



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

## COVID-19: a potential public health problem for homeless populations



Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is infecting people throughout the world. It is probable that coronavirus disease (COVID-19) will be transmitted to people experiencing homelessness, which will become a major problem in particular in North America where there are sizable populations of people experiencing homelessness in nearly every metropolitan city in the USA and Canada. In the USA, more than 500 000 people were reported to be experiencing homelessness on any given night over the past decade (2007–19).<sup>1</sup> The State of Homelessness in Canada 2016 report<sup>2</sup> estimated 35 000 people are experiencing homelessness on any given night in Canada.

People experiencing homelessness live in environments that are conducive to a disease epidemic. Many people experiencing homelessness live in congregate living settings—be it formal (ie, shelters or halfway houses) or informal (ie, encampments or abandoned buildings)—and might not have regular access to basic hygiene supplies or showering facilities, all of which could facilitate virus transmission. People experiencing homelessness are a vulnerable group, and their potential exposure to COVID-19 might negatively affect their ability to be housed, and their mental and physical health. People experiencing homelessness aged younger than 65 years have all-cause mortality that is 5–10 times higher than that of the general population.<sup>3</sup> COVID-19 infection might further increase this mortality disparity.

Many people experiencing homelessness have chronic mental and physical conditions,<sup>4</sup> engage in high rates of substance abuse (including sharing of needles),<sup>5</sup> and have often less access to health care,<sup>6</sup> all of which could lead to potential problems with screening, quarantining, and treating people who might have COVID-19. Such problems have occurred as recently as last year, when outbreaks of typhus, hepatitis A, tuberculosis, trench fever, and *Shigella* bacteria were reported among people experiencing homelessness in US cities with large homeless populations.<sup>7</sup>

There are some additional issues, which are unique to people experiencing homelessness, to consider with regards to COVID-19. Homeless populations might

be more transient and geographically mobile than individuals in the general population,<sup>8</sup> making it difficult to track and prevent transmission and to treat those who need care. COVID-19 was recently found to be transmittable via the oral–faecal route.<sup>9</sup> Some major US cities with large homeless populations, like San Francisco, have experienced issues with public defecation, which might pose an additional transmission risk for people experiencing homelessness and other individuals. Together, the multitude of potential vulnerabilities and risks for people experiencing homelessness in becoming infected, needing care, and transmitting COVID-19 cannot be ignored and must be planned for. Some lessons can be learned from the response to severe acute respiratory syndrome among homeless service providers nearly two decades ago.<sup>10</sup> Testing kits and training on how to recognise COVID-19 should be widely disseminated to homeless service providers and deployed in shelters, encampments, and street outreach. Alternative spaces might be needed to quarantine and treat people experiencing homelessness.

If cities impose a lockdown to prevent COVID-19 transmission, there are few emergency preparedness plans to transport and provide shelter for the large number of people experiencing homelessness. In lockdowns, public spaces are closed, movement outside homes are restricted, and major roads of transport might be closed, all of which might negatively affect people experiencing homelessness. It is unclear how and where unsheltered people experiencing homelessness will be moved to if quarantines and lockdowns are implemented. In such a scenario, closures of shelters and other high-density communal settings (eg, drop-in centres and soup kitchens) are possible, which could increase the number of unsheltered people experiencing homelessness and reduce their access to needed services. Lockdowns and disease containment procedures might also be deleterious to the mental health of people experiencing homelessness, many of whom have fears around involuntary hospitalisation and incarceration.<sup>11</sup>

In response to COVID-19, the State of Washington has declared a state of emergency, allowing cities to take

Lancet Public Health 2020

Published Online

March 11, 2020

[https://doi.org/10.1016/S2468-2667\(20\)30053-0](https://doi.org/10.1016/S2468-2667(20)30053-0)

52468-2667(20)30053-0

extraordinary measures, which has included King County moving people infected with COVID-19 to housing units that were originally intended to provide housing for people experiencing homelessness.<sup>12</sup> As other cities follow suit, these actions might further displace people experiencing homelessness and put them at greater risk of COVID-19. Another complicating matter is that in December, 2019, the US Supreme Court declined to review the case of *Martin v City of Boise*, upholding a ruling that cities cannot arrest or punish people for sleeping on public property unless cities have provided adequate and accessible indoor accommodations. This legal precedent prevents the criminalisation of homelessness, but it is unclear if and how it will be applied during COVID-19 outbreaks.

