

HIV 90-90-90 targets and the care continuum: findings from the Tracks survey among people who inject drugs in Canada, Phase 4, 2017-2019

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BACKGROUND – OBJECTIVE – METHOD

Canada’s HIV 90-90-90 estimates, at the end of 2016 (PHAC, 2018)

- » 86% of the estimated 63,110 persons living with HIV were diagnosed
- » 81% were estimated to be on treatment
- » 91% of those on treatment had suppressed viral load

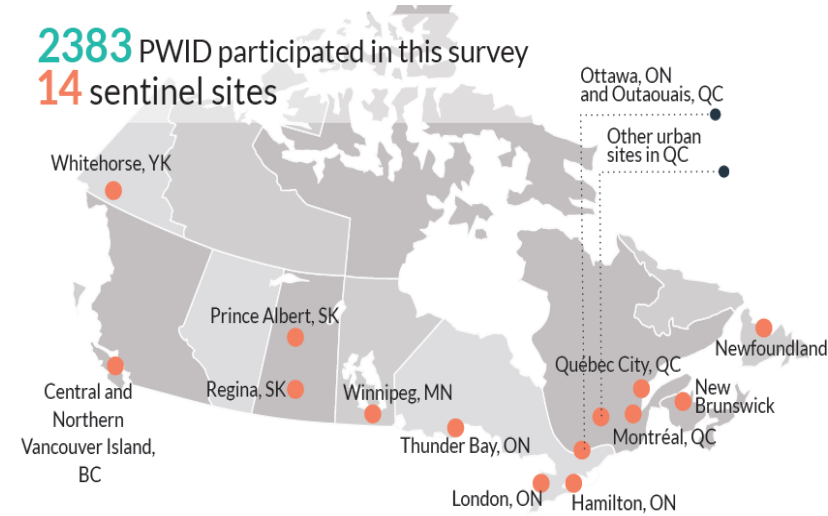
People who inject drugs (PWID) is a key risk group (PHAC, 2018)

- » Of the 2,165 new HIV infections in 2016, the estimated proportion attributed to injection drug use was 11.3%
- » To ensure that prevention and control efforts are targeted appropriately, it is important to understand the HIV care continuum for this key population

Tracks survey of people who inject drugs in Canada

- » A national integrated behavioural and biological surveillance system
- » Monitors HIV and hepatitis C prevalence and associated risk behaviours among PWID in Canada
- » Periodic cross-sectional surveys at selected sentinel sites using venue-based sampling
- » Four phases since 2003: Phase 4 data collection from 2017-2019 in 14 sites (Figure 1).
- » **Inclusion criteria:**
 - Injected drugs in the 6 months prior to recruitment
 - Met the minimum age of consent
 - Understood English or French
- » Interview-administered questionnaire and dried blood spot (or oral fluid specimen in SurvUDI sites) collected and tested for HIV (antibodies) and hepatitis C (antibodies and RNA)
- » **Questionnaire collects information about:**
 - Socio-demographic characteristics
 - Social determinants of health
 - Use of prevention services and testing
 - Drug use and experiences with overdoses
 - Sexual risk behaviours
 - HIV and hepatitis C care cascade, prevalence and awareness of infection status

Figure 1. Phase 4 Tracks survey of PWID sentinel sites



Objective

To describe the HIV 90-90-90 targets, the HIV care continuum and associated characteristics among PWID using data from the 2017-2019 Phase 4 Tracks Survey of PWID.

Methods

- Data from the Phase 4 Tracks Survey of determinants of HIV and hepatitis C among PWID in Canada was used with a total of 2383 eligible participants
- Five HIV care continuum indicators were defined:
 1. Awareness of HIV-positive status (**1st 90**)
 2. Linkage to care for HIV-related services among participants aware of their HIV-positive status
 3. Currently on antiretroviral therapy (ART) among participants aware of their HIV-positive status (**2nd 90**)
 4. Adherence to ART among participants aware of their HIV-positive status
 5. Self-reported undetectable viral load at last test among participants aware of their HIV-positive status and currently on ART treatment (**3rd 90**)
- Potential correlates and confounders were identified (Table 1). Associations between potential correlates and each indicator were explored using bivariate analyses. Significant predictors ($p < 0.1$) for each indicator were included in a multivariate analysis, using forward stepwise logistic regression. All analyses were computed with SAS Enterprise Guide® 7.1. Participants who responded as “not stated”, “don’t know” or “refused” were excluded from each individual analysis.

