

Examining the secondary impacts of the COVID-19 pandemic on Syndemic production and PrEP use among Gay, Bisexual and other Men who have Sex with Men (GBM) in Vancouver, Canada

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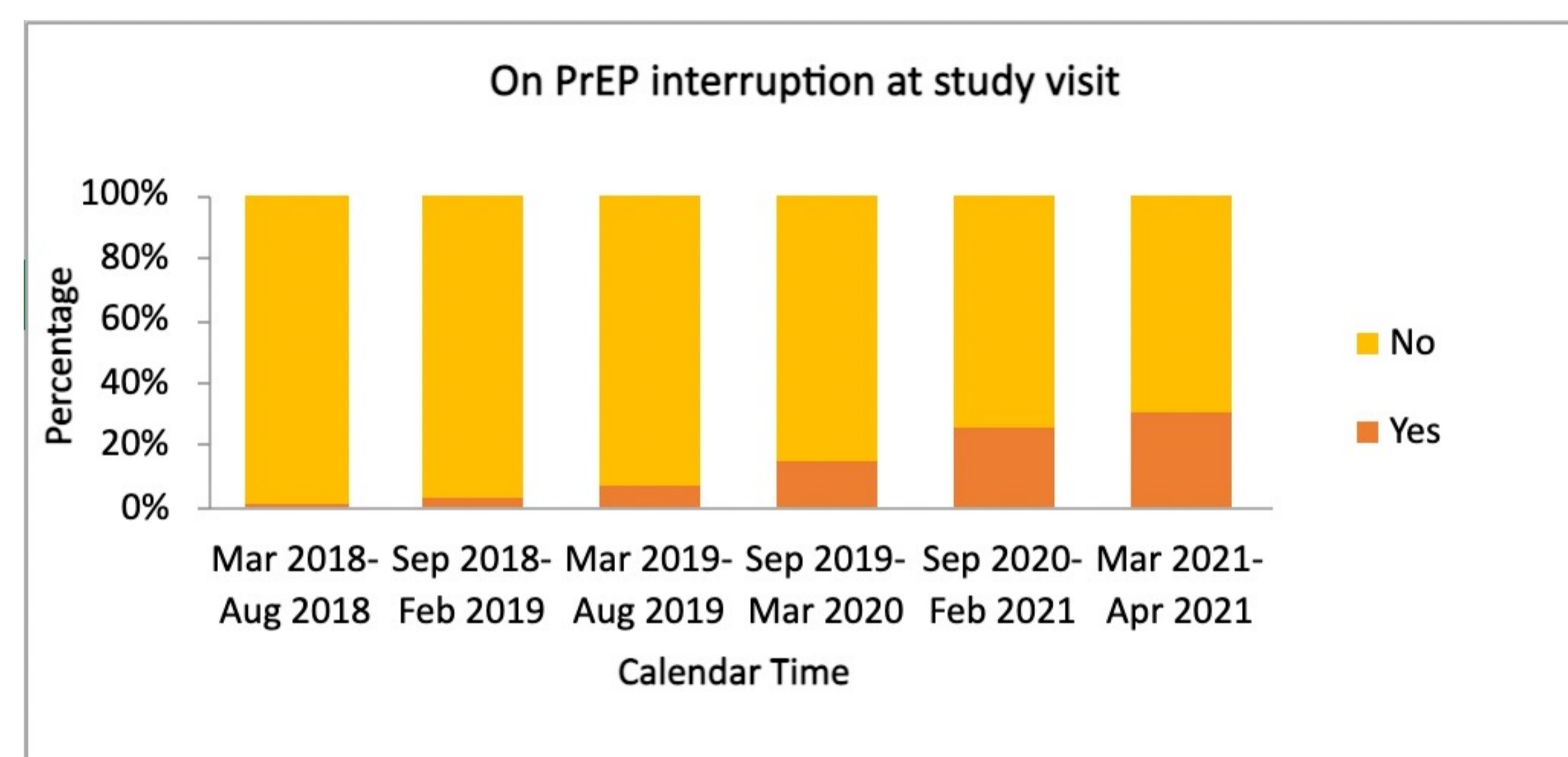
Introduction

