Canadian study finds increased risk of death among HIV-positive Indigenous people

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Studies done in the past 35 years have found that, in general, Indigenous people in Canada have shorter life spans than non-Indigenous people. The direct causes of this reduced survival have been linked to the following issues:

- cardiovascular disease
- gastro-intestinal diseases
- cancer
- motor vehicle accidents
- substance use
- HIV infection

Indigenous people and HIV

Since the introduction of potent combination anti-HIV therapy (ART) in 1996, deaths from HIV-related complications have dramatically decreased in Canada. However, a team of Indigenous and non-Indigenous researchers has reviewed health-related information collected from HIV-positive people by clinics in B.C., Ontario and Quebec through a collaboration with the Canadian HIV Observational Cohort (CANOC). The researchers found that in the recent era (2000 to 2012) HIV-positive Indigenous people who were prescribed ART continued to have elevated rates of death compared to non-Indigenous people. The team called for “immediate action” to identify the causes of death in order to find ways to improve the health of Indigenous HIV-positive people.

Study details

Thanks to the participation and advice from Indigenous people, the research team developed what they called an “Indigenous Health Epidemiology Model”—a framework that unites Indigenous and epidemiological perspectives.

The dataset that the research team used was CANOC, which collects health-related data from many clinics in several provinces across Canada. It uses data from HIV-positive participants once they have initiated ART. The data is stripped of identifying information and analysed from time to time.

The study team focused on data from 7,080 participants that were collected between the years 2000 and 2012. The average profile of participants upon entering the study was as follows:

- 79% men, 21% women
- age – 40 years
- CD4+ cell count – 210 cells/mm$^3$
- viral load – 78,000 copies/mL

The ethno-racial composition of participants was as follows:

- Indigenous – 497 people
- White – 2,471 people
- African, Caribbean or Black – 787 people
Results

Over the course of the study, 10% of participants died. Indigenous people were at significantly elevated risk of death compared to non-Indigenous people.

There are many measurable factors that could affect a person’s health and chances of survival. When researchers took into account some of these factors—age, gender, route of HIV infection, co-infection with hepatitis C virus, combination of drugs used in regimens, initial CD4+ cell count and viral load—they found that Indigenous people with HIV had a risk of death that was two and a half times greater than that of white people with HIV. This difference in risk of death was statistically significant; that is, not likely due to chance alone.

There appeared to be a trend toward an increasing risk of death in Indigenous people over the course of the study.

People of African heritage or other ethno-racial groups in the study did not have a risk of death that was significantly different from white people.

Bear in mind

1. The results of the present study are deeply concerning. The reasons for the diminished survival in HIV-positive Indigenous people are not clear. As mentioned before, Indigenous people in general have shortened survival in Canada and the research team noted that it is possible that the factors that drive down survival rates among Indigenous people in general may also affect survival of HIV-positive Indigenous people. However, a previous study in B.C. found that there are some factors that negatively affect the survival of HIV-positive people, including the following:
   - having a doctor who is not experienced in the care and treatment of HIV-positive people
   - having a history of injecting street drugs
   - lower levels of education
   - lower socio-economic status

Therefore, more research will be needed to find out exactly why HIV-positive Indigenous people are dying prematurely.

2. About 80% of the Indigenous people in this study resided in B.C. There were not sufficient numbers of Indigenous people in the study to make statistically meaningful comparisons to the fate of Indigenous people in other provinces such as Ontario or Quebec.

3. Observational databases such as CANOC depend on clinics to collect data. Due to constraints on time, personnel and money, clinics tend to capture data that is easily measurable and computerized, such as results of blood tests. In the present study, researchers noted that there was no information on the following factors that could have had an impact on health, well-being and survival:
   - current use of alcohol or street drugs
   - the ability of participants to take ART every day exactly as directed
   - “adverse social and physical environments”
   - “culture loss and intergenerational trauma”
   - “adverse child development”
   - “discrimination and inequitable health care use and access”

For the future

To better capture and understand issues affecting HIV-positive Indigenous people, future research activity could include building links to provincial databases that collect health information.

Much work remains to be done to understand the factors that undermine the health of HIV-positive Indigenous people.
people. The researchers stated that their findings “require immediate action to discern causes of death, to identify structural barriers and challenges to self-determination in health and wellness, and to identify initiatives exemplifying the success of Indigenous strengths for improving and maintaining health and wellness.”

—Sean R. Hosein

**Resource**

[Canadian HIV Observational Cohort (CANOC)]

[Canadian Aboriginal AIDS Network]

**REFERENCES:**


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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