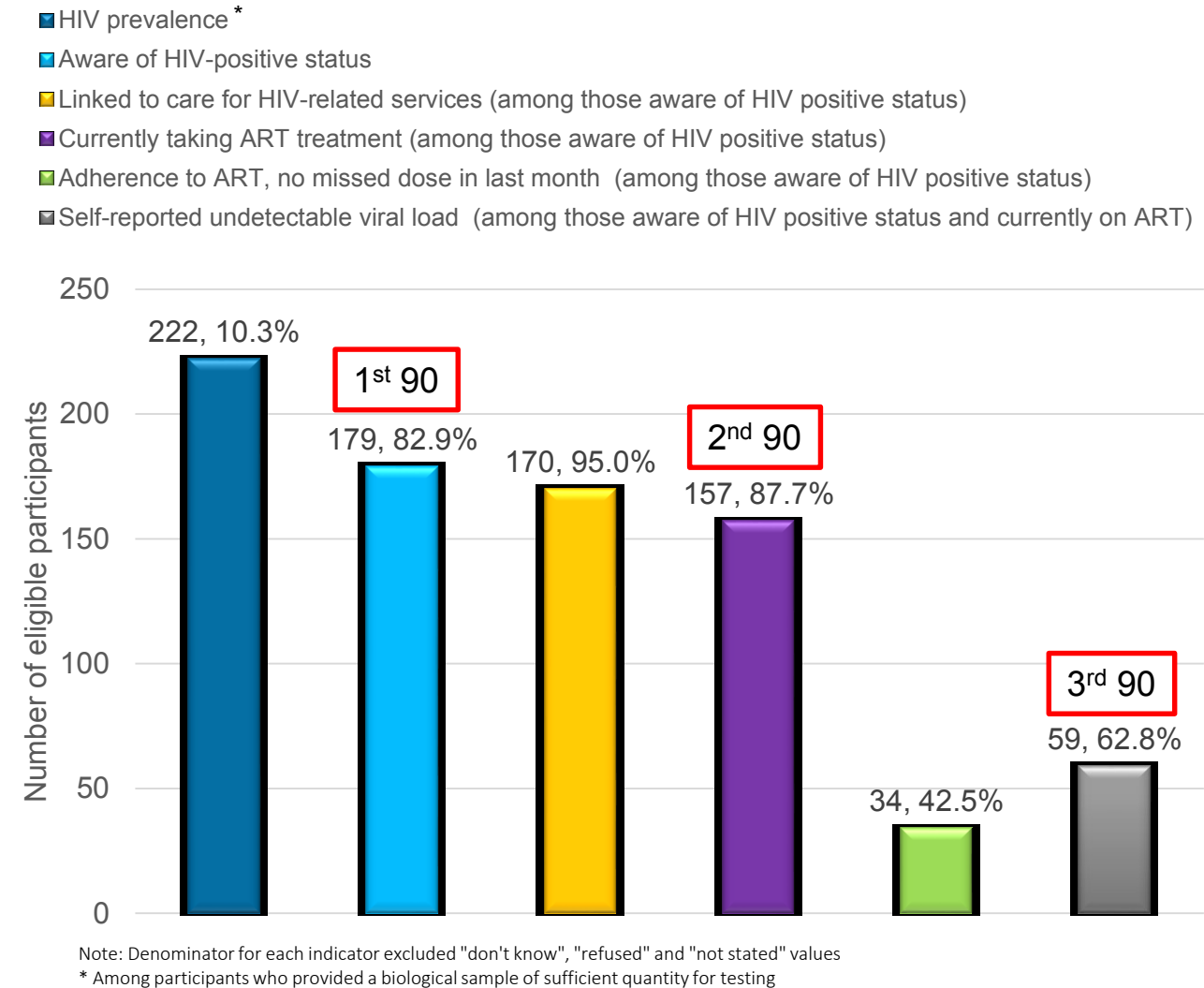
RESULTS: Descriptive Analysis

Table 1. Characteristics of participants, Tracks survey of people who inject drugs in Canada, Phase 4, 2017–2019 (n=2,383)

Socio-demographic characteristics		n	Total ^a	%
Gender identity	Cisgender female	775	2,372	32.7
	Cisgender male	1,556	2,372	65.6
	Transfeminine ^b	24	2,372	1.0
	Transmasculine ^c	17	2,372	0.7
Mean age (SD)		40.1 (11.0)		
Indigenous status	First Nations, Métis, or Inuit	997	2,360	42.2
	Other ethnicity	1,363	2,360	57.8
Living in a First Nation, Métis or Inuit community ^d	No	802	930	86.2
	Yes	128	930	13.8
Social determinants of health				
Education, highest level	Less than high school	1,139	2,373	48.0
	Finished high school	621	2,373	26.2
	More than high school	613	2,373	25.8
Experienced financial strain ^e , past 12 months	No	207	1,479	14.0
	Yes	1,272	1,479	86.0
Housing status, past six months	Unstable housing ^f	1,486	2,374	62.6
	Stable housing	888	2,374	37.4
Ever incarcerated ^g	No	422	1,736	24.3
	Yes	1,314	1,736	75.7
Mental health	Fair to excellent	1,401	1,668	84.0
	Poor	267	1,668	16.0
Experience of stigma and discrimination ^h , ever	No	166	1,464	11.3
	Yes	1,298	1,464	88.7
Experience of childhood physical, sexual, and/or emotional abuse	No	220	1,463	15.0
	Yes	1,243	1,463	85.0
Experience of sexual partner physical, sexual, and/or emotional abuse	No	351	1,458	24.1
	Yes	1,107	1,458	75.9

