forecast
JAN09
Journal of the BC Centre for Excellence in HIV/AIDS
St. Paul's Hospital, Vancouver, B.C.

# Aboriginal street youth more likely to be HIV-positive

In Canada, there are upwards of 150,000 homeless and street-involved youth, and they are far more vulnerable to HIV and other sexually transmitted infections. In fact, infection rates for diseases such as chlamydia and gonorrhea are 10 times that of the general adolescent population in the country. And certain factors, including ethnicity, can increase a youth's risk profile even more. In particular, the Aboriginal population in Canada is represented disproportionately among HIV infections. Although only 3.3% of Canadians identify as American Indian, First Nations, Inuit or Métis, Aboriginal people accounted for 18.8% of positive HIV test reports in 1998. That number surged to 27.3% in 2006.

Researchers with the BC Centre for Excellence in HIV/AIDS looked at HIV infection among a group of more than 500 Vancouver street youth between the ages of 14 and 26 who were homeless or street-involved and spent most of their time in the Downtown Eastside. The study drew from the At Risk Youth Study (ARYS), a prospective cohort of more than 500 drug-using and street-involved youth who live in the Vancouver area. A total of 529 participants, with a median age of 22 years, completed a baseline survey and were eligible for this analysis. Of these, 76.4% had been homeless in the past six months, and 41.8% reported ever injecting drugs. One hundred and twenty-seven participants (24%) self-identified as Aboriginal, American Indian, First Nations, Inuit, or Métis.

Research showed that 2% of the non-Aboriginal youth in the study were infected with HIV, while among Aboriginal youth the figure was 5.5%. This means that Aboriginal youth were nearly three times as likely to test positive for the virus that causes AIDS.

Surveys distributed to participating youth included questions about their injection drug use, syringe sharing, history of incarceration, history of sex work and history of sexual abuse. The fact that the HIV-infected Aboriginal youth were less likely to report injection drug use and be co-infected with hepatitis C suggests that factors such as unsafe sexual activity and sex work may be responsible for a significant proportion of infections. More than half of youth participating in the study reported experiencing sexual abuse.

Previous Vancouver-based studies have identified incarceration as increasing HIV risk behaviours and HIV incidence; this study similarly linked a high prevalence of incarceration among the youth with a high risk of infection. All seven Aboriginal youth who tested positive for HIV also reported a history of incarceration.

The research points to the immediate need for culturally appropriate and evidence-based programs to support HIV-positive Aboriginal youth and to prevent further infections among this marginalized population. The results of this study also support statements by the Assembly of First Nations and the Canadian AIDS Aboriginal Network that programs for Aboriginal young people are chronically under-funded.

Further investment in existing programs and the creation of new evidence-based strategies, with the full participation of the Aboriginal community, are urgently required to prevent further infections among Aboriginal youth and to support those who are already infected.

# YouthCO reaches HIV-positive B.C. youth through peer-driven services

B.C.'s young people are at risk for HIV. Stigma and discrimination, peer and social pressure, inexperience and lack of information increase the likelihood that they will engage in higher-risk behaviours. Youth aged 19 to 25 have the fastest growing rate of infection in North America, and in Canada, the average age of HIV infection is 23 years old.

As the rate of HIV rises among this demographic, there is an increasing need for outreach geared towards young people – outreach that breaks down stigma and discrimination, provides guidance on reducing the risk of infection, and offers support for youth with HIV/AIDS.

Brandon Marshall

YouthCO has been offering youth-focused HIV/AIDS support and education in B.C. since 1994. Over the years, the organization has developed a wide range of outreach tools designed to engage a diverse audience that includes youth who may be rural- or urban-dwellers, incarcerated, street-involved, Aboriginal, lesbian/gay/bisexual/transgendered and speakers of English as a second language. Their success in connecting with young people from all walks of life is due largely to their unique, peer-based model.

"YouthCO is Canada's first and largest totally youth-driven HIV/AIDS organization," explains Brandon Marshall, who is a volunteer and board member. "It's consensus-based, non-hierarchical and very different from anything else that's out there for HIV-positive and other youth."

Marshall is a PhD student at the BC Centre for Excellence in HIV/AIDS whose work focuses on methamphetamine use and HIV risk among youth. He has been working with YouthCO for over three years, beginning by volunteering with one of its theatre programs: a troupe that specializes in involving the audience in working through specific themes or conflicts related to HIV-related stigma or oppression. Workshop themes can also include issues such as sex, sexualities, drug use and self-esteem.

