The impact of unstable housing on health

Published Online
March 26, 2021
https://doi.org/10.1016/
S2468-2667(21)00035-9

See Articles page e309

People who are homeless and people who inject drugs (PWID) often grapple with securing and retaining housing, which limits their ability to prioritise their health and their contact with health and social care services. In the past two decades, a growing body of scientific literature has provided empirical evidence of the adverse effects of housing instability[1–3] and how it contributes to adverse health outcomes among PWID, including HIV and hepatitis C Virus (HCV) transmission.

Homelessness and unstable housing are well established social determinants of health that contribute to premature morbidity and mortality.[4–7] In *The Lancet Public Health*, Chiedozie Arum and colleagues[8] report their findings from the first systematic review and meta-analysis to date to quantify associations between homelessness or unstable housing and the risk of HIV and HCV acquisition among PWID.

The depth and breadth of this systematic review and meta-analysis provide a strong foundation to understand the inter-relationships between housing and risk of HIV and HCV acquisition. This study sheds light on over three decades (1986–2020) of research across 37 studies spanning 16 countries among homeless and unstably housed PWID in the community, and contributes to the literature in three main ways. First, the authors used well known, methodologically rigorous research methods (following PRISMA guidelines), databases (ie, MEDLINE, Embase, and PsychINFO), and approaches to quantifying publication bias (eg, Newcastle-Ottawa Scale). Second, the review focuses on the intersection between housing and transmission of communicable diseases and found that PWID who are homeless or unstably housed have a relative risk of HIV acquisition of 1·55 (95% CI 1·23–1·95) and of HCV acquisition of 1·65 (1·44–1·89) compared with PWID who are not homeless or who are stably housed. Finally, Arum and colleagues' findings help to build a case for interventions that address housing as the primary method to reduce risk of HIV and HCV acquisition among PWID.

Because the studies included were from 16 countries, the authors warn that a universal definition of homelessness was not applied to the inclusion criteria. Furthermore, timeframes for definition of homeless versus unstably housed varied across countries and studies, which has implications for study inclusion criteria. Both of these limitations affect the generalisability of the study findings.

Although the strengths of this review are evident, and it provides strong evidence that unstable housing among PWID is associated with enhanced risk of HIV and HCV acquisition, much uncertainly remains with several key research questions remaining unanswered across a broad spectrum of micro-level, meso-level, and macro-level determinants. At the micro level, what are the mechanisms that underpin how homelessness or unstable housing, or both, increase risk of HIV and HCV acquisition and related high-risk behaviours? At the meso level, what existing models (eg, Housing First, Los Angeles Homeless Services Authority) can be extended or tailored to complement interventions to reduce risk of HIV and HCV acquisition? At the macro level, how can rapid rehousing policies, such as those necessitated by the COVID-19 pandemic, be transitioned to permanent and affordable supportive housing for underserved populations?

Once people are housed, we need to understand what sustainable interventions, informed by individual's experiences of trauma, will support housing retention and contribute to creating communities that thrive in permanent housing, rather than returning to homelessness. For PWID who are chronically homeless, what are the challenges of transitioning to permanent and supportive housing? For ageing PWID who are homeless, what are the challenges of remaining in permanent and supportive housing when worsening health and the need for higher acuity health care (eg, long-term care, skilled nursing) is crucial to improve health outcomes? Across the spectrum, how do health-care and social service providers help PWID who are homeless make the transition to higher acuity care and balance the need to age with housing security? Finally, how can investigators across countries collaborate to develop comparative studies to understand innovative models of care for people who are homeless or who inject drugs, or both? Thus far, several research questions have been generated from varying perspectives and these questions must be considered in light of the factors of intervention, implementation, and policy.

Taken together, the need to advance intervention and implementation science and policy is a pressing call for academicians, providers of homeless services, and policy makers. The findings of this study need to interrupt the status quo and create dialogue and collaboration among

researchers and service providers drawing on the crucial importance of housing instability and the need for an integrated strategy to address risks of HIV and HCV acquisition among PWID. Considerably more research and continued efforts to generate innovative and tailored interventions are warranted, with interdisciplinary researchers and providers working within various spheres of influence to address the social determinants that affect HIV and HCV care among this underserved population.

We declare no competing interests.

*Adeline M Nyamathi, Benissa E Salem
anyamath@hs.uci.edu

Sue & Bill Gross School of Nursing, University of California, Irvine, CA 92697, USA (AMN); School of Nursing, University of California, Los Angeles, CA, USA (BES)

1 Topp L, Iversen J, Baldry E, Maher L. Housing instability among people who inject drugs: results from the Australian needle and syringe program survey. *J Urban Health* 2013; **90:** 699–716.

2 Kim C, Kerr T, Li K, et al. Unstable housing and hepatitis C incidence among injection drug users in a Canadian setting. *BMC Public Health* 2009; **9:** 270.

3 Morris MD, Yen IH, Shiboski S, Evans JL, Page K. Housing stability and hepatitis C infection for young adults who inject drugs: examining the relationship of consistent and intermittent housing status on HCV infection risk. *J Urban Health* 2020; **97:** 831–44.

4 Aldridge RW, Story A, Hwang SW, et al. Morbidity and mortality in homeless individuals, prisoners, sex workers, and individuals with substance use disorders in high-income countries: a systematic review and meta-analysis. *Lancet* 2018; **391:** 241–50.

5 Aldridge RW, Hayward AC, Hemming S, et al. High prevalence of latent tuberculosis and bloodborne virus infection in a homeless population. *Thorax* 2018; **73:** 557–64.

6 Zivanovic R, Milloy MJ, Hayashi K, et al. Impact of unstable housing on all-cause mortality among persons who inject drugs. *BMC Public Health* 2015; **15:** 106.

7 Salhi BA, White MH, Pitts SR, Wright DW. Homelessness and emergency medicine: a review of the literature. *Acad Emerg Med* 2018; **25:** 577–93.

8 Arum C, Fraser H, Artenie AA, et al. Homelessness, unstable housing, and risk of HIV and hepatitis C virus acquisition among people who inject drugs: a systematic review and meta-analysis. *Lancet Public Health* 2021; published online March 26. https://doi.org/10.1016/S2468-2667(21)00013-X.