

Lisette Romo PA-S2  
Mini- CAT #1  
Rotation 4

**Clinical Scenario:**

A 22-year-old homeless male with a past medical history of a seizure disorder and Bipolar I disorder was brought in by EMS after another person at the shelter found him passed out on the floor. He presents with a generalized tonic-clonic seizure, and on arrival, the patient was actively seizing. He was admitted to the trauma/ resuscitation area of the ED, where his airway was monitored, suction was performed, and CO2 was monitored. He was given benzodiazepines for control of his seizure episodes. Upon patient identification and review of his medical chart, prior records demonstrated that he had multiple ED visits relating to seizure activity due to medication noncompliance. Additionally, records showed he has an unstable housing situation, leading to difficulty with consistently taking his antiepileptic and bipolar medications. There is concern following stabilization and disposition that sending this patient back to the shelter might continue placing him at high risk of medication noncompliance, recurrent seizures, and hospital readmission.

**Search Question:** For homeless adults discharged from the hospital after an acute illness, does placement in a medical respite program, compared to discharge to a shelter or the street, reduce 30-day hospital readmission rates?

**Question Type:** What kind of question is this?

☐Prevalence ☐Screening ☐Diagnosis

☐Prognosis ☒Treatment ☐Harms

**PICO search terms:**

| <b>P (Population)</b>                 | <b>I (Intervention)</b>              | <b>C (Comparison)</b>       | <b>O (Outcome)</b>          |
|---------------------------------------|--------------------------------------|-----------------------------|-----------------------------|
| Homeless adults after hospitalization | Multidisciplinary discharge planning | Discharge to shelter        | 30-day hospital readmission |
| Recently discharged homeless adults   | Housing support after discharge      | Discharge to the street     | Hospital readmission rate   |
| Homeless adults after acute illness   | Transitional care facility           | Standard discharge planning | Readmission within 30 days  |
|                                       | Medical respite                      | Discharge without           | Emergency                   |

|  |         |         |                        |
|--|---------|---------|------------------------|
|  | program | respite | Department revisit     |
|  |         |         | Healthcare utilization |
|  |         |         | Medication adherence   |

**Search tools and strategy used:**

| Database | Search Terms Used                                            | Number of Results | Filters/Limiters Applied                                                                                                      | Notes/Observations                                                                                                                                                                                       |
|----------|--------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PubMed   | homelessness AND discharge planning AND hospital readmission | 81                | English language, adults, published within the last 10 years, systematic reviews, meta-analyses, randomized controlled trials | A moderate number of relevant studies regarding discharge planning, transitional care, and case management for homeless patients after hospitalization. Results provided a broad high-level of evidence. |

|                |                                                                                                                                          |       |                                                                                            |                                                                                                                                   |
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| Google Scholar | (homelessness OR "homeless adults") AND ("discharge planning" OR "medical respite") AND ("hospital readmission" OR "30-day readmission") | 1,010 | Review articles, English language, published within the last 10 years, sorted by relevance | A broad range of studies related to homelessness, discharge planning, medical respite, and hospital readmission. Results included |
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|                          |                                                                                                                                         |     |                                                                                     | review articles, cohort studies, etc., regarding transitional care programs for homeless patients.                                                                                                                                                    |
| CINAHL                   | (homelessness OR homeless) AND (discharge OR transitional care OR case management) AND (readmission OR hospitalization)                 | 193 | English language, adults, published within the last 10 years, peer-reviewed         | A broad number of discharge planning, transitional care, and case management studies, with a nursing focus related to homelessness and hospital readmission. Results included peer-reviewed studies on care coordination and post-discharge outcomes. |
| Cochrane Library (Wiley) | (homelessness OR "homeless adults") AND ("medical respite" OR "transitional care") AND ("30-day readmission" OR "hospital readmission") | 92  | English language, journals, published within the last 10 years, sorted by relevance | A moderate amount of studies regarding homelessness, medical respite programs, transitional care, and 30-day hospital readmission. Results included research articles, cohort studies, and review articles relating to post-discharge outcomes.       |

I began my search by focusing on the most recent studies within five years, so that I could receive up-to-date evidence on my mini-cat topic question. What I looked for first was systematic reviews, meta-analyses, and randomized controlled trials since they provide strong evidence to answer whether

homeless individuals discharged to a medical respite or transitional care settings would have lower rates of readmission than those who are discharged to a shelter or to the street.

