THE IMPACT OF ENGAGEMENT IN HEPATITIS C (HCV) CARE ON THE SKIN AND SOFT TISSUE INFECTIONS HEALTHCARE BURDEN AMONG PEOPLE WHO INJECT DRUGS IN QUEBEC, CANADA

Authors:
El Sheikh MZ[1,2], Panagiotoglou D[1], Greenaway C[3,4,5], Klein MB[1,2,3]
[1]Department of Epidemiology, Biostatistics and Occupational Health, McGill University, [2]Centre for Outcomes Research and Evaluation, McGill University Health Center-Research Institute, [3]Department of Medicine, McGill University, [4]Centre for Clinical Epidemiology, Lady Davis Institute, Jewish General Hospital, [5] Division of Infectious Diseases, Jewish General Hospital

Background:
Hepatitis C virus (HCV) and skin and soft tissue infections (SSTIs) are prevalent among people who inject drugs (PWID). Barriers to care for SSTIs overlap with those for HCV. Engagement in HCV care may have positive spillover effects, presenting an opportunity for harm reduction, but such effects have yet to be demonstrated. We aimed to estimate the effects of HCV treatment initiation on the SSTI healthcare burden.

Methods:
We used Quebec's Public Health Mandatory Reportable Infectious Disease database, which links reported HCV cases with lab and administrative health data. A validated algorithm was used to identify PWID living with HCV. Using inverse probability treatment weighting and balanced interrupted time series with control, we compared SSTI diagnoses and hospitalizations among PWID who initiated HCV treatment, between 2014 and 2018 inclusive, to those who did not.

Results:
Among 3787 eligible PWID who were HCV positive, 996 had a record of initiating treatment. In the three-year pre-period, there were 750 diagnoses and 105 hospitalizations among untreated individuals, and 870 diagnoses and 129 hospitalizations among those treated; while in the post-period, there were 565 diagnoses and 89 hospitalizations among those untreated and 338 diagnoses and 50 hospitalizations among those treated. We observed (Figure 1) a significant level change (-0.18, 95%CI: -0.349, -0.012) in SSTI diagnoses after treatment and a steady annual trend (-0.11, 95%CI: -0.24, 0.01) per 100,000 individuals. While there was no immediate level effect on STTI hospitalizations (-0.016, 95%CI: -0.083, 0.049), there was a significant annual decline in additional hospitalizations (-0.06, 95%CI: - 0.10, -0.01) per 100,000 individuals

Conclusion:
HCV treatment initiation may have an immediate, although modest, effect on reducing SSTI infections and a more prolonged effect on severe infections requiring hospitalization. This suggests that HCV treatment could provide an opportunity to address other burdensome health issues.

Disclosure of Interest Statement:
El Sheikh MZ and Panagiotoglou D have no conflicts to disclose.
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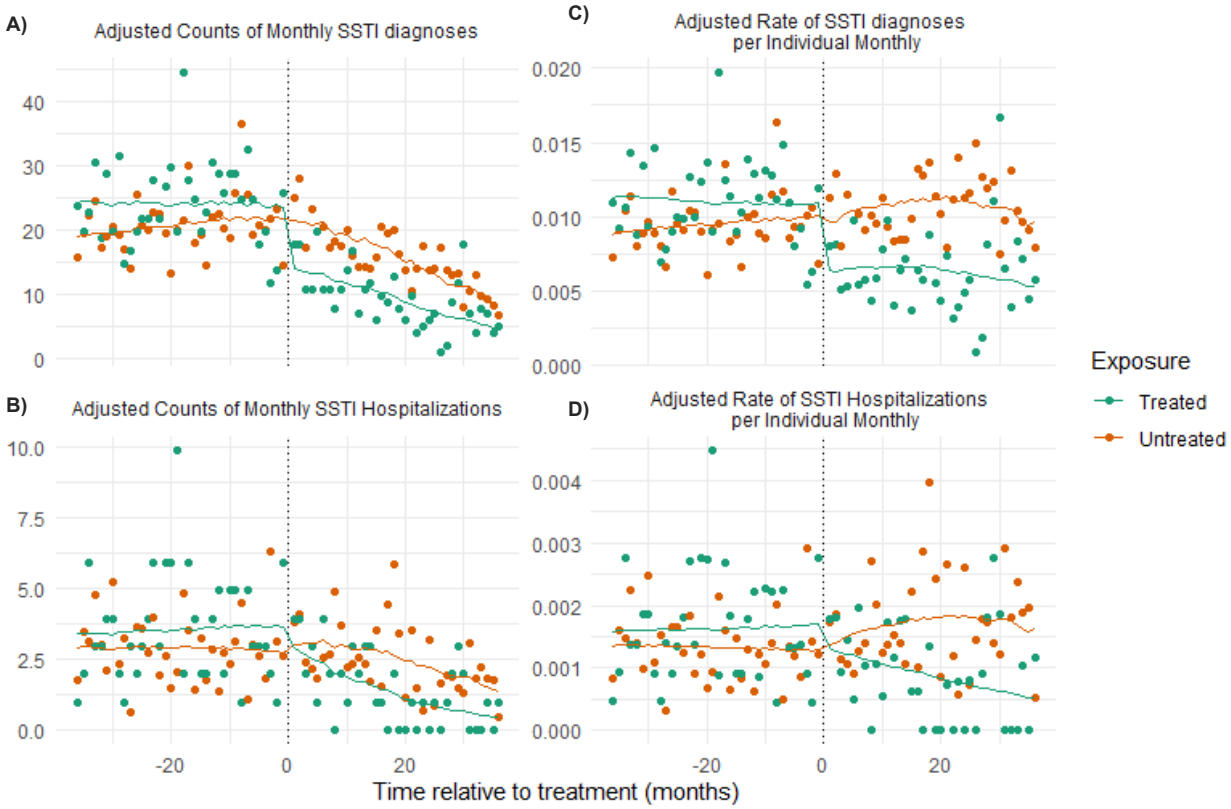

Figure 1: Trends of skin and soft tissue infection (SSTI) diagnoses (identified from physician billing database) and hospitalizations (identified from provincial public health system hospitalization database) during the study period. A, B) Total monthly number of SSTI diagnoses (A) and hospitalizations (B) among individuals followed at each time point. C, D) Monthly rates of SSTI diagnoses (C) and hospitalizations (D) per individual. All values were adjusted for time-varying confounders such as year, month, urban/rural, region in the province, social and material deprivation index, comorbidities such as HIV, diabetes, decompensated cirrhosis, liver transplant, hepatocellular carcinoma and mental health using inverse probability weights. Solid lines represent fitted lines from weighted controlled interrupted time series Poisson models. The dotted line at t=0 is the index date, and the timeline is time relative to treatment in months. Follow-up period was up to three years before and after the index date, defined as treatment initiation for those exposed, and for those unexposed, it was assigned using propensity score matching.
Green - Treated: those with a record of HCV treatment during the study period. Orange-Untreated: those with no record of HCV treatment during the study period.