

Engagement in HIV Care after Recent Incarceration Among Women living with HIV in Canada

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Honouring

CHIWOS wishes to acknowledge the ancestral, traditional and unceded Indigenous territories of the Coast Salish Peoples, and in particular, the Musqueam Nation, Tsleil Waututh Nation, Squamish Nation on whose territory we are privileged to gather today.



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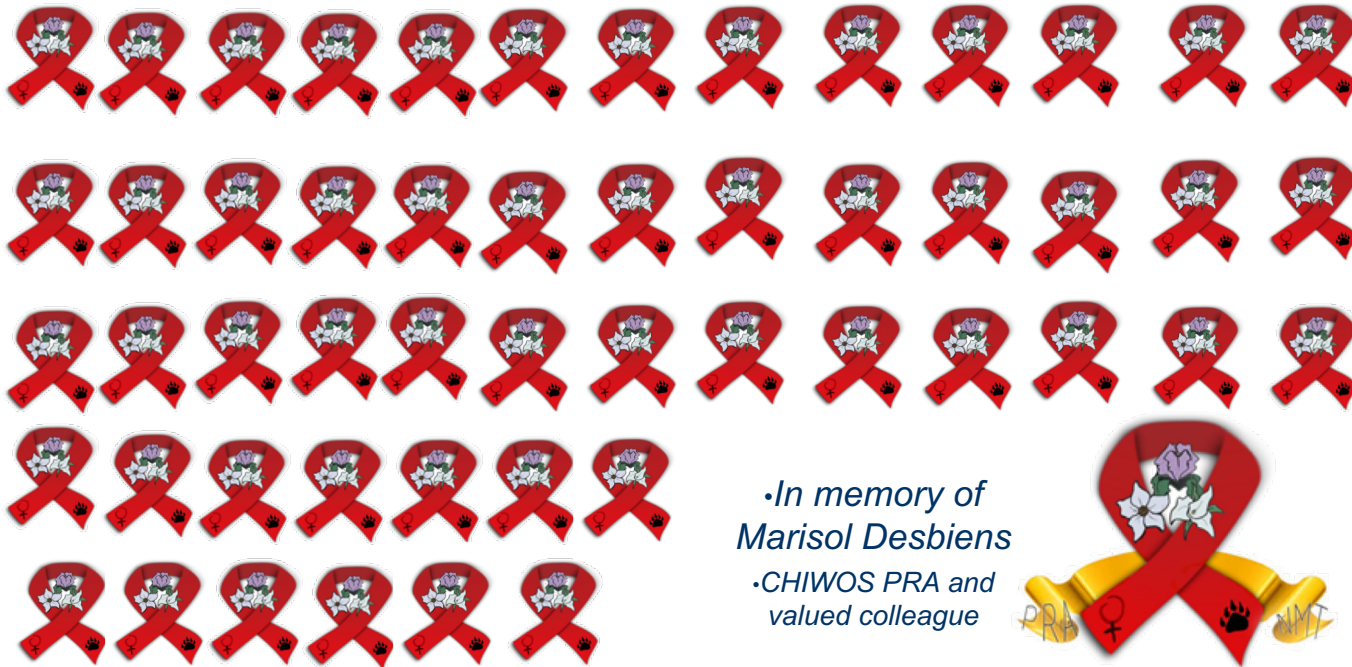
In **BC**: Oak Tree Clinic at BC Women's Hospital, AIDS Vancouver Island, BC Centre for Excellence in HIV/AIDS, Cool Aid Community Health Centre, Downtown Community Health Clinic, Keys Housing and Health Solutions (Positive Haven), Living Positive Resource Centre, Positive Living Fraser Valley, Positive Women's Network (closed), Positive Living North, and Vancouver Island Persons with AIDS Society.

