Katie Daly

Poverty and Human Capability Studies Capstone

Dr. Marcos Perez

Homelessness and Emergency Medicine: How to Address Health Inequities and Provide Effective, Dignified Care for Patients Experiencing Homelessness

I. Introduction

The portrait of emergency department (ED) use among people experiencing homelessness is a bleak one, worsened by biases, resource unavailability and other barriers to adequate healthcare which vulnerable populations experience. We should care about patients who experience homelessness because the ED is a valuable intervention point to improve their overall health, and many serious health issues are largely caused by homelessness. Dr. Kelly Doran highlights this critical intersection, saying that "housing is a critical social determinant of health … homelessness leads to worsening of medical conditions, increased risks of injury and, ultimately, early death."[1] This increased risk of illness and early death is preventable, and emergency departments stand at the forefront of this injustice.

My experience in emergency departments and knowledge of the complications of homelessness lead me to ask several questions. Based on worsened health outcomes for patients who experience homelessness and the presence of emergency departments at an inflection point for their healthcare, what can emergency departments, physicians, and our United States society do to better care for our most vulnerable members? What have people tried? Is there a solution to this health crisis, and how can emergency departments advantageously use their proximity to this population to help?

II. Background

Several studies and statistics about homelessness and ED use provide context for the national significance of this issue. Those with barriers to healthcare, including those

[1] Kelly Doran, "Hospitals Must Address Housing in Treating the Homeless," Modern Healthcare, November 7, 2015, https://www.modernhealthcare.com/article/20151107/MAGAZINE/311079979/hospitals-must-address-housing-in-treating-the-homeless.

experiencing homelessness, are significantly more likely to utilize emergency rooms as they experience barriers such as marginal housing, potential for eviction, difficulty paying expenses, and food insecurity.[2] Living environments, including a lack of food, shelter, and safety correlate with high rates of ED use in homeless populations.[3]

Many studies describe the specific health vulnerabilities of people who experience homelessness. Those who experience homelessness endure "significantly higher rates of infectious disease" (such as tuberculosis, pneumonia, hepatitis B, HIV), "ethanol and substance use," and "psychiatric illness," all common health issues that push the homeless into EDs at a rate four times higher than other low-income groups.[4] People who experience homelessness also suffer from a disproportionate rate and severity of substance and alcohol use.[5] Further, this vulnerable population experiences a substantially higher mortality rate. Heart disease is a leading cause of death in older homeless populations, and an issue that disproportionately impacts younger populations in the community as well.[6] Additionally, they are especially vulnerable to various types of injuries, whether violent or accidental in nature, and these comprise another leading cause of death for the homeless community.[7] Studies emphasize the

---

[2] Kelly M. Doran et al., "Homelessness and Other Social Determinants of Health among Emergency Department Patients," *Journal of Social Distress and Homelessness* 25, no. 2 (July 2, 2016): 71–77, https://doi.org/10.1080/10530789.2016.1237699.

[3] Robert M. Rodriguez et al., "Food, Shelter and Safety Needs Motivating Homeless Persons' Visits to an Urban Emergency Department," *Annals of Emergency Medicine* 53, no. 5 (May 1, 2009): 598-602.e1, https://doi.org/10.1016/j.annemergmed.2008.07.046.

[4] Jason D'Amore et al., "The Epidemiology of the Homeless Population and Its Impact on an Urban Emergency Department," *Academic Emergency Medicine* 8, no. 11 (2001): 1051–55, https://doi.org/10.1111/j.1553-2712.2001.tb01114.x.

[5] Kelly M. Doran et al., "Substance Use and Homelessness among Emergency Department Patients," *Drug and Alcohol Dependence* 188 (July 1, 2018): 328–33, https://doi.org/10.1016/j.drugalcdep.2018.04.021.

[6] McCary Jessie M. and O'Connell James J., "Health, Housing, and the Heart," *Circulation* 111, no. 20 (May 24, 2005): 2555–56, https://doi.org/10.1161/CIRCULATIONAHA.105.540856.

[7] Jonathan R. Hibbs et al., "Mortality in a Cohort of Homeless Adults in Philadelphia," *New England Journal of Medicine* 331, no. 5 (August 4, 1994): 304–9, https://doi.org/10.1056/NEJM199408043310506.

theoretic preventability of many health vulnerabilities that lead to death in homeless populations, reinforcing the need to improve care.

The frequent use of EDs among people who lack housing is further linked to the mere inaccessibility of care outside EDs, as the housing-insecure usually lack health insurance and transportation to attend primary care doctor's appointments.[8] Similarly, patients experiencing homelessness often lack the ability to comply with prescribed medications and treatments, so these patients show worsened health outcomes and high readmission rates after treatment in EDs.[9] In the scope of the ED, homeless patients are more likely to arrive by ambulance and less likely to be insured than others.[10] Emergency departments provide free care and are accessible via ambulance, so they become the easiest option for homeless individuals with both emergent and non-emergent health concerns. However, as EDs are intended for emergency care, the stand-in primary care they provide to vulnerable, non-emergent patients is insufficient at best. Specialized ED care is complex and costly, and utilization of ED resources for primary care represents a huge inefficiency. As patients experiencing homelessness utilize the ED at higher rates, they account for a higher percentage of hospital spending. In one urban study, on average, patients presenting to the ED with homelessness had annual

