UC Riverside

UCR Honors Capstones 2019-2020

Title

Homelessness, Health, and Health Care: A Scoping Review of the Literature

Permalink

https://escholarship.org/uc/item/8b64z944

Author

Lopez, Lilianna

Publication Date

2021-01-11

Data Availability

The data associated with this publication are within the manuscript.

eScholarship.org Powered by the California Digital Library
University of California

HOMELESSNESS, HEALTH, AND HEALTH CARE:
A SCOPING REVIEW OF THE LITERATURE

By

Lilianna Angel Lopez

A capstone project submitted for
Graduation with University Honors

June 1, 2020

University Honors
University of California, Riverside

APPROVED

_____
Dr. Andrew Subica
Department of Social Medicine, Population, and Public Health

_____
Dr. Richard Cardullo, Howard H Hays Jr. Chair, University Honors

Abstract

In a society surrounded by a surplus of medical advancements within hospitals and clinics, health care remains difficult for many to access. Throughout Riverside County, numerous obstacles prevent persons experiencing homelessness from obtaining the same health care services readily available and accessible to housed persons in the area—representing an important yet unstudied community health disparity. The absence in access to health care primarily affects members of minority groups within the Riverside and San Bernardino Counties and it becomes especially evident in populations among our underserved and low income areas around our nation. As homelessness is a growing problem affecting Riverside County, we still know little about who these individuals are, why they are forced to live on the streets or in shelters, and what health problems they are experiencing. Therefore, county officials are limited in being able to address and reduce the homelessness problem or provide adequate care to this neglected Riverside population. This study will aim as a scoping review of the literature on homelessness, health, and health care. The goal of this literature review is to understand the relationships and implications of homelessness on an individual's mental and physical health status, health care access and utilization, and duration of homelessness.

ACKNOWLEDGMENTS

I would like to start off by thanking my faculty mentor, Dr. Andrew Subica, for all the guidance and mentorship that he has given me throughout these past two years and through the duration of this project. Thank you Dr. Subica for also helping me realize that I can turn my passion into a research project and pushing me to never stop pursuing my goals. I would also like to thank all of my other mentors that have taken me under your wing during these past four years, a lot of who I am academically is because of you all.

A huge thank you to Rick Sanchez, Overflow, and the Riverside Community Church for agreeing to help me with my project. I know this project did not go as originally planned, but we all aimed for it and were ready to help the people in Riverside; I truly appreciate your willingness. I would also like to thank every person that spoke and opened up to me, inspiring the design of this project for what it was supposed to be.

Of course, my deepest gratitude to my friends that have stood alongside me during my college career making these past four years a little easier. Thank you to my family for your unconditional love and support that has taught me to keep my head up through the battles of college. Thank you to my cousin, Jalissa Strickland for being my motivation every day.

Thank you all endlessly.

TABLE OF CONTENTS

INTRODUCTION

Homelessness is an increasing problem in Riverside County caused by the soaring cost of local housing/rent, the opioid crisis, and other factors (Downey & Downey, 2016). As of 2018, Riverside County has reported a population of 1,685 individuals that are experiencing homelessness, living on the streets with no shelter, with 625 additional individuals living in shelters, totaling 2,310 people (Downey & Downey, 2016). These individuals and families often encounter hardships such as sickness and hunger yet report being unable to access needed health care, creating a major health disparity in Riverside.

The United States is a nation composed of 300 million people -- with an estimated 554,000 individuals experiencing homelessness on any given night (Taylor, 2019). Nationally, many obstacles and hardships involving access to health care affect minority populations as well as residents of most inner city and rural areas. In particular, individuals experiencing homelessness often encounter numerous obstacles to receiving health care services (Institute of Medicine). In one survey done nationally, it had been noted that 73% of the respondents reported at least one unmet health need. These unmet needs included the inability to obtain needed medical or surgical care (32%), prescription medications (36%), mental health care (21%), eyeglasses (41%), and dental care (41%) (Travis, 2010).

In this scoping literature review, we will review the state of the literature regarding homelessness and health. In the first section, we will discuss past research describing the relationship between homelessness and health. Then, in the second section, we will review the research describing the relationships between homelessness and health care. Finally, we will report on emerging research involving COVID-19 and persons experiencing homelessness.

