

By Cheyenne Garcia, Kelly Doran, and Margot Kushel

DOI: 10.1377/hlthaff.2023.01049

HEALTH AFFAIRS 43,
NO. 2 (2024): 164–171

This open access article is distributed in accordance with the terms of the Creative Commons Attribution (CC BY-NC-ND 4.0) license.

OVERVIEW

Homelessness And Health: Factors, Evidence, Innovations That Work, And Policy Recommendations

Cheyenne Garcia, University of California San Francisco, San Francisco, California.

Kelly Doran, New York University, New York, New York.

Margot Kushel (margot.kushel@ucsf.edu), University of California San Francisco.

ABSTRACT On a single night in 2023, more than 653,000 people experienced homelessness in the United States. In this overview, we highlight structural and individual risk factors that can lead to homelessness, explore evidence on the relationship between homelessness and health, discuss programmatic and policy innovations, and provide policy recommendations. Health system efforts to address homelessness and improve the health of homeless populations have included interventions such as screening for social needs and medical respite programs. Initiatives using the Housing First approach to permanent supportive housing have a strong track record of success. Health care financing innovations using Medicaid Section 1115 waivers offer promising new approaches to improving health and housing for people experiencing homelessness. To substantially reduce homelessness and its many adverse health impacts, changes are needed to increase the supply of affordable housing for households with very low incomes. Health care providers and systems should leverage their political power to advocate for policies that scale durable, evidence-based solutions to reduce homelessness, including increased funding to expand housing choice vouchers and greater investment in the creation and preservation of affordable housing.

On a single night in 2023, 653,104 people experienced homelessness in the United States.¹ Minoritized populations—including Black, Indigenous, and Pacific Islander people and gender and sexual minorities—and populations with specific adverse experiences, such as domestic violence survivors, young adults exiting foster care, and people exiting incarceration, are overrepresented within the homeless population.¹ According to the federal definition, people are homeless if they lack a fixed, adequate nighttime residence; will imminently lose their residence without another place

to go; or are fleeing interpersonal violence.² The definition includes people staying in homeless shelters.

Characteristics of the homeless population have shifted over time. In 2023 nearly 40 percent of those experiencing homelessness in the US were unsheltered—an increase from 30 percent in 2014.¹ Unsheltered homelessness is associated with disconnection from health care services, a high prevalence of substance use and mental health disorders, exposure to the elements, and risks such as experiencing violence.³ The homeless population is aging: Reflecting a nationwide trend, in 2023 almost half of single homeless

adults in California were ages fifty and older, compared with 11 percent in San Francisco in 1990.^{4,5} Research has shown that homeless adults experience accelerated aging, with premature onset of chronic medical conditions, functional and cognitive impairments, and high rates of age-adjusted mortality.^{6,7}

In this overview, we discuss structural and individual factors that can lead to homelessness, explore evidence on the relationship between homelessness and health, discuss programmatic and policy innovations to address homelessness and improve the health of homeless populations, and provide policy recommendations.

Background

STRUCTURAL AND INDIVIDUAL RISK FACTORS

Homelessness arises from an interaction between structural factors, such as the shortage of affordable housing and deficiencies in the social safety net, and individual factors, such as substance use and childhood adversity.⁸ The affordable housing landscape in the US is bleak. According to the National Low Income Housing Coalition, in 2021 there were 33 units of affordable housing available for every 100 extremely low income households, defined as those earning less than 30 percent of the area median income.⁹ Regions where affordable housing is particularly scarce have elevated rates of homelessness.¹⁰ Only one in four US households that are eligible for a housing choice voucher (a rental subsidy also known as Section 8) receive one, because of a lack of federal funding to provide subsidies for all who are eligible.¹¹ Within this context, people with individual vulnerabilities, such as having a substance use disorder, severe mental illness, or a history of incarceration, are at heightened risk for homelessness.

A CONCEPTUAL FRAMEWORK Kathryn Leifheit and colleagues' conceptual framework illustrates how structural, community, household, and individual factors related to housing security can intersect and create a negative feedback loop.¹² Inadequate access to affordable housing can lead to housing insecurity, which causes stress and material hardship, both of which can lead to adverse health outcomes. Conversely, poor health can result in high medical bills and lost income, thereby leading to housing insecurity. The authors argue that solutions to homelessness must be structural, in alignment with its causes.

