

HCA Healthcare

Scholarly Commons

Psychiatry

Research & Publications

5-1-2021

Relationship of Utilization of Mental Health Care in Patients with Substance Use Disorders With and Without History of Prior Incarceration

Linda Zhang

Harrison Ross Galicki

Gerald Demasters

William B. DeHart

Follow this and additional works at: <https://scholarlycommons.hcahealthcare.com/psychiatry>



Part of the [Psychiatry Commons](#), [Psychiatry and Psychology Commons](#), and the [Substance Abuse and Addiction Commons](#)

Relationship of utilization of mental health care in patients with substance use disorders with and without history of prior incarceration

Linda Zhang, MD; Harrison Galicki, MD; Gerald DeMasters, MD, PhD ; W. Brady DeHart, PhD | HCA

Background

Robust literature highlight the social and economic burden of substance use disorders, the increase in rates of incarceration, the high prevalence of substance use in incarcerated or previously incarcerated individuals, the high prevalence of co-occurring illness, and the utilization of addictions treatment in individuals with substance use. However, limited data is available demonstrating the mental health care utilization of those with history of incarceration and substance use disorders. In addition, co occurring illness (formerly known as dual diagnosis) is a common phenomenon necessitating broader general mental health treatment in addition to SUD treatment.

Objective

Our aim is to investigate the differences in utilization of inpatient mental health care in psychiatric patients with substance use disorder with and without history of incarceration.

Methods

The HCA Healthcare EDW was queried to identify patients (N = 4947) with diagnoses of substance use disorder and of those patients, identify those with a history of incarceration (n = 147).

Primary objective – compare hospital encounter length of stay between patients with and without a history of incarceration.

Secondary objective – Compare medications administered to two patient types.

Substance use disorders were determined by ICD 10 codes.

Lifetime incarceration was determined by the presence of positive findings in the Legal History section of Psychiatry Evaluation intake note or in future progress notes.

Data extraction was performed by an HCA analyst and data analyses were performed by the Capital Division Research Director.

Analyses – parametric and non-parametric t-tests.

Results – Primary Objective

	No HI (N=146)	Overall (N=4913)
Age		
Mean (SD)	34.4 (10.6)	40.4 (12.3)
Median [Min, Max]	32.0 [20.0, 63.0]	40.0 [18.0, 64.0]
LOH		
Mean (SD)	4.97 (3.22)	5.61 (4.84)
Median [Min, Max]	4.00 [0, 16.0]	5.00 [0, 193]
Payer		
Private	24 (16.4%)	939 (19.1%)
Self-Pay	9 (6.2%)	482 (9.8%)
Charity	29 (19.9%)	522 (10.6%)
Medicaid	72 (49.3%)	1994 (40.6%)
Medicare	12 (8.2%)	976 (19.9%)
Race		
B	7 (4.8%)	918 (18.7%)
W	139 (95.2%)	3835 (78.1%)
A	0 (0%)	20 (0.4%)
AI	0 (0%)	11 (0.2%)
OTHER	0 (0%)	129 (2.6%)
Sex		
Female	24 (16.4%)	1683 (34.3%)
Male	122 (83.6%)	3230 (65.7%)

Results – Secondary Objective

Incarceration	Gabapentin			Incarceration	Naltrexone		
	No	Yes	Total		No	Yes	Total
No	3258 67.9 %	1542 32.1 %	4800 100 %	No	4530 94.4 %	270 5.6 %	4800 100 %
Yes	82 55.8 %	65 44.2 %	147 100 %	Yes	141 95.9 %	6 4.1 %	147 100 %
Total	3340 67.5 %	1607 32.5 %	4947 100 %	Total	4671 94.4 %	276 5.6 %	4947 100 %

$\chi^2=8.967 \cdot df=1 \cdot p=0.044 \cdot p=0.003$ $\chi^2=0.385 \cdot df=1 \cdot p=0.011 \cdot Fisher's p=0.582$

