

Awareness of Pre-Exposure Prophylaxis (PrEP) among a cohort of men who have sex with men (MSM) in Vancouver, Canada

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Background

Pre-exposure Prophylaxis (PrEP) is gaining attention as a potential strategy to prevent HIV acquisition amongst high-risk populations.

Grant et al. (Grant et al. 2010) demonstrated the effectiveness of Tenofovir/ Emtricitabine as Pre-exposure Prophylaxis (PrEP) for decreasing HIV incidence in at-risk among a sub-set of men who have sex with men (MSM) in the iPrEX study.

The US Centers for Disease Control has recommended the use of PrEP in MSM.

Although PrEP has been highlighted in popular media, Truvada is not licensed for use in Canada, although off-label use may be possible.

Study Objective: This study aimed to characterize factors associated with PrEP awareness amongst MSM in a cohort recruited from Greater Vancouver, BC.

Methods

Study Population: The Momentum Health Study is a longitudinal bio-behavioural study of gay, bisexual and other MSM in Vancouver. Participants are recruited via Respondent Driven Sampling (RDS) and are ≥16 years old, gender-identify as a man and report having sex with a man in the 6 months prior to baseline. Data were analyzed for participants enrolled between Feb 28 2012 and February 28 2014.

Primary Outcome: Participants were asked if they had heard of PrEP and, if so, how much they knew about the term, and if they had discussed it with friends or sex partners in the past 6 months. Of the sample of 719 participants, those who did not provide a response regarding PrEP awareness (n=170) were excluded from this analysis.

Statistical Analysis: We used descriptive statistics, as well as statistical test values (Pearson χ^2 test for categorical variables and Wilcoxon rank-sum test for continuous variables) to explore the univariate distribution of PrEP awareness and compare differences between those who had heard of PrEP and those who had not. Multivariate logistic regression was used to identify independent covariates of PrEP awareness.

Results

Table 1: Socio-demographic characteristics by PrEP Awareness

Variable	Total	Ever heard of PrEP			
		No		Yes	
		Crude % (n)	Weighted estimate % (95% CI)	Crude % (n)	Weighted estimate % (95% CI)
HIV POC result	549				
Positive		79.1 (345)	77.4 (71.4, 83.5)	63.7 (72)	71.8 (61.2, 82.4)
Negative		20.9 (91)	22.8 (16.5, 28.6)	36.3 (41)	28.2 (17.6, 38.8)
Ethnicity	549				
White		72.5 (316)	65.4 (58.6, 47.8)	83.2 (94)	82.4 (71.8, 92.9)
Asian		10.6 (46)	10.4 (6.6, 14.1)	8 (9)	7.8 (2.1, 13.5)
Aboriginal		7.8 (34)	11.7 (6.6, 16.8)	1.8 (2)	4.9 (0, 13.9)
Other		9.2 (40)	12.5 (7.3, 17.7)	7.1 (8)	4.9 (0.6, 9.1)
Age (continuous)	549	31 (25, 44)	32 (25, 45)	37 (29, 50)	36 (29, 49)
Sexual identity	549				
Gay		83 (362)	78.6 (72.7, 84.6)	87.6 (99)	89.1 (82.2, 96)
Bisexual		11 (48)	15.7 (10.3, 21.2)	7.1 (8)	8.6 (2, 15.2)
Other		6 (26)	5.6 (2.7, 8.6)	5.3 (6)	2.3 (0.3, 4.3)
Education	538				
High school or less		24.6 (105)	29.9 (23.4, 36.5)	17.1 (19)	23.9 (11.6, 36.1)
Greater than high school		75.4 (322)	70.1 (63.5, 76.6)	82.9 (92)	76.1 (63.9, 88.4)

Of the 549 participants included in this analysis, 21% (113) had heard of PrEP while 79% (436) had not heard of PrEP. More HIV-negative individuals had heard of PrEP (31.1% vs. 17.3% for HIV-positive participants) but these differences were not statistically significant (p=0.2448). The median age of those PrEP aware (31 years; IQR 25 – 44) was lower than for those who had not heard of PrEP (37 years; IQR 29 – 50).

Conflict of Interest Disclosure: I have no conflicts of interest

Results (continued)

Table 2: Significant variables by PrEP awareness

		Univariate analysis	Multivariate analysis
Variable	p value	Adjusted Odds Ratio (CI 95%)	
Age (continuous)	<.001	1.02 (1.00, 1.04)	Not selected
Ethnicity	0.0120	1.00 (Reference) 0.60 (0.26, 1.37) 0.33 (0.12, 1.90) 0.31 (0.11, 0.84)	1.00 (Reference) 0.64 (0.27, 1.52) 0.27 (0.10, 0.75) 0.24 (0.09, 0.68)
Heard of STOP HIV/AIDS Team	0.0017	1.00 (Reference) 2.16 (1.33-3.52)	Not selected
Heard of Treatment as Prevention (TasP)	<.0001	1.00 (Reference) 3.07 (1.91, 4.92)	1.00 (Reference) 3.14 (1.92, 5.13)
P6M number of anal intercourse partners	0.0366	1.00 (Reference) 1.67 (1.03, 2.70)	Not selected
Lifetime number of receptive anal intercourse partners	0.0004	1.00 (Reference) 2.24 (1.42, 3.53)	1.00 (Reference) 2.09 (1.28, 3.40)
Lifetime number of insertive anal intercourse partners	0.0299	1.00 (Reference) 1.65 (1.05, 2.60)	Not selected
Most recent partner age compared to yours	0.0464	1.00 (Reference) 0.99 (0.45, 2.19) 0.57 (0.26, 1.26) 0.40 (0.17, 0.95) 0.63 (0.19, 2.15)	Not selected
Insertive UAI with most recent partner	0.0089	1.00 (Reference) 1.98 (1.18, 3.33)	Not selected
Marijuana use within 2 hours of most recent sexual encounter	0.0225	1.00 (Reference) 1.72 (1.08, 2.75)	Not selected
Sexual sensation seeking scale	0.0006	1.00 (Reference) 2.21 (1.40, 3.48)	1.00 (Reference) 2.05 (1.26, 3.32)

In adjusted analyses: PrEP aware respondents were more likely to be White, older and have heard of TasP. PrEP awareness was associated with sexual behaviour variables including greater than 4 lifetime receptive anal intercourse partners and sexual sensation seeking.

Conclusions

Despite the HIV prevention potential of PrEP, PrEP awareness was limited among this sample of MSM, particularly among HIV-positive participants. This highlights the need for a coordinated PrEP campaign targeting MSM before initiating this important HIV prevention tool in Canada.

References Cited

Grant RM, Lama JR, Anderson PL, et al. Pre-exposure chemoprophylaxis for HIV prevention in men who have sex with men. N Engl J Med. 30;363(27):2587-99.

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