A Review Of The Evidence

POOR HEALTH STATUS IS ASSOCIATED WITH HOMELESSNESS

Although there are no random-

ized controlled trials to prove that poor health leads to homelessness, robust evidence suggests an association between poor health status and an elevated risk of homelessness. Dan Treglia and colleagues found that in the period 2009–15, the use of acute care, including hospitalization, increased in the year prior to entry into homelessness among a sample of New York City shelter users, suggesting that health crises may precipitate homelessness.¹³ People experiencing homelessness sometimes report that health crises, either their own or those of a household member, precipitated their housing loss, in many cases indirectly through income loss.⁵ Physical and mental health conditions, as well as substance use disorders, may precipitate homelessness by limiting the ability to work and thereby reducing income, by increasing medical costs and thus leaving people with insufficient funds to pay rent, or by leading to social problems such as depleted personal networks or criminal justice involvement.⁵ Nearly one-fifth of US households reported having medical debt in 2017; the median amount was \$2,000.¹⁴ Medical debt depletes savings, thus increasing the risk for homelessness. A study of homeless adults in Seattle, Washington, found that two-thirds reported medical debt, and having medical debt was associated with prolonged homelessness.¹⁵

HOMELESSNESS IS ASSOCIATED WITH POOR

HEALTH Compared to low-income populations with housing, people experiencing homelessness have a higher prevalence of acute and chronic physical and mental health conditions and higher mortality rates.¹⁶ This disparity has been attributed, in part, to evidence indicating that homelessness has direct and indirect deleterious impacts on health and that it interferes with access to primary health care.^{16,17}

In a representative study of adults experiencing homelessness in California conducted during 2021–22, 45 percent of participants reported fair or poor physical health, 60 percent reported one or more chronic health conditions, and over a third reported difficulty with one or more activities of daily living.⁵ Homelessness among pregnant people is associated with increased risk for premature birth, low birthweight, and neonatal intensive care unit admission.¹⁸ A 2015–19 analysis found that people who experienced homelessness were more likely than those in an age- and gender-matched comparison group to report one or more chronic conditions, even once housed.¹⁹

People experiencing homelessness have elevated rates of mental health conditions and substance use disorders.²⁰ The California study cited above found that 82 percent of homeless adults in California reported experiencing serious men-

tal health symptoms sometime in their lives, and two-thirds reported current symptoms; depression and anxiety were the most common.⁵ Two-thirds reported ever using illicit drugs regularly or drinking heavily; 35 percent said that they were currently using illicit drugs regularly.

People experiencing homelessness have high rates of age-adjusted mortality. Amid the national overdose crisis, drug overdose has become the leading cause of death in the US homeless population overall.^{7,21,22} In a cohort study of adults ages fifty and older who were homeless at baseline, heart disease and cancer were the leading causes.²³

In part because of the environmental conditions of homelessness—including crowded shelters or encampments and limited access to clean water and hygiene facilities—people experiencing homelessness are at heightened risk for infectious disease.²⁴ During the COVID-19 pandemic, congregate homeless shelters were subject to outbreaks.²⁵ Also, homelessness is associated with increased sleep disruption and its adverse health effects, stemming from exposure to inclement weather, hard sleeping surfaces, and heightened threats to personal safety.²⁶

People experiencing unsheltered homelessness often are forcibly moved out of encampments, and their belongings may be thrown away or lost.⁵ People who refuse to comply with relocation orders may be arrested. These displacements increase criminal justice involvement, disrupt social networks, and create challenges for engagement with health and social services providers; each of these outcomes may negatively affect health.^{27,28}

HOMELESSNESS IS ASSOCIATED WITH CERTAIN CARE USE PATTERNS In 2009, compared with housed populations, people experiencing homelessness reported lower rates of non-emergency department (ED) ambulatory care use, higher rates of ED use and hospitalizations, and higher rates of unmet health care needs.¹⁶ Even with insurance, people experiencing homelessness face barriers to preventive and longitudinal care, including competing demands on time and resources, discrimination, and stigma.²⁹

High use of ED care among people experiencing homelessness has been attributed to high rates of substance use and injury and to barriers in access to non-ED ambulatory health care.³⁰ Compared to housed populations with similar demographics, people experiencing homelessness have longer hospital lengths-of-stay and higher rates of readmission.^{31,32} Compared to the general population, a higher proportion of people experiencing homelessness are hospitalized for mental health and substance use conditions.³¹

Homelessness is a complex problem with multiple contributing factors, many adverse impacts, and no single solution.

