engage
Advancing gay and bisexual men's sexual health

CONFERENCE CAHR 2021

Associations between area of residence, openness, STI/HIV testing, and PrEP use among gay, bisexual and other men who have sex with men living in Montreal, Toronto and Vancouver

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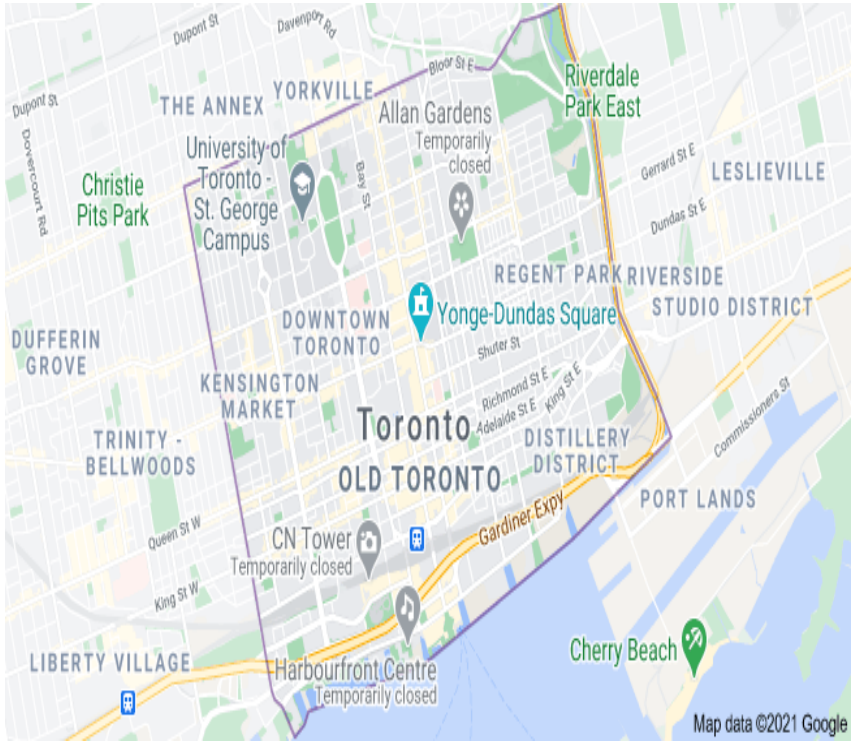
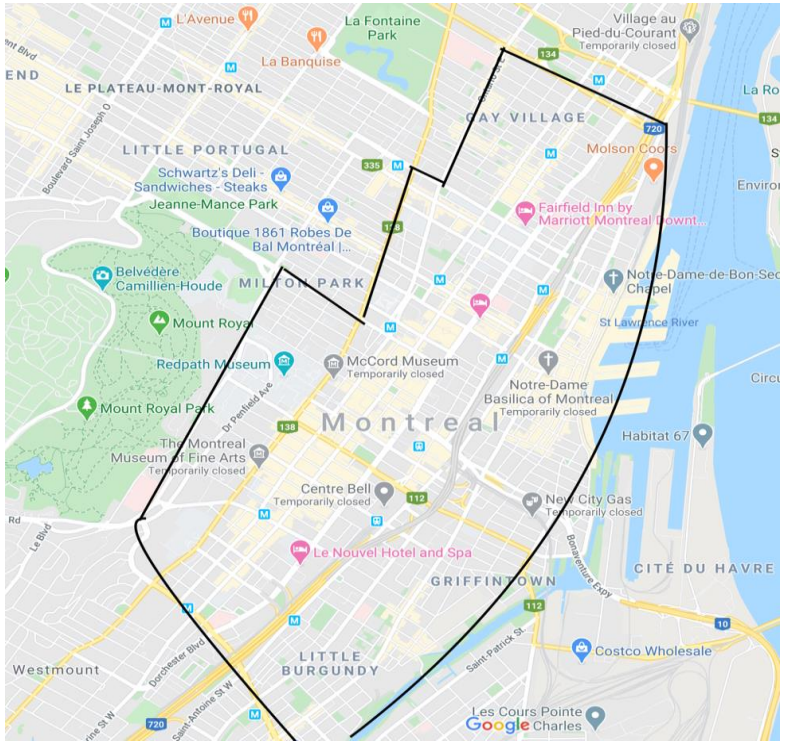
Introduction