[8] La Fleur F. Small, "Determinants of Physician Utilization, Emergency Room Use, and Hospitalizations among Populations with Multiple Health Vulnerabilities," *Health* 15, no. 5 (2011): 491–516.
[9] D'Amore et al., "The Epidemiology of the Homeless Population and Its Impact on an Urban Emergency Department."
[10] Gary Oates, Allison Tadros, and Stephen M. Davis, "A Comparison of National Emergency Department Use by Homeless versus Non-Homeless People in the United States," *Journal of Health Care for the Poor and Underserved* 20, no. 3 (2009): 840–45, https://doi.org/10.1353/hpu.0.0192.

healthcare expenditures that were 3.8 times greater than the average person on Medicaid in Massachusetts.[11]

Though some patients who experience homelessness use EDs solely for necessary but non-medical resources, they represent the minority. Most patients who experience chronic homelessness utilize EDs at higher rates due to the referenced high-acuity illnesses that cause them to be disproportionately sicker.[12] In contrast to harmful stereotypes about ED misuse, a study in San Francisco found that most homeless patients presented to the ED with health concerns outside of food, shelter, and safety, and that only 29% of patients listed those as "one of the main reasons" for their visit.[13]

Inefficiencies and poor health outcomes in emergency department care for people experiencing homelessness remain a significant societal issue, impacting physicians, hospital systems, and most importantly, patients. On a socio-personal level, they may experience stigma from healthcare workers, which impacts their quality of care. Although resources vary, many EDs lack the appropriate social services staff to provide adequate discharge planning at all hours of the day and night. As these vulnerable patients do not have the resources to heal properly and maintain their health outside of the hospital, they return to EDs at high rates, and the cycle begins again. This pattern of human suffering is disheartening, as is the lack of research on evidence-based solutions to improving care.

III. Methods

---

[11] Monica Bharel et al., "Health Care Utilization Patterns of Homeless Individuals in Boston: Preparing for Medicaid Expansion Under the Affordable Care Act," *American Journal of Public Health* 103, no. S2 (October 22, 2013): S311–17, https://doi.org/10.2105/AJPH.2013.301421.

[12] Kelly M. Doran, "Homelessness and ED Use: Myths and Facts," *The American Journal of Emergency Medicine* 34, no. 2 (February 1, 2016): 307, https://doi.org/10.1016/j.ajem.2015.10.001.

[13] Rodriguez et al., "Food, Shelter and Safety Needs Motivating Homeless Persons' Visits to an Urban Emergency Department."

To answer my research question, I analyze existing literature on homelessness and emergency medicine from 1990-present. I use the 2018 paper, *Homelessness and Emergency Medicine: A Review of the Literature*, by Salhi et al as a cornerstone, analyzing the strengths and weaknesses of their review. To add to the current literature on emergency departments and homelessness, I compile an organized list of recommendations to improve care for patients experiencing homelessness. This list accommodates for inadequacies in previous literature as I include information from articles published after 2018 that Salhi et al. doesn't review, information found from studies outside the United States, and case studies on community-based healthcare initiatives beyond the scope of the ED.

To find articles, I use PubMed, JSTOR, and Google Scholar with keywords "emergency medicine," "emergency department," "homelessness," and "community health." I also search the bibliographies of found papers for more sources and receive reading recommendations from peers and advisors. Most of these articles contain qualitative data, and I especially focus on their results and conclusions sections to see their recommendations. I organize the proposed solutions into three categories: provider-level, hospital-level, and community-based, and evaluate them.

I also bring some personal experience which informs my review and recommendations. As a prospective medical student, I recently shadowed night shifts over two months in three different emergency departments in my hometown of Savannah, Georgia. Nearly every night, people experiencing homelessness presented to the emergency department. Some people complained of serious health concerns, and all possessed serious social concerns. While patients experiencing homelessness always received medical treatment regardless of their ability to pay, social support was often

unavailable to them. I spoke with two or three patients who invented false reasons for ED admission to achieve basic unmet needs: sleeping in warm hospital beds, bathing, or receiving free meals. These patients were inevitably discharged upon physician realization of their lack of need for urgent medical attention. The general consensus among nurses and physicians was that non-urgent patients experiencing homelessness took valuable resources from sicker patients, and that medical care was the only thing they had to offer. However, these experiences were exceptional and not standardized across all patients coping with homelessness. When patients experiencing homelessness arrived to EDs with more obvious medical concerns, their issues were severe. These patients were often labeled "frequent fliers," both visiting EDs and returning at high rates. Their medical conditions were exacerbated by poor living conditions and lack of access to outside care, including prescribed medications and treatments. Though these patients continued to return to the ED at high rates, they were discharged after each treatment with no additional resources to aid in their care outside of the hospital. My observations reveal a critical necessity to address and care for social determinants of health for patients who experience homelessness, something I didn't witness enough of in the ED setting.

Based on my background in Poverty Studies, my ED experiences disheartened me. I interned as a social worker in a hospital system in West Virginia for a summer and know that communities can provide valuable social resources to patients experiencing homelessness. Access to shelters, food banks, free primary care clinics, bus passes, job searching, and more can be found through social workers with expert knowledge of communities. Social workers provide a vital link for patients experiencing homelessness, but are largely absent in some emergency departments, especially during night shifts.