Programmatic And Policy Innovations

The root cause of homelessness is a lack of affordable housing for extremely low income households; therefore, to be effective, solutions to reduce homelessness must incorporate strategies to expand the availability of affordable housing and increase incomes.¹⁰ These solutions require action by entities outside the health care system. Nevertheless, health care providers and systems have contributed to efforts to address homelessness and improve the health of homeless populations. Health care entities have partnered with housing providers and participated in health care financing innovations to reduce homelessness. These health-sector interventions and cross-sector partnerships often are guided by expert opinion. Empirical research to evaluate the outcomes of such efforts has been limited.

HEALTH CARE SYSTEM EFFORTS TO ADDRESS HOMELESSNESS AND IMPROVE HEALTH

► **LOW-BARRIER CARE:** Across the US, many health systems, including federally qualified health centers receiving Health Care for the Homeless funding and Veterans Affairs (VA) health system Homeless Patient Aligned Care Team (HPACT) clinics, offer low-barrier care. These clinics provide services on a walk-in basis, through mobile units, or via telemedicine, along with transportation assistance, to increase homeless patients' access to primary health care. They adopt other best practices to care for patients experiencing homelessness, including simplifying medication regimens; arranging follow-up visits at the point of care; and providing prescribed medications at the time of discharge.³³ In a nationwide study of homeless-experienced veterans, those who received care from HPACTs reported better patient experience on all measures, including access to care, than veterans who received care from traditional

Changes are needed to increase the supply of affordable housing for very low income households.

PACTs that did not tailor services specifically to homeless populations' needs.³⁴

► **CRITICAL TIME INTERVENTION:** Critical Time Intervention (CTI) is a stepped, time-limited intervention implemented during a transition from an institution, such as a prison or hospital, to the community. CTI was first developed in the 1980s for people with serious mental illness who were experiencing homelessness. Since the 2000s, the model has expanded to other populations and contexts domestically and internationally, including homeless shelters, domestic violence shelters, and rapid rehousing programs. CTI includes case management that begins in the institutional setting and gradually diminishes in the transition to community care. A randomized trial among people who had experienced homelessness and were discharged from psychiatric hospitalization found that compared with the control group, those assigned to receive CTI had a significantly lower risk of homelessness nine months after the intervention ended.³⁵

► **SOCIAL NEEDS SCREENING:** In the past several years, health systems throughout the country have begun screening patients for social needs, including housing instability and homelessness. Screening identifies patients who could benefit from homelessness response and prevention services, so that health systems can help them connect with community resources.

Evidence on the effectiveness of health system screening for social needs is nascent, and findings are mixed. Some authors have raised concerns that social needs screening may increase stigma and that health care providers lack the time or resources to act on the information gathered, highlighting the importance of implementation that considers and minimizes these risks.³⁶ One systematic review found that identification of social needs led to increased use of resources to address needs, such as food pantries for food insecurity.³⁷ Two high-quality studies found that interventions pairing social needs screening with referrals to community resources

to address social needs, such as housing assistance, were associated with downstream reductions in health care use.^{38,39} However, other studies have not found evidence of improvement in health outcomes following social needs screening.³⁷ To address the needs of homeless populations effectively, interventions following screening will likely require a high-touch approach, including warm handoffs and ongoing engagement. More research is needed on the effectiveness of social needs screening in ameliorating and preventing homelessness.

► **MEDICAL RESPITE:** Medical respite, also known as recuperative care, provides 24/7 shelter with medical and social services for hospital patients who are homeless and no longer require inpatient-level care but are too ill for discharge to homeless shelters or unsheltered locations. Medical respite programs emerged in the 1980s as a response to homelessness and have become increasingly prevalent since the early 2000s. There are now more than 150 medical respite programs across the US.⁴⁰ Most medical respite providers are nonprofit providers of homeless or health care services, such as federally qualified health centers. Some hospitals have collaborated with homeless service partners to create medical respite programs; others pay a per diem fee for the cost of medical respite for patients they discharge. Recently, there has been increased willingness among payers, including some state Medicaid programs and managed care organizations, to reimburse respite providers for care.⁴¹

A systematic review published in 2013 found that medical respite program stays were associated with reductions in hospital readmissions and lengths-of-stay, improved HIV outcomes, and improvement in housing status at respite discharge; however, several studies in the review were limited by the lack of comparison groups.⁴²

