

# Is awareness of the HIV prevention benefits of ART associated with lower anxiety during sex? A cross-sectional analysis of women living with HIV in Canada

Allison Carter<sup>1, 2</sup>, Saara Greene<sup>3</sup>, Deborah Money<sup>4</sup>, Margarite Sanchez<sup>2</sup>, Kath Webster<sup>2</sup>, Valerie Nicholson<sup>2</sup>, Lori A. Brotto<sup>4</sup>, Catherine Hankins<sup>5, 6</sup>, Mary Kestler<sup>10</sup>, Neora Pick<sup>4, 7</sup>, Kate Salters<sup>1, 2</sup>, Karène Proulx-Boucher<sup>8</sup>, Nadia O'Brien<sup>8, 9</sup>, Sophie Patterson<sup>2</sup>, Alexandra de Pokomandy<sup>8, 9</sup>, Mona Loutfy<sup>11</sup>, Angela Kaida<sup>2</sup>, CHIWOS

1. British Columbia Centre for Excellence in HIV/AIDS, Vancouver, BC, 2. Simon Fraser University, Faculty of Health Sciences, Vancouver, BC, 3. McMaster University, School of Social Work, Hamilton, ON, 4. University of British Columbia, Department of Obstetrics and Gynecology, Faculty of Medicine, Vancouver, BC, 5. Amsterdam Institute for Global Health and Development, University of Amsterdam, Amsterdam, Netherlands, 6. McGill University, Department of Epidemiology, Faculty of Medicine, Montreal, QC, 7. Oak Tree Clinic, British Columbia Women's Hospital and Health Centre, Vancouver, BC, 8. Chronic Viral Illness Service, McGill University Health Centre, Montreal, QC, 9. McGill University, Department of Family Medicine, Montreal, QC, 10. University of British Columbia, Division of Infectious Diseases, Faculty of Medicine, Vancouver, BC, 11. Women's College Research Institute, Women's College Hospital, Toronto, ON

## BACKGROUND



Sustained use of ART with an undetectable viral load effectively eliminates risk of sexual HIV transmission.

