

Ethno-racial differences in HIV and sexually transmitted infections (STI), and related preventive and risk behaviours among gay, bisexual and other men who have sex with men in Montreal, Toronto, and Vancouver

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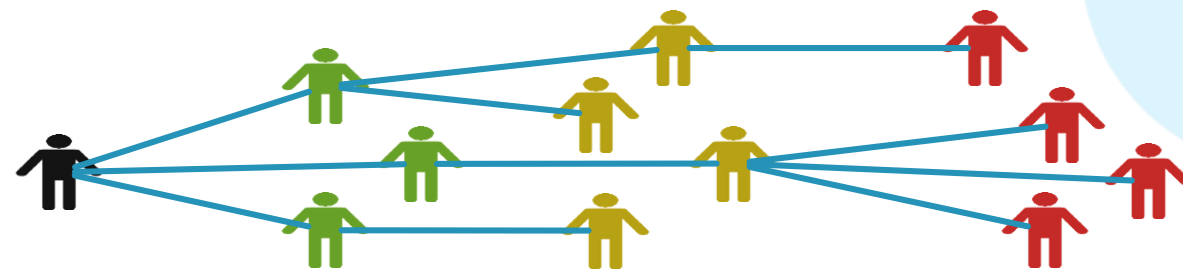
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Introduction

- ▶ HIV/STI disparities exist across ethnic and racial minorities. For example, Indigenous Peoples accounted for 154 of all new HIV infections in 2018, but represents only 4.9% of the total Canadian population (PHAC, 2020).
- ▶ By exposure category, gay, bisexual and other men who have sex with men (GBM) continued to represent the highest proportion (39.7%) of all reported adult cases in Canada (Haddad et al., 2021)
- ▶ Though HIV surveillance report (Haddad et al., 2021) provides the national picture of HIV epidemiology in Canada, it lacks data on ethnic and racial minority GBM:
 - ▶ race/ethnicity information was NOT available for all (only 880 out of 2122) reported HIV cases in 2019,
 - ▶ Some categories lumps participants from distinct geographical locations (ex., Armenian, Bangladeshi, Sri Lankan and Egyptian in one category).
- ▶ In this analysis, using data from three largest cities of Canada, we attempt to address the data gap, and to present descriptive statistics on HIV/STI prevalence and related behaviours by the racial/ethnic categories of GBM.

Methods: The Engage Study

- ▶ Mixed-Method longitudinal cohort study recruited 2,449 (Vancouver=753, Toronto=517, Montreal=1179) cis- and transgender men (16+ age who reported having sex with another man in the past 6 months) from February 2017–August 2019,
- ▶ Data collected using Respondent-Driven Sampling (RDS) with purposively selected ethnoracial minority seeds
- ▶ Engage combines data from computer-assisted self-interviewing (CASI) and the detection of HIV and other selected STBBIs using biological samples.
 - ▶ Participants provide a venous blood sample permitting serological testing for HIV, hepatitis C virus (HCV), hepatitis B virus (HBV) and syphilis
 - ▶ Study participants also provided urine, pharyngeal swabs, and rectal swabs for gonorrhea and chlamydia
- ▶ We assessed participants' preferred racial/ethnic identification by asking,
 - ▶ What single or multiple ethnic group(s) or family background(s) do you identify with?



- ▶ For this analysis, using baseline data we compared
 - ▶ RDS-adjusted proportions of laboratory-confirmed HIV, STIs (syphilis, gonorrhea, and chlamydia),
 - ▶ Preventive- behaviors (HIV/STI testing: never/ever, within 6 months; and PrEP use, within 6 months), and
 - ▶ Sexual -behaviours (sero-discordant condomless anal sex: SDCAS, within 6 months),
 - ▶ By 9 racial/ethnic categories (white, Black, Latino/Latinx, East/Southeast Asian, Indigenous, South Asian, West Asian/North African, Unidentified/Others, and Mixed race/ethnicity).
- ▶ We also examined differences in the RDS-adjusted estimates within-city (white as reference) and between-cities using non-parametric tests for unequal sample sizes and low cell counts

Results

- ▶ A majority of 2,449 GBM self-identified as white (71%), with a minority identifying as Black (3%), Latin American (8%), East-Southeast Asian (7%), South Asian (2%), Aboriginal (2%), West Asian/North African (3%), mixed race/ethnicity (3%). 2% did not identify or identified with less prevalent groups.
- ▶ Montreal recruited the highest number of white GBM (52%) followed by Vancouver (29%) and Toronto (19%).
- ▶ Differences by race/ethnicity (compared with white GBM) within-city as well as across cities were observed. For example,
 - ▶ In Montreal, South Asians (RDS-adjusted 26%); in Toronto, West-Asian/North African (50%); and in Vancouver Aboriginals (67%) represented highest proportion of HIV positive cases.
 - ▶ Regarding Syphilis, Aboriginals (RDS-adjusted 62%) in Montreal; East-Southeast Asians (31%) in Toronto; Black (45%) in Vancouver represented highest proportion of syphilis anti-body positive cases.
 - ▶ HIV prevalence among West Asian/North African (3.9%) was lower compared with white GBM (15.9%; $p=.02$) in Montreal, but higher (50.5% vs. 23.9%; $p=.02$) in Toronto.
 - ▶ Black GBM were less likely to report SDCAS in Toronto (11.2% vs. 41.1%; $p=.004$) and in Vancouver (15.2% vs. 44.5%; $p=.001$), but more so in Montreal (59.2% vs. 37.5%; $p=.01$).
 - ▶ Regarding HIV testing, Black GBM were more likely to report recent (last 6 months) testing in Toronto (79.9% vs. 49.4%; $p=.01$) and in Vancouver (96.6% vs. 57.3%; $p=.002$) than white GM.

Conclusion

- In this first cross-city biobehavioural study of GBM in Canada, we estimated ethno-racial differences among a large sample of GBM.
- Results show significant differences in HIV and other STI prevalence, and in related preventive and sexual behaviours by race/ethnicity within-city as well as between-cities.
- Our findings (13 out of 35 = 37% tested HIV-positive) are in align with previous national data highlighting overrepresentation of Aboriginal population in Canadian HIV epidemiology.

Limitations:

- ❖ While estimates are adjusted for the RDS recruitment, the data are not adjusted for other factors such as sociodemographic differences, which could affect HIV/STI comparisons across cities.
- ❖ Cross-sectional design of study limits temporality and generalizability of the findings.
- ❖ Low cell counts for some racial/ethnic categories did not allow advanced statistical analyses.
- Despite limited statistical power due to low cell counts for some ethno-racial categories, findings suggest local, culturally-grounded, targeted efforts for diverse ethno-racial GBM are needed.