In **ON**: 2-Spirited People of the 1st Nations; 519 Community Centre; ACCKWA; Africans in Partnership Against AIDS (APAA); AIDS Committee of Durham Region; AIDS Committee of Guelph and Wellington County; AIDS Committee of Simcoe County; AIDS Network Hamilton; Alliance for South Asian AIDS Prevention; Black Coalition for AIDS Prevention; Bruce House; Casey House; Centre Francophone; Elevate NOW; Fife House; Hemophilia Ontario; HIV/AIDS Regional Services (HARS); Maggie's: Toronto Sex Worker's Action Project; Peel HIV Network; Positive Living Niagara; Prisoners with AIDS Support Action Network; Réseau Access Network; Toronto PWA Foundation; Women's Health in Women's Hands; Children's Hospital of Eastern Ontario; Kingston Hotel Dieu Hospital; Health Sciences North, Sudbury Regional Hospital, HAVEN Program; Lakeridge Health; Maple Leaf Medical Clinic; McMaster Family Practice; Ottawa General Hospital; Riverside Family Health Team; SIS Clinic, Hamilton Health Sciences; St. Joseph's Healthcare London; St. Michael's Hospital; Sunnybrook Health Sciences Centre; Toronto East General Hospital; Toronto General Hospital; William Osler Health System; Windsor Regional Hospital, HIV Care Program.

In **QC**: ACCM; L'ARCHE de l'Estrie; ASTT(e)Q; BLITS; BRAS-Outaouais; CACTUS; CASM; Centre Sida Amitié; Corporation Félix Hubert d'Hérelle; COCQ_SIDA; Fondation d'Aide Directe-SIDA Montréal; GAP-VIES; GEIPSI; M.A.I.N.S-Bas St-Laurent; Maison Plein Coeur; Maison Dominic; Maison du Parc; Maison Re-Né; MIELS-Québec; Le MIENS Chicoutimi; Portail VIH/sida du Québec; Sidaction Mauricie; Sida-Vie Laval; Stella, l'amie de Maimie.

Remembering

We honour and remember the 57 women living with HIV who participated in CHIWOS from across Canada who have passed away.