While searching, there were some articles that were high-level studies that directly matched my clinical question. However, the majority of available articles were broad and focused on homelessness, mental illness, substance use, or healthcare access. Due to these broader topics, I decided to widen my search to include articles that were from the past ten years, and also considered other high levels of evidence, such as cohort studies and observational studies. I searched through different search engines, including PubMed, Google Scholar, CINAHL, and Wiley. PubMed was useful for finding systematic reviews, which served for retrieving the highest level of articles. Google Scholar also gave me a large number of results consisting of other relevant articles, helping me identify cohort and observational studies. CINAHL I also considered that their articles gave more nursing and case management-focused studies that were related to planning for discharge and care coordination. Wiley produced fewer articles overall, but the articles were more relevant to the mini cat topic.

A challenge I encountered in my search was that limited studies were comparing homeless patients discharged to a medical respite facility versus those who were discharged and then sent back to the street/ shelter. To improve my results, I broadened my search terms a few times to include terms such as “30-day readmission” or “case management,” for example. I was able to find better studies that way. Ultimately, I decided on articles that provided the strongest available evidence for my topic, including four retrospective cohort studies.

1. **Thirty- Day Hospital Readmission Among Homeless Individuals with Medicaid in Massachusetts** <https://pubmed.ncbi.nlm.nih.gov/31651744/>

Racine, M. W., Munson, D., Gaeta, J. M., & Baggett, T. P. (2020). Thirty-day hospital readmission among homeless individuals with Medicaid in Massachusetts. *Medical Care*, 58(1), 27–32. <https://doi.org/10.1097/MLR.0000000000001234>

Study type: Retrospective Cohort Study

**Abstract:**

**Background:** National efforts are underway to reduce hospital readmissions. Few studies have used administrative data to provide a global view of readmission among people experiencing homelessness, who often utilize multiple hospital systems.

**Objective:** To examine the 30-day hospital readmission rate and factors associated with readmission following discharge among homeless Medicaid members in Massachusetts.

**Methods:** We analyzed medical records and Medicaid administrative data for 1269 hospitalizations between 2013 and 2014 for 458 unique patients attributed to Boston Health Care for the Homeless

Program. Generalized Estimating Equations were used to investigate factors associated with readmission.

**Results:** Of all hospitalizations, 27% resulted in readmission, more than double the average national Medicaid readmission rate. Leaving against medical advice was associated with increased readmission, while having a Health Care for the Homeless primary care practitioner was associated with reduced readmission. Among the most frequently admitted individuals, being discharged to medical respite care was associated with reduced readmission.

**Conclusions:** To break the readmission cycle, health care providers serving homeless individuals could focus on assuring access to medical respite care and extending outreach efforts that increase primary care engagement. This may be especially important for accountable care systems, as safety net providers increasingly assume financial risk for patients' total cost and quality of care.

### **Why I chose this article:**

I decided to choose this article since it directly matched my mini-cat question and assessed whether discharge versus medical respite care was associated with decreased hospital readmission rates in homeless individuals. This was a strong article since it focused on 30-day readmissions, was based in the U.S, and occurred within the past 10 years, and assessed the appropriate demographic, including homeless patients with several hospitalizations. What made this article unique was that it also assessed other factors that were associated with readmission, including leaving against medical advice, which is also contributing to the issue of readmission rates.

