BRITISH COLUMBIA CENTRE *for* EXCELLENCE *in* HIV/AIDS

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Determinants of viral suppression among people living with HIV in British Columbia, Canada: Preliminary findings from the SHAPE study

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SHAPE The STOP HIV/AIDS Program Evaluation Study

CONFERENCE CAHR 2018

I would like to formally acknowledge that we are gathered here on the unceded traditional territory of the Musqueam, Squamish and Tsleil-Waututh First Nations.

Conflicts of Interest Disclosure

- None to declare

Background

- The **Seek and Treat for Optimal Prevention of HIV/AIDS (STOP HIV/AIDS)** program aims to improve access to HIV testing, antiretroviral therapy and supportive HIV care for people living with HIV in British Columbia (BC).

- In 2009, the initiative was piloted in Vancouver and Prince George.

- Due to successes seen in the pilot, the STOP HIV/AIDS program was expanded to the entire province of BC in 2013.

The STOP HIV/AIDS Program Evaluation (SHAPE) Study

- The SHAPE study was initiated in 2016 to examine progress of the STOP HIV/AIDS Program towards addressing health inequities among people living with HIV.
- The study is a longitudinal cohort of BC residents who are living with HIV, aged 19 and older.
- Participation involves 3 surveys about HIV care experiences.
- Survey responses are linked to clinical health data held by the provincial Drug Treatment Program.

Objective

- This analysis examines prevalence and predictors of **viral load suppression** in the SHAPE study.

HIV Cascade of Care

Methods

- Explanatory variables of interest were selected based on previous research about determinants of HIV-related health outcomes.
- Univariate modelling tested the associations between key explanatory variables from the SHAPE baseline survey and viral load suppression (outcome).
- Multivariable regression models identified independent predictors of the outcome variable.

Outcome: Viral Suppression

- Participants were classified as virologically suppressed if they had a viral load of less than 50 copies/mL for a minimum of 3 months in the year prior to baseline interview.

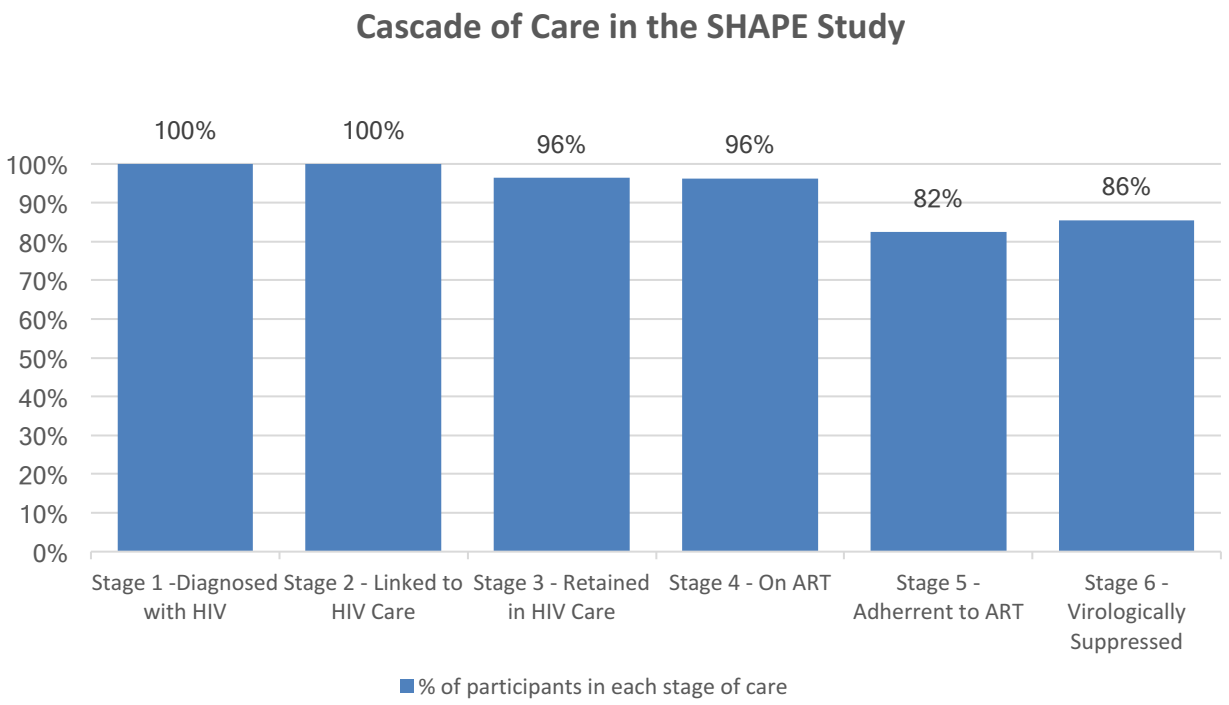
- To eligible for inclusion in the analysis, participants needed to have 2 or more viral load measurements spanning a period of 3 months or greater.