- Concerns regarding how the secondary effects of the pandemic affected access and adherence to PrEP among HIV-negative GBM
 - Research from Australia: 41.8% of GBM reported discontinuing PrEP due to COVID restrictions (Hammoud et al. 2021).
 - Research from France: 58.8% of GBM reported stopping PrEP use during the first COVID lockdown (Di Ciaccio et al. 2022).
- Syndemic conditions among GBM are important indicators for PrEP use/adherence.
 - The secondary effects of the pandemic may have negatively impacted syndemic production among GBM.
- This study aimed to **1)** examine trends of syndemic conditions and trends of PrEP interruptions **2)** assess syndemic correlates of PrEP interruptions among HIV-negative/unknown GBM in Vancouver

Measures & Analysis

- Syndemic conditions:** anxiety and depression (both measured by HADS Scale), ever any experiences of interpersonal violence (IPV), polysubstance use (2+ substances used in past six months), alcohol use (measured by AUDIT-C scale), childhood sexual abuse.
- PrEP interruptions:** Participant self-reported stopping PrEP **and/or** Participant did not refill PrEP for at least 6 months as per BC PrEP Program administrative data.
- We used univariable generalized-linear mixed models to examine 1) trends in syndemic conditions (i.e. anxiety, depression, interpersonal violence, polysubstance use, alcohol use) and 2) trends in PrEP interruptions (6-month periods) among HIV-negative/unknown GBM.
- We also applied 3-level mixed-effects multivariate logistic regression with RDS clustering to examine syndemic correlates for experiencing a PrEP interruption.

Trend Results: N=766 participants reporting on 2396 visits from March 2018-April 2021



Methods



- Participants were recruited using respondent-driven sampling (RDS) into the Engage Study, a longitudinal, bio-behavioural cohort study of GBM in Vancouver, Toronto, and Montreal from February 2017 to August 2019.
- Eligibility: ≥ 16 years of age; identify as a man, including transmen; live in Vancouver, Toronto, or Montreal; report sex with another man in the past 6 months; be recruited into the study or seed participant.
- Data from March 2018-April 2021 (6 months study visits)
 - Closure of study offices due to the pandemic from March 2020-September 2020.
- Only Vancouver data were used because study data were linked to BC PrEP Program, which is responsible for public distribution of PrEP in BC.

Syndemic factors trends

- Depressive symptoms increased over the study period (OR=1.35, 95%CI=1.17-1.56) with an increase after the onset of COVID-19 in Canada.
- Decreasing trends of polysubstance use (OR=0.89, 95%CI=0.82-0.97), alcohol use (OR=0.74, 95%CI=0.67-0.81)
- Trends for anxiety were not significant (OR=1.03, 95%CI=0.94-1.12).

PrEP Interruption trend

- We found a trend of increasing PrEP interruptions over time (OR=2.33, 95%CI=1.85, 2.94).
- Noticeable drop in PrEP users since the onset of the pandemic.

Multivariable model: Included 828 visits from 280 HIV negative/unknown participants since March 2018

- Depression was positively associated with PrEP interruptions (aOR=4.80, 95%CI=1.43, 16.16), while IPV was negatively associated (aOR=0.38; 95%CI=0.15, 0.95).
- We did not find significant interactions between any two syndemic conditions.
- GBM who met clinical eligibility for PrEP were less likely to experience PrEP interruptions (aOR=0.25; 95%CI=0.11, 0.60).
- Time period after the onset of COVID-19 (September 2020-April 2021) was significantly associated with greater odds of PrEP interruptions (aOR=9.25, 95%CI=4.06, 21.1) compared to the time period before COVID-19 (March 2018-March 2020).

Conclusions

- We found increased PrEP interruptions among HIV-negative/unknown GBM since the onset of the pandemic.
- However, those most likely to acquire HIV were less likely to have interruptions.
- We also found increasing trends of depression symptoms, but decreasing trends polysubstance use, IPV and binge drinking.
- Additional mental health services and targeted follow-up assessment for PrEP continuation may be needed to mitigate the impacts of the pandemic on GBM.
- Future research should examine how long these interruptions lasted and factors associated with restarting treatment.
- Future research should also include qualitative data to contextualize findings.

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For more information about the Engage Cohort Study, please visit <https://www.engage-men.ca/>