*•In memory of
Marisol Desbiens*

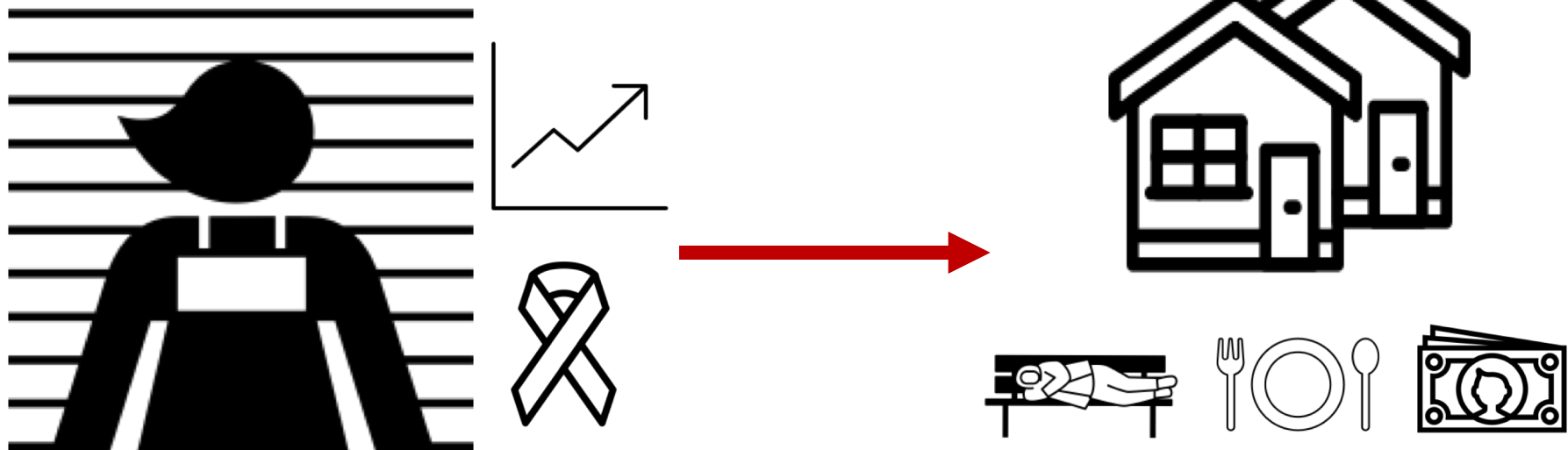
*•CHIWOS PRA and
valued colleague*



Conflicts of Interest

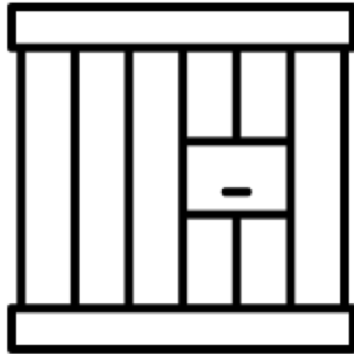
- No conflicts of interest to disclose.

Background 1-5



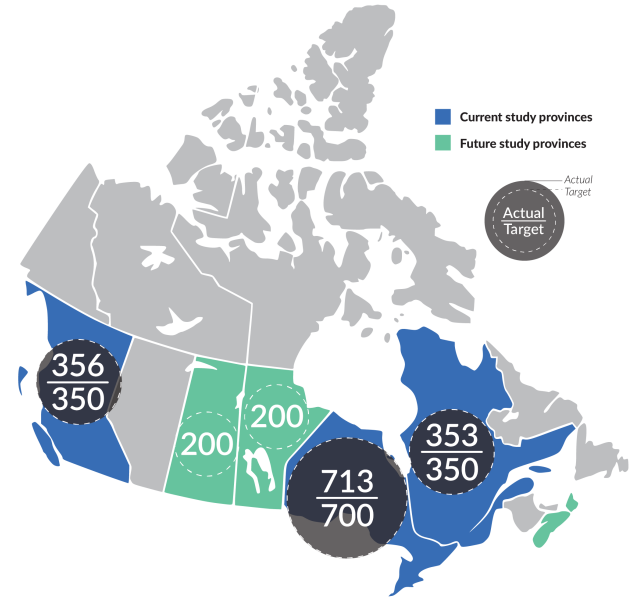
Objective

Understand the relationship between **incarceration experience** and **engagement in HIV care** among women living with HIV in Canada.



Canadian HIV Women's Sexual and Reproductive Health Cohort Study (CHIWOS)⁶

- **Cross-sectional** data from a multi-site, community-based, cohort study
- Enrolled 1,422 women (cis and trans inclusive) living with HIV ≥16 years
- Peer Research Associate (PRA) administered survey
 - Baseline and 18 month follow ups (Wave 2 complete, Wave 3 underway)



Methods:

Primary Outcomes:

- **Recent incarceration experience** (within the past year)
- **Ever incarceration experience** (yes, but not in the last year)
- **Never** (no incarceration experience)

Explanatory Variables:

- **Engagement in HIV care**
 - Received HIV medical care < 1 year
 - Current ARV use
 - Adherence to ARV ($\geq 95\%$)
- **Social and structural factors**

Methods:

CHIWOS Baseline Survey (2013-2015)

