid to close InSite thrown out unanimously by the Canadian Supreme Court. "We have been in an almost constant battle with the previous federal government despite all the supportive evidence of what our programmes are achieving", says Montaner. "We are already experiencing a much more constructive relationship with the new Liberal Government."

Montaner's team includes director of operations Irene Day, who runs the centre and provides invaluable support regarding the centre's negotiations with politicians at all levels. Codirector of the Urban Health Research Initiative, Evan Wood (see Profile, p 2131) runs the centre's addiction programmes, while director Richard Harrigan leads the research laboratory. Harrigan worked on the development of some of the early ARVs, such as abacavir in the 1990s. "We test for drug resistance in most HIV patients in Canada, so each has their ARV regimen optimised. We are doing similar work for hepatitis C patients", he explains. His team is busy automating the technology on resistance testing, to

hopefully provide it free to centres worldwide. "The revolution in DNA sequencing has made this possible", explains Harrigan. "A small number of labs dotted around the globe could soon do the entire world's drug resistance testing", he adds.

The remit of assistant director Rolando Barrios is translating the research the centre has produced into clinical practice. He has two specific portfolios—epidemiology and population health and the implementation of the STOP (Seek and Treat for Optimal Prevention of HIV/AIDS) strategy. Based on the treatment as prevention concept, the goal of STOP is to retain HIV-positive individuals in care and treatment to bring down HIV morbidity, mortality, and transmission.

His focus also includes a project to re-engage around 1200 people across BC who have, for whatever reason, fallen out of the care pathway. "These patients' own health can suffer and they may become infectious again if they have stopped taking their ARVs", explains Barrios. The project alerts each patient's primary-care physician, and, if this is unsuccessful, staff at the centre will work with local public health officials to locate the patient and attempt re-engagement. "It's the first time clinicians and public health doctors have come together in this way" in Canada, says Barrios.

Looking to the future, Montaner concludes: "Now, while not taking our eyes off HIV, we must confront other epidemics, such as hepatitis C. The new drugs coming onto the market are fantastic, but the cost must come down to treat the population effectively. We feel certain we can transfer many of the lessons learned during the HIV pandemic to deal with other infectious diseases."

Tony Kirby



BC-CfE



BC-CfE