### **2. Association of Homelessness with Hospital Readmissions - An Analysis of Three Large States** <https://pubmed.ncbi.nlm.nih.gov/32556872/>

Khatana, S. A. M., Wadhera, R. K., Choi, E., Groeneveld, P. W., Culhane, D. P., Kushel, M., Kazi, D. S., Yeh, R. W., & Shen, C. (2020). Association of homelessness with hospital readmissions—An analysis of three large states. *Journal of General Internal Medicine*, 35(9), 2576–2583. <https://doi.org/10.1007/s11606-020-05946-4>

Study Type: Retrospective cohort study

### **Abstract:**

**Background:** Individuals experiencing homelessness have higher hospitalization and mortality rates compared with the housed. Whether they also experience higher readmission rates, and if readmissions vary by region or cause of hospitalization is unknown.

**Objective:** Evaluate the association of homelessness with readmission rates across multiple US states.

**Design:** Retrospective analysis of administrative claims PATIENTS: All inpatient hospitalizations in Florida, Massachusetts, and New York from January 2010 to October 2015 MAIN MEASURES: Thirty- and 90-day readmission rates KEY RESULTS: Out of a total of 23,103,125 index hospitalizations, 515,737 were for patients who were identified as homeless at the time of discharge. After adjusting for cause of index hospitalization, state, demographics, and clinical comorbidities, 30-day and 90-day readmission rates were higher for index hospitalizations in the homeless compared with those in the housed group. The difference in 30-day readmission rates between homeless and housed groups was the largest in Florida (30.4% vs. 19.3%;  $p < 0.001$ ), followed by Massachusetts (23.5% vs. 15.2%;  $p < 0.001$ ) and New York (15.7% vs. 13.4%;  $p < 0.001$ ) (combined 17.3% vs. 14.0%;  $p < 0.001$ ). Among the most common causes of hospitalization, 30-day readmission rates were 4.1 percentage points higher for the homeless group for mental illness, 4.9 percentage points higher for diseases of the circulatory system, and 2.4 percentage points higher for diseases of the digestive system.

**Conclusions:** After adjusting for demographic and clinical characteristics, homelessness is associated with significantly higher 30- and 90-day readmission rates, with a significant variation across the three states. Interventions to reduce the burden of readmissions among individuals experiencing homelessness are urgently needed. Differences across states suggest that certain public policies can affect health outcomes for individuals experiencing homelessness.

#### **Why I chose this article:**

This article assessed homelessness and hospital readmission rates across several states with large patient populations. This study focused on time frames for readmission rates, comparing 30 and 90-day readmission rates between homeless individuals and housed patients, regardless of why the patient was hospitalized. It also assessed this throughout different states, and rates were slightly varied, due to differences in public policy, hospital discharge planning and overall access to resources. This article was useful for my topic since it assessed the burden of readmission rates amongst homeless patients, along with highlighting why better interventions are needed.

### **3. Program Outcomes and Health Care Utilization of People Experiencing Homelessness and Substance Use Disorder after Transitional Care Program**

**Engagement**<https://pubmed.ncbi.nlm.nih.gov/36245167/>

Biederman, D. J., Sloane, R., Gamble, J., Sverchek, C., & Daaleman, T. P. (2022). Program outcomes and health care utilization of people experiencing homelessness and substance use disorder after transitional care program engagement. *Journal of Health Care for the Poor and Underserved*, 33(3), 1337-1352. <https://doi.org/10.1353/hpu.2022.0116>

**Study Type:** Retrospective cohort study

**Background:** People experiencing homelessness (PEH) have a high prevalence of mental illness and substance use disorder (SUD) and substantial acute and chronic disease burden. Transitional care and medical respite programs facilitate a safe transfer for PEH from the acute care to community setting. Many medical respite programs practice harm reduction strategies that can increase the opportunity for positive program outcomes for PEH with SUD.

**Methods:** This transitional care and medical respite program evaluation explored program outcomes, health care utilization patterns, and comorbid conditions of persons with and without SUD.

**Results:** People experiencing homelessness with SUD had similar program outcomes and both groups had decreased acute care utilization after program engagement. A high prevalence of trimorbidity, which is associated with early mortality, was noted.

