

HOUSING STABILITY AND HEPATITIS C INFECTION FOR YOUNG ADULTS WHO INJECT DRUGS: EXAMINING THE EFFECT OF CONSISTENT AND INTERMITTENT HOUSING TRAJECTORIES ON INCIDENT HCV INFECTION

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Background:

Unstable housing status affects drug-use behaviors, but little research exists on the direct relationship between housing trajectories and hepatitis c virus (HCV) infection.

Methods:

HCV negative young adult (<30 years of age) people who inject drugs (PWID) were enrolled into a prospective cohort (2003-2017) with quarterly behavioral and serological assessments. Temporal trends were plotted to capture changes in housing status between 2000-2017 and HCV incidence rates estimated by percent time housed using Kaplan-Meier methods. Cox proportional hazard models were used to assess the independent effect of recent housing status and housing status patterns on time to HCV incident infection.

Results:

Among 721 participants a total of 235 incident HCV infections occurred over 963.84 person-years (cumulative incidence: 24.4/100py, 95% Confidence Interval (CI): 21.5, 27.7). An inverse relationship between time housed and HCV incidence was observed (always unhoused: 45.0/100py, 95%CI: 37.1, 54.5; variably housed: 18.0/100py, 95%CI: 15.0, 21.3; and always housed: 7.2/100py, 95%CI: 3.0, 17.3). In Cox proportional hazard regression models controlling for sex, age, and factors which could account for incident HCV infection, those recently unhoused versus housed had a 1.6 greater hazard (95% CI: 1.1, 2.1); for every 3-months of unstable housing the hazard for HCV incident infection increased by 6% (aHR: 1.1, 95% CI: 0.8, 1.4). Further, compared to those always housed, those always unhoused has a 4-times greater hazard of HCV infection (95%CI: 1.7, 10.2) and those with varying housing trajectories a 2.4 times greater hazard (95%CI: 1.0, 5.8).

Conclusion:

Findings indicate both recent unstable housing and being chronically unhoused greatly increases one's risk for HCV infection in young adult PWID, but so does intermittent states of being unhoused. Given the increasing rates of housing instability many cities are experiencing, interventions focused on providing consistent long-term housing for people engaged in substance has potential to significantly reduce new HCV infections.

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