PARTNERSHIPS BETWEEN HOUSING AND HEALTH CARE PROVIDERS

► **HOUSING FIRST:** Developed in the early 1990s, Housing First is a flexible housing model that encompasses many interventions. It is most often implemented as permanent supportive housing, which includes subsidized housing and supportive services, such as case management, substance use treatment, and life skills training, to people experiencing chronic homelessness. Housing First interventions do not require people to enroll in or complete substance use or behavioral health treatment services before receiving housing. The Department of Housing and Urban Development–Veterans Affairs Supportive Housing (HUD-VASH) program, the nation's largest permanent supportive housing initiative, uses the Housing First approach.⁴³ HUD-VASH combines HUD's housing choice

voucher rental assistance with case management and clinical services provided by the VA.⁴³ A demonstration project implemented in 2010 found that compared with veterans who participated in a “treatment first” housing model, HUD-VASH participants were placed in housing sooner, were more likely to remain housed a year later, and had less ED use.⁴⁴ HUD-VASH is, in part, responsible for the dramatic reduction in veteran homelessness since 2009.¹ Other studies have found that people receiving housing assistance on a Housing First basis remained housed longer, reported fewer psychiatric symptoms, and had more primary care use than people who did not receive housing or who participated in treatment-first models.^{45–47} Based on decades of consistent evidence, the United States Interagency Council on Homelessness has endorsed Housing First as the gold-standard model to reduce homelessness.⁴⁸

► **DIRECT INVESTMENTS IN HOUSING:** To address the deleterious impacts of homelessness on health, some health care organizations have made direct investments in affordable housing.^{45,49} A 2020 study found that during 2017–19, fifty-two hospitals and health systems across the US announced commitments totaling \$1.6 billion in housing-related investments.⁵⁰ In Portland, Oregon, in 2016, a consortium of six health care organizations partnered with Central City Concern, a community organization that provides housing and health care services, to create more than 300 units of affordable housing with an on-site clinic and other services.⁵¹ Other hospital systems, such as NYC Health + Hospitals and Sanford Health, have donated their unused land for affordable housing developments.^{52,53} These projects have not reported on health outcomes.

HEALTH CARE FINANCING INNOVATIONS Section 1115 of the Social Security Act gives the secretary of health and human services the authority to approve state-specific pilot projects using Medicaid funds to pay for nonmedical interventions, including assistance with housing searches and subsidies for moving expenses, along with case management. In January 2022, California received a renewal of its Medicaid Section 1115 and Section 1915(b) waiver programs, which it renamed California Advancing and Innovating Medi-Cal (CalAIM). CalAIM expands on previously approved waivers to provide Medicaid reimbursement for case management, as well as community supports such as housing and meal services, in addition to physical, mental, and dental health care.⁵⁴

Beginning in 2024, Oregon’s Section 1115 waiver will enable the use of Medicaid funds to subsidize short-term rental costs for people

Health care stakeholders can play an important role in ending homelessness.

experiencing homelessness and other at-risk populations, such as those exiting foster care or incarceration.⁵⁵ North Carolina’s Healthy Opportunities Pilots program, launched in 2022, provides Medicaid enrollees who have qualifying physical or behavioral health needs, as well as social needs such as homelessness, with enhanced case management and financial assistance.⁵⁶ Arizona’s Housing and Health Opportunities program, which began in 2021, provides health-related services to Medicaid enrollees with severe mental illness or substance use disorders who are homeless or at risk for becoming homeless.⁵⁷ Evaluations are required for all Medicaid Section 1115 waiver programs, but no rigorous evaluations of these interventions have yet been published.⁵⁸

Policy Recommendations

Homelessness is a complex problem with multiple contributing factors, many adverse impacts, and no single solution. Making progress in reducing homelessness and its ill effects nationwide will require ongoing commitment by policy makers and stakeholders across sectors, including health care. To protect people with complex health care needs from the crushing medical debt that depletes savings and increases the risk for homelessness, the federal government should implement policies to increase health coverage and reduce out-of-pocket health care expenses. Health systems are uniquely positioned to play an important role in addressing homelessness and improving the health of homeless populations, as people at risk for or experiencing homelessness often have needs that precipitate engagement with the health care sector. Health systems should leverage these opportunities by screening patients for housing insecurity and homelessness and making high-touch referrals to community resources.

