PROGRESS TOWARD 90-90-90 TARGETS

FOR PERSONS LIVING WITH HIV IN NEWFOUNDLAND AND LABRADOR (NL)

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BACKGROUND

The NL Provincial HIV Clinic provides care for all persons living with HIV (PLWH) in NL, yet progress toward 90-90-90 goals for diagnosis, linkage to care and viral suppression have not previously been documented. All patients who receive care through this provincial HIV program are included in the NL clinic cohort.

PURPOSE

The purpose of this study is to describe engagement in HIV care and virologic outcomes for the NL cohort in 2016 and 2019, and to compare findings to the Canadian HIV Observational Cohort (CANOC) for 2016 (last available data).
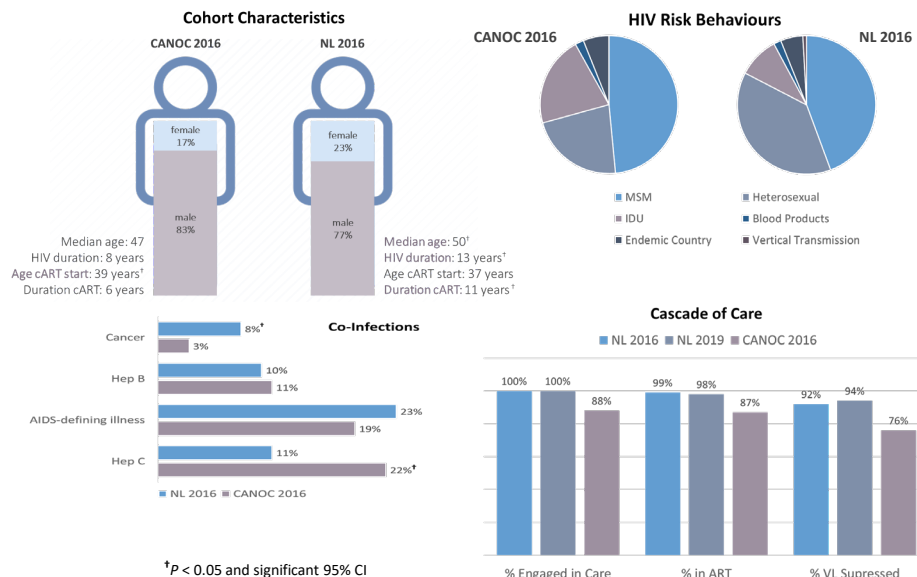
METHODOLOGY

- For this analysis, the NL cohort included data for adults ≥18 years, who were considered engaged in care defined by at least one CD4 and one viral load (VL) measurements in study calendar year.
- The CANOC includes individuals living in Canada, ≥18 years, who were cART naïve as of Jan. 1, 2000, with at least one viral load and CD4 count within 12 months of initiating cART.
- Participants were considered on cART if they had undetectable VL or prescription for cART was filled since last clinic visit. Suppressed VL was defined as two consecutive measures of RNA levels < 200 copies/mL.
- Descriptive statistics were performed for all characteristics by year, between NL and rest of CANOC. Compared variables using $\chi 2$ test or Fisher's Exact test (categorical), or Wilcoxon Sum Rank test (continuous).
- A logistic regression probability model was used to compare cascade parameters between NL and CANOC.

ANALYSIS

- NL HIV cohort characteristics consistent between 2016 and 2019 but differed significantly from CANOC (Table 1, next slide).
- NL HIV clinic median age > CANOC participants and age at first-start cART < CANOC.
- NL clinic participants lived longer with HIV, were on cART for a greater length of time and started cART earlier than CANOC.
- Although the NL HIV cohort exceeds national goals of 90% receiving ART and 90% achieving undetectable VL, new infections continue to occur.

Cohort Characteristics

CANOC 2016
female 17%
male 83%
Median age: 47
HIV duration: 8 years
Age cART start: 39 years†
Duration cART: 6 years

NL 2016
female 23%
male 77%
Median age: 50†
HIV duration: 13 years†
Age cART start: 37 years
Duration cART: 11 years†

HIV Risk Behaviours
CANOC 2016 — NL 2016
MSM, Heterosexual, IDU, Blood Products, Endemic Country, Vertical Transmission

Co-Infections
	NL 2016	CANOC 2016
Cancer	8%†	3%
Hep B	10%	11%
AIDS-defining illness	23%	19%
Hep C	11%	22%†

†P < 0.05 and significant 95% CI

Cascade of Care
NL 2016 — NL 2019 — CANOC 2016
	NL 2016	NL 2019	CANOC 2016
% Engaged in Care	100%	100%	88%
% in ART	99%	98%	87%
% VL Suppressed	92%	94%	76%

KEY FINDINGS

Engagement in care and virologic outcomes were consistent in NL from 2016 to 2019:
- 100% engaged in care (no change)
- 99% and 98% on cART
- 92% and 94% VL suppression.

Cascade of care parameters were higher for NL than for CANOC:
- 100% vs. 88% engaged in care (p<0.001)
- 99% vs. 87% on ART (p<0.001)
- 92% vs. 76% VL suppression (NS).

CONCLUSIONS

Despite being an older cohort and living with HIV longer, engagement in care and virologic outcomes among PLWH in NL is high and compares favorably to a national cohort.

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ANALYSIS   Characteristics of the NL HIV cohort remained consistent between
2016 and 2019 but differed significantly from CANOC (Table 1).

Table 1: Characteristics and Comparisons of the NL Cohort in 2016 and 2019 and with CANOC (2016)

Characteristic	Category	Descriptive Statistics					
		CANOC 2016 n = 11768		NL 2016 n = 177		NL 2019 n = 188	
		n	(%)	n	(%)	n	(%)
Age (years)	Median (IQR)	47 (38-54)		50 (44-55)[†]		53 (46-57)	
Gender	Male	9744	(83)	137	(77)	143	(76)
	Female	1963	(17)	40	(23)	44	(23)
	Transgender	55	(0)	0	(0)	1	(1)
	Unknown	6	(0)	0	(0)	0	(0)
HIV Risk Behaviour	MSM	5669	(48)	91	(51)	100	(53)
	Heterosexual	2538	(22)	78	(44)[†]	71	(38)
	IDU	2478	(21)[†]	19	(11)	14	(7)
	Blood products	177	(2)	4	(2)	5	(3)
	Endemic Country	726	(6)[†]	11	(6)	16	(9)
	Vertical Transmission	8	(0)	1	(1)	2	(1)
HIV Duration (years)	Median (IQR)	8 (4-13)		13 (4-22)[†]		15 (6-25)	
Age of Starting cART (years)	Median (IQR)	39 (32-47)[†]		37 (31-45)		37 (31-46)	
Duration on cART (years)	Median (IQR)	6 (3-10)		11 (3-18)[†]		11 (5-21)[‡]	
Hepatitis C (ever coinfected)	Coinfected ever	2644	(22)[†]	20	(11)	19	(10)
Hepatitis B (ever coinfected)	Coinfected ever	1314	(11)	17	(10)	18	(10)
Ever Diagnosed with Cancer	Yes	380	(3)	15	(8)[†]	17	(9)
Ever Diagnosed with AIDS-defining Illness	Yes	2208	(19)	41	(23)	46	(24)

[†]Denotes $P < 0.05$ and significant 95% confidence for odds ratio for CANOC vs. NL (2016) and associated with probability of cohort more likely to have the higher value. [‡]Denotes $P < 0.05$ and significant 95% confidence for odds ratio for NL (2016) vs. NL (2019) and associated with probability of cohort more likely to have the higher value.