The fast pace of the ED prevents in-depth questioning and identification of underrepresented homeless patients, further limiting opportunity for adequate social care. These ideas and experiences all inform my review.

Some limitations of my literature review include a lack of research on emergency departments and improving outcomes for patients experiencing homelessness. However, a literature review is the best method to answer my question because I lack the resources to perform a study to find evidence-based solutions of my own in any hospital setting during the COVID-19 pandemic. Additionally, this lack of available literature warrants a commonly proposed solution of performing better, more detailed research on homeless patients in the ED.

Potential biases may arise in my literature review and analysis as Emergency Medicine physicians author most papers relating homelessness and emergency department use. As a student wishing to pursue medicine, and based on my experiences shadowing in emergency departments, I may have a slightly different bias. Further, literature on homelessness lacks the critical perspective of those who experience homelessness, who could add their own invaluable experiences, opinions, and desires.

IV. Literature Review

Though poor ED outcomes and inefficient care for those experiencing homelessness remain a growing issue, the problems lack in substantial research and proposed solutions. In the 2018 paper, *Homelessness and Emergency Medicine: A Review of the Literature*, Salhi et al. provide an extensive review of existing literature on

homelessness and emergency departments.[14] This review finds only 28 studies from 1990-2016 that examine homelessness and emergency departments. They divide the studies into four categories: "1) prevalence and sociodemographic characteristics of homeless ED visits, 2) ED utilization by homeless adults, 3) clinical characteristics of homeless ED visits, and 4) medical education and evidence-based management of homeless ED patients."[15] Notably, only two studies were found in the fourth category of proposed evidence-based management solutions.[16,17] Overall, the review's significant conclusions include that homelessness may be underrecognized in emergency departments due to insufficient database categories, and that much more research is needed in this area, especially in regards to unrepresented, vulnerable categories of patients, such as single females with families and LGBTQ+ youth experiencing homelessness.

The paper's strengths include the acknowledgement of stereotypes about patients experiencing homelessness alongside useful data that contradicts those stereotypes. For example, the paper elucidates the diverse composition of the homeless population, comprised of 40% single women, 36% families, and 6.5% single adolescents.[18] Another strength is the emphasis on the complexity of housing status as a contributing factor to

---

[14] Bisan A. Salhi et al., "Homelessness and Emergency Medicine: A Review of the Literature," *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine* 25, no. 5 (May 2018): 577–93, https://doi.org/10.1111/acem.13358.
[15] Salhi et al.
[16] Kelly M. Doran et al., "Navigating the Boundaries of Emergency Department Care: Addressing the Medical and Social Needs of Patients Who Are Homeless," *American Journal of Public Health* 103 Suppl 2 (December 2013): S355-360, https://doi.org/10.2105/AJPH.2013.301540.
[17] Kelly M. Doran et al., "'Rewarding and Challenging at the Same Time': Emergency Medicine Residents' Experiences Caring for Patients Who Are Homeless," *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine* 21, no. 6 (June 2014): 673–79, https://doi.org/10.1111/acem.12388.
[18] Salhi et al., "Homelessness and Emergency Medicine."

the difficulty of generalization of homeless populations. The paper clarifies the range from chronically homeless to marginally housed as a factor that complicates research.

As previously mentioned, some areas of the paper lack significant information such as the successes of community outreach organizations in treating homeless populations (non-EDs) and information about homelessness and ED use in countries outside of the United States.

Since the publication of Salhi et al. in 2018, another publication, *Homelessness and the Practice of Emergency Medicine: Challenges, Gaps in Care, and Moral Obligations*, provides an updated perspective in 2019. In this article, Dr. Maria Raven agrees with Salhi et al. and also cites documentation of housing status in the ED as a key cause of poor outcomes for patients experiencing homelessness, as well as proposing a multitude of solutions at the systemic and provider levels.

V. Analysis

Salhi et al. "found no evidence-based guidelines or medical education curriculum to aid in the health care providers' recognition or management of homeless patients in the ED," thus, a need for an expanded review including patient management strategy is warranted.[19] To expand upon existing literature and provide more effective recommendations, I investigate studies from other countries, community-based strategies, and the informed opinions of Emergency Medicine providers.

a) Studies from other countries

Salhi et al. neglected studies that investigated homelessness and ED use in countries other than the US, as they "may not generalize to the U.S. population, as other nations

[19] Salhi et al.

may have differing features of their health care resources and/or social welfare systems."[20] Despite the drawbacks of applying studies from other countries to the unique American healthcare system, they may have a role in inspiring solutions and future, generalizable research within the US. Especially due to a lack of national research on emergency department care for homeless populations, the United States is posited to learn from the work of other countries and healthcare systems.

One London-based study performed a quality improvement project in which they launched a Homeless Health Initiative. The initiative focused on improving discharge resources for patients experiencing homelessness by using a checklist and included resources for the patients via Homeless Health Boxes. These kits included maps to "homeless-friendly" healthcare and housing resources, information about charitable services, as well as dental care supplies. In addition, several people within the ED such as nurses and other providers were trained and appointed as "Homeless Links" to assist patients experiencing homelessness. After twelve months of the Homeless Health Initiative, the study found low staff compliance, citing reasons such as provider disenchantment with excess paperwork and lack of recognition of homelessness as a healthcare issue. However, the study maintains that they were able to provide "sustainable improvement in the quality, safety and equity of healthcare delivered to homeless patients, as well as an improvement in staff satisfaction in terms of their subjective ability to care for homeless patients in the ED."[21]

[20] Salhi et al.
[21] Charles Gallaher et al., "The St Thomas' Hospital Emergency Department Homeless Health Initiative: Improving the Quality, Safety and Equity of Healthcare Provided for Homeless Patients Attending the ED | BMJ Open Quality," accessed January 28, 2021, https://bmjopenquality.bmj.com/content/9/1/e000820.