1. Baseline characteristics
2. Differences by outcome using Pearson χ^2
3. Multivariable logistic regression

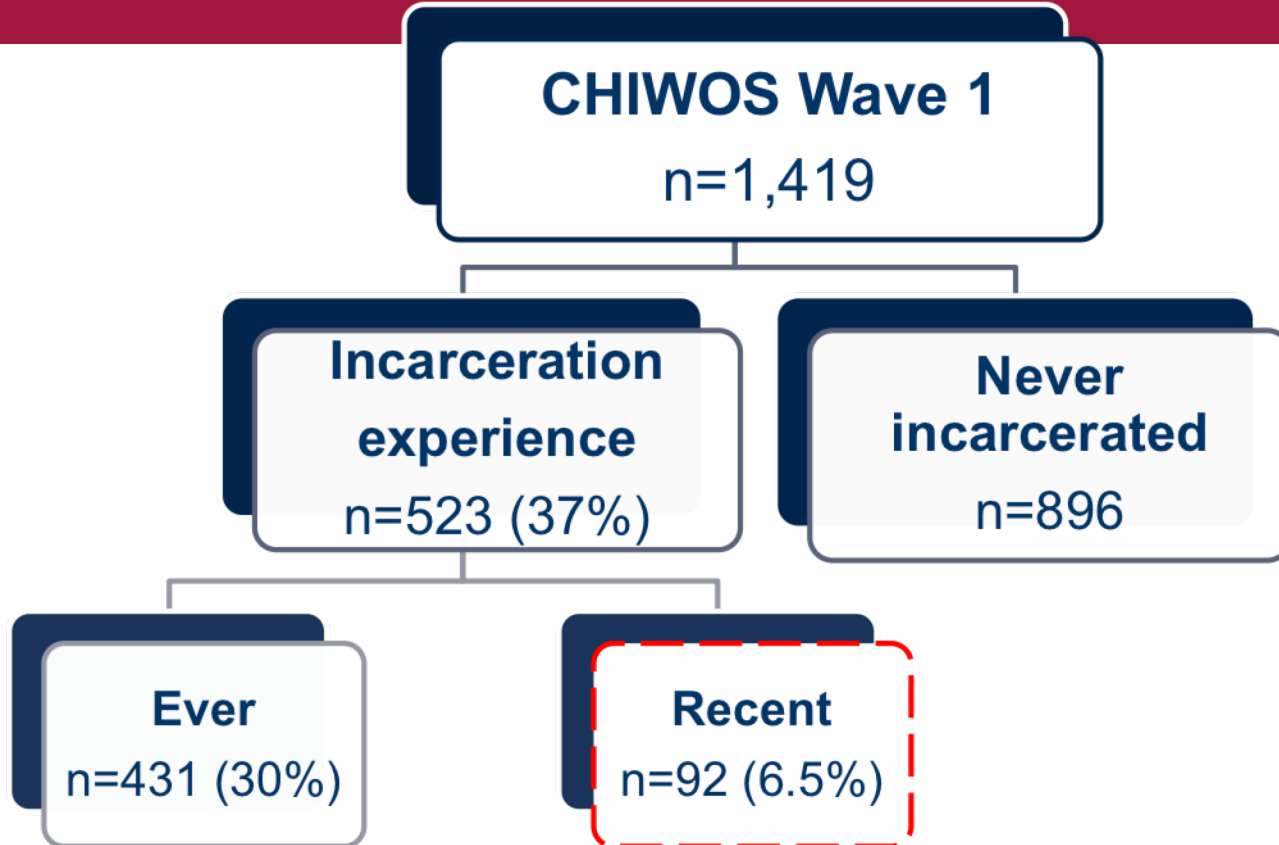
Table 1: Baseline Characteristics (n=1,419)

Characteristics	Median [IQR] or n (%)
Age	43 [35-50]
Ethnicity	
Indigenous	318 (22.4)
African / Caribbean / Black	417 (29.4)
White	583 (41.1)
Mixed ethnicity / other	101 (7.1)
LGBTQT	178 (12.5)
Stable Housing	1267 (89.3)
≥ High school education	1185 (83.5)
Personal yearly income <\$20,000	995 (70.1)
Currently on ARVs	1172 (82.6)



Women living with HIV
in Canada are diverse

Results: Prevalence of Incarceration Experience



Bivariable results of incarceration experience:

	Never (n=896)	Ever (n=431)	Recent (n=92)	P-value
Ethnicity				
Indigenous	12.7%	36.0%	53.3%	<0.001
African/Caribbean/Black	44.2%	3.7%	5.4%	
White	35.4%	53.8%	37.0%	
Mixed ethnicity / Other	7.7%	6.5%	4.3%	
Yearly income <\$20,000				<0.001
	62.5%	81.7%	90.2%	
Violence as an adult	66.5%	89.1%	80.4%	<0.001
Received HIV medical care <1 yr	94.5%	93.3%	84.8%	0.001
Currently on ARVs	82.8%	83.8%	75.0%	0.006
ARV adherence ≥ 95%	63.5%	60.6%	34.8%	<0.001

