

# A Comparative Study of Nonfatal Overdoses in People With and Without HIV in British Columbia, Canada

Category: Poster Presentation (in person)

## Abstract Body

**Background:** The magnitude of the drug toxicity crisis is most severe in British Columbia (BC) and people with HIV (PWH) are disproportionately affected. Nonfatal overdoses (NFODs) are associated with increased mortality in the following year; more insight is needed into the occurrence, determinants, and consequences of NFODs among PWH.

**Methods:** The Comparative Outcomes and Service Utilization Trends study is a population-based cohort linking demographic and clinical data from the BC Centre for Excellence in HIV/AIDS with administrative data from Population Data BC on all PWH in BC and a 10% general population sample, aged  $\geq 19$  years. We assessed and compared the age-adjusted incidence rate (IR) of NFOD events resulting in hospitalization or acute care visit, between men and women with and without HIV. Using Poisson regression, we modelled the interaction between sex and HIV-status.

**Results:** Between 2012-2020, 11,062 PWH (81.8% male) and 474,072 people without HIV (50.3% male) were followed-up for a median of 7.9 (Q1-Q3:7.3-7.9) and 7.9 years (Q1-Q3:4.3-7.9) years respectively. Age-adjusted IRs among men with and without HIV were 40 (95%CI:38-43) and 3.4 (95%CI:3.3-3.5)/1000 PY, IRR=11.8 (95%CI:11.0-12.6), and for women with and without HIV 69 (95%CI:63-74) and 2.7 (95%CI:2.6-2.7)/1000 PY, IRR=25.8 (95%CI:23.7-27.9). Between 2013-2019, the age-adjusted NFOD rate statistically significantly increased among men and women without HIV but not among PWH. After adjusting for age and neighbourhood-level income quintile, HIV remained significantly associated with a higher NFOD rate (IRR=12.7, 95%CI:11.8-13.7). Compared to men without HIV, the NFOD rate in women without HIV was lower (IRR=0.8) whereas it was higher in men (IRR=10.2) and women with HIV (IRR=17.3)(p-interaction<0.001).

**Conclusions:** These preliminary results demonstrate a significantly higher NFOD rate among PWH compared to people without HIV. The NFOD rate was highest among women with HIV. These findings stress the need for policies and programs oriented toward PWH to mitigate overdoses.

## Key Words

- Concurrent Disorders
- Epidemiology
- Women/Pregnancy/Neonatal Issues

## Learning Objective # 1

Describe how people with HIV in BC are disproportionately affected by the drug toxicity and overdose crisis.

## Learning Objective # 2

Recognize that the overdose rate is highest among women with HIV in BC, compared to all men and women without HIV..

## Reference # 1

The Comparative Outcomes and Service Utilization Trends (COAST) study Cohort profile provides details about the study (Eyawo et al, BMJ Open, 2018) .<https://bmjopen.bmj.com/content/8/1/e019115>

## Reference # 2

The abstract includes preliminary data, obtained in the context of this project:

<https://cancovid.ca/grant/providing-insight-into-and-mitigating-the-impact-of-the-covid-19-pandemic-on-the-occurrence-severity-complications-and-long-term-health-effects-of-drug-overdoses-in-people-living-with-and-without-h/>

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### **Co-Author**

Ms. Megan Marziali  
PhD fellow | Columbia Mailman School of Public Health

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### **Co-Author**

Mr. Jason Trigg  
Senior Data Analyse | BC Centre for Excellence in HIV/AIDS

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### **Co-Author**

Ms. Monica Ye  
Statistician | BC Centre for Excellence in HIV/AIDS

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### **Co-Author**

Mr. Robert Hogg  
Senior Research Scientist | BC Centre for Excellence in HIV/AIDS

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### **Lead Author**

Katherine Kooij