To address the health needs of patients experiencing homelessness, health systems should invest in interventions with a strong track record of success, such as medical respite programs. Health systems and payers should

build on successful models of partnership with affordable housing organizations that provide high-quality permanent supportive housing. To succeed, permanent supportive housing interventions should have robust linkages with supportive services, such as substance use treatment, that are readily accessible to participants on a voluntary basis.⁴⁵ Health care payers involved in these initiatives should align payment rates with participants' level of health care need.

Finally, to reduce homelessness and its many adverse health impacts, changes are needed to increase the supply of affordable housing for very low income households. Health care providers and systems should leverage their political power to advance policies that scale durable, evidence-based solutions to reduce homelessness, including increased funding to expand housing choice vouchers^{43,59} and greater invest-

ment in the creation and preservation of affordable housing.

Conclusion

Evidence on the relationship between homelessness and poor health should inspire health systems, payers, and health care providers to take steps to limit the negative impacts of health crises on housing security and the negative impact of homelessness on health. By making adjustments in clinical practices; investing in successful cross-sector approaches; and advocating for scalable, evidence-based solutions to increase the supply of affordable housing for very low income populations, health care stakeholders can play an important role in ending homelessness. ■

A grant from the Benioff Homelessness and Housing Initiative at the University of California San Francisco supported this work. Cheyenne Garcia and Margot Kushel received support from the National Institutes of Health (Grant No. K24AG046372) for this work. The authors are solely responsible for the accuracy of the information presented in

this article. Any views or opinions expressed in this article are solely those of the authors, and no endorsement of these views or opinions by the authors' institutions is expressed or implied. This is an open access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY-NC-ND 4.0) license, which permits

others to distribute this work provided the original work is properly cited, not altered, and not used for commercial purposes. See <https://creativecommons.org/licenses/by-nc-nd/4.0/>. To access the authors' disclosures, click on the Details tab of the article online.

NOTES

- 1 de Sousa T, Andrichik A, Pretera E, Rush K, Tano C, Wheeler M. The 2023 Annual Homelessness Assessment Report (AHAR) to Congress, Part 1: Point-in-time estimates of homelessness [Internet]. Washington (DC): Department of Housing and Urban Development, Office of Community Planning and Development; 2023 Dec [cited 2024 Jan 3]. Available from: <https://www.huduser.gov/portal/sites/default/files/pdf/2023-AHAR-Part-1.pdf>
- 2 Department of Housing and Urban Development, Office of the Assistant Secretary for Community Planning and Development. Homeless emergency assistance and rapid transition to housing: defining "homeless." *Fed Regist*. 2011;76(233):75994-6019.
- 3 Richards J, Kuhn R. Unsheltered homelessness and health: a literature review. *AJPM Focus*. 2023; 2(1):100043.
- 4 Hahn JA, Kushel MB, Bangsberg DR, Riley E, Moss AR. Brief report: the aging of the homeless population: fourteen-year trends in San Francisco. *J Gen Intern Med*. 2006;21(7):775-8.
- 5 Kushel M, Moore T, Birkmeyer J, Dhatt Z, Duke M, Knight KR, et al. Toward a new understanding: the California Statewide Study of People Experiencing Homelessness [Inter-
- net]. San Francisco (CA): University of California San Francisco, Benioff Homelessness and Housing Initiative; 2023 Jun [cited 2023 Dec 18]. Available from: https://homelessness.ucsf.edu/sites/default/files/2023-06/CASPEH_Report_62023.pdf
- 6 Brown RT, Hemati K, Riley ED, Lee CT, Ponath C, Tieu L, et al. Geriatric conditions in a population-based sample of older homeless adults. *Gerontologist*. 2017;57(4):757-66.
- 7 Baggett TP, Hwang SW, O'Connell JJ, Porneala BC, Stringfellow EJ, Orav EJ, et al. Mortality among homeless adults in Boston: shifts in causes of death over a 15-year period. *JAMA Intern Med*. 2013;173(3):189-95.
- 8 Burt M, Aron LY, Lee E. Helping America's homeless: emergency shelter or affordable housing. 1st ed. Washington (DC): Urban Institute Press; 2001.
- 9 National Low Income Housing Coalition. The gap: a shortage of affordable homes [Internet]. Washington (DC): NLIHC; 2023 Mar [cited 2023 Dec 18]. Available for download from: <https://nlihc.org/gap>
- 10 Colburn G, Aldern CP. Homelessness is a housing problem: how structural factors explain U.S. patterns. 1st ed. Oakland (CA): University of California Press; 2022 Mar.
- 11 Poethig EC. One in four: America's housing assistance lottery [Internet]. Washington (DC): Urban Institute; 2014 May 28 [cited 2023 Dec 18]. Available from: <https://www.urban.org/urban-wire/one-four-america-housing-assistance-lottery>
- 12 Leifheit KM, Schwartz GL, Pollack CE, Linton SL. Building health equity through housing policies: critical reflections and future directions for research. *J Epidemiol Community Health*. 2022;76(8):759.
- 13 Treglia D, Johns EL, Schretzman M, Berman J, Culhane DP, Lee DC, et al. When crises converge: hospital visits before and after shelter use among homeless New Yorkers. *Health Aff (Millwood)*. 2019;38(9):1458-67.
- 14 Bennett N, Eggleston J, Mykyta L, Sullivan B. 19% of U.S. households could not afford to pay for medical care right away [Internet]. Washington (DC): Census Bureau; 2021 Apr 7 [cited 2023 Dec 18]. Available from: <https://www.census.gov/library/stories/2021/04/who-had-medical-debt-in-united-states.html>
- 15 Bielenberg JE, Futrell M, Stover B, Hagopian A. Presence of any medical debt associated with two additional years of homelessness in a Seattle sample. *Inquiry*. 2020;1(57):

