

# Impact of the Data Collection on Adverse Events of Anti-HIV Drugs Cohort Study on Abacavir Prescription among Treatment-Naive, HIV-Infected Patients in Canada

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## Objective

This study examined whether the findings from the Data Collection on Adverse Events of Anti-HIV Drugs (DAD) cohort influenced physician prescribing practices and patient intake of Abacavir (ABC).

## Main Finding

Presentation of the DAD cohort study results was associated with a significant decrease in ABC use among ARV medication-naive, HIV-positive patients in Canada.

## Background

- ABC is a nucleoside reverse transcriptase inhibitor (NRTI).
- In 2008, the DAD cohort study reported that exposure to ABC within the previous six months was associated with an increased risk of myocardial infarction among patients living with HIV.
- After the presentation of the DAD results, several HIV treatment guidelines relegated ABC to second-line status.
- Later analyses did not find any association between ABC exposure and cardiac disease, prompting concern that the original DAD study results had confounding and selection bias issues.

## Importance of this Study

- Well-publicized randomized clinical trials demonstrate a high impact factor, in that they can spur rapid and meaningful changes to medication prescribing practices.
- The effects of observational studies on clinical practice are less clear.
- Considering the widespread media attention generated by the DAD results, it is possible that they influenced physician prescribing behaviour, despite concerns over possible bias and confounding.
- This study provided an opportunity to evaluate trends of ABC use among ARV medication-naive, HIV-infected individuals both prior to and following the dissemination of the DAD findings.

## How this Study was Conducted

- Data from the CANOC collaboration were analyzed retrospectively. CANOC is an interprovincial collaborative cohort of HIV-positive individuals on antiretroviral therapy in Canada.
- CANOC compiled HIV clinical and demographic data from 8 cohorts across British Columbia, Ontario, and Quebec. This study examined monthly trends in the proportion of new ABC and tenofovir (TDF) prescriptions in the 97 months preceding the DAD presentation and the 24 months following the presentation.
- TDF was chosen as a comparison drug because it is the most clinically relevant NRTI replacement for ABC.
- 7,280 ARV medication-naive patients were included in CANOC during the 121-month study timeline. Of these patients, 1,294 initiated treatment with ABC and 2,985 initiated treatment with TDF.

## Study Results

- Following the release of the DAD results, there was a significant negative trend in the proportion of new ABC prescriptions.
- ABC use following the presentation of the DAD results decreased by an estimated 28% per year.

## Implications

- This research demonstrates that a well-publicized observational study can provoke changes in medication prescribing practices.

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