

2022

The effect of medical respite services on hospital readmissions for those experiencing homelessness

Kendrick Belardo

Wayne State University, gt3829@wayne.edu

Follow this and additional works at: <https://digitalcommons.wayne.edu/crp>



Part of the [Medical Education Commons](#), [Social Justice Commons](#), and the [Translational Medical Research Commons](#)

Recommended Citation

BELARDO K. The effect of medical respite services on hospital readmissions for those experiencing homelessness. Clin Res Prac. Dec 6 2022;8(2):eP2988. <https://doi.org/10.22237/crp/1667261280>

This Clinical Decision Report is brought to you for free and open access by the Open Access Journals at DigitalCommons@WayneState. It has been accepted for inclusion in Clinical Research in Practice: The Journal of Team Hippocrates by an authorized editor of DigitalCommons@WayneState.

The effect of medical respite services on hospital readmissions for those experiencing homelessness

KENDRICK BELARDO, Wayne State University School of Medicine, gt3829@wayne.edu

ABSTRACT A clinical decision report using:

Kertesz SG, Posner MA, O’Connell JJ, et al. Post-Hospital Medical Respite Care and Hospital Readmission of Homeless Persons. *J Prev Interv Community*. 2009;37(2):129-142. <https://doi.org/10.1080/10852350902735734>

for a patient experiencing homelessness.

Keywords: *homeless, health outcomes, respite care*

Clinical-Social Context

Max Thorsten (Pseudonym) is a 68 year old African American man with a past medical history of hypertension, Coronary Artery Disease and chronic heart failure who has been experiencing homelessness for 18 years. He presented to the emergency department for heart failure exacerbation, one of several hospital readmissions that he has seen this year for the same problem. Mr. Thorsten, who was estranged from his family, was living in abandoned homes for most his time experiencing homelessness; however, he just recently entered a shelter within the surrounding area. He states that he has access to clean water and food however has trouble obtaining his medications and following up with physicians regarding his chronic conditions. When asked about his heart failure condition, Mr. Thorsten did not seem well-versed nor did he seem to understand the underlying cause for the recurrent exacerbations this past year. Furthermore, when doing a medicine reconciliation, Mr. Thorsten was unable to name his medications or the functions associated with each. He stated that “no one took the time to explain it to me”. Given his current state of health and the need for better management of his socioeconomic factors to health, the option of a medical respite was discussed.

Clinical Question

Can increased primary care engagement and medical respite programs help decrease hospital readmissions amongst those experiencing homelessness and therefore improve health outcomes?

Research Article

Kertesz SG, Posner MA, O’Connell JJ, et al. Post-Hospital Medical Respite Care and Hospital Readmission of Homeless Persons. *J Prev Interv Community*. 2009;37(2):129-142. <https://doi.org/10.1080/10852350902735734>¹

KENDRICK BELARDO is a medical student at the Wayne State University School of Medicine.



ISSN: 2379-4550

<http://digitalcommons.wayne.edu/crp>, © 2022 The Author(s)

Licensed under [Creative Commons Attribution 4.0 International \(CC-BY-4.0\)](https://creativecommons.org/licenses/by/4.0/)

Description of Related Literature

Pubmed was utilized to assess for articles using the search terms homeless AND respite care AND health outcomes utilizing the advanced tabs section and inputting each term appropriately. Seventeen results populated and one was chosen due to its large sample size, appropriate population characteristics for our specific patient such as location. This was done in hopes of reproducing the results in a similar area where those experiencing homelessness may have similar needs and challenges. The other studies are described here as well.

A study in 2020 by Bring et al. was a randomized controlled trial where 96 individuals experiencing homelessness were either transferred to a medical respite program or discharged to their own care with the chance to seek help in shelters or with medical street nurses and doctors. Bring et al. followed these groups for 6 months however this study was not chosen for further analysis because it assessed health care cost-effectiveness between the two groups after acute hospitalization. Furthermore, it analyzed Danish citizens whose needs and challenges might not correctly correspond with our specific patient population.²

Hwang et al. in 2014 studied how health programs specifically tailored to those experiencing homelessness affect higher patient quality of care. The study looked at case management interventions, housing programs, and primary care practices however this study focused only slightly on medical respite programs and was therefore not chosen.³

A study conducted in 2006 by Buchanan et al. followed 225 hospitalized homeless adults referred from a public urban hospital during a 26-month period. Buchanan et al. analyzed the hospital readmission rates, emergency department or outpatient clinic visits, and health outcomes between those transferred to a medical respite program and those who were denied admission to a medical respite simply because of unavailable beds.⁴ Although this study showed a significant decrease in hospital readmission rates due to medical respite, this study was ultimately not chosen for further analysis based on the lower sample size

The 2009 study by Kertesz et al. was chosen for review and further analysis. Based on a cohort study of 743 homeless individuals discharged from a hospital following an acute hospitalization, Kertesz et al, researched the effect medical respites have, in comparison to discharge to self-care, on readmission rates within a 90-day window following discharge.¹ Based on the large sample size, similar characteristics to our patient, and the emphasis of medical respite programs on readmission rates, this paper was chosen as it related well to the specific needs of our patient.