Multivariable Model n=1,161

Variable	Unadjusted OR (95% CI)		Adjusted OR (95% CI)	
	Ever	Recent	Ever	Recent
Ethnicity (vs. White)				
Indigenous	1.86 (1.38, 2.50)	4.01 (2.46, 6.52)	1.24 (0.77, 1.99)	3.47 (1.60, 7.52)
ACB	0.06 (0.03, 0.09)	0.12 (0.05, 0.30)	0.17 (0.09, 0.32)	0.24 (0.06, 0.98)
Mixed ethnicity / Other	0.55 (0.35, 0.89)	0.54 (0.19, 1.57)	0.67 (0.36, 1.28)	0.48 (0.09, 2.44)
Unstable housing	2.43 (1.67, 3.53)	6.10 (3.64, 10.21)	1.20 (0.62, 2.33)	2.59 (1.12, 6.00)
Current sex work	9.31 (5.00, 17.33)	17.93 (8.40, 38.27)	3.22 (1.32, 7.87)	3.79 (1.27, 11.32)
Injection drug use				
Currently vs. never	53.33(26.83, 106.02)	168.76(72.84,391.02)	9.09 (3.70, 22.32)	26.99 (7.90, 92.30)
Previously vs. never	29.79 (20.86,42.55)	30.98 (16.50, 58.19)	6.32 (3.77, 10.62)	8.88 (3.40, 23.20)
<\$20,000 (annual)	2.63 (1.98, 3.51)	9.19 (3.69, 22.89)	1.28 (0.83, 1.97)	2.59 (0.91, 7.32)

Multivariable Model n=1,161

Variable	Unadjusted OR (95% CI)		Adjusted OR (95% CI)	
	Ever	Recent	Ever	Recent
Low resiliency (≤ 64)	1.52 (1.21, 1.92)	2.30 (1.46, 3.62)	0.81 (0.54, 1.23)	0.47 (0.23, 0.94)
Violence as an adult	8.94 (5.38, 14.87)	5.86 (2.34, 14.68)	4.86 (2.48, 9.52)	2.64 (0.81, 8.58)
Ever Hepatitis C	17.65 (13.15, 23.71)	25.63 (15.24, 43.09)	4.05 (2.47, 6.64)	3.05 (1.29, 7.19)
Depressive symptoms* *CES-D Scale ⁷	1.61 (1.28, 2.04)	6.12 (3.49, 10.67)	1.16 (0.78, 1.74)	4.37 (2.07, 9.22)
Province of interview				
BC vs. QC	4.66 (3.32, 6.54)	3.43 (1.91, 6.15)	1.19 (0.67, 2.11)	0.31 (0.12, 0.83)
ON vs. QC	1.12 (0.82, 1.52)	0.91 (0.51, 1.60)	1.34 (0.80, 2.23)	0.51 (0.21, 1.27)

Multivariable Model n=1,161

Variable	Unadjusted OR (95% CI)		Adjusted OR (95% CI)	
	Ever	Recent	Ever	Recent
Received HIV medical care in past year No vs. Yes	1.30 (0.81, 2.10)	3.24 (1.71, 6.14)	2.60 (1.14, 5.94)	2.61 (0.76, 8.99)
Current antiretroviral use				
Currently vs. never	1.42 (0.97, 2.08)	0.64 (0.36, 1.13)	1.62 (0.78, 3.37)	0.56 (0.18, 1.78)
Previously vs. never	2.74 (1.47, 1.51)	1.33 (0.48, 3.66)	3.26 (1.20, 8.89)	1.23 (0.26, 5.90)
ARV adherence < 95% vs. ≥ 95%	1.26 (0.95, 1.68)	3.80 (2.30, 6.29)	1.46 (0.91, 2.32)	3.44 (1.62, 7.27)

Limitations



Did not differentiate between provincial and federal facilities, number of times incarcerated, nor length of prison sentence^{8,9}



Self-reported data¹⁰



Cross-sectional analysis

Discussion

There is a high prevalence of recent incarceration experience among women living with HIV.



**Sub-optimal
ARV adherence^{4,11}**



**Social
determinants of
health^{12,13}**



**Risk of
re-
incarceration¹⁵**

Community Action: What do women need?

Recognize Canada's colonial history that is placing Indigenous women at a three times higher odds of having recent incarceration.