Conclusions

- Patients with a prior history of incarceration were discharged .5 days sooner than patients without a history of incarceration ($W = 3.84 \times 10^5$, $p = 0.06$).
- Higher proportion of gabapentin, not naltrexone, prescriptions were present in those with a positive legal history.
- Results suggest an inherent difference in need between the two populations or possibly a prescriber bias.
- Contrasting prior studies suggesting an increased need for addictions treatment, our study did not find a significant increase in utilization of mental health care in SUD populations with a legal history vs those without.
- These findings may help discredit the misconception that those with prior legal histories and substance use disorders are a larger burden on the medical system, thereby reducing stigma experienced by those individuals with legal history and substance use disorders.

References

Gerdien H. de Weert-van Oene, Fabian Terhorsthuizen, Victor J.A. Buwalda, Eibert R. Heerdink. Somatic health care utilization by patients treated for substance use disorders. *Drug and Alcohol Dependence*, Volume 178, 2017, Pages 277-284. ISSN 0376-8716. <https://doi.org/10.1016/j.drugalcdep.2017.05.022>. <https://www.sciencedirect.com/science/article/pii/S037687161730296X>

Grant BF, Stinson FS, Dawson DA, et al. Prevalence and co-occurrence of substance use disorders and independent mood and anxiety disorders: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Arch Gen Psychiatry*. 2004;61(8):807-816. doi:10.1001/archpsyc.61.8.807

Han B, Compton WM, Blanco C, Colpe LJ. Prevalence, Treatment, and Unmet Treatment Needs Of US Adults With Mental Health And Substance Use Disorders. *Health Aff (Millwood)*. 2017;36(10):1739-1747. doi:10.1377/hlthaff.2017.0584

Kessler RC. The epidemiology of dual diagnosis. *Biol Psychiatry*. 2004 Nov 15;56(10):730-7. doi: 10.1016/j.biopsych.2004.06.034. PMID: 15566117.

Matejko-Schriner A, Webster JM, Hiller ML, Stoton M, Leukfeld C. Criminal History, Physical and Mental Health, Substance Abuse, and Services Use Among Incarcerated Substance Abusers. *Journal of Contemporary Criminal Justice*. 2003;19(1):82-97. doi:10.1177/1043986202239743

McCollister, K.E. Cost Effectiveness of Substance Abuse Treatment in Criminal Justice Settings Knowledge Asset, Web site created by the Robert Wood Johnson Foundation's Substance Abuse Policy Research Program; August 2009. http://saspj.org/knowledgeassets/knowledge_detail.cfm?KAD=10