Commented [MOU1]: For APA format, it is just the last name and then the date, for example, (Lopez, 2020)

Commented [II2R1]: Travis is the last name, should I write Travis P?

Commented [II3R1]:

Homelessness and Health

In the literature, individuals who experience homelessness often encounter difficulties meeting their basic subsistence needs, like housing and food, which results in poorer health care outcomes. For example, one study showed that individuals experiencing homelessness have higher rates of morbidity and mortality, lower access to health care, high utilization of acute health care services, and poorer self-rated health compared to the general population (Reid, Vittinghoff & Kushel, 2008). The population of persons experiencing homelessness in the U.S. have also demonstrated serious health problems including high rates of substance abuse, human immunodeficiency virus (HIV), tuberculosis (TB), and other serious medical illnesses (Hwang, Orav, O'Connell, 1997). With such horrible health problems, it is no surprise that these individuals often die prematurely of preventable causes (Hwang, Orav, O'Connell, 1997). In an older cohort study done in Boston, researchers explored the causes of death of persons experiencing homelessness. What they found was that homicide was the number one leading cause of death among men aged 18-24 years (Hwang, Orav, O'Connell JJ, 1997). In the age group of 25-44 years, the acquired immunodeficiency syndrome (AIDS) was the leading cause of death in both men and women; and heart disease and cancer were the major causes of death for individuals of 45-64 years old experiencing homelessness (Hwang, Orav, O'Connell, 1997).

Another area of health that appears to be negatively affected by homelessness are problems with sleep (Taylor, 2019). It is believed that persons experiencing homelessness may suffer from numerous sleep problems associated with being forced to sleep on hard surfaces such as concrete, pavement, or benches, and living in high-risk environments that may pose a danger to health during sleep. Accordingly, one study investigated identifying lifestyle factors that are associated with improving the quality and quantity of sleep to promote health. The researchers specifically

examined the associations of physical activity with subjective sleep problems and found that "Failure to meet/exceed physical activity guidelines was associated with higher likelihood of being a long sleeper, but a lower likelihood of having ≥30 days of insufficient rest/sleep" (Taylor, 2019). These findings conclude that physical activity in this population does not address various problems with poor sleep but may be effective in reducing difficulties with oversleeping in this population (Taylor, 2019).

In addition, adults experiencing homelessness have also been shown to hold high rates of functional vision impairment (37%), skin/leg/foot problems (36%), and TB skin test positivity (31%), although they did report similar rates of high blood pressure to the general population (14%) (Gelberg, 2000). Further, the author concluded that referral for physical health care can be successfully accomplished in persons experiencing homelessness and can also have successful efforts when helping them find permanent housing, alleviate their mental illness, and abstain from substance abuse (Gelberg, 2000).

Women Experiencing Homelessness

Another sad finding is that the numbers of women with children experiencing homelessness have been growing, with most mothers having fallen from family relationships or escaping from domestic abuse (Tischler, 2006). One study found that mothers experiencing homelessness had poorer mental health than low-income housed mothers; the mothers related their health to hostels' conditions and their prior experienced trauma (Tischler, 2006). Many of these women expressed that their best support system during this time was other mothers experiencing homelessness, and that they felt there was a lack of resources to meet their needs (Tischler, 2006). The results of this study explicitly showed that before the homelessness of most of these mothers,

they were financially poor and had poor mental health (Tischler, 2006). Their situation drove them into hostels with terrible conditions, only making life harder for them and their children.

On the topic of women, not many studies have investigated their mortality patterns and rates. One study reported the mortality rates and causes of death in women who were in homeless shelters in: Toronto, Montreal, Copenhagen, Boston, New York, Philadelphia and Brighton, UK. All of these women did not have children with them during the duration of the studies. What they found was that Toronto's mortality rates were 515/100,000 person-years in women aged 18–44 years and 438/100,000 person-years in those 45–64 years of age (Cheung & Hwang, 2004). In other words, the women 18–44 years of age experiencing homelessness had mortality rates 10 times higher than women in the general population of Toronto (Cheung & Hwang, 2004). Analyzing the studies from all 7 cities, the risk of death for women experiencing homelessness was greater than women in the general population by 4.6 to 31.2 in the 18-44-yearage group and 1.0 to 2.0 in the 45-64 age group (Cheung & Hwang, 2004). In 6 of the 7 cities, the risk of death was not significantly different between younger homeless women and men in the same age group (Cheung & Hwang, 2004). With similar mortality patterns, this shows that younger women experiencing homelessness are just as much at risk than younger males are. Therefore, in order to reduce the risk of death and mortality rates among homeless women, a greater focus is necessary on those women experiencing homelessness under 45 years of age.