Programs for HIV-positive and hepatitis-C-positive youth include individual, one-on-one support sessions, group support and a support group geared towards young HIV-positive women. YouthCO also offers sexual health programs for public, private and ESL schools, and harm reduction programs that are focused on increasing youth's knowledge and skills around HIV and hepatitis C, and reducing the risks associated with using drugs. Harm reduction workshops and games are provided to detention centres, treatment centres and drop-in centres for street-involved youth across B.C.

YouthCO often works with other organizations to create programs that are culturally relevant to a specific demographic; they are currently partnering with Aboriginal groups Healing Our Spirit and Chee Mamuk to develop an Aboriginal youth-friendly program that reaches this at-risk population. The new program will incorporate traditional Aboriginal culture and art techniques to explore some of the issues that HIV-positive and hepatitis-C-positive youth experience.

Marshall now sits on the board of directors, which is made up of individuals who are all 29 years old or younger. "Over its 15-year history, we have been able to use our unique position as a completely youth-driven organization to address the evolving concerns that youth infected and affected by HIV face," says Marshall. "Our staff and volunteers have always been committed to providing the most innovative, relevant and progressive programs for young people, and it is for these reasons that we have had so much success working with youth communities."

More information on YouthCO's programs and services can be found at **www.youthco.org**.


## Short-term virologic failure and clinical outcomes for antiretroviral-naïve patients

*The Antiretroviral Therapy Cohort Collaboration*

This study determined that differences in short-term virologic failure among commonly used antiretroviral therapy (ART) regimens do not necessarily translate to differences in clinical outcomes for antiretroviral-naïve patients initiating ART.

13,546 antiretroviral-naïve HIV-positive patients initiating ART with efavirenz, nevirapine, lopinavir/ritonavir, nelfinavir, or abacavir as third drugs in combination with a zidovudine and lamivudine nucleoside reverse transcriptase inhibitor backbone were studied between January 2000 and December 2005.

The study tracked short-term (24-week) virologic failure (>500 copies/ml) and clinical events within 2 years of ART initiation (incident AIDS-defining events, death, and a composite measure of these two outcomes).

Compared with efavirenz as initial third drug, short-term virologic failure was more common with all other third drugs evaluated; nevirapine (adjusted odds ratio=1.87, 95% confidence interval (CI)=1.58–2.22), lopinavir/ritonavir (1.32, 95% CI=1.12–1.57), nelfinavir (3.20, 95% CI=2.74–3.74), and abacavir (2.13, 95% CI¼1.82–2.50). However, the rate of clinical events within 2 years of ART initiation appeared higher only with nevirapine (adjusted hazard ratio for composite outcome measure 1.27, 95% CI=1.04–1.56) and abacavir (1.22, 95% CI=1.00–1.48). *(AIDS)*

## CD4+ T-Cell count monitoring and virologic failure in adults taking ART

*Moore D; Awor A; Downing R; Kaplan J; Montaner J; Hancock J; Were W; Mermin J*

This study found that using CD4+ T-lymphocyte (CD4) counts to monitor response to antiretroviral therapy (ART) in resource-limited settings does not accurately identify individuals with virological failure.

Various definitions of immunologic failure were examined to identify individuals with viral loads (VLs) ≥ 50, ≥ 500, ≥ 1000, or ≥ 5000 copies per millilitre at 6, 12, and 18 months after treatment initiation.

One thousand sixty-three ART-naive persons who initiated ART in Tororo, Uganda, were examined at 6-monthly intervals for CD4 counts, CD4 percentages, and VL.

The proportion of individuals with virologic failure ranged between 1.5% and 16.4% for each time point. The proportion with no increase in CD4 count from baseline did not differ between those with suppressed or unsuppressed VLs at 6, 18, and 24 months after ART initiation. No increase in CD4 cell counts at 6 months had a sensitivity of 0.04 [95% confidence interval (CI) 0.00 to 0.10] and a positive predictive value of 0.03 (95% CI 0.00 to 0.09) for identifying individuals with VL ≥ 500 copies per millilitre at 6 months. The best measure identified was an absolute CD4 cell count <125 cells per microlitre at 21 months for predicting VL ≥ 500 copies per millilitre at 18 months which had a sensitivity of 0.13 (95% CI 0.01 to 0.21) and a positive predictive value of 0.29 (95% CI 0.10 to 0.44). *(Journal of Acquired Immune Deficiency Syndrome)*

## Measuring the stigma of STIs among women in a high-risk neighbourhoood

*Rusch M; Shoveller J; Burgess S; Stancer K; Patrick D; Tyndall M*

The objective of this study was to develop a scale to measure women's unique experience of stigma related to sexually transmitted infections (STIs), based on the assumption that women's experience of stigma related to sexual behaviours is different than men's.