Results: Characteristics of SHAPE Participants

Variable	% (n=503)
50 years or older	51.5%
Indigenous ancestry	19.8%
HCV co-infection	30.6%
HIV risk:	
MSM	55.5%
IDU	18.7%
Both MSM and IDU	5.8%
Neither MSM nor IDU	20.0%
Female	22.1%
Born in Canada	85.1%
High school education or lower	51.3%
Annual income:	
0 to 14999	43.9%
History of incarceration	33.2%
Currently homeless	3.6%
Mental illness diagnosis ever	64.6%

Prevalence of Viral Suppression

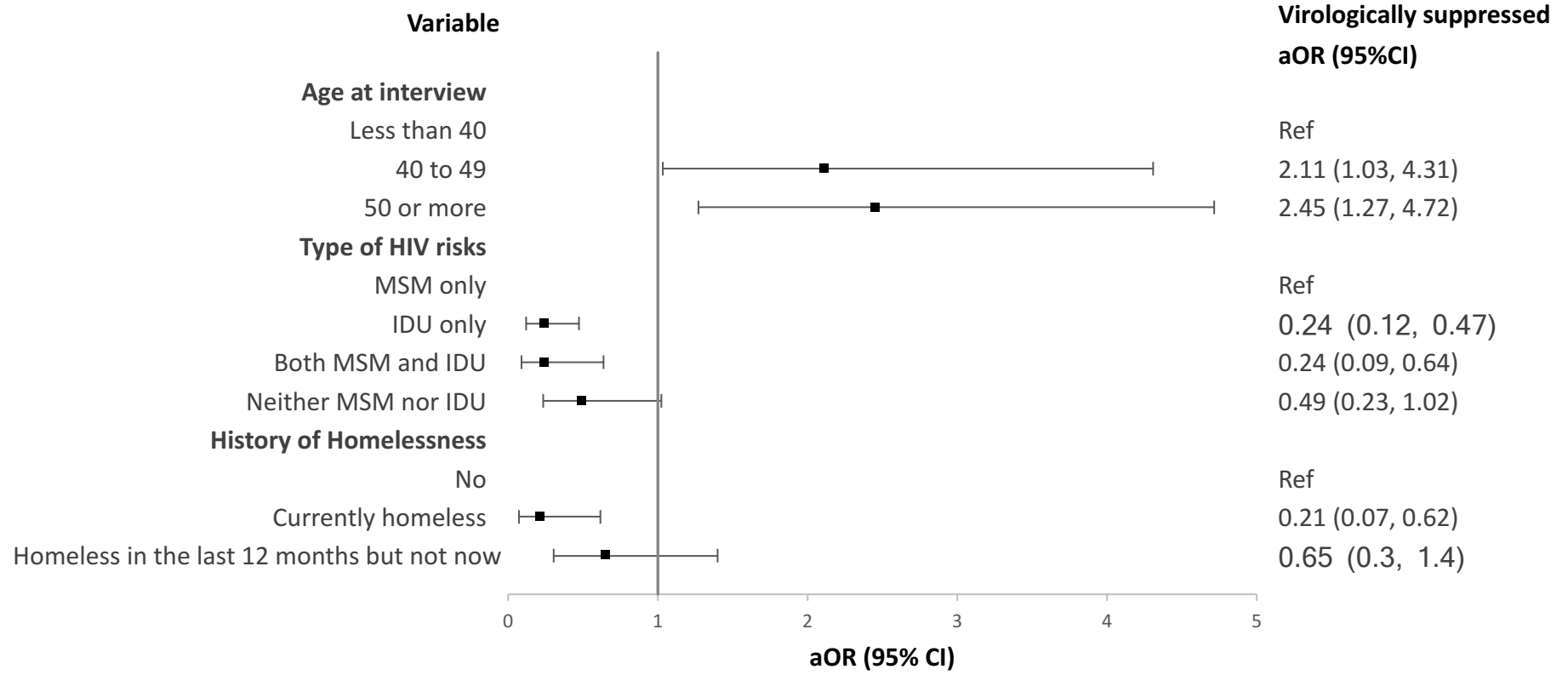
- Among participants who completed a baseline survey and met the inclusion criteria for this analysis, 85.5% were virologically suppressed.



