



Community Connectedness and Correlates of ART Interruptions Among gbMSM living with HIV in Vancouver

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Background

- Treatment interruptions (TI) are broadly defined as any interruption in antiretroviral (ART) treatment for people living with HIV (PLWH)
- TI are associated with poorer patient health outcomes and viral rebound, which is associated with increased risk of HIV transmission and increased mortality (El-Sadr et al., 2008)
- Community connectedness may be especially relevant for gay, bisexual and other men who have sex with men (gbMSM) who may face marginalization from family or friends (McConnell et al. 2018)
 - Qualitative research found social isolation to be an important factor in TI among gbMSM living with HIV (McNeil et al., 2017)
 - Little to no published studies look at associations between community connectedness and HIV outcomes

Study Objective: to examine the relationship between community connectedness and TI among a general cohort of gbMSM living with HIV



Methods, Measures, and Analysis

- **Sexually active gbMSM, aged ≥ 16 years; recruited through respondent-driven sampling (RDS)**
- **Prospective bio-behavioural cohort**, follow-up of 5 years, complete questionnaire every 6 months and nursing visit
- **PRIMARY OUTCOME: Treatment interruptions (TI)** were measured using pharmacy refill data from the BC Drug Treatment Program (DTP). TIs defined as being >60 days beyond an expected ART refill date with a TI alert sent to their physician; conservative definition.
- **PRIMARY EXPLANATORY FACTOR: Community connectedness** measured using questions asking about connection and engagement to the lesbian, gay, bisexual, transgender and queer (LGBTQ) community in past six months (P6M) (Responses: Not in the past six months; Less than once per month; About once per month; More than once per month)
- **Data collected:** February 2012-August 2019, limited to HIV-positive gbMSM
- **Analysis:** Bivariate analysis, incidence of TI with generalized linear mixed-models with log-linkage (not experienced TI or not with logit-linkage)
 - We matched TI which occurred or were within 14 months of Momentum Study visits (choosing the TI falling closest to study visit).



Results

Sample Description

- **Median follow-up of 1781 days, equivalent to 4.5 years**
- N=213; Median age was 48 years (IQR:= 41-53)
- At baseline cohort study visit:
 - Median duration of ART use was 9 years (IQR 3.4-16.3)
 - 94.2% had a VL <200 copies/ mL
- **Primary Outcome:** 25% (n=53/213) ever experienced at least one TI during follow-up visits

Univariable Results

- Attending gay meetings more than once per month were associated with lower odds of experiencing a TI (**RR=0.35; 95% CI=0.12, 0.98**) compared with gbMSM who did not attend gay meetings in P6M
- Using gay chat lines less than once a month (**RR=2.64; 95% CI=1.52, 4.59**), and using gay smart apps less than once per month were associated with greater odds of experiencing a TI (**RR=1.86, 95% CI=1.06, 3.26**) compared with gbMSM who did not use any gay chat lines or use any gay smart apps in P6M

Multivariable Results

- Older age (**RR=0.96 per year increase; 95% CI=0.93, 0.99**), previous history of a TI (**RR=1.22; 95% CI=1.13, 1.32**), less time since first ART date (year) (**RR=0.94, 95% CI=0.90, 0.98**), and any crack use (**RR=2.13; 95% CI=1.25, 3.62**) were positively associated with experiencing a TI
- Community connectedness variables were not selected in the final multivariable model



Limitations

- Sample-size was relatively small (n=53/213 with TI), but our use of longitudinal data with median follow-up of 4+ years allowed for adequate power
- While TI were based on clinical DTP data and used a conservative definition of TI, Momentum questionnaire data was self-reported and subject to social desirability bias

Conclusions & Next Steps

- 25% of gbMSM living with HIV in our sample experienced a TI lasting over 60 days, over a 5-year period
- Community-connectedness significant in univariable analysis, but not selected in our multivariable model
- Findings show **younger age, crack use, and less time on treatment** may impede HIV treatment for gbMSM living with HIV; **people with a previous TI** were also more likely to experience a subsequent TI indicating the need for better follow-up and retention support for these individuals