Exploring viral suppression rates among some Indigenous people who started ART

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In general, researchers have found that there are differences in rates of health-related issues among Indigenous (First Nations, Inuit and Métis) people. For instance, Indigenous people tend to have higher rates of type 2 diabetes, cardiovascular disease, cancer and injuries. These differences in health arise from a history of colonialism and centuries-long cultural, economic, social and political displacement and discrimination endured by Indigenous people. In this context it should not be surprising that studies have found elevated rates of mental health issues and substance use among some Indigenous people. As a result, Indigenous people in Canada have been hit hard by viral infections such as HIV and hepatitis C.

When taken every day exactly as prescribed and directed, HIV therapy (ART) can improve a person’s health. Over a period of months after initiating ART, the amount of HIV in the blood falls to very low levels (commonly called “undetectable”) and continued use of ART helps it to stay undetectable. Studies show that when people have an ongoing undetectable viral load they do not transmit HIV to their sexual partners.

Researchers with Canada’s HIV observational cohort database (CANOC) have been analysing health-related information to assess and compare the response of participants, including Indigenous people, to ART. They found that Indigenous people, as a group, were less likely to achieve an undetectable viral load during their first year of using ART. However, once viral suppression was achieved, Indigenous people were just as likely as others to maintain an undetectable viral load. The study authors recommend that Indigenous people with HIV would likely benefit from interventions that enhanced their ability to take ART.

Study details

The research team, which included Indigenous people, reviewed health-related information collected from HIV-positive people between January 1, 2000 and December 31, 2012. As is the case with all CANOC studies, the data that were collected and analysed did not contain information that could be used to identify an individual participant. The analyses used data collected from clinics or observational studies in B.C., Ontario and Quebec from 7,086 participants of whom 497 were Indigenous.

The research team used the following definitions when reviewing the data:

- virological suppression – this occurred when two consecutive viral load test results, at least three months apart, were less than 50 copies/mL
- virological rebound – this occurred when two consecutive viral load test results, at least three months apart, were greater than 200 copies/mL in people whose previous viral loads were suppressed (less than 50 copies/mL)

Results—Virological suppression

In total, 89% (5,890) of participants achieved an undetectable viral load in their first year of using ART.

The distribution of people with an undetectable viral load by ethno-racial group was as follows:

- Indigenous – 54%
• white – 77%
• African, Caribbean or black heritage – 80%
• other ethno-racial groups – 84%

The differences in the proportions of people achieving an undetectable viral load between Indigenous people and other ethno-racial groups were statistically significant.

In this study, after taking into account participants who injected street drugs, Indigenous people were still at risk for not achieving an undetectable viral load.

**Results—Virological rebound**

Of the 5,890 participants who achieved an undetectable viral load in their first year of initiating ART, 1,072 (18%) subsequently rebounded. However, rates of rebound were not statistically different between Indigenous and other people.

**Bear in mind**

1. Analyses done by CANOC occur only on data sent to them by clinics and sub-studies. The nature of this data is somewhat limited. For instance, researchers were not able to fully take into account other factors that could have intersected with the lives of Indigenous people and which could have had an impact on the conclusions they drew. Examples of such factors advanced by the researchers included the following:
   - a severely weakened immune system at the time ART was initiated
   - difficulty taking ART every day exactly as directed
   - not receiving care from a physician highly experienced with treating people with HIV
   - a low degree of engagement with care and treatment
   - the combinations used for HIV treatment

2. About 80% of Indigenous people in the present CANOC analysis lived in B.C. Therefore, it is unclear if the conclusions from this study are relevant to Indigenous people who live in Ontario and Quebec, the other provinces from which CANOC receives the bulk of its data. In recent years CANOC has begun to amass data it receives from clinics in Saskatchewan—a province where Indigenous people are particularly affected by HIV. A future CANOC analysis that takes into account data from this province may shed more light on the response to initiating ART by Indigenous people there. However, there are large populations of Indigenous people in Alberta and Manitoba and in Canada’s north, and none of these have clinics that currently participate in CANOC. So, for now, analyses of the outcomes of HIV care and treatment among Indigenous people in these places will have to be done locally.

**For the future**

The present analysis of Indigenous people in the CANOC database is a good first step to try to understand virological success and failure in this population. However, much more work remains to be done in regions where Indigenous people live so that their health can improve and new cases of HIV infection can be reduced.

The study team recommends that “culturally appropriate” and focused interventions can be done in Canada’s regions to help Indigenous people who are prescribed ART. Such interventions should include the following:

- adherence support
- linkage with traditional healing
- trauma-informed models of care

The research team would also like to obtain a more complete “classification of ethnicity according to First Nations, Inuit or Métis identity; residence in First Nationals communities and settlements; and First Nations status vs. non-status.”

**Getting to 90-90-90**

Programs that offer HIV testing accompanied by counselling and swift referral to care and treatment in cases of a
positive test result are going to become more important in the years ahead. The power of ART to help reduce the spread of HIV is so tremendous that the United Nations Joint Programme on HIV/AIDS (UNAIDS) has set goals to which cities, regions and countries can aspire by the year 2020. These goals are encompassed in the shorthand phrase 90-90-90:

- 90% of all people living with HIV will know their HIV status
- 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy
- 90% of all people receiving antiretroviral therapy will have viral suppression

If Canada is to meet these targets, it will have to intensify efforts working with Indigenous communities.

**Resources**

- Canadian Aboriginal AIDS Network (CAAN)
- Message from the Federal Minster of Health Jane Philpott on Aboriginal AIDS Awareness Week
- Summary: Estimates of HIV incidence, prevalence and proportion undiagnosed in Canada, 2014 (Public Health Agency of Canada – PHAC)
- Summary: Measuring Canada's Progress on the 90-90-90 HIV Targets - PHAC
- 90–90–90 – An ambitious treatment target to help end the AIDS epidemic (UNAIDS)
- CATIE statement on the use of antiretroviral treatment (ART) to maintain an undetectable viral load to prevent the sexual transmission of HIV

**The Canadian HIV Observational Cohort (CANOC)**

---Sean R. Hosein

**REFERENCES:**


Disclaimer

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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