**Conclusion:** Opportunities for harm reduction strategies to promote both social and clinical outcomes are offered.

#### **Why I chose this article:**

The reason I chose this article is that it evaluated a specific program that actually works to support the particular demographic that is assessed in my clinical question. The Durham Homeless Care Transitions program is responsible for handling case management, providing housing support, mental health, substance abuse services, etc. Having an actual program made it relevant to my clinical question since it can give evidence as to whether these interventions actually aid in the reduction of healthcare services. The study results demonstrated that with engagement with the program, homeless patients were less likely to overuse healthcare services, leading to fewer admissions and emergency department visits, which may reduce strain on limited emergency department resources.

#### **4. Hospital Readmission and Emergency Department Revisits of Homeless Patients Treated at Homeless-Serving Hospitals in the USA: Observational Study**

<https://pubmed.ncbi.nlm.nih.gov/32666492/>

Miyawaki, A., Hasegawa, K., Figueroa, J. F., & Tsugawa, Y. (2020). Hospital readmission and emergency department revisits of homeless patients treated at homeless-serving hospitals in the USA: Observational study. *Journal of General Internal Medicine*, 35(9), 2560–2568.

<https://doi.org/10.1007/s11606-020-06029-0>

Study type: Retrospective cohort study

#### **Abstract**

**Background:** As the U.S. homeless population grows, so has the challenge of providing effective care to homeless individuals. Understanding hospitals that achieve better outcomes after hospital discharge

for homeless patients has important implications for making our health system more sustainable and equitable.

**Objective:** To determine whether homeless patients experience higher rates of readmissions and emergency department (ED) visits after hospital discharge than non-homeless patients, and whether the homeless patients exhibit lower rates of readmissions and ED visits after hospital discharge when they were admitted to hospitals experienced with the treatment of the homeless patients ("homeless-serving" hospitals-defined as hospitals in the top decile of the proportion of homeless patients).

**Methods:** A population-based longitudinal study, using the data including all hospital admissions and ED visits in FL, MA, MD, and NY in 2014. Participants were 3,527,383 patients (median age [IQR]: 63 [49-77] years; 1,876,466 [53%] women; 134,755 [4%] homeless patients) discharged from 474 hospitals. Risk-adjusted rates of 30-day all-cause readmissions and ED visits after hospital discharge.

**Results:** After adjusting for potential confounders, homeless patients had higher rates of readmissions (adjusted rate, 27.3% vs. 17.5%; adjusted odds ratio [aOR], 1.93; 95% CI, 1.69-2.21;  $p < 0.001$ ) and ED visits after hospital discharge (37.1% vs. 23.6%; aOR, 1.98; 95% CI, 1.74-2.25;  $p < 0.001$ ) compared with non-homeless patients. Homeless patients treated at homeless-serving hospitals exhibited lower rates of readmissions (23.9% vs. 33.4%;  $p < 0.001$ ) and ED visits (31.4% vs. 45.4%;  $p < 0.001$ ) after hospital discharge than homeless patients treated at non-homeless-serving hospitals.

**Conclusion:** Homeless patients were more likely to be readmitted or return to ED within 30 days after hospital discharge, especially when they were treated at hospitals that treat a small proportion of homeless patients. These findings suggest that homeless patients may receive better discharge planning and care coordination when treated at hospitals experienced with caring for homeless people.

#### **Why I chose this article:**

This article looks at a very large population with 3.5 million patients and compares homeless patients with housed patients across many states. I find this article to be relevant as it assessed 30-day hospital readmissions and emergency department revisits following discharge. While the article was not specific in mentioning the exact hospitals that provided services to a higher homeless demographic, it compiled data that found homeless patients treated at homeless serving hospitals had lower rates of readmission, and ED revisit rates in comparison to homeless patients treated at hospitals that had less experience caring for homeless patients. Similar to the other articles, it also suggested that hospitals with stronger discharge planning and social work involvement had better outcomes for homeless patients after hospitalization.