Though disparities in the healthcare field between marginalized and general populations are fairly documented, there is less known about the disparities among women experiencing homelessness of different ethnic backgrounds. In 2010, a study was done in Los Angeles to demonstrate these potential differences in health disparities. White women held the highest rates "reporting alcohol and drug problems, physical and sexual assaults as adults, recent depression,

Commented [4]: recently added

and bodily pain" (Teruya, 2010). White women also had lower scores for psychological well-being and relatively high prevalence of hospitalization for mental illness, along with African Americans (Teruya, 2010). Generally, African American women held intermediate positions with respect to health and health care measures numerically, whereas Latinas reported better health for most measures, and the lowest proportions of utilizing health care services such as outpatient physician visits and preventive HIV and TB tests (Teruya, 2010). One in three Latinas experiencing homelessness reported their general health status to be fair or poor, in comparison to about two in five rates for African Americans and whites (Teruya, 2010). With respect to health care disparities, higher proportions of white women reported unmet needs for medical care (57%) than African Americans (22%) and Latinas (10%) (Teruya, 2010). Additionally, Latinas experiencing homelessness were less than half as likely to have been hospitalized in the last year as whites and African Americans (Teruya, 2010). Latinas and white women experiencing homelessness reported lower percentages (53%) of Pap smears within the last year, as compared to African Americans (71%) (Teruya, 2010). This data as a whole indicates that although women experiencing homelessness encounter different disparities than men do in the same situations, greater disparities are present for each woman and no two circumstances are the same.

Disparities also widen as individuals experiencing homelessness struggle to have their basic needs met in accessing food (Bowen, 2019). These same people are also susceptible to higher levels of sexual and physical violence and victimization, both causing and occurring during periods of homelessness (Bowen, 2019). For people experiencing homelessness, those cyclical risk factors that contribute to their health disparities are dubbed "cumulative disadvantage". With housing and health being so closely linked, this study indicates that achieving health equity for people

experiencing homelessness is closely related to strategies aimed at improving housing stability and other crucial social determinants of health (Bowen, 2019).

Homelessness and Health Care

Given the high degree of morbidity, mortality, and general poor health experienced by persons experiencing homelessness, it is essential that these individuals access and receive adequate health care services to reduce their incidence of disease and death. Unfortunately, the literature consistently shows that persons experiencing homelessness have high needs for health care services yet encounter numerous difficulties in accessing needed health care.

As the median age of a single adult experiencing homelessness is over 50 years, one study examined ED utilizations and housing situations within Oakland, CA over a 6-month period. Findings revealed that 46.3% of participants spent most of their time unsheltered; 25.1% moved around various establishments including shelters, hospitals, and jails; 16.3% primarily lived with family or friends; and 12.3% had just recently become homeless (Raven, 2017). Half of the participants reported at least one emergency department (ED) visit in the past 6 months; 6.6% of participants composed half of all visits; 71.8% reported a steady non-ED source of healthcare; and 7.3% of visits resulted in hospitalization (Raven, 2017). In addition, older adults experiencing homelessness with health insurance and coverage, a history of psychiatric hospitalization, and severe pain were all tied to higher ED utilization rates (Raven, 2017). It emerges that higher ED utilization rates were reported in those participants who reported being primarily unsheltered vs. participants who reported being housed for most of the prior 6 months.

For persons who become newly homeless, one study done in New York City showed that a year prior to experiencing homelessness, this population accessed health care services at high rates, indicating that these individuals had high rates of health needs and challenges prior to becoming homeless (Schanzer, 2007). However, it seems that this population's health improved through the services that NYC policymakers had brought to shelters (Schanzer, 2007).