Women are experiencing high rates of violence, highlighting a need for trauma-aware approaches to care and service provision.

Care and transition planning needs to focus on the **whole person**.



Photo by Valerie Nicholson

Thank you!

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References

1. Zinger I. Annual Report: Office of the Correctional Investigator In: Canada CS, editor. 2017
2. Canada CS. Human Immunodeficiency Virus (HIV) Age, Gender and Indigenous Ancestry. In: Canada CS, editor. 2016
3. Hogg RS, Heath KV, Yip B, Craib KJ, O'Shaughnessy MV, Schechter MT, et al. Improved survival among HIV-infected individuals following initiation of antiretroviral therapy. *JAMA*. 1998;279(6):450-4.
4. Baillargeon J GT, Rich JD, Wu ZH, Wells K, Pollock BH, Paar DP. Accessing Antiretroviral Therapy Following Release From Prison. *JAMA*. 2009;301(8):848-57.
5. Haley DFG, Carol E ; Farel, Claire E ; Wohl, David A ; Scheyett, Anna M ; Garrett, Jenna J ; Rosen, David L ; Parker, Sharon D. Multilevel challenges to engagement in HIV care after prison release: a theory-informed qualitative study comparing prisoners' perspectives before and after community reentry. *BMC Public Health*. 2014;14(1).
6. Loutfy M, de Pokomandy A, Carter A, O'Brien N, Lewis J, Nicholson V, et al. Cohort Profile: The Canadian HIV Women's Sexual and Reproductive Health Cohort Study (CHIWOS). *PLoS ONE*. 2017;12(9):e0184708.
7. Zhang W, O'Brien N, Forrest JI, Salters KA, Patterson TL, Montaner JS, et al. Validating a shortened depression scale (10 item CES-D) among HIV-positive people in British Columbia, Canada. *PLoS One*. 2012;7(7):e40793.
8. Loeliger KB, Altice, Frederick L., Desai, Mayur M., Ciarleglio, Maria M., Gallagher, Colleen., Meyer, Jaimie P. Predictors of linkage to HIV care and viral suppression after release from jails and prisons: a retrospective cohort study. *Lancet HIV*. 2018;5:e96-106.
9. Martin RE HD, Hemingway C, Ramsden V, Buxton J, Granger-Brown A, Condello LL, Macaulay A, Janssen P, Hislop TG. Homelessness as viewed by incarcerated women: participatory research. . *International Journal of Prison Health*. 2012;8(3-4):108-16
10. SELF-REPORT / PEERS MITIGATE SOCIAL DESIRABILITY BIAS
11. DP BJGTHASAWZGJBGP. Predictors of reincarceration and disease progression among released HIV-infected inmates. *AIDS Patient Care & STDS*. 2010;24(6):389-94
12. Kouyoumdjian FG MK, Liauw J, Green S, Karachiwalla F, Siu W, Burkholder K, Binswanger I, Kiefer L, Kinner SA, Korchinski M, Matheson FI, Young P, Hwang SW. A Systematic Review of Randomized Controlled Trials of Interventions to Improve the Health of Persons During Imprisonment and in the Year After Release. *American Journal of Public Health*. 2015;105(4):E13-E33.
13. Binswanger IAM, Shane R. ; Beaty, Brenda L. ; Min, Sung-Joon ; Corsi, Karen F. Gender and risk behaviors for HIV and sexually transmitted infections among recently released inmates: A prospective cohort study. *AIDS Care*. 2013;26(7):872-81.
14. Chyvette T. Williams SK, Jaimie Meyer, Anne Spaulding., Paul Teixeira AA, Kevin Moore, Frederick Altice, Dorothy Murphy-Swallow, Dominique Simon, Jeff Wickersham, Lawrence J. Ouellet. Gender Differences in Baseline Health, Needs at Release, and Predictors of Care Engagement Among HIV-Positive Clients Leaving Jail. *AIDS Behaviour*. 2013;17:S195-S202.
15. Elwood Martin R BJ, Smith M, Hislop G. The scope of the problem: The health of incarcerated women in BC. *BC Medical Journal*. 2012;54(10):502-8