HEPATITIS C VIRUS REINFECTION IN A REAL-WORLD COHORT OF HOMLESS-EXPERIENCED INDIVIDUALS IN BOSTON

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Background:
Surveillance for HCV reinfection after successful treatment is a critical step in the care cascade, but limited data on reinfection are available among some marginalized populations at potentially elevated risk, including those experiencing homelessness or unstable housing. This study assessed post-treatment HCV reinfection in a real-world cohort of homeless-experienced individuals in Boston. Initial data were presented at INHSU 2021. This updated report included a larger study population and used a more sophisticated time-to-event analysis, evaluating incidence of HCV reinfection and factors associated with reinfection risk.

Methods:
Individuals receiving HCV direct-acting antiviral treatment through Boston Health Care for the Homeless Program during 2014-20 with post-treatment follow-up assessment were included. Reinfection was identified based on recurrent detectable HCV RNA at 12 weeks post-treatment with HCV genotype switch or any recurrent detectable HCV RNA following sustain virologic response. Drug use within six months prior to treatment was defined as recent drug use.

Results:
A total of 535 individuals with 617 person-years of follow up were included (81% male, median age 49 years, 70% unstably housed or homeless at treatment initiation, 38% had recent drug use). Seventy-four HCV reinfections were detected, including five second reinfections. HCV reinfection rate was 12.0/100 person-years (95%CI 9.5-15.1) overall, 18.9/100 person-years (95%CI 13.3-26.7) among individuals with unstable housing and 14.6/100 person-years (95%CI 10.0-21.3) among those experiencing homelessness (Figure). In adjusted analysis, experiencing homelessness (vs. stable housing, adjusted HR 2.14, 95% CI 1.09-4.20, p=0.026) and recent drug use (adjusted HR 5.23, 95%CI 2.25-12.13, p<0.001) were associated with increased reinfection risk.

Conclusion:
We found high HCV reinfection rates in a population experiencing homelessness, with increased risk among those homeless at treatment, independent of drug use. Tailored strategies to address the individual and systems factors impacting marginalized populations are required to prevent HCV reinfection and to enhance engagement in post-treatment HCV care.

Disclosure of Interest Statement:
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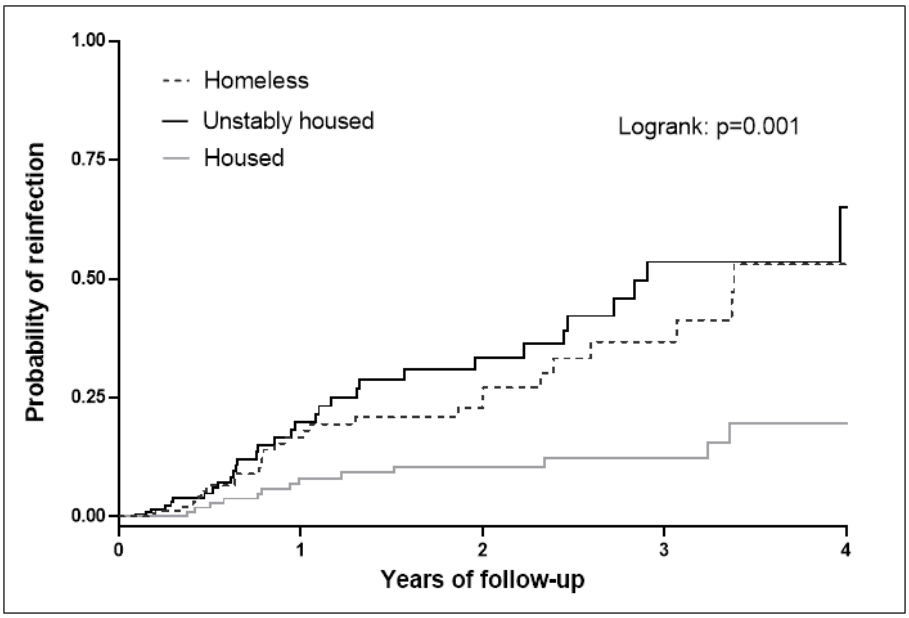

Figure: Time to HCV reinfection, by housing status at enrollment