



# Condom Use During Anal Intercourse and Other Prevention Strategies Among HIV-Positive MSM in Vancouver, British Columbia

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## Conflict of Interest Disclosure

In the past 2 years I have been an employee of: **None**

In the past 2 years I have been a consultant for: **None**

In the past 2 years I have held investments in the following pharmaceutical organizations, medical devices companies or communications firms: **None**

In the past 2 years I have been a member of the Scientific advisory board for: **None**

In the past 2 years I have been a speaker for: **None**

In the past 2 years I have received research support (grants) from: **None**

In the past 2 years I have received honoraria from: **None**

I agree to disclose approved and non-approved indications for medications in this presentation: **N/A**

I agree to use generic names of medications in this presentation: **N/A**

There are no relationships to disclose: **YES**



## Background

- Gay, bisexual and other men who have sex with men (GBM) are disproportionately effected by HIV in Canada
  - Incidence rate 71 times higher than non-GBM (PHAC, 2014)
- In British Columbia, the number of new HIV diagnoses has remained stable for the past decade (~140-180/year)
- Early treatment and viral suppression are promoted for both clinical and prevention benefit



## Aims

We seek to understand the current sexual practices of HIV-positive GBM in order to inform best sexual health promotion and prevention programming:

1. To identify factors associated with condom use during anal intercourse among HIV-positive GBM
2. To determine what preventive attitudes and alternative strategies were employed by HIV-positive GBM who did not report using condoms



# Methods (1)

- **Momentum Health Study:**
  - Bio-behavioural longitudinal study
  - RDS-recruitment (n=119 seeds for 719 total participants)
  - 6-monthly in-person study visits:
    - Computer-assisted self-interview
    - Nurse-administered clinical questionnaire and screening
- **Eligibility Criteria:**
  - Report sex with another man in the past 6 months
  - Aged 18 years or older



## Methods (2)

- **Explanatory Factors - Individual-Level:**
  - Demographics, prevention strategies, HIV-related attitudes
  - Psychosocial factors:
    - **HAART Optimism** (Van Den Ven et al., 2000): less fear of HIV disease and probability of HIV infection
    - **Sexual Sensation Seeking** (Kalichman & Rompa, 1995): need for varied, novel, and complex sexual experiences and willingness to take personal physical and social risks to enhance sexual sensations
    - **Cognitive Escape** (McKirnan et al., 2001): from past or ongoing sexual risk and vulnerability to HIV
    - **Sexual Altruism** (Nimmons & Folkman, 1999): personal and community subscales for HIV prevention



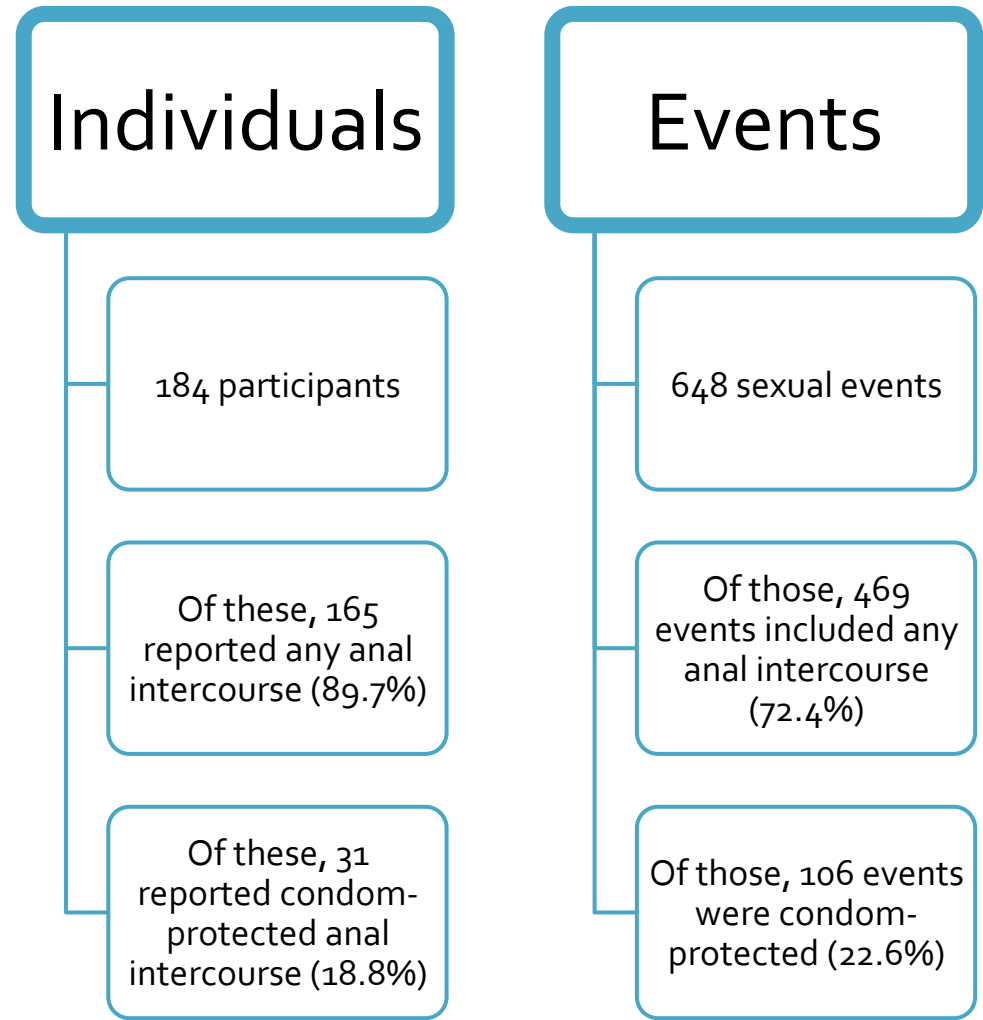
## Methods (3)