This study's use of Homeless Health Boxes and updating of hospital protocol marks a concerted effort to improve care for populations experiencing homelessness in the ED, as well as exemplifying barriers to novel methods of care. Though the researchers provided abundant education on the new protocol of the initiative, few providers complied. This reveals the difficulty in implementing new protocol at the provider-level. However, they make a moderate positive impact on the patients experiencing homelessness by providing previously neglected resources in a dignified manner. My concerns with this method are multifaceted, including the lack of provider compliance and the temporary nature of resources provided. While well-intentioned, they did not work to alleviate the overarching issue of homelessness or provide long-term help.

A 1993 Toronto, Canada-based study investigated "compassionate care" as a mechanism to lower rates of ED returns by people experiencing homelessness. They hypothesized that if patients were more satisfied with their level of care, that they would return at lower rates. The hospital provided compassionate volunteers who offered the patients experiencing homelessness food, juice, and an active listener to sit and speak with them. This compassionate care improved patient satisfaction as well as lowering readmission rates.[22]

One weakness of the study includes the financial feasibility of paying "compassionate caretakers." ED physicians are often too overwhelmed to spend extra time on compassionate care measures such as lengthy conversations, and the study remarks that the cost of hiring salaried caretakers would exceed the amount saved by EDs in the reduced number of visits, making this a cost-ineffective solution. However, the study

[22] DA Redelmaier, "A Randomised Trial of Compassionate Care for the Homeless in an Emergency Department," *The Lancet* 345, no. 8958 (May 6, 1995): 1131–34, https://doi.org/10.1016/S0140-6736(95)90975-3.

succeeds in improving dignified care for those who experience homelessness, and the successes reiterate the importance of valuing the dignity of all patients in healthcare. My concern with this solution lies in its temporary effects that do not address the overarching societal issues surrounding homelessness or alleviate any health vulnerabilities.

A 1993 study in Paris, France explored the usefulness of medically-oriented social workers in an urban ED. The study's goals were to reduce non-medical admissions to the hospital and to provide improved care for vulnerable patients. The study found that 23.5% of the patients needing social assistance were patients experiencing homelessness, and the social workers were able to provide resources such as clothing, transfer to shelters, and additional care beyond the hospital.[23] This study reveals the effectiveness of employing additional social workers in the ED setting, especially in regards to assisting patients experiencing homelessness. Social workers are vital for creating safe discharge plans with providers and nurses. Many EDs do employ social workers, and as they provide such valuable aid to patients, I believe that the employment of *more* social workers at all hours of the day can greatly impact outcomes for patients experiencing homelessness.

These studies from other countries exist outside of the US healthcare system, so are not wholly generalizable to US hospitals and EDs. The US healthcare system, however, can take lessons from these alternate systems and use them to improve ED care. I believe that other developed countries provide valuable inspiration for future US initiatives, showing both areas for improvement and effective solutions. Especially due

[23] J. J. Monsuez et al., "Early Social Intervention in the Emergency Department," *The European Journal of Medicine* 2, no. 8 (November 1993): 489–92.

to a lack of research on evidence-based practices regarding homelessness and ED use in the US, we must build upon the work of others to improve care.

b) Community health initiatives

Though community health initiatives cannot always directly translate into clinical applications, they certainly alleviate human suffering and can provide ideas and inspiration for future quality improvement projects in the ED setting. Community health initiatives often address societal-level problems that are outside the scope of emergency departments, elucidating these issues along with the feasibility of their solutions.

In the documentary, *One Bridge to the Next*, One Pennsylvania-based physician, Dr. Jim Withers, provides "street medicine" via a program called Operation Safety Net to homeless populations in inner city Philadelphia. His office aims to treat people living on the streets with respect and autonomy by providing primary care, prescription access, and social workers to help patients secure housing and other necessary rights. Withers says they work "to bring not just medical care, but social justice" to the people they serve.[24]

Operation Safety Net works alongside hospitals and emergency departments in the city, and Dr. Withers often follows his patients in the hospital system when necessary. However, Dr. Withers maintains that his organization "saves the hospital $300,000 each year in terms of ER utilization, length of stay, decrease of readmissions, and that's the tip of the iceberg."[25] The takeaway from this case study is that consistent primary care and social services given to homeless populations can reduce emergent health

[24] *One Bridge to the Next*, accessed January 25, 2021, https://vimeo.com/87441138. (8:45)
[25] *One Bridge to the Next*. (19:00)

concerns, improve quality and length of life, take pressure off of EDs, and reduce hospital spending. Operation Safety Net works from many sides of the issue to improve homeless healthcare while alleviating accessibility issues and homelessness itself. However, this program collaborates with the hospital system rather than integrating with it, and relies on the external community.