| <u>Author</u> | <u>Level of</u> | <u>Sample/Setting</u> | <u>Outcome(s)</u> | <u>Key Findings</u> | <u>Limitations and</u> |
|---------------|-----------------|-----------------------|-------------------|---------------------|------------------------|
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| <b><u>(Date)</u></b>                   | <b><u>Evidence</u></b>        | <b><u>(# of subjects/<br/>studies, cohort<br/>definition etc.)</u></b>                                                                                                                                                | <b><u>studied</u></b>                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                   | <b><u>Biases</u></b>                                                                                                                                                                                                                                                                               |
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| Racine, M.<br>W., et al.<br>(2020)     | Retrospective<br>Cohort Study | One study included homeless adults with Medicaid in Massachusetts. The study evaluated 1,269 hospitalizations among 458 unique homeless patients between 2013 and 2014.                                               | The primary outcome was 30-day hospital readmission after discharge. Secondary outcomes included discharge and healthcare utilization. | <ul style="list-style-type: none"> <li>- Homeless patients had high rates of 30-day hospital readmission.</li> <li>- Lower readmission rates in patients who were discharged to medical respite care versus those discharged to the street/ shelter.</li> <li>-Post-discharge outcomes had improvement with medical respite placement.</li> </ul> | <ul style="list-style-type: none"> <li>-The study was limited to Medicaid patients residing in Massachusetts.</li> <li>- A retrospective cohort study might cause selection bias</li> <li>-This study did not consistently document patients' housing status nor discharge destination.</li> </ul> |
| Khatana, S.<br>A. M., et al.<br>(2020) | Retrospective<br>Cohort Study | One study included approximately 23,103,125 index hospitalizations across Florida, Massachusetts, and New York between 2010 and 2015. Of these, 515,737 hospitalizations involved patients experiencing homelessness. | Assessed 30-day and 90-day hospital readmission rates after discharge.                                                                 | <ul style="list-style-type: none"> <li>-Homeless patients had significantly higher 30 and 90-day hospital readmission rates in comparison to those who are housed (17.3% vs 14.0%)</li> <li>-Homelessness was associated with increased</li> </ul>                                                                                                | <ul style="list-style-type: none"> <li>-Homelessness was underreported since housing status was only identified with discharge codes.</li> <li>-The study only includes 3 states: NY, FL, and MA, which limits generalization.</li> <li>-This study does not account for</li> </ul>                |

|                                        |                                   |                                                                                                                                                                                                                                                                                               |                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                            |
|----------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        |                                   |                                                                                                                                                                                                                                                                                               |                                                                                                                                                                   | <p>readmission rates across FL, MA, and NY.</p> <p>-Readmission rates varied per state</p>                                                                                                                                                                                                                                                         | <p>other factors, including medication adherence, mental illness severity, substance use, or access to outpatient care.</p> <p>-This retrospective study could have inconsistencies in coding and potential missing information.</p>                                       |
| <p>Biederman, D. J., et al. (2022)</p> | <p>Retrospective Cohort Study</p> | <p>This study evaluated people experiencing homelessness who participated in a transitional care and medical respite program in the United States. It compared patients with and without substance use disorder and examined health care utilization before and after program engagement.</p> | <p>The primary outcomes focused on including program outcomes, healthcare utilization, comorbidities, and healthcare utilization after the program engagement</p> | <p>-Patients with a history of a substance use disorder had very similar outcomes to those without a substance use disorder.</p> <p>-There was a high prevalence of homeless patients with multiple tri-comorbidities, including medical illness, mental illness, and a substance use disorder.</p> <p>- Transitional care and medical respite</p> | <p>-The retrospective cohort study was limited to one transitional care program within the U.S.</p> <p>-The study only compared patients with and without a substance use disorder; however did not include a separate control group who did not partake in a program.</p> |

