HIV and hepatitis C in Alberta

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Researchers with the Public Health Agency of Canada (PHAC) and Alberta Health Services have been conducting a study among people who inject illicit drugs to gain a better understanding of the epidemics of HIV and hepatitis C virus (HCV) in that population. The study team focused its efforts on the city of Edmonton. They found relatively high rates of HIV and HCV among injection drug users (IDUs). In their report the researchers stated that IDUs “have complex needs” and programs that help this community with addiction, medical, psychological and other issues need to continue.

Study details

In 2005 researchers recruited IDUs in Edmonton as part of a Canadian study called I-Track. This study was developed by PHAC to investigate high-risk behaviours and viral infections such as HIV and HCV among IDUs across Canada.

Blood was collected and sent for analysis to Canada’s National HIV and Retrovirology lab. Since HIV testing was anonymous and because it was not linked to anyone’s name in the Edmonton study, participants did not receive the results because researchers could not match test results to the identity of a person. However, along with the study, regional testing programs offered simultaneous testing for HIV and HCV infections in case participants wanted to know their status. Research nurses surveyed participants about their life and behaviours.

The study recruited 275 participants who had the following average profile:

- 32% females, 68% males
- age – females 36 years; males 39 years
- 71% of participants identified as Aboriginal people – First Nations, Métis and Inuit
- females were more likely to be of Aboriginal ancestry (84%) than males (64%)

Results—substance use

Participants reported that the two most common substances they injected in the past six months were as follows:

- cocaine – 37% of participants
- morphine – 25% of participants

The most commonly used substance that was not injected was this:

- crack cocaine – 22% of participants

Focus on injecting

The researchers found that male participants were more likely to begin injecting drugs at an earlier age (18 years) compared to females (21 years).

About 22% of participants disclosed that they injected drugs between two and five times each day.

Nearly 75% of participants reported that they most frequently injected drugs with another person. Women were
more likely to inject drugs with a regular partner (34%) compared to men (14%).

Nine percent of people disclosed that they shared needles in the past six months. Women were about five times more likely to share needles than men.

Eighty-two percent of participants had used a needle exchange facility some time in the past six months and some people used them frequently, as follows:

- 5% used a needle exchange daily
- 30% used a needle exchange weekly

**Sex**

During the past six months, 85% of participants reported having a sex partner. In most cases this was their regular partner.

Among people who had casual sex partners, women were more likely to disclose being paid for sex (34%) than men (3%). More men reported that they had paid for sex (6%) than women (0%). During their last episode of sex, women were less likely (40%) to report using a condom than men (58%).

**Focus on HIV**

About 24% of participants were HIV positive and 92% reported being tested previously. Among participants who disclosed that their previous HIV test was negative, six new cases of HIV were detected.

Among the 65 participants who said that they were HIV positive, most reported being in medical care yet only 40% were currently taking anti-HIV therapy.

**Risks for HIV**

Among women, engaging in the sex trade increased their chances of being HIV positive threefold.

Men who used needle exchanges or who were older were more likely to be HIV positive.

**Focus on HCV**

About 66% (181) of participants tested positive for HCV. Among these 181 people, 54% disclosed that they were being monitored for this infection. However, only 3% of HCV-positive people were currently receiving treatment for this infection.

Researchers found that men who began injecting drugs at a younger age had a greater risk for becoming HCV positive. This trend was not seen in women.

Based on the data from the Edmonton study, the team was not sure why needle exchanges apparently did not have a greater impact on preventing HIV transmission. Bear in mind that the Edmonton report is based on a cross-sectional study—analogous to a snapshot at one point in time. It was not a study that monitored a group of people over time, which would have been more complex and expensive. Statistically, cross-sectional studies are good at finding associations but cannot conclusively prove a link between cause and effect. So the Edmonton study cannot be reliably used to evaluate the impact of needle exchange programs in that city.

The researchers suspect that because of links between injecting drugs and engaging in the sex trade more cases of HIV were transmitted via unprotected sex than sharing needles in their study. Indeed, the Alberta Ministry of Health, Alberta Health and Wellness, has found that since 2002 HIV has been transmitted mostly by unprotected sex in that province.

**Beyond needles**

The study team says that safer-injecting habits likely have played a role in restricting the spread of HCV. But sharing needles and other injection drug equipment is just one way of transmitting germs. In the Edmonton study, 22% of participants disclosed that the use of crack cocaine (likely smoked) was relatively common. So it is possible that
equipment that is shared when smoking crack—such as crack pipes, which can cause cracks and sores on the lips—could also spread HIV and other germs. The research stated that the impact of “[safer] crack distribution kits [on the spread of HIV and HCV] would be worth exploring” in a future study.

**Aboriginal people**

The researchers found that most of the people in the Edmonton study were of Aboriginal descent yet Aboriginal people comprise about 5% of Alberta’s population. This over-representation of Aboriginal people affected by intersecting issues of substance use, addiction and blood-borne infections has been found at other I-Track sites in Regina and Winnipeg. In Canada, after White people, Aboriginal people are the second largest ethno-racial group infected by HIV.

The research team says that all of the evidence points to this:

“...the need for commitment to and support for the development and implementation of [disease] prevention and control strategies among Aboriginal persons in Canada.”

Presumably Aboriginal people and organizations would be deeply involved in such strategies. These plans would need to address a wide range of issues that affect the health and well-being of Aboriginal people in the 21st century in order to help their communities become stronger and more resilient.

—Sean R. Hosein

**REFERENCE:**

Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV- and hepatitis C-related illness and the treatments in question.

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