Brown et al. (2015) studied the impact of obtaining housing on people experiencing homelessness' health and ED use. They followed patients who received housing in Boston, and after 12 months assessed various qualities of health and rates of ED use. They found that patients who obtained housing used acute care less frequently, at 2.5 times per year compared to 5.3 per year among those without housing.[26] They also found that depressive symptoms were reduced in the group that obtained housing, but found other markers of health to be comparable between the two groups.

Brown et al. did not address the cost of providing housing compared with the cost of ED visits, and this solution also exists outside the scope of the hospital system. However, it does reveal that housing alleviates health issues associated with homelessness and reduces pressure on hospital emergency departments.

c) Emergency Medicine provider perspectives

After the publication of Salhi et al., Doran and Raven responded in an article called "Homelessness and Emergency Medicine: Where do we go from here?" In the article, they stated,

> Although knowledge of patients' housing status is critical to providing good, routine emergency care, we also believe that emergency medicine could—and should—be playing a larger role in helping to end homelessness. Because the ED

[26] Rebecca T. Brown et al., "Health Outcomes of Obtaining Housing Among Older Homeless Adults," *American Journal of Public Health* 105, no. 7 (May 14, 2015): 1482–88, https://doi.org/10.2105/AJPH.2014.302539.

> is uniquely accessible for individuals experiencing homelessness, we have unique opportunities to assist as part of larger efforts to end it.[27]

This article discusses several recommendations based on knowledge from Salhi et al.'s literature review. Concurrently, they all call for a diversity of research from a broader range of subgroups of patients. They emphasize that the research should focus on identifying gaps in care and effective interventions, going beyond the current research that is limited to rates of ED use among homeless populations.[28] Additionally, both agree that evidence-based guidelines for treating patients experiencing homelessness should be integrated into residency curricula to maximize outreach potential. Further, Doran and Raven raise a need for physicians to include housing status when taking a patient's history to aid in identification of vulnerable patients. They bring up a valid concern of identifying marginally housed individuals, writing,

> It is easy to identify as homeless the frequent ED user who lives on the streets and has a cart full of bags, but there are segments of the homeless population who are undoubtedly underidentified in the ED, including women, children, the elderly, and those who are only transiently homeless.[29]

Physicians are calling for more active interventions in helping their patients who experience homelessness. Many ED physicians have supported a newly emerging field called Social Emergency Medicine. The idea of Social Emergency Medicine is that physicians can become advocates for their patients and assist them with social determinants of health along with the physical health consequences of their social

[27] Kelly M. Doran and Maria C. Raven, "Homelessness and Emergency Medicine: Where Do We Go From Here?," *Academic Emergency Medicine* 25, no. 5 (2018): 598–600, https://doi.org/10.1111/acem.13392.
[28] Salhi et al., "Homelessness and Emergency Medicine"; Doran and Raven, "Homelessness and Emergency Medicine."
[29] Doran and Raven, "Homelessness and Emergency Medicine."

inequities in EDs. For patients who experience homelessness, Social Emergency Medicine ideals center on eliminating homelessness via housing.

Dr. Raven writes a persuasive article about the challenges and prospects of Social Emergency Medicine, calling for Emergency Medicine physicians to advocate for their patients on a larger scale. She writes in great support of government efforts to provide housing, legislation that benefits homeless health initiatives, and community organizations that support better discharge protocols.[30] Dr. Doran responds to Raven's article in agreement. She also champions Social Emergency Medicine and reinforces the importance of solving homelessness as whole, writing,

> efforts such as paramedicine and other ED diversion programs, offering clothes and sandwiches, and even providing mobile or shelter-based health care services are responses to the symptoms of homelessness, not solutions for the underlying problem. We must devote our energy to ending homelessness, not just managing it.[31]

I agree with Dr. Raven and Dr. Doran and admire their work which centers on homelessness and ED use. The novel development of Social Emergency Medicine mirrors much of my argument about the best ways to care for patients who experience homelessness. Physicians are valuable advocates and while they cannot act alone, they form a vital front to tackling issues of healthcare inequity. It is inspiring to see physicians rallying together to improve care for their patients who experience homelessness. As a society, we have a long road ahead to achieve health equity among

[30] Maria C. Raven, "Homelessness and the Practice of Emergency Medicine: Challenges, Gaps in Care, and Moral Obligations," *Annals of Emergency Medicine* 74, no. 5 (November 1, 2019): S33–37, https://doi.org/10.1016/j.annemergmed.2019.08.440.
[31] Kelly M. Doran, "Commentary: How Can Emergency Departments Help End Homelessness? A Challenge to Social Emergency Medicine," *Annals of Emergency Medicine* 74, no. 5 (November 1, 2019): S41–44, https://doi.org/10.1016/j.annemergmed.2019.08.442.

all vulnerable patients, and the task is insurmountable without the collective drive and care of compassionate healthcare workers.

d) Solution Analysis

Based on my findings, I divide the studies and recommendations into three categories: provider-level solutions, hospital-level solutions, and community-based care. Provider-level solutions are interventions at the level of ED practitioners, and may include altered procedures in interactions with patients experiencing homelessness. Hospital-level solutions come from the administrative level and may include new protocols, hired positions, and more that would influence all providers in the ED. Community-based care solutions exist outside the scope of the hospital system, but address the reduction of homelessness and improvement of healthcare for people experiencing homelessness. The following table includes my breakdown of the studies and evaluations of their applicability.

