

# Predictors of viral suppression and rebound among HIV-positive men who have sex with men in a large multi-site Canadian cohort

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## Objective

The purpose of this study was to identify factors that are associated with successful and failing treatment outcomes among HIV-positive men who have sex with men.

## Importance of this Study

- Men who have sex with men (MSM) are disproportionately impacted by HIV in Canada.
- Research has documented risk factors that are associated with HIV infection among MSM; however, there is a need to examine responses to HIV treatment and the factors that predict successful or failing treatment outcomes in this population.
- This study contributes to filling the research gap.

## How this Study was Conducted

- Data was analyzed from the CANOC collaboration, an interprovincial collaborative cohort of HIV-positive individuals on antiretroviral therapy in Canada.
- The study included 2,858 MSM participants, all of whom were 18 years old and over when beginning HIV treatment between 2000 and 2011.
- Factors were identified that predict the length of time between starting treatment and viral suppression (which is the desired outcome of treatment), as well as the time between suppression and rebound (when HIV becomes detectable after previously being suppressed).

## Study Results

- MSM in Canada are close to the UNAIDS proposed target for viral suppression: that viral suppression is achieved among 90% of people living with HIV/AIDS who are on treatment.
- Suppression was associated with beginning treatment in a later calendar year, no history of injection drug use, lower blood levels of HIV at the start of treatment, initial treatment plan consisting of drugs called “non-nucleoside reverse-transcriptase inhibitors”, and older age.
- Rebound was associated with beginning treatment in an earlier calendar year, injection drug use history, younger age, higher CD4 count at the start of treatment (CD4 count measures immune system strength and a higher count indicates a stronger immune system), and living in British Columbia.

## Implications

- There is a need to develop strategies that improve HIV treatment outcomes among men who have sex with men in Canada.
- Strategies should target younger men and men with a history of injection drug use.

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