Regional Differences in Rates of HIV-1 Viral Load Monitoring in Canada: Insights and Implications for Antiretroviral Care in High Income Countries

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Objective

This study investigated whether there were regional differences in patterns of viral load (VL) testing among individuals receiving treatment for HIV in Canada.

Importance of this Study

- VL monitoring is a crucial component of HIV care. It detects spikes in viral load levels and helps identify patients who are failing combination antiretroviral therapy (cART) regimens.
- Left undetected, a VL increase can lead to ART drug resistance and HIV treatment failure.
- Despite the availability of VL testing without charge in the setting of universal health care in Canada, there has been evidence of differential rates of VL monitoring among HIV infected individuals.

How this Study was Conducted

- Data were analyzed from the CANOC collaboration, an interprovincial collaborative cohort of HIV-positive individuals who started cART since January 2000.
- CANOC compiled HIV clinical, virological, immunologic, and demographic data from cohorts across BC, Ontario, and Quebec.
- 3,648 individuals met the inclusion criteria and were included in the analysis.

Study Results

- The rates of VL testing among HIV-positive Canadians on cART were considerably higher in British Columbia than in Ontario or Quebec.
- 26% of study participants experienced at least one 9-month period without VL testing.
- Relative to BC, going 9 months without VL testing had higher odds of occurring in Ontario and Quebec.
- Younger persons and injection drug users were more likely to experience a testing gap.
- Men who have sex with men, more recent cART initiates, and people with a VL below 50 copies/mL were less likely to experience a testing gap.

Implications

- Further investigation into these demographic and clinical factors will aid with developing strategies to improve VL monitoring in groups at higher risk of VL testing gaps.
- Future regional and economic examinations of VL testing disparities would be helpful.