



# Preliminary Findings from **Per-SVR**, a Longitudinal Cohort of Hepatitis C Patients Who Achieved Sustained Virologic Response (SVR)

Jessica Ly, MA, Clinical Research Coordinator, BC Centre for Excellence in HIV/AIDS ([jly@cfenet.ubc.ca](mailto:jly@cfenet.ubc.ca))

**Co-authors:** Nalin Dhillon, Shaughna Cooper, Zoran Barazanci, Lindila Awendila, Kirti Singh, Kate Laird, Kate Salters  
Rolando Barrios, Julio SG Montaner

## **Acknowledgments:**

- Thank you to all the participants who have volunteered their time to our study as well those who have passed away.
- Ministry of Health (MOH)
- Funding Sources: Merck Pharmaceuticals

**Conflict of Interest Disclosure:** I have no conflicts of interest to disclose.



## Study Rationale / Introduction

**Hepatitis C virus (HCV)** can cause both acute and chronic hepatitis, ranging in severity from a mild illness lasting a few weeks to a serious, lifelong illness. HCV therapy has recently experienced a shift to a highly effective, safer, and shorter course direct-acting antivirals (DAA)-based therapy and this has been made available to hepatitis patients across Canada<sup>1</sup>.

BC is the province with the second highest rate of HCV in the country with an estimated **73,000** living with the virus<sup>2</sup>



### Objectives:

1. To *measure patterns of HCV reinfection* after achieving an undetectable viral load at the end of treatment (EOT) on DAA-based therapy;
2. To determine the threshold of risk reduction practices that protects against HCV reinfection after achieving an undetectable viral load on DAA-based therapy;
3. To evaluate the potential impact of successful HCV treatment in terms of healthcare costs and resource utilization

<sup>1</sup> <https://news.gov.bc.ca/releases/2018HLTH0017-000387>

<sup>2</sup> <https://www.catie.ca/en/fact-sheets/epidemiology/epidemiology-hepatitis-c-canada>

# Study Methods

Per-SVR is an open prospective cohort study which began June 2017. Our aim is to recruit 730 participants throughout lower mainland, Vancouver Island, Fraser Valley, Interior, and Northern BC. *(Still recruiting ~ Please get in touch if you want to be involved)*

## Recruitment via:

- Referrals from hospitals, clinics, and community outreach, peers
- Flyers, posters and bus adverts
- Community knowledge translation / HCV education

## Study consists of:

- Interviewer-administered questionnaire and blood and urine samples
  - (Y1 – every 3 months; Y2-5 – every 6 months)
- Cash honoraria provided

## Eligibility:

- Adult patients (19+)
- Achieved SVR12 using interferon-free DAA based therapy
- Reside in British Columbia, Canada



# Preliminary Findings

*Study Period: June 2017 ~ Dec 2018*  
*baseline characteristics of participants (n=220)*

Variables	n=220 (%)
<b>Gender:</b>	
Men	152 (69%)
Women	54 (29%)
Transgender	3 (2%)
Median Age (Q1, Q3)	53 (23; 86)
<b>Substance Use:</b>	
Ever on methadone	63 (28%)
Currently on methadone	40 (18%)
Ever on prescription heroin (diacetylmorphine)	7 (3%)
Ever on suboxone	25 (11%)
Currently on suboxone	5 (2%)
<b>Key Populations:</b>	
History of injection drug use	127 (57%)
Current injection drug use	27 (12%)
MSM	3 (4%)
Engaged Sex work	38 (17%)
Substance use disorder	25 (55%)

Variables	n=220 (%)
<b>HCV Re-infection</b>	<b>4 (&lt;2%)</b>

Variables	n=220 (%)
<b>Health Outcomes:</b>	
Living with HIV	35 (16%)
Currently smoking	106 (48%)
Indicated depressive symptoms (CESD-10 scale)	78 (36%)
Ever experienced homelessness	116 (52%)
Ever experienced physical abuse	87 (39%)
Difficulty accessing treatment programs	2 (4%)
<b>Genotype (most common):</b>	
1A	88 (47%)
3A	57 (30%)
<b>Most common treatment type:</b>	
Sofosbuvir/Velpatasvir (Epclusa)	119 (54%)
<b>Most common treatment Length:</b>	
12 Weeks	177 (80%)

## Ongoing challenges

- Testing encouraged for Baby Boomers
- Public health concerns over reinfection
  - Athena cohort demonstrated that HCV treatment uptake led to the subsequent decline of HCV RNA positive patients from 4.2% in 2013 to 1.5% at the end of 2016<sup>1</sup>
- Barriers, including stigma, against people who use drugs
  - Among >45,000 people who use drugs who had confirmed HCV, 8% received DAAs; 3% achieved SVR<sup>2</sup>

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## Summary

- Increasing HCV burden among British Columbians
- Treatment, alongside harm reduction efforts, may curb transmission rates, morbidity, & mortality
- Findings will inform new evidence on the expansion of Treatment as Prevention (TasP) in HCV
- Community and peer engagement, HCV education is are key to treating HCV and preventing transmission

<sup>1</sup>Iversen, Jenny, et al. "Estimating the cascade of hepatitis C testing, care and treatment among people who inject drugs in Australia." *International Journal of Drug Policy* 47 (2017): 77-85.

<sup>2</sup>Cuypers, Lize, et al. "Relapse or reinfection after failing hepatitis C direct acting antiviral treatment: Unravelling by phylogenetic analysis." *PLoS one* 13.7 (2018): e0201268.