Homelessness is a problem that extends beyond Riverside, and beyond the U.S. borders – it is a major problem throughout our world. In Canada, homelessness and health were studied and the researchers focused on what health problems were common in this population and how their health care system responded to their health needs. What they found was that disease severity can be extremely high due to factors such as poverty, delays in successfully getting care and therapy, and cognitive impairment (Hwang, 2001). Amongst these medical problems included: seizures, chronic diseases, arthritis, musculoskeletal disorders, skin and foot problems, and poor dental and oral health (Hwang, 2001). This study also found that adults who experience homelessness utilize health care more than the general population, where their usage is often in EDs – even staying longer than low income patients (Hwang, 2001).

One essential aspect that makes Canada so different from the U.S. is their universal healthcare, however, many of this population that comes in for treatment are not covered because their identification became stolen or lost (Hwang, 2001). Similarly, although Canada abides by a universal health insurance system, the country still struggles to meet the health care needs of those experiencing homelessness in cities such as Toronto (Hwang & Ueng, 2010). One study found that 17% of 1169 homeless persons in the study reported unmet health care needs. In particular, women with children experiencing homelessness were the most common of those that reported unmet health care needs (Hwang & Ueng, 2010). Young age, experiences of physical assault, and lower

Commented [5]: health OR health care

Commented [ll6R5]:

Commented [7]: services

Commented [MOU8]: You keep mixing health care studies with the section of homelessness and health. I will be moving things to help.

Commented [ll9R8]: I agree, I wasn't sure for this one. Honestly, we can take it out because I have enough pages of content. I don't see it being a deal breaker if it was cut

Commented [ll10R8]:

Commented [ll11R8]: I think I need the paragraph bc I need a little more space

Commented [12]: health

Commented [13]: health care

mental and physical health were the three major independent factors that were associated with the unmet needs of this population in a system of universal health insurance (Hwang & Ueng, 2010).

When examining the factors surrounding homelessness associated with higher health care utilization and rates of disability and illnesses, one early national study found high percentages of persons experiencing homelessness who reported one or more ambulatory care visits (62.8%), E.D. visits (32.2%), hospitalizations (23.3%), and inability to receive necessary medical care (24.6%) (Kushel, 2001). Once adjusted for sex, age, race/ethnicity, mental health problems, medical illnesses, and substance abuse, study results showed that "*having health insurance was associated with greater uses of ambulatory care, inpatient hospitalization, and lower reporting of barriers to needed care, and prescription medication compliance*" (Kushel, 2001). The findings of this first survey on persons experiencing homelessness done nationally suggest that this marginalized population reports high levels of barriers to needed care and high rates of acute hospital-based care use; while having insurance is associated with greater use of ambulatory care and fewer reported barriers (Kushel, 2001). In this study, possessing insurance was shown to improve the substantial morbidity of persons experiencing homelessness and decrease their reliance on acute hospital-based care (Kushel, 2001), but now, even decades later persons experiencing homelessness are still reporting barriers to care in the U.S.

Additionally, it is seen that access to primary care services among persons experiencing homelessness can be limited by numerous barriers. One longitudinal study identified multiple barriers in primary care access for persons experiencing homelessness. These results included a lack of insurance coverage and competing priorities. This study also identified key facilitators to primary care access that provided evidence for the need for health policy initiatives, patient-

centered care, and targeted interventions can facilitate improved primary care access for persons experiencing homelessness (White & Newman, 2014).

There has been limited research investigating admissions for hospital visits, specifically of ambulatory care sensitive conditions (ACSCs). One study explored preventable hospital admissions among individuals experiencing homelessness in California. The patients experiencing homelessness admitted for ACSC were mostly male, non-Hispanic white, and averaged 49.9 years of age (White, Ellis, & Simpson, 2014). Using the predictive model, an increased chance of ACSC admissions among patients experiencing homelessness was associated with higher rates if the patient was African American, admitted to emergency departments (ED) or transferred from another health facility (White, Ellis, & Simpson, 2014). A decreased chance for an ACSC admission among patients experiencing homelessness was observed if the patient had Medicare (White, Ellis, & Simpson, 2014). Essentially, ACSC admissions were associated with race and coverage. Accordingly, what can potentially be done next to alleviate the burden of hospitalizations is establishing new programs that may serve as safety nets for patients experiencing homelessness.

