Potential shift in Barriers and facilitators of Hepatitis C treatment initiation among people who use drugs with transition from Interferon-based to direct antiviral treatment options

Iuliia Makarenko, Adelina Artenie, Nanor Minoyan, StineHøj, Gillian Bartlett, Didier Jutras-Aswad D, Julie Bruneau

7th International Symposium on Hepatitis Care in Substance Users
September 19-21, 2018





#### **Disclosures**

• Julie Bruneau receives advisor fees from Gilead Sciences and Merck and a research grant from Gilead Sciences, outside of this current work.



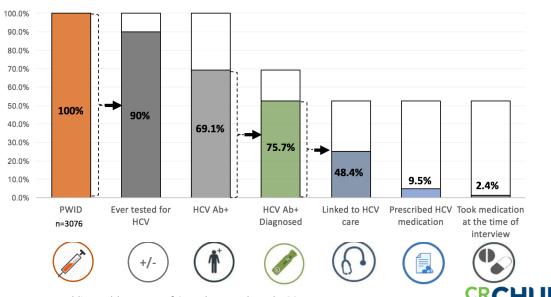
## Hepatitis C and injection drug use in Canada

- People who inject drugs (PWID) are the principal group at risk for hepatitis c (HCV) in Canada.
- Injection drug use causes >60% of the total HCV cases.
- 60-80% of PWID are An+ HCV positive.

Grebely et al., 2014; Degenhardt et al., 2016

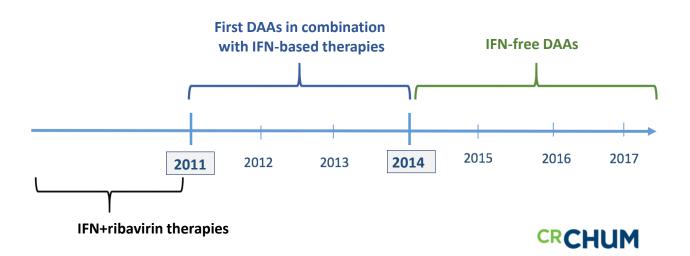


#### **HCV** continuum of care among PWID in Canada



Public Health Agency of Canada, I-Track study, 2014

#### **HCV** treatment in Canada



# Barriers to HCV treatment

- Unemployment
- Homelessness
- Poverty
- · Poor knowledge
- Stigma
- Higher addiction severity
- comorbidities: HIV, mental health problems etc.
- · Limited access to healthcare

## Facilitators of HCV treatment

- Enrolment in OAT program
- Participation in peer-support groups combined with multidisciplinary health care
- Nurse-led education
- Trust to healthcare professionals

Arain & Robaeys 2014; Grebely et al. 2013; Janjua et al. 2017; Treloar et al. 2010.

Grebely et al. 2010; Grebely et al. 2007; Larrey et al. 2011; Moirand et al. 2007



### **Study Aim**

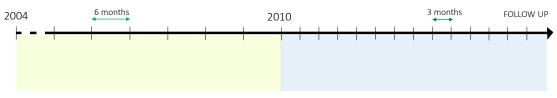
 Examine barriers and facilitators of time to HCV treatment initiation among PWID and their potential shift with availability of INF-free DAA therapies compared to previous IFN-based regimens.



#### **METHODS**



#### **HEPatitis COhort (HEPCO)**



Design: Prospective longitudinal open cohort study

Aim: To identify individual and contextual determinants of HCV infection among PWID

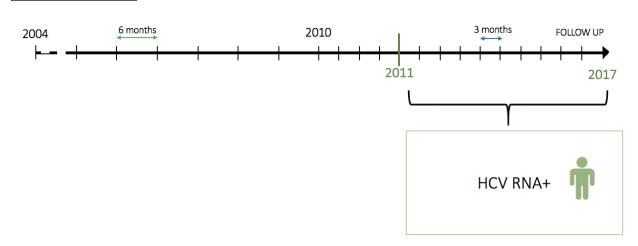
Setting: Montreal, QC, Canada

Eligibility: drug injection (within past 6m), age ≥18

**Recruitment**: Combination of street-level strategies and community program referrals

**Procedures**: Detailed sociodemographic and behavioural questionnaire administered by trained interviewers, HCV testing (every 6/3 months)

#### FOR THIS ANALYSIS:





#### **Statistical Analysis**

- Time-updated Cox-regression analysis (HR, 95% CI)
- Censoring:
  - $\circ\,$  Did not initiate treatment during the period of observation
  - Lost to follow-up
- Final multivariable model was stratified by the period of DAAs availability:



#### **RESULTS**



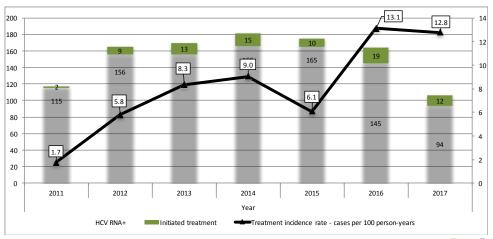
# Baseline socio-demographic characteristics of the study participants (N=308)

Characteristic	%
Age (>40 years old)	54%
Sex (male)	85%
Unstable housing	52%
Being on OAT	47%
Frequently injected in the past 3 months	35%
Opiate use in the past 3 months	59%
Cocaine use in the past 3 months	65%
Have seen a family physician in the past 3 months	52%
Previous HCV treatment experience	20%



## **HCV** treatment initiation, 2011-2017

In total, 80 (26%) out of 308 HCV RNA positive initiated treatment during the study period.





# Factors associated with time to HCV treatment initiation

	Period of follow-up	
	2011-2013	2014-2017
	N=669	N=1053
	Events=24	Events=56
	Adjusted HR	Adjusted HR
	(95% CI)	(95% CI)
Have seen a family doctor in the past 3 m	3.63 (1.21, 10.89)	2.52 (1.10, 5.77)
Frequently injected in the past 3 m	0.23 (0.05, 0.99)	0.49 (0.24, 0.99)
Age (>40 years)	0.58 (0.24, 1.42)	2.27 (1.24, 4.13)
Being on OAT	0.98 (0.38, 2.59)	2.17 (1.19, 3.94)
Previous HCV treatment experience	1.31 (0.50, 3.45)	3.00 (1.75, 5.15)
Cocaine use in the past 3 m	0.40 (0.18, 0.90)	0.64 (0.37, 1.09)



#### **Discussion and Conclusions**

- HCV treatment initiation is still low.
- Older age a marker of waiting until treatment availability.
- Seeing a family physician is key to facilitate treatment initiation.
- Opioid agonist therapy an important facilitator of HCV treatment initiation.
- Previous treatment attempt a proxy of higher engagement in HCV care.
- More frequent drug injection and cocaine were negatively associated with HCV treatment initiation.



#### **Acknowledgements**

- RESEARCH TEAM:
- Julie Bruneau, Didier Jutras-Aswad, Élise Roy, Geng Zang, Lise Gauvin, Nanor Minoyan, Brendan Jacka, Stine Høj, Emmanuel Fortier, Adelina Artenie
- HEPCO COHORT TEAM: Rachel Bouchard, Elisabeth Deschenes, Yanie Nam, Marie-Eve Turcotte, Maryse Beaulieu, Serge Coté, Isabelle Boisvert, Mélanie Gagnon
- ALL HEPCO PARTICIPANTS

#### Phd Scholarship





#### **HEPCO COHORT FUNDING**