Cities with large homeless populations might face unique challenges while trying to contain COVID-19 and addressing homelessness, with the potential for both issues to exacerbate one another.

We declare no competing interests.

Copyright © 2020 The Author(s). Published by Elsevier Ltd. This is an Open Access article under the CC BY 4.0 license.

\**Jack Tsai, Michal Wilson*  
**jack.tsai@uth.tmc.edu**

School of Public Health, University of Texas Health Science Center at Houston, Houston, TX 77030, USA (JT, MW); National Center on Homelessness Among Veterans, US Department of Veterans Affairs, Tampa, FL, USA (JT); and Department of Psychiatry, Yale University School of Medicine, Yale University, New Haven, CT, USA (JT)

- 1 The Council of Economic Advisers. The State of Homelessness in America, 2019. <https://www.whitehouse.gov/wp-content/uploads/2019/09/The-State-of-Homelessness-in-America.pdf> (accessed March 10, 2020).
- 2 Gaetz S, Dej E, Richter T, Redman M. The State of Homelessness in Canada 2016. 2016. [https://homelesshub.ca/sites/default/files/SOHC16\\_final\\_20Oct2016.pdf](https://homelesshub.ca/sites/default/files/SOHC16_final_20Oct2016.pdf) (accessed March 10, 2020).
- 3 Baggett TP, Hwang SW, O'connell JJ, et al. Mortality among homeless adults in Boston: shifts in causes of death over a 15-year period. *JAMA Intern Med* 2013; **173**: 189–95.
- 4 Tsai J, Gelberg L, Rosenheck RA. Changes in physical health after supported housing: Results from the Collaborative Initiative to End Chronic Homelessness. *J Gen Intern Med* 2019; **34**: 1703–08.
- 5 Maremmani AG, Bacciardi S, Gehring ND, et al. Substance use among homeless individuals with schizophrenia and bipolar disorder. *J Nerv Ment Dis* 2017; **205**: 173–77.
- 6 Hwang SW, Ueng JJ, Chiu S, et al. Universal health insurance and health care access for homeless persons. *Am J Public Health* 2010; **100**: 1454–61.
- 7 Gorman A. Medieval diseases are infecting California's homeless. *Kaiser Health News* 2019. <https://www.theatlantic.com/health/archive/2019/03/typhus-tuberculosis-medieval-diseases-spreading-homeless/584380/> (accessed Feb 22, 2020).
- 8 Gray D, Chau S, Huerta T, Frankish J. Urban-rural migration and health and quality of life in homeless people. *J Soc Distress Homeless* 2011; **20**: 75–93.
- 9 Zhang Y, Chen C, Zhu S, et al. Isolation of 2019-nCoV from a stool specimen of a laboratory-confirmed case of the coronavirus disease 2019 (COVID-19). *China CDC Weekly* 2020; **2**: 123–24.
- 10 Leung CS, Ho MM, Kiss A, Gundlapalli AV, Hwang SW. Homelessness and the response to emerging infectious disease outbreaks: lessons from SARS. *J Urban Health* 2008; **85**: 402–10.
- 11 Schutt RK, Goldfinger SM. Homelessness, housing, and mental illness. Cambridge, MA: Harvard University Press, 2011.
- 12 Sun D. COVID-19 isolation site getting set up in White Center. 2020. <https://www.kiro7.com/news/local/covid-19-isolation-site-getting-set-up-white-center/RKPEH5B42JDQBNTNIMWD75M3HE/> (accessed March 3, 2020).