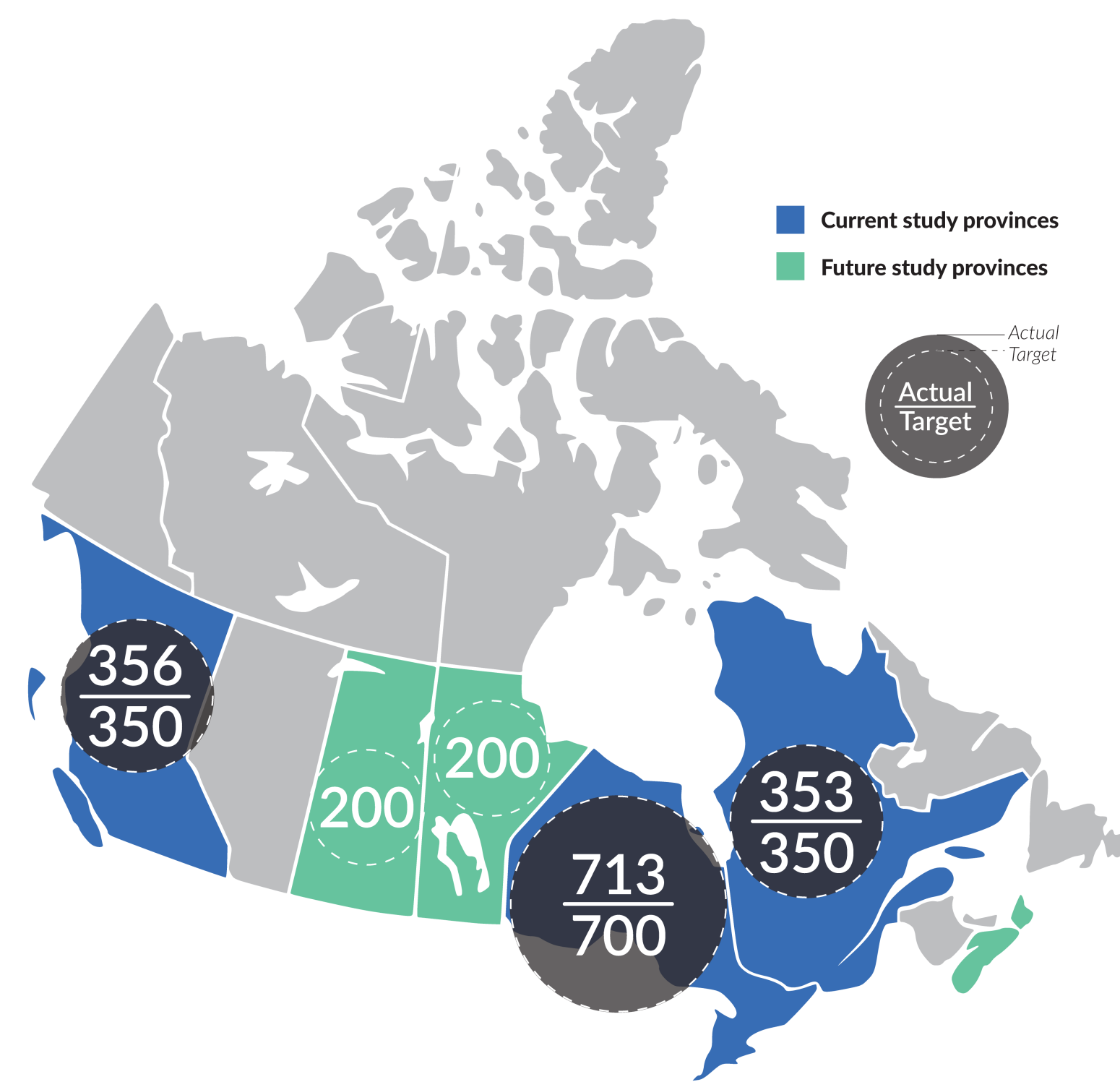
While the primary aim of this medical strategy is to **reduce sexual risk**, communities are using this science to help **reclaim their sexual lives**.

### Research question:

**Is awareness of the HIV prevention benefits of ART associated with lower anxiety during sex?**

## METHODOLOGY

We used baseline questionnaire data from the Canadian HIV Women's Sexual and Reproductive Health Cohort Study (CHIWOS, www.chiwos.ca). We hired and trained 40 women living with HIV as Peer Research Associates across BC, ON and QC and together, we recruited and surveyed a diverse cohort of 1,422 women living with HIV aged 16 years or older.



- Data collection:** August 2013 to May 2015
- Primary outcome:** Women who reported sex in the past month were asked, "Overall, how frequently have you become anxious or inhibited during sexual activity with a partner?"
- Explanatory variable:** Awareness of ART prevention benefits was measured via the question, "How do you think taking ART changes your risk of transmitting HIV?" and defined as "makes the risk a lot lower."
- Statistical analysis:** Multinomial logistic regression

