A triple threat for COVID-19: Homelessness, tobacco use, and aging

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Abstract

The COVID-19 pandemic has taken an enormous toll on our lives, but certain segments of our population bear a disproportionate burden. People experiencing homelessness are at heightened risk for COVID-19 because of inadequate housing, the staggeringly high rates of tobacco use, the aging of the population, and the co-occurrence of health conditions that worsen prognosis from COVID-19. We describe here potential solutions to mitigate the risk of COVID-19 among people experiencing homelessness, emphasizing the urgent need for permanent supportive housing. We highlight the opportunities that the COVID-19 pandemic offers to heighten awareness of the harms of tobacco use and the benefits from smoking cessation. We describe challenges to accessing telehealth primary care for people experiencing homelessness, and the roles that primary care providers and pharmacists can take to mitigate barriers to access healthcare and smoking cessation services.

Keywords: Tobacco use; Tobacco cessation; Homelessness; COVID-19

Abbreviations: chronic obstructive pulmonary disease (COPD)

The COVID-19 pandemic has taken an enormous toll on all our lives, but people experiencing homelessness are at heightened risk for COVID-19 because inadequate housing poses substantial challenges when all non-essential personnel are ordered to shelter in place. Stigma and discrimination associated with homelessness and limited access to healthcare may further compromise individuals' ability to seek healthcare when they most need it, particularly when the healthcare that they need is available only via telehealth. Compounding these structural inequities are the staggeringly high rates of tobacco use, chronic conditions such as chronic obstructive pulmonary disease (COPD), and the aging of the homeless population. African Americans—a minority group disproportionately impacted by COVID-19—account for 34% of all homeless individuals, 33% of veterans experiencing homelessness, and 52% of families experiencing homelessness even though they constitute only 13.4% of the U.S. population.[1,2] These structural, behavioral and biological factors could create a perfect storm for hotspots of COVID-19 infections among people experiencing homelessness across the U.S.

Homelessness creates particular vulnerabilities for people during COVID-19.[3] Lack of housing increases risk of developing COVID-19, irrespective of whether one stays on the street or in a crowded shelter. Social distancing is difficult to achieve in both of these venues. Few sanitizing stations and dwindling supplies of sanitizer as well as lack of personal protective equipment are barriers to preventing transmission of the

SARS-CoV-2, the virus that causes COVID-19. High rates of substance use may heighten risk as people gather together to support each other and share limited resources to minimize symptoms of withdrawal from substances. Fear of entering healthcare facilities and barriers to engaging in telehealth care, may lead to presentations at acute care settings when conditions have progressed to an advanced stage, when they are harder and more expensive to treat.

People experiencing homelessness share another behavioral risk factor for COVID-19. Cigarette smoking and vaping have been shown to be associated with increased progression and adverse outcomes from COVID-19.[4] In a study of 1099 people with COVID-19, people who smoked were 2.4 times more likely to need intensive care treatment, including mechanical ventilation.[5] Tobacco-caused diseases such as COPD, cardiovascular disease, diabetes, and other respiratory diseases have been shown to worsen prognosis among people with COVID-19.[6] Mortality rates are highest among persons 65 years and older who have these diseases.[6]

The prevalence of cigarette smoking among people experiencing homelessness is 70%.[7] Among homeless adults who are smokers, 66% use other forms of non-cigarette tobacco or nicotine products such as little cigars or e-cigarettes.[8] Compared to the general population, successful quit rates are lower among people experiencing homelessness even though quit attempt rates are similar.[9] Tobacco-caused illnesses

are the leading causes of death among homeless adults who are 45 years and older.[10] For those less than 45 years, the incidence of tobacco-caused illnesses is three times higher than age matched individuals in the general population.[10]

Moreover, people who are homeless necessarily have reduced access to home-cooked meals,[11] which is a risk factor for food insecurity.[12,13] Food insecurity is common among smokers,[14,15] and especially smokers who experience housing instability or homelessness.[16] Food insecurity increases risk for obesity[17] and obesity-related, inflammatory metabolic diseases such as diabetes and fatty liver disease.[18,19] Obesity and inflammatory metabolic diseases, in turn, are risk factors for death from COVID-19.[20]

The aging of the homeless population highlights another vulnerability for COVID-19.[21] Today, approximately half of the single adults who are experiencing homelessness are 50 years or older, compared to 11% in 1990.[22] This is thought to be due to a cohort effect: individuals born during the second half of the baby boom (1954-1963) have had an elevated risk of homelessness throughout their lives, and are now 50 years or older.[22] Moreover, African Americans are over-represented in the aging homeless population. Due to premature development of chronic medical conditions such as diabetes, cardiovascular disease or COPD [23] —diseases associated with poor

outcomes from COVID-19—homeless adults aged 50 years or older are at particular risk for COVID-19 and its adverse consequences.

