Who Gets Treatment? Substance Use Disorder Treatment Enrollment after Traumatic Injury

INTRODUCTION

- Substance Use Disorder (SUD) is both a risk factor and result of unstable housing status.[1] People experiencing homelessness (PEH) are understudied and more likely to experience traumatic injury, SUD, and frequent ED visits than housed individuals.[2-4]
- PEH are more likely to enter residential SUD treatment and less likely to enroll in outpatient treatment than housed individuals with SUD.[5]
- The hospital encounter for traumatic injury represents a key opportunity to assess and address SUD in PEH. There is little data exploring the impact of housing status on SUD treatment enrollment after traumatic injury.
- Aim: Examine the impact of housing status on SUD treatment enrollment after traumatic injury.

METHODS

- Retrospective cohort study of age ≥18 trauma patients with SUD at Boston Medical Center (BMC), an urban Level 1 trauma center
- Data obtained through BMC Trauma Registry, supplemented with chart review
- SUD treatment enrollment was defined as engagement with either behavioral or medication-based SUD treatment documented in the medical record
- Multivariable logistic regressions controlling for demographic, clinical, and socioeconomic factors were used to evaluate the relationship between housing status and the primary outcomes
- A p-value ≤ .05 was considered significant

OUTCOMES

SUD treatment initiation: new enrollment in SUD treatment within one year after the index encounter

All treatment enrollment: any SUD treatment engagement within one year of index encounter, including continuation of treatment

RESULTS

Total Cohort: N = 618	
Housed, n=379 61%	Unhoused, n=239 39%

Compared to housed patients, **unhoused patients** were:

- **Younger** (mean (SD): 44.3 (10.3) vs. 50.87 (14.7), t(608) = 6.69, p<.001)
- More often **white** (X^2 (2, N = 618) = 12.1, p=.002)
- More often **unemployed** (X^2 (2, N = 618) = 43.3, p<.001)
- More often diagnosed with a **mental health disorder** (X^2 (1, N = 618) = 20.8, p<.001)
- More often diagnosed with **multiple SUDs** (X^2 (3, N = 618) = 48.7, p<.001)

Table 1. Multivariable Regressions	All Treatment Enrollment n = 618		New Treatment Enrollment n = 450	
	OR (95% CI)	p-value	OR (95% CI)	p-value
Demographics				
Housing Status (Ref. Housed)	**4.04 (2.79, 5.88)**	<0.001*	**4.92 (3.06, 8.03)**	<0.001*
Age	0.990 (0.98, 1.00)	0.160	0.993 (0.98, 1.01)	0.415
Sex (Ref. Male)	1.30 (0.82, 2.05)	0.255	1.62 (0.98, 1.01)	0.116
Race (Ref. White)				
Black	0.736 (0.49, 1.11)	0.142	1.07 (0.62, 1.83)	0.811
Other	1.22 (0.74, 2.02)	0.432	1.60 (0.88, 3.07)	0.160
Injury Severity Score	**0.966 (0.94, 0.99)**	0.005*	0.979 (0.95, 1.01)	0.173
Social Determinants of Health				
Housing Status (Ref. Housed)	**3.51 (2.38 - 5.21)**	<0.001*	**3.96 (2.42 - 6.57)**	<0.001*
SUD Type (Ref. Opioid only)				
Alcohol Use Disorder only	**0.252 (0.13, 0.49)**	<0.001*	0.333 (0.11 - 1.08)	0.059
Stimulant Use Disorder only	**0.347 (0.09, 1.18)**	0.010*	0.436 (0.08 - 2.18)	0.319
Multiple Diagnoses	**0.474 (0.25, 0.89)**	0.020*	0.514 (0.17 - 1.62)	0.244
Mental Health Diagnosis	**2.80 (1.91, 4.13)**	<0.001*	**2.85 (1.76 - 4.66)**	<0.001*
Employment (Ref. Employed)				
Unemployed	1.20 (0.71, 2.05)	0.499	1.44 (0.74, 2.88)	0.288
Unknown	0.992 (0.56, 1.75)	0.978	1.22 (0.60, 2.52)	0.587

CONCLUSION

Unhoused status was positively associated with both SUD treatment initiation and all treatment enrollment within one year of traumatic injury. This may be due to treatment enrollment requirements in facilities unhoused patients are discharged to and the fact that inpatient SUD treatment often addresses unmet basic needs (shelter, food). These results support that **hospital encounters for traumatic injuries are a pivotal opportunity for treatment enrollment for unhoused patients.**

Housed patients were less likely to initiate or maintain enrollment in SUD treatment after a traumatic injury. Compared to unhoused patients, discharging housed patients less often requires addressing a SUD. Therefore, SUD may be less likely to be assessed during the hospital admission in housed patients. This finding highlights that **every hospital encounter is an opportunity to offer SUD resources, regardless of housing status**.

Given the association between substance use and traumatic injury and the disparities in treatment enrollment highlighted in this study, we conclude that **targeting addiction health services to all trauma patients is a potent use of resources likely to increase enrollment in SUD treatment.**

AUTHORS & DISCLOSURES

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A. Nothing to disclose

REFERENCES

1. Jurewicz A, Padgett DK, Ran Z, et al. Social Relationships, Homelessness, and Substance use among Emergency Department Patients. Substance Abuse. 2022;43(1):573-580. doi:10.1080/08897077.2021.1975869
2. Taylor SN, Munson D. Health Care of People Experiencing Homelessness: Part I. NEJM Evidence. 2023;2(8):EVIDra2300123. doi:10.1056/EVIDra2300123
3. Miller JP, O' Reilly GM, Mackelprang JL, Mitra B. Trauma in adults experiencing homelessness. Injury. 2020;51(4):897-905. doi:10.1016/j.injury.2020.02.086
4. Yue D, Pourat N, Essien EA, Chen X, Zhou W, O'Masta B. Differential associations of homelessness with emergency department visits and hospitalizations by race, ethnicity, and gender. Health Serv Res. 2022;57(Suppl 2):249-262. doi:10.1111/1475-6773.14009
5. Han BH, Doran KM, Krawczyk N. National trends in substance use treatment admissions for opioid use disorder among adults experiencing homelessness. Journal of Substance Abuse Treatment. 2022;132:108504. doi:10.1016/j.jsat.2021.108504