Table 1. Summary and Evaluation of Proposed Interventions

Level of Intervention	Recommendation	Source	Evaluation
Provider-level	Include housing status in patient history interrogation	Salhi et al.[32], Doran and Raven[33]	This is a good starting point, and can assist providers in noticing vulnerable patients who may fly under their radars in the fast-paced ED.
Hospital-level	Employ social workers who specialize in providing resources	Monsuez et al.[34]	Social workers can be incredibly valuable to help patients obtain

[32] Salhi et al., "Homelessness and Emergency Medicine."
[33] Doran and Raven, "Homelessness and Emergency Medicine."
[34] Monsuez et al., "Early Social Intervention in the Emergency Department."

	and aid to homeless populations		resources and safe discharge plans.
	Provide helpful discharge resources for patients experiencing homelessness	Gallaher et al.[35]	Tangible hygiene supplies can be helpful, but packets of overwhelming information without interpersonal assistance may be less so.
	Integrate evidence-based guidelines on treating patients experiencing homelessness into resident training	Salhi et al.[36], Doran and Raven[37]	This is very important in reducing physician stigma and maximizing their ability to help patients who experience homelessness. This also needs more research and development.
	Employ "compassionate caretakers" who spend quality time with and offer refreshments to patients experiencing homelessness	Redelmeier et al.[38]	This is a great idea in theory, but was found to be cost-ineffective. Resources may be better used to employ social workers in EDs.
Community-based	Provide free housing to people experiencing homelessness	Brown et al.[39]	The best option to reduce health inequities among homeless patients. Requires lots of work on a societal level.

[35] Gallaher et al., "The St Thomas' Hospital Emergency Department Homeless Health Initiative: Improving the Quality, Safety and Equity of Healthcare Provided for Homeless Patients Attending the ED | BMJ Open Quality."
[36] Salhi et al., "Homelessness and Emergency Medicine."
[37] Doran and Raven, "Homelessness and Emergency Medicine."
[38] Redelmaier, "A Randomised Trial of Compassionate Care for the Homeless in an Emergency Department."
[39] Brown et al., "Health Outcomes of Obtaining Housing Among Older Homeless Adults."

	Utilize "street medicine" to provide free primary care to patients experiencing homelessness	Operation Safety Net[40]	A great option to reduce stigma and provide accessible care. This would also reduce pressure on EDs and improve patient compliance with treatment.

VI. My recommendations

Based on the findings of Salhi et al., my review of non-US and community-based practices, and opinions of Emergency Medicine providers, I recommend that emergency departments combine solutions at several levels of intervention to improve care for patients experiencing homelessness. This must begin with adequate documentation and data collection. I agree with Salhi et al. and Doran and Raven that ED providers need to evaluate the housing status of each patient they treat. This knowledge is necessary to treat the complex needs of patients and to signal potential health vulnerabilities. This will help trigger provider awareness of the specific social needs of patients who are homeless, especially those whose vulnerability may go unrecognized. This documentation mechanism should be standardized and implemented across the United States in every hospital system to maintain consistency for improving data on homeless healthcare.

Additionally, at the hospital-level, I recommend required, comprehensive training on how to effectively treat patients experiencing homelessness for ED providers and nurses. Treatment should encompass ideals of Social Emergency Medicine including homelessness as a social determinant of health and include strategies for effective

[40] *One Bridge to the Next*.

treatment and discharge. The guidelines for this training need to be evidence-based, and thus require extensive research via quality improvement projects. These projects should investigate treating homelessness in all of its capacities, complexities and locations, to fully address the unique health vulnerabilities of all marginally housed and homeless patients. Building this curriculum will take time and resources but is invaluable since the ED interacts with such a high volume of patients experiencing homelessness.

To help in the hospital setting, hiring a 24-hour round of ED social workers with expert knowledge of homeless aid resources would give vital help to patients. Social workers take pressure off of providers and supply patients with care more catered to their social determinants of health. Social workers are the most valuable link to community resources outside of the hospital and can advocate for the social needs of their patients where medical providers fall short.

US government and community agencies can alleviate suffering and improve health for homeless individuals by providing housing for the chronically homeless. Housing is increasingly advocated for as a human right, and studies show its positive impacts on health of those experiencing homelessness. In fact, some ED physicians remark that the solution to reducing rates of ED use by those who experience homelessness is to eliminate homelessness via housing.[41] I agree and maintain that this is the most obvious solution to alleviate suffering among homeless patients: to end their homelessness. With an estimated 2.5 to 3.5 million people who experience homelessness annually, and up to 600,000 people on a given night, the task of providing universal housing in the United

[41] Doran, "Hospitals Must Address Housing in Treating the Homeless."

States certainly doesn't come easily or all at once.[42] It requires complex structural changes in society, as homelessness is a structural issue. Collecting government funding and grants, as well as national support, would require time and effort. Further, finding space for this housing and building or remodeling it to appropriate code would be gradual, making this a long-term goal.

While providing free, quality housing is a difficult barrier to hurdle, community agencies who provide respite beds allow an intermediate solution. Respite beds give people who experience homelessness a safe place to recover and heal when they're healthy enough for discharge from hospitals but still not ready to resume daily life. One review found that medical respite programs can reduce hospital readmissions and improve housing prospects for patients.[43] If hospitals collaborate with medical respite centers, they can greatly help their patients by improving health and decreasing readmission rates. This collaboration requires the work of expert, dedicated social staff, and providers may play a role in recommending patients to be discharged to medical respite centers.

