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# Summary:

Rates of homelessness are expected to increase dramatically with impending job loss and evictions tied to the COVID-19 pandemic, which will put even more people at risk for SARS-CoV-2 infection. Ending this pandemic will requires addressing homelessness.



### **ABSTRACT**

Job loss and evictions tied to the COVID-19 pandemic are expected to significantly increase homelessness in the coming months. Reciprocally, homelessness and the many vulnerabilities that inevitably accompany it are driving COVID-19 outbreaks in U.S. shelters and other congregate living situations. Unless we intervene to address homelessness, these co-existing and synergistic situations will make the current public health crisis even worse.

Preventing homelessness and providing permanent affordable housing has reduced the ravages of the HIV epidemic. We must take the lessons learned in 40 years of fighting HIV to respond effectively to the COVID-19 crisis. Housing is an investment that will curb the spread of COVID-19 and help protect all of us from future pandemics.

Keywords: homelessness, COVID-19, HIV, health disparity

Epidemics have a way of spotlighting vulnerabilities. As the U.S. struggles through the COVID-19 pandemic, tens of millions of Americans have lost jobs and experts predict that the existing affordable housing crisis is about to get substantially worse as more people have fewer resources to cover living expenses. Evictions in particular are expected to rise steeply, and the effects will be disproportionately felt by lower-wage earners. Unless we take bold action, experts predict a significant increase in the half million people who already live homeless in the United States each night. While our country debates strategies for supporting both public health and the economy, we would be wise to apply lessons from 40 years of HIV research. Like HIV, there will be no end to this latest pandemic without addressing homelessness.

Medical and public health research has illuminated how the HIV epidemic is inextricably linked with food insecurity, violence, incarceration, racism, substance use, PTSD and depression. Each of these factors significantly increases the risk of HIV infection, creates barriers to testing and health care, and makes negative health outcomes much more likely. The issue at the center of it all is homelessness, which magnifies the likelihood of every other risk factor.¹ These are the same issues fueling other recent epidemics, such as typhus outbreaks among unsheltered Americans². Homelessness and the many vulnerabilities that inevitably accompany it are driving COVID-19 outbreaks in U.S. shelters and other congregate living situations.³ Unless we intervene swiftly, tens of thousands of newly unemployed people are at risk for landing in these shelters, which are often densely populated and thus some of the riskiest places to be- for both residents and staff- during this pandemic.

COVID-19 may have turned a spotlight on the fault lines in our country, but these social and economic fissures go back decades. Even before the COVID-19 pandemic, holding down a job has not always guaranteed protection: the combination of higher rent and lower wages has created a growing population of *working* people who experience homelessness.<sup>4</sup> Neither is homelessness limited by educational status: A 2016 survey of California State University students found that 1 in 10 was homeless, and 1 in 5 did not have consistent access to food.<sup>5</sup> Like SARS-CoV-2 itself, housing insecurity has

penetrated every corner of our country: in rural areas, 4 in 10 Americans say their families had problems affording basic needs in the past several years, including housing. Collectively, these situations tell us that housing instability can no longer be viewed as a rare condition occurring in exceptional circumstances. The challenge facing us now is that this problem is about to get substantially worse.

The HIV epidemic has given us 40 years of experience and insight. It is now understood that a cornerstone for ending the HIV epidemic is providing permanent affordable housing. In addition to promoting independence and individual health, stable housing reduces the transmission of HIV. Why? Housed people without HIV are better equipped to take preventive measures such as pre-exposure prophylaxis (PrEP), and are at lower sexual risk from situations involving coercion and assault. Housed people living with HIV are also better able to store medication, take their antiretroviral therapy (ART), attend medical appointments and achieve sustained viral suppression, thus eliminating the possibility of transmitting HIV to others.

Innovative health care delivery that provides comprehensive services through street-based medicine or low-threshold (e.g., no appointment) clinic-based care are helping to address the challenges faced by people experiencing homelessness or unstable housing; 11 however, these programs are only provisional, short-range stopgaps. No care model can adequately address the underlying social determinants of health that are so severely impacted by a lack of stable housing. Similarly, the reprieve from homelessness afforded by recently deployed "shelter in place hotels" and "isolation hotels" provide respite and risk reduction; however, these programs are only temporary. Unless they are used as bridges to permanent housing options, the individual and community-level risks remain.

