An HIV sexual risk profile of transgender men in a sample of men who have sex with men (MSM) In Vancouver, British Columbia

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Background

In addition to comprising a 'hidden' or hard to reach population, transgender people are generally excluded from routine epidemiological surveillance, leaving estimates of HIV prevalence and population size unreliable. While HIV prevalence among the population is estimated to be low, literature suggests that transgender men may not be at low risk of acquiring HIV. Studies have show that up to two-thirds of transgender men identify as gay, bisexual or queer (Bauer et al. 2013). Transgender men also engage in a number of sexual HIV risk behaviours including receptive anal and genital sex, inconsistent condom use, and sex work (Bauer et al. 2013; Sevelius 2009).

Study Objective: We created a descriptive profile of transgender-identified men in a cross-sectional study of gay, bisexual and other men who have sex with men (GBMSM) in Vancouver, Canada and and compared transgender versus cisgender (people for whom self-identified gender matches their sex assigned at birth) men in the study.

Methods

Study Population: The Momentum Health Study is a longitudinal cohort study of GBMSM in Vancouver. Participants were ≥16 years old, gender-identified as a man and reported sex with a man in the past six months. Participants were recruited via respondent driven sampling (RDS) and completed a self-administered computer-based survey. Data were analyzed for participants in the closed cross-sectional study, enrolled between February 28 2012 and February 28 2014.

Statistical Analysis: For this cross-sectional analysis, descriptive statistics were used to create a summary profile of transgender participants using individual-level data and event level data pertaining to sexual behaviour and substance use 2 hours prior to or during sex for participants' last 5 sexual partners in the past 6 months. Bivariate analysis was conducted to compare transgender and cisgender participants for socio-demographic, psychosocial and behavioral variables related to HIV sexual risk. Crude and RDS-adjusted percentages are presented in Tables 1 and 2.

Results

Table 1: Socio-demographic comparison of transgender vs. cisgender GBMSM

	Transgender (n = 14)		Cisgender (n = 703)		p-value
	Crude % (n)	Weighted % (CI)	Crude % (n)	Weighted % (CI)	
HIV Point of Care test result					**0.015**
Negative	100 (14)	100	72 (505)	72 (68-77)	
Positive	-	-	28 (198)	28 (23-32)	
Age, median (IQR)	26(24-28)	-	34(26-47)	-	**0.004**
Area of residence					**0.004**
Downtown/ West End (excludes DTES)	14(2)	16(0-45)	50(353)	51(46-57)	
Rest of Vancouver	71(10)	55(18-93)	30(213)	28(24-33)	
Outside Vancouver	14(2)	29(0-65)	19(137)	20(16-24)	
Sexual Orientation					**<0.001**
Gay	36(5)	55(20-90)	86(606)	83(78-87)	
Bisexual	-	-	9(66)	13(9-17)	
Questioning	-	-	1(5)	1(0-2)	
Queer	64(9)	45(2-80)	2(15)	1(1-2)	
Other	-	-	2(11)	2(0-4)	
Ethnicity					0.437
White	86(12)	81(51-100)	75(525)	69(64-74)	
Asian	-	-	10(72)	10(7-13)	
Aboriginal	-	-	7(50)	10(6-14)	
Other	14(2)	19(0-49)	8(56)	11(7-15)	
Education					0.655
< High School	7(1)	06(0-20)	9(61)	12(8-16)	
Completed high school	86(12)	92(78-100)	15(105)	18(13-22)	
> High School	7(1)	1(0-5)	75(524)	68(63-73)	

Of 717 total eligible participants, 14 (2%) transgender-identified and 703 (98%) cisgender men were included in this analysis. All 14 TMSM were HIV-negative while 28% (198) of cisgender participants were HIV-positive by POC result, 3 of whom self-reported serostatus as HIV-negative or unknown. Transgender men were younger (median age 26 vs. 34, p=0.004), less likely to live in Downtown Vancouver (14% vs. 50%; p=0.004), and more likely to be queer-identified (64% vs. 2%; p<0.001).

Results (continued)

Table 2: Comparison of sexual risk behaviours of transgender vs. cisgender GBMSM

	Transgender (n = 14)		Cisgender (n = 703)		p-value
	Crude % (n)	Weighted % (CI)	Crude % (n)	Weighted % (CI)	
Current partner gender					**<0.0001**
Female	14(2)	7(0-21)	1(6)	2(1-3)	
FTM	29(4)	12(0-28)	0(1)	0(0-1)	
Male	14(2)	29(0-65)	31(216)	30(25-35)	
MTF	-	-	0(2)	0(0-0)	
Relationship with primary partner open or closed					**0.040**
Completely monogamous	7(1)	14(0-44)	11(74)	12 (8-16)	
Supposed to be monogamous, but have partners on the side	-	-	6(42)	7 (4-9)	
Only shared sex partners	-	-	3(21)	3(1-4)	
Only separate outside sex partners	-	-	3(21)	3(2-5)	
Both shared and separate sex partners	36(5)	19(0-40)	7(49)	5(3-7)	
Other arrangement	14(2)	15(0-45)	3(18)	2(1-3)	
Strategies to prevent acquiring HIV					**0.031**
None selected	-	-	27(193)	27(22-31)	
At least 1 selected	100(14)	100(100-100)	72(506)	73(68-78)	
Strategy: always use condoms					**0.027**
Yes	79(11)	70(36-100)	46(324)	49(43-54)	
No	21(3)	30(0-64)	54(379)	51(46-57)	
Strategy: no anal sex					**0.001**
Yes	79(11)	27(0-61)	35(246)	31(26-35)	
No	21(3)	73(39-100)	65(457)	69(65-74)	
Number of times tested P2Y, median(IQR)	3(2-4)	-	2(0-4)	-	**0.036**
Number of male anal sex partners P6M, median(IQR)	2(1-5)	-	4(2-10)	-	**0.024**
Unprotected anal sex with unknown serostatus partner P6M					0.092
No	36(5)	51(15-87)	32(228)	33(28-38)	
Yes	7(1)	14(0-44)	32(228)	30(25-35)	
Number of times had unprotected anal sex P6M, median(IQR)	1(0-1)	-	1(0-1)	-	0.153

In bivariate comparison, more transgender GBMSM reported always using condoms (79% vs. 46%; p=0.027) and having sex which did not include anal sex (79% vs. 35%; p=0.001) as HIV acquisition prevention strategies. Transgender GBMSM had tested for HIV more frequently in the past two years (median 3 times vs. 2 times; p=0.036), had fewer total male anal sex partners in the past 6 months (median 2 vs. 4; p=0.024), and, though not statistically significant, reported less unprotected anal sex in the past 6 months with an unknown serostatus male partner (36% vs. 32%; p=0.92). There was no difference in reported frequency of unprotected anal sex in the past 6 months between the groups (median 1; IQR:1).

Conclusions

We found no HIV infections among this sample of transgender men. Overall, transgender GBMSM in Momentum engaged in lower HIV sexual risk behaviours than their cisgender peers and employed some HIV risk reduction strategies more often, including consistent condom use and HIV testing.

Public health prevention interventions targeting GBMSM need to acknowledge the presence of transgender men within these communities and ensure they are inclusive of transgender GBMSM.

As a longitudinal bio-behavioural study, Momentum provides an opportunity to gain insight into the clinical and behavioural sexual health of transgender GBMSM over time, adding to the limited knowledge on these men's health. This preliminary quantitative analysis will inform a qualitative study to explore in depth factors related to HIV sexual risk for transgender GBMSM.

References

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