## RESULTS

**Table 1:** Baseline characteristics and bivariable associations with sexual anxiety (n=474) (continued)

	Frequency of becoming anxious or inhibited during sex in past month				p-value
	Overall	Always/Usually (N=69, 14.6%)	Sometimes/Seldom (N=127, 26.8%)	Not at all (N=278, 58.6%)	
<b>Additional categorical variables - N (%)</b>					
<b>Gender identity</b>					
Cis woman	447 (94.3)	62 (89.9)	116 (91.3)	269 (96.8)	<b>0.021</b>
Trans woman	27 (5.7)	7 (10.1)	11 (8.7)	9 (3.2)	
<b>Personal yearly income</b>					
Less than \$20000	318 (69.3)	54 (85.7)	80 (65.0)	184 (67.4)	<b>0.009</b>
\$20000 or more	141 (30.7)	9 (14.3)	43 (35.0)	89 (32.6)	
<b>Any violence as adult</b>					
Never	67 (14.8)	9 (13.6)	8 (6.6)	50 (18.7)	<b>&lt;0.001</b>
Previously	264 (58.1)	30 (45.5)	73 (60.3)	161 (60.3)	
Currently	123 (27.1)	27 (40.9)	40 (33.1)	56 (21.0)	
<b>Current sex work</b>					
No	408 (87.7)	49 (73.1)	108 (85.7)	251 (92.3)	<b>&lt;0.001</b>
Yes	57 (12.3)	18 (26.9)	18 (14.3)	21 (7.7)	
<b>Illicit drug use history</b>					
Never	217 (46.3)	28 (41.2)	46 (36.5)	143 (52.0)	<b>0.033</b>
Previously	134 (28.6)	19 (27.9)	46 (36.5)	69 (25.1)	
Currently	118 (25.2)	21 (30.9)	34 (27.0)	63 (22.9)	
<b>ART</b>					
Never	59 (12.5)	3 (4.3)	13 (10.2)	43 (15.6)	<b>0.091</b>
Previously	29 (6.2)	5 (7.2)	6 (4.7)	18 (6.5)	
Currently	383 (81.3)	61 (88.4)	108 (85.0)	214 (77.8)	
<b>Most recent viral load</b>					
Undetectable	368 (77.6)	62 (89.9)	99 (78.0)	207 (74.5)	<b>0.033</b>
Detectable	68 (14.3)	4 (5.8)	16 (12.6)	48 (17.3)	
<b>Emotional closeness in sex life</b>					
Enough	256 (54.4)	16 (23.2)	59 (46.8)	181 (65.6)	<b>&lt;0.001</b>
Not enough	215 (45.6)	53 (76.8)	67 (53.2)	95 (34.4)	
<b>Communication of sexual desires or preferences</b>					
Always/Usually	336 (73.4)	37 (56.9)	70 (57.4)	229 (84.5)	<b>&lt;0.001</b>
Sometimes/Seldom/Never	122 (26.6)	28 (43.1)	52 (42.6)	42 (15.5)	
<b>Body satisfaction</b>					
Satisfied	318 (67.1)	43 (62.3)	76 (59.8)	199 (71.6)	<b>0.043</b>
Dissatisfied	156 (32.9)	26 (37.7)	51 (40.2)	79 (28.4)	

**Table 2:** Multivariable model of factors associated with sexual anxiety using "not at all" as the reference (n=370), showing AORs and 95% CIs

Main explanatory variable	Odds of sexual anxiety	
	Always/Usually	Sometimes/Seldom
Not aware of the HIV prevention benefits of ART	1.028 (0.466, 2.269)	0.874 (0.479, 1.596)
<b>Covariates associated with higher odds of sexual anxiety</b>		
Depression (10-point increase, CES-D scale)	<b>1.09 (1.036, 1.147)</b>	<b>1.045 (1.003, 1.089)</b>
Sexism (10-point increase, EED scale)	1.022 (0.986, 1.06)	<b>1.034 (1.005, 1.063)</b>
Current sex work	<b>6.841 (1.618, 28.918)</b>	1.428 (0.449, 4.541)
Previous illicit drug use (vs. never)	1.23 (0.546, 2.768)	<b>2.546 (1.411, 4.593)</b>
<b>Covariates associated with lower odds of sexual anxiety</b>		
Current illicit drug use (vs. never)	0.299 (0.084, 1.059)	0.801 (0.349, 1.837)
Detectable viral load	<b>0.281 (0.085, 0.936)</b>	0.599 (0.273, 1.315)
Adequate emotional closeness from partner	<b>0.358 (0.161, 0.796)</b>	0.917 (0.515, 1.633)
Sexual Relationship Power (10-point increase, SRPS)	<b>0.942 (0.897, 0.99)</b>	<b>0.92 (0.885, 0.957)</b>