Finally, primary care is essential for maintaining health of homeless populations and preventing excessive, inefficient acute care use of the ED. Projects like that of Dr. Withers both save money and alleviate human suffering, and widespread "street medicine" could save many lives. Like referral to medical respite centers, referral to

[42] Seena Fazel, John R Geddes, and Margot Kushel, "The Health of Homeless People in High-Income Countries: Descriptive Epidemiology, Health Consequences, and Clinical and Policy Recommendations," *The Lancet* 384, no. 9953 (October 25, 2014): 1529–40, https://doi.org/10.1016/S0140-6736(14)61132-6.

[43] Kelly M. Doran et al., "Medical Respite Programs for Homeless Patients: A Systematic Review," *Journal of Health Care for the Poor and Underserved* 24, no. 2 (2013): 499–524, https://doi.org/10.1353/hpu.2013.0053; Doran, "Commentary."

"street medicine" organizations provides a safer alternative to a discharge with no reliable follow-up care.

To summarize, I recommend a combination of solutions to address homeless health in the short-term and long-term. I think that research and education on identification of those experiencing homelessness are great starting points for efforts to improve care. I think that hiring more social workers in EDs can improve patient health outcomes upon discharge, provided that the social workers are educated on valuable connections with community healthcare programs, medical respite centers, and free clinics. Emergency Medicine providers and emergency departments should collaborate with community organizations and help via funding and advocation for legislation benefitting these organizations. All of these efforts work towards the goal of reducing human suffering and provide a cushion en route to the overarching goal which we should strive for: ending homelessness altogether by providing free, safe housing.

VII. Discussion

Though optimistic about the United States' potential to better care for patients who experience homelessness via ED intervention and provision of housing, I recognize that the issue of homelessness is complex and multifaceted. I am certainly not an expert on the structural societal changes that are necessary to end homelessness overall. However, I think that it is crucial for people in positions of power in healthcare to recognize their responsibility to aid vulnerable patients. I see several obstacles to universal implementation of my recommendations. First, a major aspect of my recommendation includes employing full-time, 24-hour social workers for EDs. This requires additional funding at the hospital level and an availability of social workers. I believe that the money saved by reducing ED inefficiencies compensates for these

additional salaries and provides a net societal good. Additionally, the reliance of social services on community partners works upon the assumption of the existence and reliability of these community partners. While larger cities with high rates of homelessness such as New York, Philadelphia, San Francisco, and Los Angeles may have a plethora of resources and community agencies, more rural areas understandably have fewer resources and may lack these valuable agencies.

Further, the quality of homeless aid agencies and their ability to provide adequate care relies on government funding and grants. Tackling issues related to homelessness is complex, and politicians may struggle to gain support for homelessness reduction efforts. This challenge is most evident in the structural ideal of ending chronic homelessness altogether by providing housing. These limitations, challenging as they may be, reveal areas in which society can better care for their most vulnerable. These challenges are daunting, yet necessary to surmount if we want to end disproportionate illness and early death among those who experience homelessness.

VIII. Works Cited

Bharel, Monica, Wen-Chieh Lin, Jianying Zhang, Elizabeth O'Connell, Robert Taube, and Robin E. Clark. "Health Care Utilization Patterns of Homeless Individuals in Boston: Preparing for Medicaid Expansion Under the Affordable Care Act." *American Journal of Public Health* 103, no. S2 (October 22, 2013): S311–17. https://doi.org/10.2105/AJPH.2013.301421.

Brown, Rebecca T., Yinghui Miao, Susan L. Mitchell, Monica Bharel, Mitkumar Patel, Kevin L. Ard, Laura J. Grande, Deborah Blazey-Martin, Daniella Floru, and Michael A. Steinman. "Health Outcomes of Obtaining Housing Among Older Homeless Adults." *American Journal of Public Health* 105, no. 7 (May 14, 2015): 1482–88. https://doi.org/10.2105/AJPH.2014.302539.

D'Amore, Jason, Oliver Hung, William Chiang, and Lewis Goldfrank. "The Epidemiology of the Homeless Population and Its Impact on an Urban Emergency Department." *Academic Emergency Medicine* 8, no. 11 (2001): 1051–55. https://doi.org/10.1111/j.1553-2712.2001.tb01114.x.

Doran, Kelly. "Hospitals Must Address Housing in Treating the Homeless." Modern Healthcare, November 7, 2015. https://www.modernhealthcare.com/article/20151107/MAGAZINE/311079979/hospitals-must-address-housing-in-treating-the-homeless.

Doran, Kelly M. "Commentary: How Can Emergency Departments Help End Homelessness? A Challenge to Social Emergency Medicine." *Annals of Emergency Medicine* 74, no. 5 (November 1, 2019): S41–44. https://doi.org/10.1016/j.annemergmed.2019.08.442.

———. "Homelessness and ED Use: Myths and Facts." *The American Journal of Emergency Medicine* 34, no. 2 (February 1, 2016): 307. https://doi.org/10.1016/j.ajem.2015.10.001.