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|-----------------------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             |                            |                                                                                                                                                                              |                                                                                                          | programs might improve outcomes for homeless patients, both clinically and socially.                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                         |
| Miyawaki, A., et al. (2020) | Retrospective Cohort Study | One study included 3,527,383 patients discharged from 474 hospitals across Florida, Massachusetts, Maryland, and New York in 2014. Of these, 134,755 patients were homeless. | The primary outcomes were 30-day hospital readmissions and emergency department revisits post discharge. | <ul style="list-style-type: none"> <li>-Homeless patients had higher rates of 30-day hospital readmission in comparison to non-homeless patients (27.3 vs. 17.5%)</li> <li>-Homeless patients had higher rates of ED revisits after discharge (37.1% vs. 23.6%).</li> <li>-Homeless serving hospitals had lower rates of readmissions and ED revisits compared with homeless patients treated at non-homeless-s erving hospitals.</li> <li>-Better discharge planning and</li> </ul> | <ul style="list-style-type: none"> <li>-Housing status is underreported since homeless status was identified through administrative data.</li> <li>-The study only focuses on four states.</li> <li>-The study did not account for other factors tied to homelessness, including mental illness, substance use, medication adherence, or access to other services aside from inpatient care.</li> </ul> |

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|  |  |  |  | care coordination were improving post-discharge outcomes for homeless patients. |  |
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### **Conclusions:**

1. **Article #1 Thirty- Day Hospital Readmission Among Homeless Individuals with Medicaid in Massachusetts** <https://pubmed.ncbi.nlm.nih.gov/31651744/>

This study concluded that homeless individuals had significantly high rates of 30-day hospital readmission; approximately 27% of patients who were hospitalized eventually were readmitted. Even with patients leaving against medical advice, they returned, leading to an increased rate of readmission. In comparison to patients enrolled in a program such as a Health Care for the Homeless primary care provider, they had much lower rates of readmission. These programs reduced readmission even if patients were amongst those who were most frequently admitted. This supports how homeless patients will benefit from a medical respite program.

2. **Article #2 Association of Homelessness with Hospital Readmissions - An Analysis of Three Large States** <https://pubmed.ncbi.nlm.nih.gov/32556872/>

This study assessed homelessness in 30 and 90-day periods, demonstrating that homelessness had higher readmission rates versus those who are housed. One significant statistic demonstrated that homeless patients had a combined 30-day readmission rate of 17.3% compared to 14.0% for housed patients. Additionally, amongst the states that were compared, readmission rates varied per state, with the biggest difference in Florida, and New York had the smallest. This can further explain that homelessness is a huge risk factor for readmission. Improvements can be made by implementing better state policies, providing more access to Medicaid, and other discharge services.

3. **Article #3 Program Outcomes and Health Care Utilization of People Experiencing Homelessness and Substance Use Disorder after Transitional Care Program Engagement** <https://pubmed.ncbi.nlm.nih.gov/36245167/>

This study concluded that both transitional care and medical respite programs improve social and clinical outcomes for homeless individuals. While it may seem otherwise, patients dealing with a history

of a substance use disorder had very similar outcomes to those without a substance use disorder, with both groups showing a reduction in acute healthcare services like the emergency department resources after being enrolled in a program. It also recognized that the homeless demographic deals with a large amount of medical illness, mental illness, and substance use disorder. Lastly, it supports implementing transitional care and medical respite programs into a homeless patient's acute care to reduce issues with overuse of acute healthcare resources, and in turn improving outcomes after hospital discharge.

**4. Article #4 Hospital Readmission and Emergency Department Revisits of Homeless Patients Treated at Homeless-Serving Hospitals in the USA: Observational Study**  
<https://pubmed.ncbi.nlm.nih.gov/32666492/>

This study compared both homeless patients and nonhomeless patients and found that homeless patients contributed to the high rates of hospital readmission and frequent emergency department revisits. What was also a unique aspect of this study was that it found hospitals with more frequent homeless patients had lower readmission and emergency department use rates in comparison to hospitals that serve fewer homeless patients.

**Overarching Conclusion:**

Overall, homeless patients who are discharged from the hospital have high rates of 30-day hospital readmission and emergency department revisits in comparison to those who are housed.

Across all four studies, it was found that homelessness itself is an independent risk factor for readmission, regardless of the patient's diagnosis or hospitalization reason. The evidence highly suggests that unstable housing contributes to poor medication adherence, limited access to outpatient follow-up, worsening mental illness and substance use disorders, with increased reliance on emergency departments for ongoing healthcare needs. The evidence across all retrospective cohort studies reports that homeless patients receiving support post-discharge through programs such as medical respite or transitional housing had much lower rates of readmission and healthcare resource use. The studies aligned with the finding that discharge to a shelter or a street had associations with worse outcomes. Including multidisciplinary involvement in homeless patients' care has strong potential to reduce this issue amongst hospitals, through providing programs with housing support in addition to other benefits to reduce the healthcare burden of an influx of high readmission rates.