- 0046958020923535.
- 16 Lebrun-Harris LA, Baggett TP, Jenkins DM, Sripipatana A, Sharma R, Hayashi AS, et al. Health status and health care experiences among homeless patients in federally supported health centers: findings from the 2009 patient survey. *Health Serv Res.* 2013;48(3):992–1017.
 - 17 Taylor SN, Munson D. Health care of people experiencing homelessness: part I. *NEJM Evidence.* 2023;2(8):EVIDra2300123.
 - 18 St. Martin BS, Spiegel AM, Sie L, Leonard SA, Seidman D, Girsan AI, et al. Homelessness in pregnancy: perinatal outcomes. *J Perinatol.* 2021;41(12):2742–8.
 - 19 Sutherland H, Ali MM, Rosenoff E. Health conditions among individuals with a history of homelessness [Internet]. Washington (DC): Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation; 2021 Feb 28 [cited 2023 Dec 18]. Available from: <https://aspe.hhs.gov/reports/health-conditions-among-individuals-history-homelessness-research-brief>
 - 20 Gutwinski S, Schreiter S, Deutscher K, Fazel S. The prevalence of mental disorders among homeless people in high-income countries: an updated systematic review and meta-regression analysis. *PLoS Med.* 2021;18(8):e1003750.
 - 21 Funk AM, Greene RN, Dill K, Valvassori P. The impact of homelessness on mortality of individuals living in the United States: a systematic review of the literature. *J Health Care Poor Underserved.* 2022;33(1):457–77.
 - 22 Los Angeles County Department of Public Health, Center for Health Impact Evaluation. Mortality rates and causes of death among people experiencing homelessness in Los Angeles County: 2014–2021 [Internet]. Los Angeles (CA): The Department; 2023 May [cited 2023 Dec 18]. Available from: http://publichealth.lacounty.gov/chie/reports/Homeless_Mortality_Report_2023.pdf
 - 23 Brown RT, Evans JL, Valle K, Guzman D, Chen YH, Kushel MB. Factors associated with mortality among homeless older adults in California: the HOPE HOME Study. *JAMA Intern Med.* 2022;182(10):1052–60.
 - 24 Liu CY, Chai SJ, Watt JP. Communicable disease among people experiencing homelessness in California. *Epidemiol Infect.* 2020;148:e85.
 - 25 Levesque J, Babando J, Loranger N, Johnson S, Pugh D. COVID-19 prevalence and infection control measures at homeless shelters and hostels in high-income countries: a scoping review. *Syst Rev.* 2022;11(1):223.
 - 26 Léger D, Beck F, Richard JB. Sleep loss in the homeless—an additional factor of precariousness: survey in a group of homeless people. *JAMA Intern Med.* 2017;177(2):278–9.
 - 27 Barocas JA, Nall SK, Axelrath S, Pladsen C, Boyer A, Kral AH, et al. Population-level health effects of involuntary displacement of people experiencing unsheltered homelessness who inject drugs in US cities. *JAMA.* 2023;329(17):1478–86.
 - 28 Chang JS, Riley PB, Aguirre RJ, Lin K, Corwin M, Nelson N, et al. Harms of encampment abatements on the health of unhoused people. *SSM Qual Res Health.* 2022;2(1):100064.
 - 29 Liu M, Hwang SW. Health care for homeless people. *Nat Rev Dis Primers.* 2021;7(1):5.
 - 30 Vohra N, Paudyal V, Price MJ. Homelessness and the use of emergency department as a source of healthcare: a systematic review. *Int J Emerg Med.* 2022;15(1):32.
 - 31 Wadhera RK, Choi E, Shen C, Yeh RW, Joynt Maddox KE. Trends, causes, and outcomes of hospitalizations for homeless individuals: a retrospective cohort study. *Med Care.* 2019;57(1):21–7.
 - 32 Khatana SAM, Wadhera RK, Choi E, Groeneveld PW, Culhane DP, Kushel M, et al. Association of homelessness with hospital readmissions—an analysis of three large states. *J Gen Intern Med.* 2020;35(9):2576–83.