Homelessness and Insurance

It is also noted that young adults experiencing homelessness are a vulnerable population with substantial health care needs. In some states, including California, young adults experiencing homelessness can be considered eligible for Medicaid under the Affordable Care Act (ACA) (Winetrobe, 2016). The ACA Medicaid expansion was planned to provide a foundation to increase access to health care for vulnerable populations, including the millions who experience homelessness every year in the U.S (Fryling, 2015). One study done in Venice, CA explores the health insurance coverage and health care utilization of homeless young adults prior to the

Commented [MOU14]: See how this one was adjusted to suit APA in-text citation format

Commented [15]: recently added

Commented [MOU16]: Great summary

Commented [17]: recently added

Medicaid expansion in this area. Some limitations for this study though were that the majority participants of this study were white, heterosexual males, limiting the heterogeneity of responses. However, 70% of these participants reported having no health insurance the prior year, 39% reported their last health care visit was to an ER, 31% reported unmet health care needs, and financial cost was reported to be the main barrier to receiving proper care (Winetrobe, 2016). Additional data found that young adults experiencing homelessness that reported having health insurance were almost 11 times more likely to report healthcare utilization of the prior year (Winetrobe, 2016). This data represents that health insurance coverage is a main factor associated with health care utilization, at least amongst young adults experiencing homelessness.

With regard to insurance and the ACA, a recent study sought to characterize the knowledge about ACA among persons experiencing homelessness. Additionally, they sought to see how these persons identify barriers to their ACA enrollment and access to ways of communication that can be used to facilitate ACA enrollment. They found that participants experiencing homelessness were 16% more likely to have never heard of the ACA than the general population (Fryling, 2015); they simply were not "aware if they qualify for Medicaid". Those that were uninsured and experiencing homelessness reported "being unaware of Medicaid qualifications" to be the most common (70%) and most significant (30%) barrier to their enrollment of ACA (Fryling, 2015). Additionally, those unsure if they qualified for Medicaid, reported an income < 138% of the federal poverty level (91%), which would qualify them for enrollment (Fryling, 2015). Thus, these citizens of San Francisco experiencing homelessness have depicted poorer knowledge and understanding of the ACA and its qualification criteria than their housed counterparts (Fryling, 2015). Arguably, if this population's knowledge about ACA increases, enrollments may also increase (Fryling, 2015). All of this data effectively demonstrates that a marginalized community is the least aware

group of their access to affordable insurance coverage, even though their circumstances show that they are the most qualified for resources and programs.

As a possible solution to the lack of ACA knowledge and insurance coverage for this population, Los Angeles County has enacted programs to provide intensive case management services (ICMS) and housing. ICMS actually includes a basic needs assessment and referrals to primary care, treatments for mental health and substance use, housing and other needed services (Ratiu & Wohl, 2019). One recent investigation was to explore if ICMS enrollment had any associations with hospitalizations, specifically a reduction in inpatient (IP) or ED visits. Over the 6-month period enrolled in ICMS, they found that ED visits experienced a 19% decrease, but not a significant change for IP hospitalizations (Ratiu & Wohl, 2019). Interestingly, the decreased trend in ED visits persisted when adjusted for race and gender individually (Ratiu & Wohl, 2019). It seems as though Los Angeles County had made a good choice with ICMS, and such services can be utilized in various counties, like Riverside, where homelessness is a problem.

Commented [18]: recently added

Homelessness and Health Care Treatment

Contrary to the profound data showing that people experiencing homelessness access acute health care services at high rates, the attitudes they encounter from staff and providers is not well known. In a universal health care system – where regardless of an individual's ability to pay, all are allowed quality medical services – one study investigated the encounters of "welcoming" and "unwelcoming" attitudes among persons experiencing homelessness. What the researchers found was that most individuals discerned their encounters to be more unwelcomed, based on their experiences of discrimination (Wen, Hudak & Hwang, 2007). The most common perception of basis for discriminatory treatment was "homelessness and low social class" (Wen, Hudak & Hwang, 2007). Participants' descriptions of unwelcoming health care encounters included that