**Weight of Evidence:**

These studies provided a strong level of evidence, consisting of four studies that were retrospective cohort studies. They were done in the United States and were done on large patient populations. The studies all showed that homelessness is associated with higher hospital readmission and emergency revisits after discharging them. While I searched for even higher levels of evidence, including randomized controlled trials or systematic reviews, the retrospective studies were still very similar and

supported a multitude of programs to help homeless patients, and therefore improve their outcomes. The limitations of the retrospective studies were that they were retrospective designs, so information might be skewed with coding inaccuracies and generalization. However, there was consistency across these studies, which strengthened the evidence for further improving discharge support for homeless individuals. Even though RCTs and systematic reviews were limited, the consistency of findings across multiple larger retrospective cohort studies strengthens the reliability of the evidence. Despite differences in geographic areas, patient demographics, and healthcare systems, all the studies demonstrated the same trend of increased healthcare utilization among homeless patients and improved outcomes when transitional support systems were implemented.

### **Magnitude of any effects / Clinical significance:**

There were clinically substantial differences in the outcomes between homeless and housed patients. Readmission rates were always consistently higher in homeless patients, by higher percentage rates, and even showed that it was nearly twice as high as national averages. Homeless patients also returned for the emergency department more frequently after being discharged. Programs following discharge aim at reducing this issue, and they appear to lessen these risks. The findings remain to be clinically significant because the frequent readmissions demonstrate that patients struggle with medication access, have unstable housing, suffer from debilitating mental illness, and struggle with follow-up appointments. Guiding patients by offering programs upon discharge might prevent these frequent hospital visitations along with improving healthcare outcomes.

### **Other Considerations:**

Offering medical respite programs and transitional care can potentially improve outcomes in homeless patients following discharge. More studies must be conducted to make further direct comparisons amongst programs, versus discharge outcomes. Further research must also include homeless patients dealing with mental illness, substance use disorder, and poor medication adherence, with the potential to show outcomes following those support programs. A significant consideration is the concept of trimorbidity, which includes the coexistence of medical illness, mental illness, and substance use disorder. This is especially relevant to the clinical scenario, as this patient had Bipolar I disorder, seizure disorder, medication noncompliance, and an unstable housing situation. These conditions are overlapping and likely to complicate and compound barriers to recovery, increasing the likelihood of recurrent hospitalization without structured post-discharge support.

### **Clinical Bottom Line:**

Overall, based on the evidence, medical respite and transitional care programs likely reduce healthcare utilization and improve post-discharge outcomes amongst homeless adults after being hospitalized; direct evidence is slightly limited in specifically addressing 30-day readmission rates. In a retrospective

study, Biederman et al. (2022) found that homeless patients participating in a transitional care program had much lower hospital admissions and emergency department use after discharge. However, this study was done on a smaller sample size without a control group. Khatana et al. (2020) and Racine et al. (2020) were also studies that provided stronger evidence regarding the continuing issue by showing that homeless patients have significantly higher 30-day readmission rates versus housed patients. These retrospective studies did not actually directly evaluate medical respite programs, which was a limiting factor. Lastly, Miyawaki et al. (2020) concluded that homeless patients who were treated at homeless-serving hospitals had significantly lower readmission rates, which suggests that hospitals with more experience caring for homeless patients may provide better discharge planning and care coordination. The evidence is consistent with supporting these programs, but it is evident that additional higher-level studies are needed. As a result, for the patient in the clinical scenario, discharge back to a shelter without any additional support would place him at continued risk for medication nonadherence, recurrent seizures, repeat emergency department visits, and hospital readmission. Based on the available evidence, referrals to a medical respite/ transitional care program would provide safer continuity of care with improved social and clinical outcomes.