Like HIV before it, the COVID-19 pandemic places America's vulnerabilities in stark relief. We know that living paycheck to paycheck amplifies a cascade of threats to safe, stable housing. We know that, as jobs disappear, the risk of homelessness increases

exponentially. Meanwhile people experiencing homelessness face dismal prospects for securing a new job. At the same time, people without homes have higher rates of pre-existing conditions and are at high risk for developing COVID-19 for a variety of reasons. Without housing, a person cannot safely shelter in place; it is almost impossible to practice social distancing when living in a crowded housing or shelter environment; and those who live on the street face staggering obstacles to basic needs such as handwashing or taking medication.

Preventing homelessness and providing permanent affordable housing has reduced the ravages of the HIV epidemic. We must take the lessons learned in 40 years of fighting HIV to respond effectively to the COVID-19 crisis. Housing is an investment that will curb the spread of COVID-19 and help protect all of us from future pandemics.

## **ACKNOWLEDGEMENT**

This viewpoint was supported by the California HIV/AIDS Research Program (CHRP) award R00RG3097.

## POTENTIAL CONFLICTS OF INTEREST

MG reports grants from NIH, outside the submitted work. ER reports grants from California HIV/AIDS Research Program (CHRP) and National Institutes of Health, outside the submitted work. AC reports grants from NIH, outside the submitted work. All other authors have no potential conflicts to disclose.

### **REFERENCES**

- 1. Riley ED, Vittinghoff E, Koss CA, et al. Housing First: Unsuppressed Viral Load Among Women Living with HIV in San Francisco. *AIDS Behav.* 2019;23(9):2326-2336.
- Flea-borne (endemic) typhus. Los Angeles County Department of Public Health. Acute communicable disease control Web site.
   <a href="http://www.publichealth.lacounty.gov/acd/vectortyphus.htm">http://www.publichealth.lacounty.gov/acd/vectortyphus.htm</a>. Accessed August 8, 2020.
- 3. Imbert E, Kinley PM, Scarborough A, et al. Coronavirus Disease 2019 (COVID-19) Outbreak in a San Francisco Homeless Shelter. *Clin Infect Dis.* 2020.
- Hughes B. Working Homeless Population Grows in Cities Across the U.S. . Parade. February
   7, 2018.
- Crutchfield R, Clark K, Gamez S, Green A, Munson D, Stribling H. Serving displaced and food insecure students in the CSU. <a href="https://presspage-production-content.s3.amazonaws.com/uploads/1487/cohomelessstudy.pdf?10000">https://presspage-production-content.s3.amazonaws.com/uploads/1487/cohomelessstudy.pdf?10000</a>. Published 2016. Updated January. Accessed May 29, 2020.
- 6. Life in rural America: Part II. Harvard T.H.Chan School of Public Health, the Robert Wood Johnson Foundation and National Public Radio. Rural Health and Well-Being in America: An RWJF Collection Web site. <a href="https://www.rwjf.org/en/library/research/2019/05/life-in-rural-america--part-ii.html">https://www.rwjf.org/en/library/research/2019/05/life-in-rural-america--part-ii.html</a>. Published 2019. Accessed May 29, 2020.
- 7. Buchbinder SP, Havlir DV. Getting to Zero San Francisco: A Collective Impact Approach. *J Acquir Immune Defic Syndr.* 2019;82 Suppl 3:S176-S182.
- 8. Spinelli MA, Laborde N, Kinley P, et al. Missed opportunities to prevent HIV infections among pre-exposure prophylaxis users: a population-based mixed methods study, San Francisco, United States. *J Int AIDS Soc.* 2020;23(4):e25472.
- 9. Dickson-Gomez J, McAuliffe T, Quinn K. The Effects of Housing Status, Stability and the Social Contexts of Housing on Drug and Sexual Risk Behaviors. *AIDS Behav.* 2017;21(7):2079-2092.
- 10. Clemenzi-Allen A, Geng E, Christopoulos K, et al. Degree of Housing Instability Shows
  Independent "Dose-Response" With Virologic Suppression Rates Among People Living With
  Human mmunodeficiency Virus. *Open Forum Infect Dis.* 2018;5(3):ofy035.
- 11. Clemenzi-Allen AA, Hickey M, Conte M, et al. Improving Care Outcomes for PLWH Experiencing Homelessness and Unstable Housing: a Synthetic Review of Clinic-Based Strategies. *Curr HIV/AIDS Rep.* 2020;17(3):259-267.