Article details: 2021-0093	
Title	A province-wide HIV treatment-as-prevention-based initiative to accelerate treatment initiation and virologic suppression in British Columbia, Canada: a population-based cohort study
Authors	Ni Gusti Ayu Nanditha BSc, Xinzhe Dong MSc, Hiwot M. Tafessu MSc, Lu Wang MSc, Michelle Lu MSc, Rolando Barrios MD, Julio S.G. Montaner MD, Viviane D. Lima PhD
Reviewer 1	Dr. Marie-Ève Goyer
Institution	University of Montreal, Hôpital Notre-Dame, Montréal, Que.
General comments (author response in bold)	1. Very good article. Well written, clear and results will be very interesting for clinicians. **Response (32): Thank you for your kind comments and constructive feedback.** 2. On this sentence: «The decline in time Tx-Vx pre- and post-STOP was statistically significant, except among females»: it would be interesting to have section in the interpretation trying to explain these results. **Response (33): We conducted additional bivariate analyses (not shown) to further understand the charac- teristics of the women in our study pre- and post-STOP. Nevertheless, we were unable to deduce, based on the characteristics that we were able to observe, why the time Tx-Vx pre- and post-STOP among the women in our study were not statistically different. We agree, however, that this observation needs to be highlighted in the Interpretation and, as such, we have added the following sentence to page 14 (line 314-318): "Note that our study indicated potential disparities in the impact of STOP on early ART initi- ation across gender and HA of residence. Further studies should thus delve into specific barriers that may prevent population subgroups such as women and residents of northern HA from receiving the full benefits of STOP." Note also that we have replaced the paired term "females"/"males" with "women"/"men", as we believe the latter more accurately depicts gender, which is the variable presented in the study. This change is re- flected in Table 1 and Figure 2, as well as in the manuscript as follow:** **• In the Methods on page 8 (line 195): "The following potential confounders, selected based on relevance and availability of data, were investigated: gender (women, men)…"** **• In the Results on page 11 (line 242): "Of the 3301 eligible PLWH diagnosed in BC during 2005- 2016, 82% were men…"** **• In the Results on page 12 (line 274-275): "The decline in time Tx-Vx pre- and post-STOP was statistically significant, except among women…"**
Reviewer 2	Mx. Rhiannon Cooper
Institution	McMaster University, Faculty of Health Sciences, Institute for Circumpolar Health Research
General comments (author response in bold)	3. This was a very interesting study and a pleasure to read. Methods and reporting were clear and detailed and figures were very well done. I have only minor comments: **Response (34): Thank you for your kind comments and constructive feedback.**

INTRODUCTION

4.   Line 63: Perhaps clarify what is meant by the latter. Unclear what it is that led to the conception of "HIV Treatment as Prevention".
Response (35): The following sentence in the Introduction on page 5 (line 76) has been modified: "This evidence led to the conception of "HIV Treatment as Prevention" (TasP)…," suggesting that the evi- dence outlined in the previous sentence instigated the development of TasP.

5.   Line 67: Should effectively read effective instead?
Response (36): The usage of the word "effectively" on now page 5 (line 78-81) of the Introduction was correct to define a very low risk of transmission, which can be considered as zero: "…resulting in sus- tained undetectable viral load in bodily fluids and an effectively zero risk of sexual transmission of HIV…"

6.   Line 72: A little unclear with the way the sentence is written, adding in commas in between mor- bidity and mortality would be more clear. (…morbidity, mortality, and new HIV infections).
Response (37): A comma has been added to clarify the sentence in the Introduction on page 5 (line 78): "…the scaling-up of testing followed by the immediate initiation of ART, as a strategy for reducing AIDS- related morbidity and mortality, and, simultaneously, the spread of HIV (6–8)." This sentence signifies that TasP is a strategy for (1) reducing AIDS-related mortality and multimorbidity, and (2) reducing the spread of HIV.

METHODS

7.   Study setting: A little unclear where exactly the study took place, perhaps stating in the first sen- tence exactly where the study was conducted/data collected.
Response (38): As per the editor's comments, we have rearranged the Methods section. The first sub- heading on page 7 (line 115-123) is now "Data sources and population", and the first sentence describes the setting of the study (i.e., BC, Canada): "Data were obtained from the STOP population-based cohort (26), which constituted individual-level longitudinal data of all PLWH in BC diagnosed between April 1996 and March 2017."

8.   Study design: In the outcomes and exposures section, you are using pre-STOP and post-STOP time frames, it would be prudent to specify how long the STOP cohort went on (in the study design sec- tion).
Response (39): The following sentence has been added to the Methods on page 7 (line 129-131): "While the STOP initiative is ongoing at the time this manuscript is prepared, our study period was limited by the latest available data linkages from the STOP cohort."

STATISTICAL APPROACH

9.   Line 151: shouldn't the change in the coefficient be less than or equal to 5%? (Not greater than).
Response (40): The following sentence in the Methods on page 9 (line 224-

| | 225) was correct: "Starting with a full model, confounding variables were gradually omitted until the change in the coefficient for the main explanatory variable was ≥5% (37)." Removal of a variable that results in a <5% change in the co- efficient of main explanatory variable indicates that the removed variable does not significantly affect the association of interest, and thus is not a confounding variable. On the contrary, a confounding variable significantly affects an association of interest, leading to a ≥5% change in the coefficient of main explana- tory variable when removed from a full model. |