Commented [19]: recently added

they felt “dehumanized, not listened to, or disempowered”; while welcoming experiences were expressed in ways of feeling “valued as a person, truly listened to, or empowered” (Wen, Hudak & Hwang, 2007). The harsh emotional responses of unwelcoming experiences were shown to have a negative influence on their desire to seek health care in the future (Wen, Hudak, & Hwang, 2007). One potential way to foster welcoming and unwelcoming interactions is Martin Buber’s “I-It” and “I-You” concepts (Wen, Hudak & Hwang, 2007) and this can effectively help eliminate the negative feelings individuals with homelessness experience in health care settings.

On a greater and global level, homelessness is identified as a social problem, affecting all facets of our contemporary society (Riley, 2003). The “concept of homelessness in terms of its historical context and the dominance of the pervasive 'victim blaming' ideologies, which, together with the worldwide economic changes that have contributed to a fiscal crisis of the state, and the resultant policies and circumstances, have led to an increase in the number of 'new homeless' people”. Through their work, it can be seen that “A start can be made by building on some of the positive work that is already being done in primary care, but in reality general practitioners (GPs) will be 'swimming against the tide'” ” in combating homelessness due to the many barriers confronting both providers and patients. For instance, these barriers include unavailable or fragmented health care services, misconceptions, prejudices and frustrations on the part of healthcare professionals who care for persons experiencing homeless (O'Toole, 2002).

Commented [20]: under policies?

Discrimination and disparity are two feelings well documented amongst transgender individuals, especially those experiencing homelessness (Presley, 2017) and this community is even more neglected and marginalized than other groups of individuals experiencing homelessness. Utilizing interviews, one recent study explored potential barriers encountered in the health care system of Portland, Oregon. The results elucidate the emerging barriers to include lack

Commented [21]: recentyl added

of primary and post-operative care, failure for care teams to communicate adequately, wrongful information regarding Medicaid benefits, and referrals to non-affirming health care environments (Presley, 2017). As always, if competency is gained when providing health care for transgender patients experiencing homelessness, the focus can advance from unwelcoming medical practices to a more outward support within the larger health care system.

Homelessness and COVID-19

Commented [22]: needs to be read

COVID-19 is the gravest public health crisis of the past century. Thus, we sought to conclude our literature review by examining how COVID-19 is impacting persons experiencing homelessness. In one recent study done in the greater areas of Los Angeles County and New York City, individuals experiencing homelessness and infected by COVID-19 were 2 times as likely to be hospitalized, 2-4 times more likely to need critical care, and 2-3 times more likely to die than the general population in the same areas (Culhane, Treglia, Steif, Kuhn & Byrne, 2020). This recent analysis suggests that 400,000 new hospital beds are necessary to satisfy the emergent accommodation and social distancing needs of single adults experiencing homelessness on any given day. Additionally, the total estimation of cost needed to meet the U.S.'s emergency shelters and quarantine units is approximately $11.5 billion for one year (Culhane, Treglia, Steif, Kuhn & Byrne, 2020). Additional studies are also exploring alternatives for emergency accommodation, which include congregate shelters, in place sheltering, private accommodations, and emergency coordination of care.

One other recent study addressed homelessness and the healthcare sector's limitations during these crucial past months. The authors discussed how our nation's hospitals have served as

a “stopgap social and medical resources” for people experiencing homelessness, however COVID-19 quickly limited their ability to fill these roles. Once hospitalized, patients experiencing homelessness sometimes spent longer time in the hospital because there was no appropriate discharge location for them (Doran, Cha, Cho, DiPietro, Gelberg, & Kushel, 2020). While major cities are facing an alarming shortage of hospital beds, COVID-19 has deemed the reliance on hospitals to fill “other political systems’ gaps” for patients experiencing homeless as a critical issue (Doran, Cha, Cho, DiPietro, Gelberg, & Kushel, 2020). This study concludes that the health care system cannot solve the nation’s housing and homelessness crisis alone, and the same is true concerning COVID-19. Planning an action to slow the spread of COVID-19 among people experiencing homelessness are ultimately multi-sectoral and multi-level governmental responsibilities; however, health care is an essential part to implement COVID19 plans for this population that mutually touches the health care and social service systems (Doran, Cha, Cho, DiPietro, Gelberg, & Kushel, 2020).