- **Explanatory Factors – Event-Level:**
  - Partner relationship length and frequency of sex
  - Participant's sexual position, awareness of HIV status
  - Substance use by participant and by partner
- **Outcome:**
  - **“Partner Matrix”** - 5 most recent sexual partners, and last sexual encounter with each of these
  - **Condom use versus non-use** (limited to anal intercourse)
- **Analyses:**
  - Generalized linear mixed models
  - Manual backward selection ( $p < 0.05$  significant)








# Results

- **Figure 1** (right) describes the outcome variable at individual and event levels
- **Table 1** (green) presents factors associated with condom use (vs. non-use)
- **Table 2** (orange) presents factors associated with condom non-use





# Factors Associated with Condom Use (CU)

	# CU events / # events	% CU events	aOR	95% CI	
<b>Psychosocial scales</b>					
Sexual Sensation Seeking 	n/a	n/a	<b>0.86</b>	0.78	0.94
Cognitive Escape 	n/a	n/a	<b>0.93</b>	0.88	0.99
Sexual Altruism – Community 	n/a	n/a	<b>3.32</b>	2.00	5.50
<b>EVENT-LEVEL FACTORS</b>					
<b>Number of times of anal sex in P6M</b>					
	n/a	n/a	<b>0.86</b>	0.77	0.97
<b>Awareness of partner's HIV status</b>					
No, I did not know his status	36/102	<b>35.3</b>	<b>1.00</b>		
Yes, I was <u>certain</u> he was HIV-negative	28/75	37.3	0.88	0.30	2.65
Yes, I <u>think</u> he was HIV-negative	10/30	33.3	0.65	0.13	3.15
Yes, I was <u>certain</u> he was HIV-positive 	28/241	<b>11.6</b>	<b>0.28</b>	0.11	0.73
Yes, I <u>think</u> he was HIV-positive	4/21	19.0	1.24	0.21	7.46
<b>GHB substance use by participant</b>					
GHB not used 	104/406	<b>25.6</b>	<b>1.00</b>		
GHB was used	2/63	<b>3.2</b>	<b>0.12</b>	0.02	0.77

**CU = condom use; aOR = adjusted odds ratio; 95% CI = 95% confidence interval**  
**Model controls for sexual identity, sexual position, and participant MDMA use**

# Factors Associated with Non Condom Use

	aOR	95% CI	
<b>SEXUAL STRATEGIES</b> (mutually exclusive, referent: not used)			
<b>Sero-sorting</b> "Having sex <u>without condoms</u> only with guys I know are HIV-positive"	<b>3.64</b>	1.78	7.43
<b>TasP-informed</b> "Having sex <u>without condoms</u> if my viral load is low or I'm on HIV treatment"	<b>2.32</b>	1.12	4.80
<b>Ask Status</b> "Asking my sex partners about their HIV status before sex"	<b>3.43</b>	1.71	6.91
<b>ATTITUDES</b> (mutually exclusive, referent: disagree)			
<b>(Sero-sorting)</b> ...Agree "Having condomless sex only with guys who have the same HIV status as you is an effective means of safer sex"	<b>2.27</b>	1.09	4.72
<b>(TasP-informed)</b> ...Agree "Knowing a sex partner's viral load is just as important as knowing their HIV status"	<b>2.39</b>	1.09	5.21
<b>(Ask Status)</b> ... Agree "If my sex partner does not ask me about my HIV status then that means they mostly likely have HIV"	<b>2.30</b>	1.09	4.87

**aOR = adjusted odds ratio; 95% CI = 95% confidence interval**



## Conclusions

- HIV-positive men who report condomless anal intercourse employ **various prevention strategies that consider HIV status and viral load**
- Psychosocial traits, attitudes, and substance use are important predictors of condom use
  - Some men seek **condomless sex for pleasure**; for others, it may be a form of **coping or escape from life stressors**
- These strategies **do not appear to consider other sexually transmitted infections**, such as syphilis



# Momentum Study Team

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# Momentum Participants!



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