 - 33 Health Care for the Homeless Clinicians' Network. General recommendations for the care of homeless patients: summary of recommended practice adaptations [Internet]. Nashville (TN): National Health Care for the Homeless Council; [cited 2023 Dec 18]. Available from: <https://nhchc.org/wp-content/uploads/2019/08/General-Recommendations-for-Homeless-Patients.pdf>
 - 34 Kertesz SG, deRussy AJ, Kim Y, Hoge AE, Austin EL, Gordon AJ, et al. Comparison of patient experience between primary care settings tailored for homeless clientele and mainstream care settings. *Med Care.* 2021;59(6):495–503.
 - 35 Herman DB, Conover S, Gorroochurn P, Hinterland K, Hoepner L, Susser ES. Randomized trial of critical time intervention to prevent homelessness after hospital discharge. *Psychiatr Serv.* 2011;62(7):713–9.
 - 36 Trochez RJ, Sharma S, Stollendorf DP, Mixon AS, Novak LL, Rajmane A, et al. Screening health-related social needs in hospitals: a systematic review of health care professional and patient perspectives. *Popul Health Manag.* 2023;26(3):157–67.
 - 37 Yan AF, Chen Z, Wang Y, Campbell JA, Xue QL, Williams MY, et al. Effectiveness of social needs screening and interventions in clinical settings on utilization, cost, and clinical outcomes: a systematic review. *Health Equity.* 2022;6(1):454–75.
 - 38 Schickedanz A, Sharp A, Hu YR, Shah NR, Adams JL, Francis D, Rogers A. Impact of social needs navigation on utilization among high utilizers in a large integrated health system: a quasi-experimental study. *J Gen Intern Med.* 2019;34(1):2382–9.
 - 39 Pantell MS, Hessler D, Long D, Alqassari M, Schudel C, Laves E, et al. Effects of in-person navigation to address family social needs on child health care utilization: a randomized clinical trial. *JAMA Netw Open.* 2020;3(6):e206445.
 - 40 National Institute for Medical Respite Care. Medical respite care directory [Internet]. Nashville (TN): NIMRC; [cited 2023 Dec 18]. Available from: <https://nimrc.org/medical-respite-directory/>
 - 41 National Institute for Medical Respite Care. Medicaid reimbursement principles for medical respite care [Internet]. Nashville (TN): NIMRC; 2022 Dec [cited 2023 Dec 18]. Available from: https://nhchc.org/wp-content/uploads/2022/12/MRC_Medicaid-reimbursement-principles-12-22.pdf
 - 42 Doran KM, Ragins KT, Gross CP, Zerger S. Medical respite programs for homeless patients: a systematic review. *J Health Care Poor Underserved.* 2013;24(2):499–524.
 - 43 Department of Housing and Urban Development. HUD-VASH vouchers: a rental assistance program for homeless veterans [Internet]. Washington (DC): HUD; [cited 2023 Dec 18]. Available from: https://www.hud.gov/program_offices/public_indian_housing/programs/hcv/vash
 - 44 Montgomery AE, Hill LL, Kane V, Culhane DP. Housing chronically homeless veterans: evaluating the efficacy of a Housing First approach to HUD-VASH. *J Community Psychol.* 2013;41(4):505–14.
 - 45 National Academies of Sciences, Engineering, and Medicine. Permanent supportive housing: evaluating the evidence for improving health outcomes among people experiencing chronic homelessness. Washington (DC): National Academies Press; 2018.
 - 46 Raven MC, Niedzwiecki MJ, Kushel M. A randomized trial of permanent supportive housing for chronically homeless persons with high use of publicly funded services. *Health Serv Res.* 2020;55(Suppl 2):797–806.
 - 47 Department of Housing and Urban Development, Office of Policy Development and Research. Housing First: a review of the evidence. Evidence Matters [serial on the Internet]. Spring/Summer 2023 [cited 2023 Dec 18]. Available from: <https://www.huduser.gov/portal/periodicals/em/spring-summer-23/>