Doran, Kelly M., Leslie A. Curry, Anita A. Vashi, Stephanie Platis, Michael Rowe, Maureen Gang, and Federico E. Vaca. "'Rewarding and Challenging at the Same Time': Emergency Medicine Residents' Experiences Caring for Patients Who Are Homeless." *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine* 21, no. 6 (June 2014): 673–79. https://doi.org/10.1111/acem.12388.

Doran, Kelly M., Nathan M. Kunzler, Tod Mijanovich, Samantha W. Lang, Ada Rubin, Paul A. Testa, and Donna Shelley. "Homelessness and Other Social Determinants of Health among Emergency Department Patients." *Journal of Social Distress and Homelessness* 25, no. 2 (July 2, 2016): 71–77. https://doi.org/10.1080/10530789.2016.1237699.

Doran, Kelly M., Kyle T. Ragins, Cary P. Gross, and Suzanne Zerger. "Medical Respite Programs for Homeless Patients: A Systematic Review." *Journal of Health Care for the Poor and Underserved* 24, no. 2 (2013): 499–524. https://doi.org/10.1353/hpu.2013.0053.

Doran, Kelly M., Neloufar Rahai, Ryan P. McCormack, Jacqueline Milian, Donna Shelley, John Rotrosen, and Lillian Gelberg. "Substance Use and Homelessness among Emergency Department Patients." *Drug and Alcohol Dependence* 188 (July 1, 2018): 328–33. https://doi.org/10.1016/j.drugalcdep.2018.04.021.

Doran, Kelly M., and Maria C. Raven. "Homelessness and Emergency Medicine: Where Do We Go From Here?" *Academic Emergency Medicine* 25, no. 5 (2018): 598–600. https://doi.org/10.1111/acem.13392.

Doran, Kelly M., Anita A. Vashi, Stephanie Platis, Leslie A. Curry, Michael Rowe, Maureen Gang, and Federico E. Vaca. "Navigating the Boundaries of Emergency Department Care: Addressing the Medical and Social Needs of Patients Who Are Homeless." *American Journal of Public Health* 103 Suppl 2 (December 2013): S355-360. https://doi.org/10.2105/AJPH.2013.301540.

Fazel, Seena, John R Geddes, and Margot Kushel. "The Health of Homeless People in High-Income Countries: Descriptive Epidemiology, Health Consequences, and Clinical and Policy Recommendations." *The Lancet* 384, no. 9953 (October 25, 2014): 1529–40. https://doi.org/10.1016/S0140-6736(14)61132-6.

Gallaher, Charles, Simone Herrmann, Laura Hunter, and Alex Wilkins. "The St Thomas' Hospital Emergency Department Homeless Health Initiative: Improving the Quality, Safety and Equity of Healthcare Provided for Homeless Patients Attending the ED | BMJ Open Quality." Accessed January 28, 2021. https://bmjopenquality.bmj.com/content/9/1/e000820.

Hibbs, Jonathan R., Lawrence Benner, Lawrence Klugman, Robert Spencer, Irene Macchia, Anne K. Mellinger, and Daniel Fife. "Mortality in a Cohort of Homeless Adults in Philadelphia." *New England Journal of Medicine* 331, no. 5 (August 4, 1994): 304–9. https://doi.org/10.1056/NEJM199408043310506.

McCary Jessie M. and O'Connell James J. "Health, Housing, and the Heart." *Circulation* 111, no. 20 (May 24, 2005): 2555–56. https://doi.org/10.1161/CIRCULATIONAHA.105.540856.

Monsuez, J. J., H. Fergelot, B. J. Papon, and J. R. Le Gall. "Early Social Intervention in the Emergency Department." *The European Journal of Medicine* 2, no. 8 (November 1993): 489–92.

Oates, Gary, Allison Tadros, and Stephen M. Davis. "A Comparison of National Emergency Department Use by Homeless versus Non-Homeless People in the United States." *Journal of Health Care for the Poor and Underserved* 20, no. 3 (2009): 840–45. https://doi.org/10.1353/hpu.0.0192.

One Bridge to the Next. Accessed January 25, 2021. https://vimeo.com/87441138.

Raven, Maria C. "Homelessness and the Practice of Emergency Medicine: Challenges, Gaps in Care, and Moral Obligations." *Annals of Emergency Medicine* 74, no. 5 (November 1, 2019): S33–37. https://doi.org/10.1016/j.annemergmed.2019.08.440.

Redelmaier, DA. "A Randomised Trial of Compassionate Care for the Homeless in an Emergency Department." *The Lancet* 345, no. 8958 (May 6, 1995): 1131–34. https://doi.org/10.1016/S0140-6736(95)90975-3.

Rodriguez, Robert M., Jonathan Fortman, Chris Chee, Valerie Ng, and Daniel Poon. "Food, Shelter and Safety Needs Motivating Homeless Persons' Visits to an Urban Emergency Department." *Annals of Emergency Medicine* 53, no. 5 (May 1, 2009): 598-602.e1. https://doi.org/10.1016/j.annemergmed.2008.07.046.

Salhi, Bisan A., Melissa H. White, Stephen R. Pitts, and David W. Wright. "Homelessness and Emergency Medicine: A Review of the Literature." *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine* 25, no. 5 (May 2018): 577–93. https://doi.org/10.1111/acem.13358.

Small, La Fleur F. "Determinants of Physician Utilization, Emergency Room Use, and Hospitalizations among Populations with Multiple Health Vulnerabilities." *Health* 15, no. 5 (2011): 491–516.