

Characteristics of the HIV cascade of care and unsuppressed viral load among HIV positive gbMSM across three Canadian cities

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Across the three cities 96.7-99.8% of HIV positive gbMSM were diagnosed; 92.7-96.2% were on ART and 89.4-97.4% were virologically suppressed

Introduction

We estimated HIV cascade of care indicators among samples of gay, bisexual and other men who have sex with men (gbMSM) recruited in Vancouver, Toronto and Montreal.

Methods

Sexually active gbMSM, aged ≥16 years, were recruited through respondent-driven sampling (RDS) from February 2017 to July 2019.

Computer-Assisted Self-Interview captured sociodemographic factors, sexual and substance use behaviours, mental health symptomology (using the Hospital Anxiety and Depression Scale [HADS]) and diagnoses, and access to health services

AUDIT-C scores ≥4 indicate high risk for hazardous drinking

Participants were also tested for HIV and other sexually transmitted and blood borne infections

We conducted bivariate analyses comparing RDS-adjusted proportions across cities

We used multivariable logistic regression analysis to examine factors associated with having an unsuppressed viral load (VL) (≥200 copies/mL), with data pooled from all three cities.

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Logistic regression analysis of factors associated with having a VL ≥ 200 copies/mL among HIV positive participants

	Univariable			Multivariable		
	OR	95% CI		OR	95% CI	
Age	0.94	0.91	0.97	0.92	0.87	0.96
HADS Anxiety scores	1.11	1.03	1.19	1.16	1.03	1.30
HADS Depression scores	1.09	0.99	1.18			
City						
Montreal	Ref			Ref		
Toronto	0.36	0.12	1.10	0.14	0.03	0.70
Vancouver	0.22	0.07	0.73	0.14	0.03	0.61
Annual Income						
-<\$30,000	Ref			Ref		
\$30,000-\$59,999	0.68	0.25	1.82	0.68	0.20	2.31
\$60,000+	3.45	1.03	11.59	19.7	3.86	100.4
AUDIT C Scale						
<4	Ref			Ref		
≥4	0.11	0.02	0.67	0.03	0.00	0.26
Family Doctor						
No	Ref			Ref		
Yes	0.08	0.02	0.25	0.09	0.01	0.56
STI Diagnosed Ever						
No	Ref			Ref		
Yes	0.16	0.07	0.35	0.08	0.03	0.25

Results:

- We recruited a 1179 participants in Montreal, 517 in Toronto and 753 in Vancouver.
- HIV prevalence was 14.2% (95% CI:11.1-17.2); 22.1% (95% CI:12.4-31.8) and 20.4% (95% CI:14.5- 26.3), respectively (p<0.001).
- Of HIV negative/unknown serostatus participants, 70.4% in Montreal reported having tested for HIV in the previous year, compared to 67.5% in Toronto and 69.4% in Vancouver (p=0.010).
- Of participants with confirmed HIV infection, 3.3% were previously undiagnosed in Montreal, compared to 3.2% in Toronto and 0.2% in Vancouver (p<0.001).
- In Montreal, 94.3% of HIV positive individuals were receiving ART and 10.6% had an unsuppressed VL; in Toronto 96.2% were receiving ART and 4.0% had an unsuppressed VL; in Vancouver 92.7% were receiving ART and 2.6% had an unsuppressed VL (p=0.002 and 0.009, respectively).
- In our multivariable model, unsuppressed VL was associated with **younger age, higher HADS scores on the anxiety subscale, low-risk AUDIT-C scores, income ≥\$60,000, not having a family doctor, and not ever being diagnosed with an STI** (p<0.05, for all).

Conclusions:

- Generally, gbMSM in Montreal, Toronto and Vancouver are highly engaged in HIV testing and treatment and the magnitude of differences across cities was very small.
- Unsuppressed VL was very uncommon but was associated with younger age, symptoms of anxiety and some health service indicators.