What can we, in the healthcare and public health community, do?

First, permanent supportive housing is the primary solution to ending homelessness.[24] COVID-19 outbreaks in congregate shelter and housing settings in Seattle and San Francisco[25] have highlighted the urgent need for isolation housing to isolate homeless residents with confirmed disease or quarantine those at high risk for infection. Given the heightened concern for pre-symptomatic or asymptomatic transmission,[26] the need for widespread testing for the SARS-CoV-2 in congregate settings and the prompt transfer of individuals to independent housing units should be prioritized. Parts of California have mobilized resources to house people who experience homelessness in hotels or motels to reduce transmission of the SARS-CoV-2.[27] But as the pandemic progresses, these efforts will need to be extended to include more permanent housing solutions, particularly for adults experiencing homelessness who have advanced age or underlying chronic health conditions. Close nursing contact is essential to prevent deaths from COVID-19 exacerbations for homeless persons placed in isolation in hotel rooms.[28]

Second, now is the time to counsel against continued tobacco use. As we have transitioned to telehealth for primary care, healthcare systems are developing worklists to outreach to patients who are at high risk for developing COVID-19, such as those with predisposing health conditions and smokers. In our primary care health system, we have implemented a tobacco script in our outreach phone calls to highlight the negative impact of smoking on COVID-19 and to provide patient-accessible resources for smoking cessation. These outreach phone calls specifically target our minority groups who have shared risk factors for COVID-19 such as tobacco use, COPD or cardiovascular disease.

However, the telehealth system puts people experiencing homelessness at a disadvantage as lack of access to a charged phone or inadequate number of minutes per month to make or take video or telephone calls are barriers to access. As individuals living on the streets or in shelters are moved to isolation or quarantine hotels, there is a heightened danger of losing contact because options for telephone and/or in-person visits in clinics are severely limited. Addressing nicotine addiction under these circumstances is challenging.

In San Francisco, the Department of Public Health is using a harm reduction approach by providing alcohol, combustible tobacco, methadone and cannabis to some individuals who are quarantined or isolating in hotels to prevent them from leaving

isolation to obtain these substances.[29] These harm reduction approaches are intended to support individuals who are forced to stay indoors while having their usual sources for these substances curtailed. On first blush, there appears to be an inherent tension between supporting the public's health through harm reducing practices that minimize contact and maintaining addictions. It may be particularly problematic to support tobacco harm reducing practices such as the use of combustible tobacco or e-cigarettes or vaping devices under COVID-19 pandemic circumstances given its increased risk for poor COVID-19 outcomes.[4] On the one hand, restricting combustible tobacco use when people are dependent on it in the absence of cessation medications to minimize withdrawal symptoms, is inhumane. On the other hand, a harm reduction approach of offering tobacco, seemingly contradictory to supporting addiction treatment, may offer a humane way to broach discussions around tobacco cessation and addiction in general.

While not formally studied, there have been reports to suggest that the popularity of smoking cessation increases proportionally with press coverage around harms of tobacco use. Thus, the COVID-19 pandemic offers critical momentum for individuals who are thinking about smoking cessation, to attempt to quit smoking. It is imperative, therefore, that departments of public health, health services, and homeless housing capitalize on this momentum by incorporating a systematic screening process that includes questions on tobacco use and local resources for smoking cessation for incoming residents being placed into isolation or quarantine hotels. Healthcare providers working in or outreaching to shelters or hotels housing homeless adults could

continue to support these discussions on tobacco use and cessation within the framework of harm reduction.

Third, it is time to consider unique partnerships to facilitate and promote access to treatment. Pharmacies continue to operate and are delivering medications. Pharmacies may be a critical partner for homeless services providers in this pandemic by facilitating on-site access to medications for tobacco cessation. Common practices in shelters such as smoke breaks and the use of designated smoking zones may not be possible anymore because of social distancing requirements, and knowledge that smoking is a risk factor for COVID-19 infections makes it hard for shelter providers to support such practices. Therefore, finding ways to deliver smoking cessation counseling and medications to individuals who are placed in shelters or isolation or quarantine housing will be essential to minimize negative repercussions of nicotine withdrawal. If these pathways to access medications are made available to people experiencing homelessness, they have the potential to reduce the burden of COVID-19 illness if people are able to quit smoking.

People experiencing homelessness could be at the center of an evolving pandemic if we do not act fast. The solutions for mitigating the heightened risk of COVID-19 among people experiencing homelessness are not novel. However, there is a need for political will, advocacy, and financial support to substantially increase

affordable housing. Not only is it the right thing to do, but it will also save lives and drastically reduce risk of COVID-19 transmission. Lastly, the coordination efforts that we, as healthcare providers and public health practitioners, can offer now to increase access to healthcare and tobacco cessation services and to study the impact of COVID-19 will ensure that homeless populations are not left behind, once again.

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