Per the Strength of Recommendation Taxonomy (SORT) Criteria, the evidence for medical respite care improving health outcomes and decreasing hospital readmissions amongst those experiencing homelessness demonstrates a B-Level recommendation because few studies were of a randomized clinical trial nature with the rest being cohort studies due to the ethical nature of analyzing the clinical question in the specific patient population.⁵

Critical Appraisal

The study conducted by Kertesz et al is a cohort study analyzing the effect of medical respites on decreasing hospital readmissions within 90 days and improving long term health outcomes among those experiencing homelessness. This study was un-blinded and took place at the Boston Medical Center over a 3-year course from 1998-2001.

Administrative data was used to retrospectively identify a group of 858 homeless individuals, 18 or older, who survived at least one non-maternity, medical or surgical admission to Boston Medical Center thus limiting concern for participation bias. Thus, per the Strength of Recommendation Taxonomy (SORT) criteria, the study qualifies as level 2 evidence.⁵ Of those selected, individuals were identified as "homeless" if they had at least one encounter at the Boston Health Care for the Homeless Program (BHCHP) outpatient within one year of the hospital admission to Boston Medical Center. With over 60 outreach sites, serving over 7000 homeless individuals every year, programs such as BHCHP have been successfully used as an approach by other researchers to identify housing status.⁶ However, although this selection criteria has been used in the past by previous articles, it still presents a possible avenue of selection bias as there are many individuals experiencing homelessness who do not enter homeless shelters, each of which have very unique characteristics and circumstances which may not have been addressed. Exclusion criteria included maternity hospital admissions, patients who left against medical advice, those readmitted less than 24 hours after discharge, and those who did not survive the initial hospital admission or had died within the 90-day window post hospital course, leaving a total of 735 participants.

Once identified, one of three discharge categories were assigned to patients based on the combined input of caregivers at that time; Respite care (134 patients), Own Care (430 patients), or Other Planned supervised recuperative care such as skilled nursing facilities (171 patients). Of note, in the Kertesz et al study, payment for services had little to no influence in discharge decisions given the high rate of insurance among individuals seen by BHCHP and back-up funding options offered to uninsured patients, helping limit biases in discharge analysis. No randomization of patients into discharge categories were performed due to possible ethical reasons outlined by Buchanan et al.⁴, however as that study suggested, many individuals are already turned away from underfunded respite care with limited availability for a myriad of reasons whereas the benefit obtained from such a study might have tremendous applications to caring for the ever-growing homeless population in the United States. In the absence of a randomized controlled trial, analysis in the Kertesz et al study relied on propensity scores to match groups who had similar likelihood of being discharged to a respite care in hopes of limiting indication bias. Associations were determined between discharge categories and 90-day readmission rates using a logistic regression model including covarities such as race, sex, age, length of hospital stay, and drug or alcohol misuse.

When comparing readmission rates within 90 days of initial hospitalization, the data showed a significant reduction in the odds of readmission (OR=0.54; 95% CI 0.34 - 0.85) amongst individuals discharged to respite care in comparison to those discharged to own care. Furthermore, there is a possible reduced odds for those discharged to other planned care vs. own care (OR 0.70; 95% CI 0.46 - 1.06) however the association is nonsignificant. For respite care, the strongest association was amongst African Americans (OR = 0.58; 95% CI 0.36-0.94) and those who had an initial hospital admission stay of 2 days (OR= 0.49; 95% CI 0.28 – 0.85).

Limitations to this study included the issue of being a cohort study however, data weighted with matched propensities for readmissions might help alleviate some of those limitations. Furthermore, the study is one of the largest cohort studies to date, analyzing the effect of respite care on hospital readmissions including participants with various and diverse characteristics in age, race, sex, etc. However, the study boasted a similar effect size to previous studies such as Buchanan et al.⁴ Lastly, the study was strongest for patients with similar characteristics as the patient in question for the clinical application, namely being African American and having a hospital course of less than 2 days.

Clinical Application

As our patient was an individual experiencing homelessness with a history of readmissions for a chronic illness, we felt this study applied well to Mr. Thorsten. Several medical respite programs were available within the surrounding community who accepted Mr. Thorsten. They had similar access to case management, nurse practitioners, physicians and community partners as available within the study to help coordinate his care and improve long term outcomes with decreased readmission rates. Although the study by Kertesz et al did not specifically look at which hospitalizations might equate better outcomes or which hospitalizations might have no effect, we believed it could also be applied to our patient with chronic heart failure. Being a non-maternal hospitalization without leaving against medical advice, our patient did not meet any exclusion criteria for the study. Furthermore, when discussing this option with our patient, he was worried about payment given his socioeconomic status however the hospital was able to obtain Medicaid at a previous hospitalization therefore eliminating this possible barrier for our patient.