Conclusion

Overall, the population of persons experiencing homelessness in the U.S. represents a neglected and extremely marginalized group that continues to have unmet needs and barriers to accessing health care every day. Homelessness is known to occur when people lack a stable, safe, and appropriate environment to live. Individuals are considered homeless if they are: living in overcrowded spaces, tents or other temporary enclosures, and motels due to poor economic resources (Health & Homelessness. 2010). Given these individuals’ pressing needs, my capstone project has analyzed 25 studies that have explored various health disparities across the U.S and Canada. The next goal is to explore the health status, health problems, and barriers to care of

Commented [23]: put in limitations

Commented [MOU24R23]: No need, this is more than long enough at this point.

persons experiencing homelessness in Riverside by collecting novel data from affected family, children, and service providers. This new independent study will represent an important first step in understanding and reducing their local health needs and problems accessing care and provide additional insights that may help to shape and improve needed delivery of services to this disadvantaged and health poor population.

REFERENCES

Bowen, E., Savino, R., & Irish, A. (2019). Homelessness and Health Disparities: A Health Equity Lens. *Homelessness Prevention and Intervention in Social Work*, 57–83. doi: 10.1007/978-3-030-03727-7_3

Cheung, A. M., & Hwang, S. W. (2004). Risk of death among homeless women: a cohort study and review of the literature. *CMAJ: Canadian Medical Association journal*, 170(8), 1243–1247. https://doi.org/10.1503/cmaj.1031167

Culhane, D., Treglia, D., Steif, K., Kuhn, R., & Byrne, T. (2020). Estimated emergency and observational/quarantine capacity need for the US homeless population related to COVID-19 exposure by county; projected hospitalizations, intensive care units and mortality.

Doran, K. M., Cha, S., Cho, R., DiPietro, B., Gelberg, L., & Kushel, M. (2020). Housing as Health Care During and After the COVID-19 Crisis.

Downey D., & Downey D. (2018) More homelessness counted on Riverside County's streets for the second year in a row. Retrieved March 1, 2018 from https://www.pe.com/2018/04/18/more-homeless-counted-on-riverside-countys-streets-for-second-year-in-a-row/

Fryling, L. R., Mazanec, P., & Rodriguez, R. M. (2015). Barriers to homeless persons acquiring health insurance through the Affordable Care Act. *The Journal of emergency medicine*, 49(5), 755-762. https://doi.org/10.1016/j.jemermed.2015.06.005

Gelberg, L., Andersen, R. M., & Leake, B. D. (2000). The Behavioral Model for Vulnerable Populations: application to medical care use and outcomes for homeless people. *Health services research*, *34*(6), 1273–1302.

Health & Homelessness. (2010). *PsycEXTRA Dataset*. doi: 10.1037/e500472014-001

Hwang, S. W. (2001). Homelessness and health. Links *Canadian Medical Association Journal*, 164(2), 229–233. Retrieved from https://www.cmaj.ca/content/164/2/229.short

Hwang SW, Orav EJ, O'Connell JJ, et al. Causes of Death in Homeless Adults in Boston. *Ann Intern Med* 1997; 126:625–628. doi.org/10.7326/0003-4819-126-8-199704150-00007

Hwang, S. W., Ueng, J. J., Chiu, S., Kiss, A., Tolomiczenko, G., Cowan, L., Levinson, W., & Redelmeier, D. A. (2010). Universal health insurance and health care access for homeless persons. *American journal of public health*, 100(8), 1454–1461. doi.org/10.2105/AJPH.2009.182022

Institute of Medicine (US) Committee on Health Care for Homeless People. Homelessness, Health, and Human Needs. Washington (DC): National Academies Press (US); 1988. 4, Access to Health Care Services for Homeless People. Available from: https://www.ncbi.nlm.nih.gov/books/NBK218231/

Kushel MB, Vittinghoff E, Haas JS. Factors associated with the health care utilization of homeless people. *JAMA* 2001;285(2):200–206

