Lack of Housing Linked to HIV, HCV Spikes Among People Who Inject Drugs

Unstable housing is also associated with a higher HIV viral load.

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People who inject drugs were 39% more likely to acquire HIV and 64% more likely to acquire hepatitis C virus (HCV) if they were unstably housed or unhoused compared with those who had a safe, stable place to live, according to a meta-analysis published in Lancet Public Health.

Housing and the lack of stable access to it has long been identified as a structural driver of HIV. But researchers have reported success connecting unhoused people who inject drugs to HIV prevention methods like pre-exposure prophylaxis (PrEP). This may be the first systematic review and meta-analysis specifically looking at the impact of housing on HIV and HCV acquisition rates.

Chiedozie Arum, MSc, of the University of Bristol, and colleagues in the Homelessness, HIV, and HCV Review Collaborative Group culled through 14,351 studies on homelessness, housing, HIV and HCV diagnosis published between June 2017 and September 2020 to find 392 studies that fit their criteria. These joined another 277 studies on the topic published between 2000 and 2017.

After reviewing all the studies, just 55 included information that researchers needed to answer their scientific question: Was injection drug use itself associated with high HIV and HCV acquisition among people who inject drugs? Or could lack of housing or unstable housing play a role?

The researchers contacted study authors to ask for crude data so they could run those analyses themselves. Researchers from 21 studies replied, providing 48 unpublished data estimates.

This is a long way of saying that out of those 14,351 original results, the researchers based their meta-analysis on 37 studies. These ranged from cross-sectional (one-time) studies to retrospective cohort studies to longitudinal (long-term follow-up) studies, and they were conducted everywhere from North America to Asia and East Africa to Australia. Seventeen of those studies reported HIV acquisition rates, and 38 reported HCV acquisition rates. Eight reported data on both HIV and HCV. In total, 29,314 people participated in the HIV studies, and 21,842 participated in the HCV studies.

Across the studies, 16% of HIV study participants and 29% of HCV study participants were women. None of the studies looked at the effect of homelessness among transgender people who inject drugs.

In total, 1,224 people acquired HIV and 1,051 people acquired HCV during the studies. Overall, the adjusted risk of acquiring HIV was anywhere from 27% lower among people with recent unstable housing (after adjusting for recent incarceration and access to methadone therapy) to nearly three and a half times higher without adjusting for any other factors. Most studies found an increased risk somewhere below twice the rate.

For HCV acquisition, being homeless was associated with anywhere from a 37% decreased adjusted risk (after adjusting for sharing injection equipment, daily drug use, education level and other factors) to a nearly fivefold increased risk (adjusted for injection of crack and access to opioid substitution therapy).

In general, adjusted odds are a better indicator of the impact of housing on HIV or HCV acquisition. Unadjusted odds may also be accurate, but they could hide some other factor more strongly associated with acquiring a virus than housing access itself.

When the researchers ran their own analyses of all the raw data—both published and unpublished—and adjusted for other factors, they found that the risk of acquiring HIV went up 39% when a person currently or recently experienced homelessness or unstable housing. For HCV, the adjusted pooled risk was 64%.

No matter how the researchers sliced it, they found that lack of stable housing was independently associated with increased risk for acquiring both viruses. And the finding was consistent regardless of where people lived in the world, participant demographics or the economies of the local regions. The researchers attributed the increased risk to an increase in behaviors that render one vulnerable to HIV and HCV, including sharing injection equipment and more frequent injecting.

The findings, the authors wrote, suggest that policies that provide housing regardless of a person's willingness or ability to engage in drug treatment programs could avert some of these acquisitions.

"These findings frame housing instability as an important driver of HIV and HCV transmission among people who inject drugs and call for intensified efforts to assess and implement housing initiatives and targeted prevention services that are tailored to the needs of this marginalized population," wrote Arum and colleagues. "To help people who inject drugs attain and maintain housing stability, integrated strategies that address their competing health and social concerns are urgently needed."

Click here to read the full study.

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