When discussing this option with Mr. Thorsten, he was agreeable to being discharged to respite care and believed increased oversight of his condition might be very beneficial as he tries to gain a better understanding of the new stage of his condition. The article by Kertesz et al. demonstrated strong internal validity in its relation of respite care offering better outcomes and decreased readmissions with a large sample size and data weighted by propensity scoring. As the study from Racine et al. showed, increased access to primary care interventions, such as the myriad of resources available at respites, helps improve health outcomes and decrease hospital readmissions.⁷ Furthermore, a study by Pendyal et al showed that having these primary care interventions specifically tailored to those experiencing homelessness might also increase the patient's self-management of their condition, namely heart failure, and therefore improve health outcomes.⁸ This might be explained through positive patient interactions and increased time with physicians and health staff allowing proper education and training regarding managing one's own health conditions. Being that Mr. Thorsten was not well versed in his own condition and seemed to have past negative interactions with healthcare staff, we decided this might be an appropriate



intervention for his long-term health. Because of these factors and the subset of strongest associations in patient characteristics within the study matching our patient, we believe there to be great external validity within the paper for Mr. Thorsten. These findings were shared with Mr. Thorsten in depth. He appeared amenable to transferring to the respite care in hopes of better managing his condition and decreasing his readmission to the ED.

New Knowledge Related to Clinical Decision Science

Ensuring proper management of chronic health conditions can be tremendously complex and time consuming for patients especially if they are experiencing many of the other challenges that come with being homeless. Increased rates of hospital readmissions can result if not properly managed. Decreased readmissions and improved health outcomes will not be achieved without proper interventions in the traditional hospital setting. With the help of clinical decision science, we were able to illustrate how viewing a patient with their entire socioeconomic background and needs, might better help to shine a light on the underlying cause and direct the appropriate intervention necessary. With an ever-growing homeless population here in the United States, more research and clinical decision science is needed to provide tailored medicine and interventions for the complex problems that medically ill homeless individuals face. We believe that the additional oversight and patient centered care for our patient's chronic condition will be of tremendous benefit to him and help educate our patient regarding the next steps in his care so that he will never again be in the dark regarding his health.

Although this Clinical Decision Report reflects the best solution available currently, healthcare and physicians need to gain a greater knowledge of the structural social conditions that lead to homelessness, reflecting a preventative strategy for a determinant of health as vital to a patient's well-being as homelessness. This is called "Translational Social Science," a new frontier in medicine.

Conflict Of Interest Statement

The author declares no conflicts of interest.

References

1. Kertesz SG, Posner MA, O'Connell JJ, et al. Post-Hospital Medical Respite Care and Hospital Readmission of Homeless Persons. *J Prev Interv Community*. 2009;37(2):129-142. <https://doi.org/10.1080/10852350902735734>
2. Bring C, Kruse M, Ankarfeldt MZ, et al. Post-Hospital Medical Respite Care for homeless people in Denmark: a randomized controlled trial and cost-utility analysis. *BC Health Serv Res*. 2020;20(1):508. <https://doi.org/10.1186/s12913-020-05358-4>
3. Hwang SW, Burns T. Health Interventions for people who are homeless. *Lancet*. 2014;384(9953):1541-7. [https://doi.org/10.1016/S0140-6736\(14\)61133-8](https://doi.org/10.1016/S0140-6736(14)61133-8)
4. Buchanan D, Doblin B, Sai T, et al. The Effects of Respite Care for Homeless Patients: A Cohort Study. *Am J Public Health*. 2006;96(7):1278-1281. <https://doi.org/10.2105/AJPH.2005.067850>
5. Ebell MH, Siwek J, Weiss BD, et al. Strength of Recommendation Taxonomy (SORT): a patient-centered approach to grading evidence in the medical literature. *J Am Board Fam Med*. 2004;17(1):59-67. <https://doi.org/10.3122/jabfm.17.1.59>
6. Martell JV, Seitz RS, Harada JK, et al. Hospitalization in an urban homeless population: The Honolulu Urban Homeless Project. *Annals of Internal Medicine*. 1992;116(4):299-303. <https://doi.org/10.7326/0003-4819-116-4-299>
7. Racine MW, Munson D, Gaeta JM, et al. Thirty-Day Hospital Readmission Among Homeless Individuals with Medicaid in Massachusetts. *Medical Care*. 2020;58(1):27-32 <https://doi.org/10.1097/MLR.0000000000001234>
8. Pendyal A, Rosenthal MS, Spatz ES, et al. "When you're homeless, they look down on you": A qualitative, community-based study of homeless individuals with heart failure. *Heart Lung*. 2021;50(1):80-85. <https://doi.org/10.1016/j.hrtlng.2020.08.001>