^a Total represents total counts for the corresponding indicator excluding "don't know", "refused" and "not stated" values
^b Transfeminine included those assigned male at birth who identified with either female or a non-binary gender
^c Transmasculine included those assigned female at birth who identified with either male or a non-binary gender
^d This question was asked among Indigenous participants only
^e Defined as ever having difficulty making ends meet in the year prior to the interview
^f Unstable housing included living in a hotel or motel room, rooming or boarding house, shelter or hostel, transition or halfway house, psychiatric institution or drug treatment facility, public place or correctional facility
^g Only partial data available at the SurvUDI network sites
^h Defined as ever experienced any stigma or discrimination (e.g., avoidance, pity, blame, shame, rejection, verbal abuse or bullying) based on racial or cultural background, hepatitis C status, HIV status, sexual orientation, use of drugs or alcohol or sex work

Figure 1. HIV prevalence, awareness of infection status, and care cascade of participants in the Tracks survey of people who inject drugs in Canada, Phase 4, 2017–2019 (n=2,383)



RESULTS: Bivariate and Multivariate Logistic Regression Analyses

Table 2. Bivariate analysis of HIV care cascade indicators and associations with the socio-demographic characteristics and social determinants of health of the participants (p value <0.1), Tracks survey of people who inject drugs in Canada, Phase 4, 2017–2019 (n=2,383)

Awareness of HIV-positive status				
Characteristic	No (%)	Yes (%)	Odds ratio (95% CI)	P value
Gender identity				
Cisgender female (reference)	56.8	41.6		
Cisgender male	43.2	58.4	1.85 (0.90-3.77)	0.09
Indigenous status				
First Nations, Métis, or Inuit	78.4	58.4	0.39 (0.17-0.90)	0.03
Other ethnicities (reference)	21.6	41.6		
Housing status, past 6 months				
Unstable housing	72.9	49.7	0.37 (0.17-0.80)	0.01
Stable housing (reference)	27.0	50.3		
Characteristic	No (%)	Yes (%)	Odds ratio (95% CI)	P value
Linkage to care				
Mean age (SD)	37.8 (7.6)	43.6 (9.3)	1.08 (0.99-1.17)	0.08
Adherence to ART				
Experience of sexual partner physical, sexual, and/or emotional abuse	84.4	69.7	0.42 (0.14-1.27)	0.12
Undetectable viral load				
Unstable housing, past 6 months	81.8	47.5	0.20 (0.04-1.01)	0.05

Currently on ART treatment				
Characteristic	No (%)	Yes (%)	Odds ratio (95% CI)	P value
Indigenous status				
First Nations, Métis, or Inuit	77.3	55.8	0.37 (0.13-1.06)	0.06
Other ethnicities (reference)	22.7	44.2		
Housing status, past 6 months				
Unstable housing	72.7	46.5	0.33 (0.12-0.88)	0.03
Stable housing (reference)	27.3	53.5		
Mean age (SD)	37.1 (9.8)	44.2 (8.9)	1.10 (1.04-1.16)	0.001

- Multivariate logistic regression analysis (with p value <0.05):
- Housing status was the single factor found to be associated with awareness of HIV-positive status in the multivariate model that controlled for age and gender identity (aOR: 0.36; 95% CI: 0.16-0.78).
 - No significant factors were found in the models for Linkage to Care, Adherence to ART, Undetectable viral load or Currently on ART Treatment.

CONCLUSION – LIMITATIONS – ACKNOWLEDGEMENTS

Conclusion

- HIV 90-90-90 targets and care cascade indicators measured among PWID found that nearly all participants who were aware of their HIV-positive status were linked to care for HIV-related services and were currently taking ART; however, less than two-thirds (62.8%) reported an undetectable viral load.
- These findings reflect that HIV prevalence remains high and the challenges in access to and maintenance of effective treatment among PWID.
- This national bio-behavioural surveillance data serves as a baseline from which to measure future progress towards meeting domestic and international targets for key populations and inform public health interventions.

Limitations

- The Tracks systems use non-random, convenience sampling methods to overcome some of the inherent difficulties in accessing hard-to-reach population such as PWID. Given this, the surveillance findings may not be representative of all PWID in Canada.
- Findings are based on self-reported data which are subject to social desirability bias.

Reference:

Public Health Agency of Canada. Summary: Estimates of HIV Incidence, Prevalence and Canada's Progress on Meeting the 90-90-90 HIV Targets, 2016. Government of Canada; 2018. <https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/diseases-conditions/summary-estimates-hiv-incidence-prevalence-canadas-progress-90-90-90/pub-eng.pdf>

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