O'Toole, T. P., Gibbon, J. L., Seltzer, D., Hanusa, B. H., & Fine, M. J. (2002). Urban homelessness and poverty during economic prosperity and welfare reform: changes in self-reported comorbidities, insurance, and sources for usual care, 1995-1997. *Journal of urban health:*

bulletin of the New York Academy of Medicine, *79*(2), 200–210. doi:10.1093/jurban/79.2.200

Presley, M. (2017). Barriers and Facilitators to Care for Transgender Patients Experiencing Low Socioeconomic Status and Homelessness. *Oregon Health & Science University OHSU Digital Commons*

Ratiu, A., Wohl, A., Zheng, G., Lawrence, W., Huang, Y. C., Vassar, S., & Brown, A. F. (2019). Changes in Emergency Department and Hospital Visits for Persons Experiencing Homelessness in Los Angeles County (LAC) Following Enrollment in Intensive Case Management Services (ICMS). *APHA's 2019 Annual Meeting and Expo (Nov. 2-Nov. 6)*. American Public Health Association.

Raven, M. C., Tieu, L., Lee, C. T., Ponath, C., Guzman, D., & Kushel, M. (2017). Emergency department use in a cohort of older homeless adults: results from the HOPE HOME study. *Academic emergency medicine*, 24(1), 63-74. https://doi.org/10.1111/acem.13070

Reid, K. W. & Vittinghoff, E. & Kushel, M. B. (2008). Association between the Level of Housing Instability, Economic Standing and Health Care Access: A Meta-Regression. Journal of Health Care for the Poor and Underserved 19(4), 1212-1228. Johns Hopkins University Press. Retrieved May 2, 2019, from Project MUSE database.

Riley, A. J., Harding, G., Underwood, M. R., & Carter, Y. H. (2003). Homelessness: a problem for primary care? *The British journal of general practice: the journal of the Royal College of General Practitioners*, *53*(491), 473–479.

Schanzer B., Dominguez B., Shrout P. E., Caton C. LM., (2007) "Homelessness, Health Status, and Health Care Use", *American Journal of Public Health* 97, no. 3: pp. 464-469. doi:10.2105/AJPH.2005.076190

Taylor A, Murillo R, Businelle MS, Chen T-A, Kendzor DE, McNeill LH, et al. (2019) Physical activity and sleep problems in homeless adults. *PLoS ONE* 14(7): e0218870. https://doi.org/10.1371/journal.pone.0218870

Teruya, C., Longshore, D., Andersen, R. M., Arangua, L., Nyamathi, A., Leake, B., & Gelberg, L. (2010). Health and health care disparities among homeless women. *Women & health*, 50(8), 719-736. https://doi.org/10.1080/03630242.2010.532754

Tischler, V., Rademeyer, A., & Vostanis, P. (2006). Mothers experiencing homelessness: mental health, support and social care needs. *Health & Social Care in the Community*, 15(3), 246–253. doi: 10.1111/j.1365-2524.2006.00678.x

Travis P. Baggett, James J. O'Connell, Daniel E. Singer, and Nancy A. Rigotti, 2010. The Unmet Health Care Needs of Homeless Adults: A National Study American Journal of Public Health 100, 1326_1333, doi.org/10.2105/AJPH.2009.180109

Wen, C. K., Hudak, P. L., & Hwang, S. W. (2007). Homeless people's perceptions of welcomeness and unwelcomeness in healthcare encounters. *Journal of general internal medicine*, 22(7), 1011–1017. doi.org/10.1007/s11606-007-0183-7

White, B. M., Ellis Jr, C., & Simpson, K. N. (2014). Preventable hospital admissions among the homeless in California: A retrospective analysis of care for ambulatory care sensitive conditions. *BMC health services research*, 14(1), 511. https://doi.org/10.1186/s12913-014-0511-7

White, B. M., & Newman, S. D. (2014). Access to Primary Care Services Among the Homeless. *Journal of Primary Care & Community Health*,*6*(2), 77-87. doi:10.1177/2150131914556122

Winetrobe, H., Rice, E., Rhoades, H., & Milburn, N. (2016). Health insurance coverage and healthcare utilization among homeless young adults in Venice, CA. *Journal of Public Health*, 38(1), 147-155.