## DISCUSSION

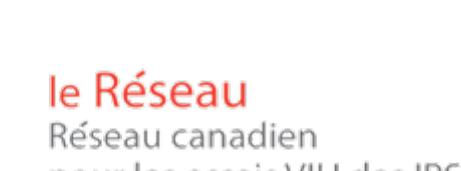
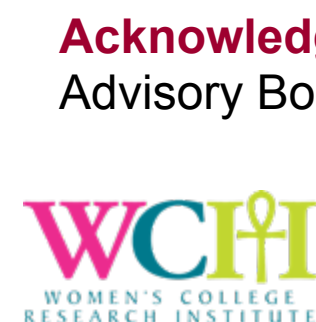
Awareness of the HIV prevention benefits of ART was not associated with lower anxiety during sex for women in this study. Instead, correlations were found with factors relating to substance use, sex work, mental health, and the quality of sex and intimate relationship experiences. These results highlight a need to gender the HIV treatment as prevention paradigm. Biomedicine alone is not enough; promoting positive sexual health outcomes among women living with HIV also requires addressing the complex social realities that shape their intimate lives.

## RESULTS

**Table 1:** Baseline characteristics and bivariable associations with sexual anxiety (n=474)

	Frequency of becoming anxious or inhibited during sex in past month				p-value
	Overall	Always/Usually (N=69, 14.6%)	Sometimes/Seldom (N=127, 26.8%)	Not at all (N=278, 58.6%)	
<b>Main explanatory variable - N(%)</b>					
Aware of the HIV prevention benefits of ART					
Yes	343 (72.4)	46 (66.7)	94 (74.0)	203 (73.0)	0.508
No	131 (27.6)	23 (33.3)	33 (26.0)	75 (27.0)	
<b>Additional continuous variables - Median (Q1, Q3)</b>					
Age at interview	39 (32.0-45.0)	40 (34.0-47.0)	39 (33.0-45.0)	39 (32.0-45.0)	0.577
Years living with HIV	9.6 (5.6-15.5)	8.2 (3.8-14.8)	9.2 (5.6-16.4)	10.2 (5.7-15.2)	0.388
Genderism/sexism	17 (10.0-27.0)	22.5 (14.5-28.5)	22 (12.0-30.0)	16 (8.0-24.0)	<b>&lt;0.001</b>
Racism	16 (8.0-28.0)	21 (8.0-32.0)	15.5 (8.0-27.0)	15 (8.0-27.0)	0.232
HIV stigma	55 (40.0-70.0)	60 (46.3-80.0)	57.5 (45.0-67.5)	52.5 (40.0-67.5)	<b>0.01</b>
Depression	8 (3.0-14.0)	13 (8.0-20.0)	10 (5.0-15.0)	5 (2.0-11.0)	<b>&lt;0.001</b>
Sexual relationship power	48 (43.0-56.0)	45 (39.0-51.0)	45 (41.0-51.0)	52 (45.0-58.0)	<b>&lt;0.001</b>
<b>Additional categorical variables - N (%)</b>					
<b>Sexual orientation</b>					
Heterosexual	405 (85.8)	54 (79.4)	110 (87.3)	241 (86.7)	0.260
Lesbian/queer	67 (14.2)	14 (20.6)	16 (12.7)	37 (13.3)	
<b>Ethnicity</b>					
Indigenous	116 (24.5)	15 (21.7)	30 (23.6)	71 (25.5)	0.505
African, Caribbean, Black	128 (27.0)	25 (36.2)	29 (22.8)	74 (26.6)	
White	197 (41.6)	24 (34.8)	57 (44.9)	116 (41.7)	
Other/multiple ethnicities	33 (7.0)	5 (7.2)	11 (8.7)	17 (6.1)	

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**For more information:**  
allison\_carter@sfu.ca  
Twitter @DrAllieCarter