Women in a low-income neighbourhood with high prevalence of substance use were passively recruited to take part in a cross-sectional structured interview. Exploratory factor analysis was used to identify stigma scales, and descriptive statistics were used to assess the associations of demographics, sexual and drug-related risk behaviours with the emerging scales.

Three scales emerged from exploratory factor analysis – female-specific moral stigma, social stigma (judgment by others) and internal stigma (self-judgment) – with alpha co-efficients of 0.737, 0.705 and 0.729, respectively. In this population of women, internal stigma and social stigma carried higher scores than female-specific moral stigma. Aboriginal ethnicity was associated with higher internal and female-specific moral stigma scores, while older age (>30 years) was associated with higher female-specific moral stigma scores.

The study suggests that health programs and messaging could be tailored to encourage individuals to seek sexual health care and address the broader aspects of the stigma experience. *(BMC Women's Health)*

# Yukon receives access to accidental exposure management expertise

The BC-CfE is helping the Yukon medical community manage cases of accidental exposure to HIV in this remote area through a combination of access to guidelines and telephone support. The program is coordinated through the efforts of Dr. Alastair McLeod.

BC-CfE is helping remote communities such as those in the Yukon to access specialized information and support.

Dr. McLeod, a dermatologist, became involved early on in treating patients with AIDS because of the prevalence of skin conditions among the early cases. His work with AIDS patients led him to help in founding the BC Centre for Excellence in HIV/AIDS in 1992.

However, even before the inception of the BC-CfE, he was instrumental in developing the original guidelines for management of accidental exposure to HIV. "I have been treating accidental exposure cases for more than 20 years," he explained. "There was a great need to put guidelines in place to provide information and offer reassurance to the many health-care workers who were fearful of the risks they ran."

Today, the guidelines are an integral part of the prevention and treatment of accidental exposure to HIV. And now, physicians such as Dr. McLeod are helping more remote communities such as those in the Yukon gain access to this specialized information and support. Dr. McLeod visits the Yukon regularly in his capacity as a dermatologist. Along with access to the guidelines themselves, the medical community in the Yukon, including pharmacists, can connect by phone to expert input through the Outpatient Pharmacy at Providence Health Care. Patients with HIV are treated by Dr. Barbara Romanowski, an infectious diseases specialist based in Edmonton.

"Excellent preventive care should be available to all health-care workers, whether they work in urban, rural or remote areas," said Dr. McLeod.

WorkSafeBC, the Ministry of Health and the BC-CfE all contribute resources towards offering co-ordinated care for those affected by accidental exposure in B.C.; in the Yukon, the program is led by Dr. Brendan Hanley, Medical Officer of Health.

# what's new

**New studies published by the BC-CfE:**

- *High rates of homelessness among a cohort of street-involved youth* – Rachlis BS, Wood E, Zhang R, Montaner JS, Kerr T
- *Canada's new federal 'National Anti-Drug Strategy': an informal audit of reported funding allocation* – Debeck K, Wood E, Montaner J, Kerr T
- *Structural and Environmental Barriers to Condom Use Negotiation With Clients Among Female Sex Workers: Implications for HIV-Prevention Strategies and Policy* – Shannon K, Strathdee SA, Shoveller J, Rusch M, Kerr T, Tyndall MW

Study abstracts can be found at **www.cfenet.ubc.ca** in the Research section.

*What's New* welcomes event submissions from all HIV/AIDS-related agencies. Please e-mail submissions to **info@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.

**Undeliverable copies, notices to**
608 – 1081 Burrard St.
Vancouver, B.C. V6Z 1Y6
Tel: 604.806.8477
Fax: 604.806.9044

**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

Funding for the BC Centre for Excellence in HIV/AIDS is provided by the B.C. Ministry of Health through Pharmacare and the Provincial Health Services Authority.