- highlight2.html
- 48** United States Interagency Council on Homelessness. All in: the Federal Strategic Plan to Prevent and End Homelessness [Internet]. Washington (DC): USICH; 2022 Dec [cited 2023 Dec 18]. Available from: https://www.usich.gov/sites/default/files/document/All_In.pdf
- 49** Maqbool N, Viveiros J, Ault M. The impacts of affordable housing on health: a research summary [Internet]. Washington (DC): Center for Housing Policy; 2015 Apr [cited 2023 Dec 18]. Available from: <https://nhc.org/wp-content/uploads/2017/03/The-Impacts-of-Affordable-Housing-on-Health-A-Research-Summary.pdf>
- 50** Horwitz LI, Chang C, Arcilla HN, Knickman JR. Quantifying health systems' investment in social determinants of health, by sector, 2017–19. *Health Aff (Millwood)*. 2020; 39(2):192–8.
- 51** Central City Concern. Housing + health = success [Internet]. Portland (OR): Central City Concern; 2021 Mar 23 [cited 2023 Dec 18]. Available from: <https://centralcityconcern.org/blog/housing-health-success/>
- 52** NYC Health + Hospitals [Internet]. New York (NY): NYC Health + Hospitals; c 2023. Press release, As part of Housing for Health Initiative, NYC Health + Hospitals, NYC HPD, and Comunilife break ground on new \$41.5m building with 93 units of affordable and supportive housing; 2023 Apr 27 [cited 2023 Dec 18]. Available from: <https://www.nychealthandhospitals.org/press-release/as-part-of-housing-for-health-initiative-nyc-health-hospitals-nyc-hpd-and-comunilife-break-ground-on-new-41-5m-building-with-93-units-of-affordable-and-supportive-housing/>
- 53** Greater Minnesota Housing Fund. Property donations from healthcare organizations lead to housing and improved health outcomes [Internet]. Saint Paul (MN): GMHF; c 2015–2023 [cited 2023 Dec 18]. Available from: <https://gmhf.com/2022/05/property-donations-from-healthcare-organizations-lead-to-housing-and-improved-health-outcomes/>
- 54** State of California Health and Human Services Agency, Department of Health Care Services. California Advancing and Innovating Medi-Cal (CalAIM) proposal [Internet]. Sacramento (CA): DHCS; 2021 Jan [cited 2023 Dec 18]. Available from: <https://www.dhcs.ca.gov/provgovpart/Documents/CalAIM-Proposal-Updated-1-8-21.pdf>
- 55** Oregon Health Authority. 2022–2027 Medicaid 1115 Demonstration Waiver [Internet]. Salem (OR): OHA; [cited 2023 Dec 18]. Available from: <https://www.oregon.gov/oha/hsd/medicaid-policy/pages/waiver-renewal.aspx>
- 56** North Carolina Department of Health and Human Services. Healthy Opportunities Pilots [Internet]. Raleigh (NC): NCDHHS; [cited 2024 Jan 3]. Available from: <https://www.ncdhhs.gov/about/department-initiatives/healthy-opportunities/healthy-opportunities-pilots>
- 57** Arizona Health Care Cost Containment System. AHCCCS Housing and Health Opportunities (H2O) Demonstration [Internet]. Phoenix (AZ): AHCCCS; c 2023 [cited 2023 Dec 18]. Available from: <https://www.azahcccs.gov/Resources/Federal/HousingWaiverRequest.html>
- 58** Centers for Medicare and Medicaid Services. 1115 demonstration monitoring and evaluation [Internet]. Baltimore (MD): CMS; [cited 2023 Dec 18]. Available from: <https://www.medicare.gov/medicaid/section-1115-demonstrations/1115-demonstration-monitoring-evaluation/index.html>
- 59** Shinn M, Greer AL, Bainbridge J, Kwon J, Zuiderveen S. Efficient targeting of homelessness prevention services for families. *Am J Public Health*. 2013;103 Suppl 2(Suppl 2): S324–30.