

ASSOCIATION BETWEEN SHORT-TERM HOUSING PATTERNS AND HEPATITIS C ACQUISITION: FINDINGS FROM A COHORT OF PEOPLE WHO INJECT DRUGS IN MONTRÉAL, CANADA

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Background: Unstable housing is a well-established risk factor for hepatitis C (HCV) acquisition among people who inject drugs (PWID). However, housing stability is dynamic and can fluctuate over time. Our objective was to identify one-year housing trajectories and examine their relationship with HCV acquisition.

Methods: At three-month intervals, HCV RNA-negative PWID enrolled from 2011-2016 in the HEPCO cohort were tested for HCV and completed an interviewer-administered questionnaire. At each visit, participants reported the accommodation they lived in the longest for each of the past three months. For the first 12 months of follow-up (month #1 to #12), housing was categorized as either “unstable” (hotel/motel room, rooming/boarding house, shelter, or street) or “stable”. Group-based trajectory modeling was performed to identify trajectories of housing stability over this one-year period and to determine the corresponding population estimates. Participants were then divided into groups based on their most likely trajectory, and group HCV incidences were estimated using Poisson distribution (month #1 to #63).

Results: Of the 386 included participants (mean age 40, 82% male, 52% HCV antibody-positive), 72 acquired HCV during 893 person-years of follow-up. HCV incidence was 5.2 per 100 person-years (95%CI 3.6-7.3) and median time to infection was 9.3 months (IQR 2.3-22.6). Three housing trajectories, with population estimates, were identified over one year: sustained stability (53%), declining stability (20%), and improving stability (27%). HCV incidence per 100 person-years was 6.0 (95%CI 4.2-8.5) for sustained stability, 12.0 (95%CI 7.4-18.3) for declining stability, and 10.0 (95%CI 6.4-14.9) for improving stability.

Conclusion: About one in two participants followed trajectories characterized by housing instability. The highest HCV incidence was found among PWID with declining housing stability, followed by those with improving stability; the lowest incidence was found among those with sustained stability. PWID-targeted interventions to improve housing conditions could play a role in preventing HCV transmission.

Disclosure of Interest Statement: *This work was supported by the Canadian Institutes of Health Research (CIHR) and the Fonds de recherche du Québec – Santé (FRQS). None of the authors has commercial relationships that might pose a conflict of interest in connection with this work.*