TREATMENT WITH DIRECT-ACTING ANTIVIRALS REDUCES HEALTH CARE SERVICE UTILIZATION 583

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for the Canadian Co-Infection Cohort Study Investigators

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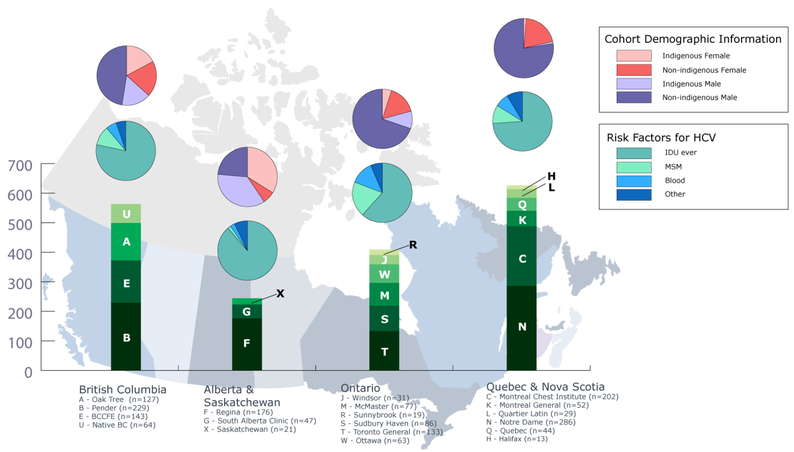
Research Question:

Does successful treatment with oral-DAA therapy reduce healthcare services utilization (HCSU) among people living with HIV in Canada?

Study Population:

- Since 2003, 2009 people living with HIV and HCV have participated in the Canadian HIV-Hepatitis C Co-Infection Cohort (CCC)
- Data for this analysis is based on self-reported biannual questionnaires



Definitions:

Covariates:
Time fixed: age, sex, men who have sex with men income (<$18,000 CAD/yr), and significant liver fibrosis; *Time varying:* CD4 cell count, undetectable HIV viral load (<50 copies/mL), diagnosis of psychiatric disorder, and injection drug use (in the last 6 months)

Exposure:
Sustained Virologic Response (SVR) following oral DAA treatment

Outcome: HCSU
1) Walk-in visit
2) General practitioners (GP),
3) HIV practitioners,
4) Specialists
5) Emergency room (ER) visits
6) Hospitalizations (over night)

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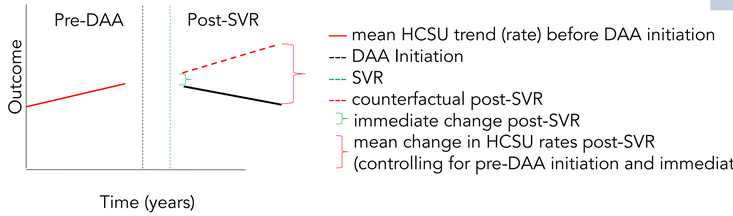
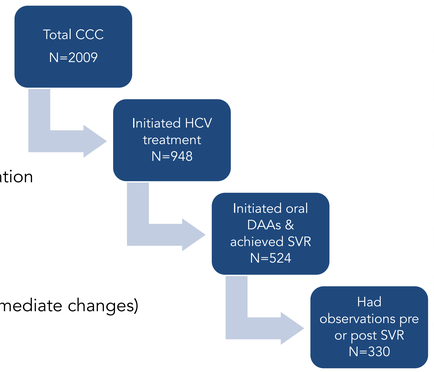
Design, Statistical Analysis & Data Flow:

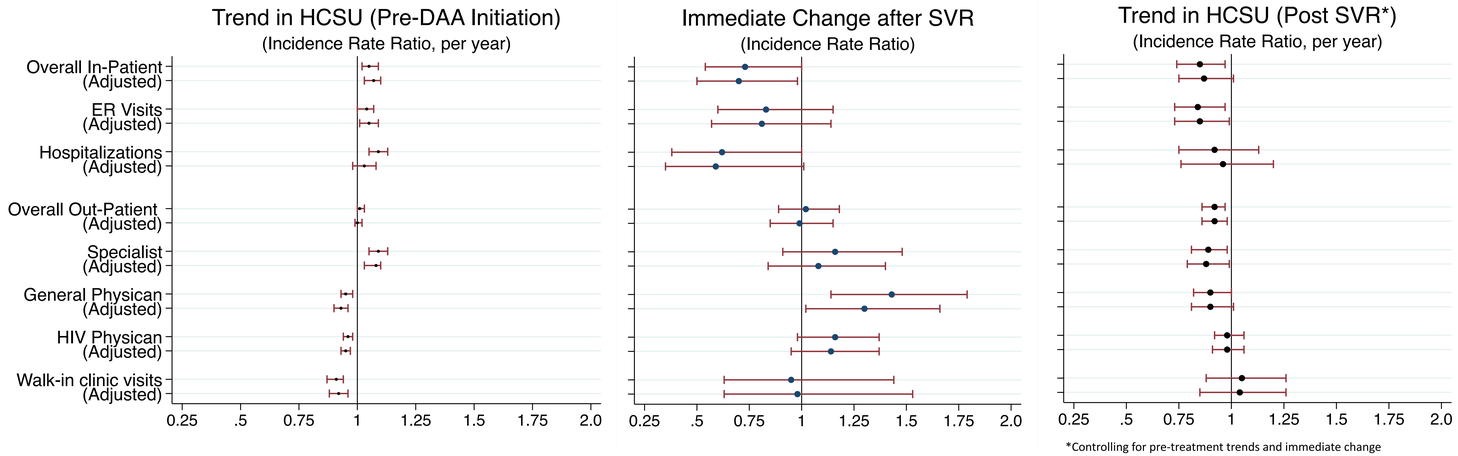
- Study Design: Individual-level Interrupted time series (ITS)
- Using a segmented generalized negative binomial mixed effects, with random intercept at the individual level
- Time between 6 months before DAA initiation and 6 months after SVR were censored





Pre-DAA	Post SVR
N=330	N=320
2232 Observations	1010 Observations
4 years follow-up	2 years follow-up
7 CCC visits/participant	3 CCC visits/ participant
13 out-patient visits/person-yr	9 out-patient visits/person-yr
3 in-patient visits/person-yr	1 in-patient visits/person-yr

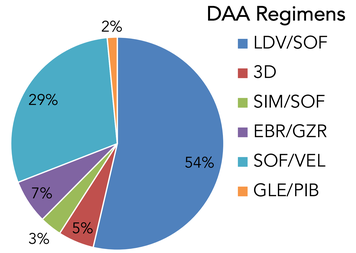
Results:



*Controlling for pre-treatment trends and immediate change

Participant's Characteristics at DAA initiation:

- Age: 50 years old (IQR 44, 55)
- Women, 32%
- Men who have sex with men, 26%
- Recent Injection drug users, 31%
- Income less than $18,000 CAD/year, 78%
- APRI >1.5, 28%
- CD4 cell count: 483 (IQR 290, 722)
- HIV RNA undetectable, 78%



Conclusions:

- Using an ITS study design, we found reductions in both in- and out- patient visits following SVR with oral-DAA therapy, among a real-world HIV-HCV coinfected population.
- This study provides empirical evidence of immediate and sustained reductions in HCSU following SVR that could result in significant cost-savings

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