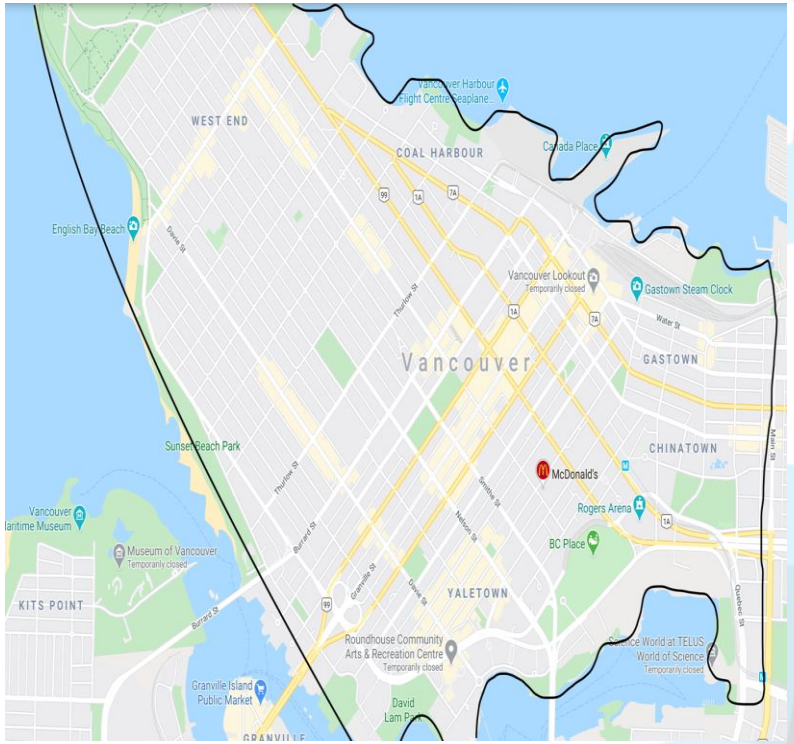
- Gay, bisexual, and other men who have sex with men (GBM) continue to be at higher risk of HIV/ sexually transmitted infections (STIs) compared to the other at-risk populations, especially in North America (CDC, 2018; PHAC, 2019)
- Within the GBM category, significant HIV/STI disparities exist based on area of residence. GBM living in areas further away from the city centre face certain challenges that are minimized for GBM who are living closer. The quality and quantity of sexual health interventions for GBM differ greatly when comparing suburban/outer-city regions to more urban neighborhoods closer to the city centre (Kosciw et al., 2017; Mirandola et al., 2016; OHTN, 2012)
- Factors such as openness about same-gender attraction and openness to one's healthcare providers about sexual orientation are possibly at play when addressing the disparities in access between both areas of the city, even though their perceived and actual risk of contracting HIV/STIs may be equal (Qiao, Zhou, & Li, 2018)
- The present analysis examined associations between area of residence, openness, and STI testing, HIV testing, and PrEP use among a sample of urban Canadian GBM living in the three largest cities of Canada

Methods: The Engage Study

- Mixed-Method longitudinal cohort study recruited 2,449 (Vancouver=753, Toronto=517, Montreal=1179) cis- and transgender men using Respondent-Driven Sampling (RDS) from February 2017–August 2019, and combines data from computer-assisted self-interviewing (CASI) and the detection of HIV and other selected STBBIs using biological samples







- We examined the relative contribution of area of residence (based on postal code: within urban-core vs. not), general openness (out to all, continuous, 1-5) and openness-with-providers (continuous, 0-2), on STI testing (in past 6 months:P6M), HIV testing (P6M, for HIV-neg only) and PrEP use (P6M, for HIV-neg only), separately.

- We fit a series of generalized estimating equation models accounting for age, race/ethnicity, income, marital status, perceived HIV risk, city and recruitment related clustering.

Results

- In our three-city combined sample of 2,449 GBM (M_{age}=36; 71%White; 440 self-reported living with HIV) 62% reported a STI test, and among HIV-negative GBM, 60% reported an HIV test and 18% reported PrEP use.

Outcome: STI Testing, last 6 Months					
	Model 1	Model 2	Model 3	Model 4	Model 5
Indicator variables	RR (95% CI; *p*)	RR (95% CI; *p*)	RR (95% CI; *p*)	RR (95% CI; *p*)	RR (95% CI; *p*)
Living outside of the City Center (within the city center as ref.)	**0.91 (0.84-0.99; *p*=.04)**				
General Openness (continuous, 1-5):		**1.06 (1.01-1.10; *p*=.02)**			
Openness to Provider (continuous, 0-2):			**1.27 (1.17-1.37; *p*<.001)**		
Outside of the City Center				0.93 (0.84-1.03; *p*=.15)	
General Openness				1.03 (0.97-1.09; *p*=.32)	
Openness to Provider				**1.26 (1.16-1.38; *p*<0.001)**	
Outside of the City Center					1.20 (0.65-2.22; *p*=.56)
General Openness					1.10 (0.99-1.23; *p*=.07)
Openness to Provider					**1.17 (1.02-1.34; *p*=.02)**
Outside of the City Center X General Openness					0.90 (0.80-1.03; *p*=.13)
Outside of the City Center X Openness to Provider					1.12 (0.93-1.34; *p*=.23)

Note. RR: Relative risk; CI: Confidence Interval; All models are adjusted for age, race/ethnicity, income, marital status, perceived HIV risk, city and recruitment related clustering

- Main effect models indicated area of residence, general-openness, and openness-with-provider were independently related with STI testing (see Table).
- Final adjusted models with three main effects and two interaction terms (residence X general-openness and residence X openness-with-provider) indicated significant effects of openness-with-providers on STI testing (RR = 1.17, 95%CI: 1.02 – 1.34; p = .02) but interaction terms were not significant.
- We found similar results for HIV testing (RR = 1.27, 95%CI: 1.10–1.48; p= .001), and PrEP use (RR = 1.68, 95%CI: 1.13–2.50; p = .01)

Conclusion

- Our results show openness and comfort with one's healthcare providers are significantly associated with recent STI testing, HIV testing, and PrEP NOT area of residence.
- Limitations:
  - While these data may approximate a probabilistic sample because they have been adjusted for the RDS recruitment, cross-sectional design of study limits temporality and generalizability of the findings.
  - Due to low cell counts we could not further explore racial/ethnic differences.
- Despite limitations, our results highlights importance of GBM and provider interventions to facilitate disclosing one's sexual orientation to improve sexual health care among Canadian GBM.