Characteristics by viral suppression status

Variable	Virologically suppressed: No (N=69) N	(%)	Yes (N=408) N	(%)	Univariate P-value
Age at interview					
Less than 40	23	(33.3)	69	(16.9)	**0.004**
40 to 49	20	(29.0)	114	(27.9)	
50 or more	26	(37.7)	225	(55.1)	
Indigenous ancestry	22	(31.9)	73	(17.9)	**0.008**
Type of HIV risk					
MSM only	20	(29.0)	247	(60.5)	
IDU only	26	(37.7)	63	(15.4)	**<0.001**
Both MSM and IDU	8	(11.6)	20	(4.9)	
Neither MSM nor IDU	15	(21.7)	78	(19.1)	
Gender	20	(29.0)	83	(20.3)	0.258
Annual income					
0 to 14999	46	(66.7)	165	(40.4)	
15000 to 29999	13	(18.8)	117	(28.7)	**0.003**
30000 to 59999	6	(8.7)	59	(14.5)	
60000 or more	2	(2.9)	54	(13.2)	
Unknown	2	(2.9)	13	(3.2)	
History of incarceration	38	(55.1)	120	(29.4)	**<0.001**
History of Homelessness					
No	49	(71.0)	362	(88.7)	**<0.001**
Currently homeless	8	(11.6)	8	(2.0)	
Homeless in the last 12 months but not now	12	(17.4)	38	(9.3)	
Mental illness diagnosis ever	49	(71.0)	260	(63.7)	0.243
Barriers to go to doctors	27	(39.1)	241	(59.1)	**0.002**

Multivariable regression analysis: Predictors of viral suppression



Limitations

- This is a preliminary analysis since the cohort is not yet complete.
- High levels of engagement in care found within our sample may be reflective of challenges in recruiting individuals who are not currently retained in HIV care.
- Results for age are less precise as demonstrated by wide confidence intervals in the previous slide; however, these intervals will narrow as our sample size increases.

Discussion and Conclusions

- Younger age, homelessness and injection drug use history are negatively associated with viral load suppression in the SHAPE cohort.

- Findings corroborate previous research on predictors of viral load suppression.[1-6]

- Targeted supports may help reduce health inequities among people living with HIV.

  - Supportive housing[7-10]
  - Harm reduction services[11,12]
  - Specialized services for youth[13]

Discussion and Conclusions

- Future studies should examine other prevalent and modifiable risk factors for viral load suppression.

- Further research may help identify optimal strategies for delivering supportive services to individuals living with HIV who experience health inequities, particularly those experiencing intersecting facets of marginalization.

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