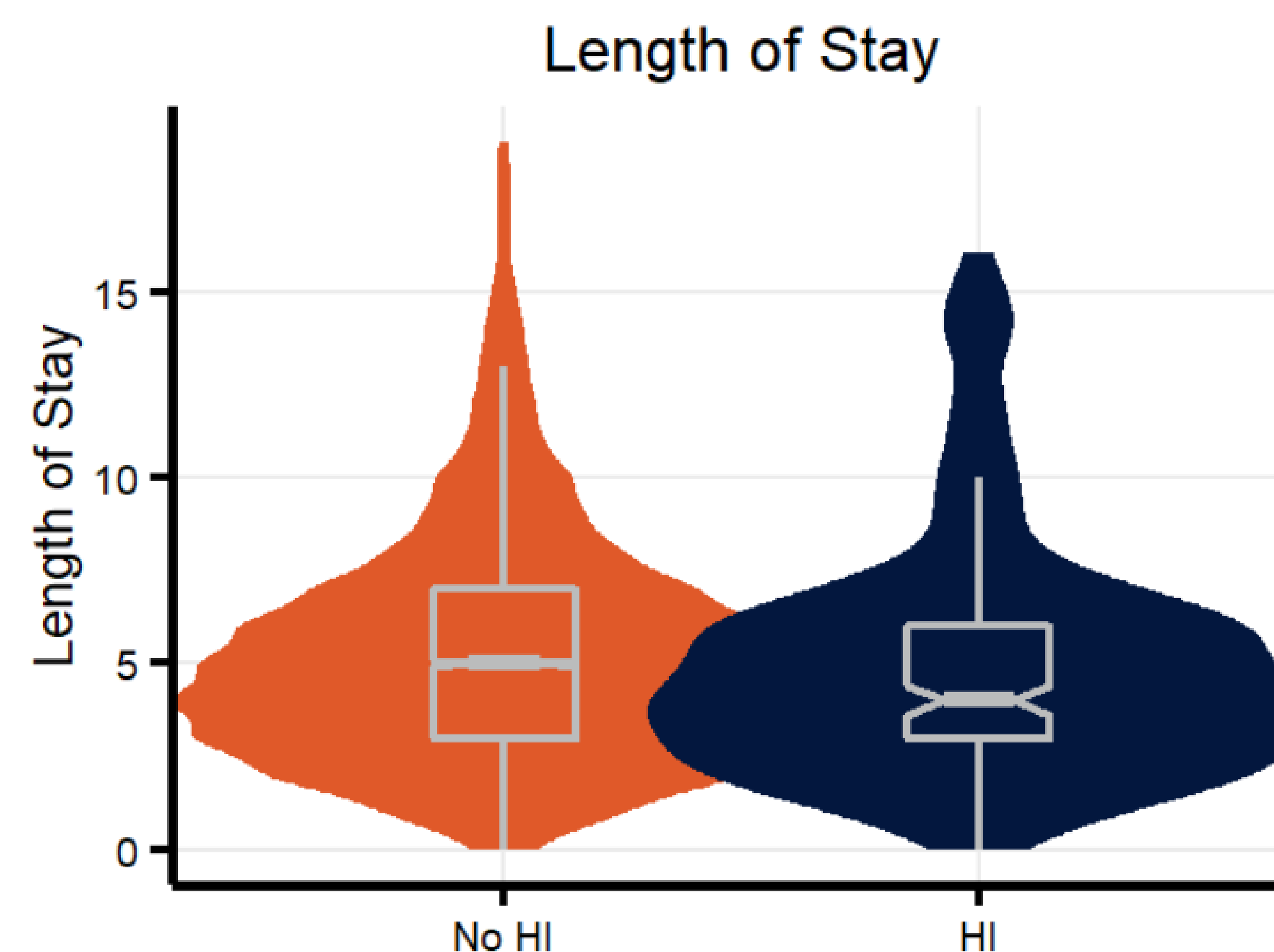
Perron BE, Mowbray OP, Glass JE, Delva J, Vaughn MG, Howard MO. Differences in service utilization and barriers among Blacks, Hispanics, and Whites with drug use disorders. *Subst Abuse Treat Prev Policy*. 2009;4:3. Published 2009 Mar 13. doi:10.1186/1747-897X-4-3.

Rentias KG, Buckley L, Wiest D, Bruno CA. Characteristics and behavioral health needs of patients with patterns of high hospital use: implications for primary care providers. *BMC Health Serv Res*. 2019;19(1):81. Published 2019 Feb 8. doi:10.1186/s12913-019-3894-7

Substance Abuse and Mental Health Services Administration. (2020). Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health (HHS Publication No. PEPS0-07-01-001, NSDUH Series H-50). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/>

The National Institute of Mental Health. (2016, May). Substance Use and Mental Health. Retrieved from <https://www.nimh.nih.gov/health/topics/substance-use-and-mental-health/index.shtml>

Trends in U.S. Corrections. (2019, June). <https://sentencingproject.org/wp-content/uploads/2016/01/Trends-in-US-Corrections.pdf>



This research was supported (in whole or in part) by HCA Healthcare and/or an HCA Healthcare affiliated entity. The views expressed in this publication represent those of the author(s) and do not necessarily represent the official views of HCA Healthcare or any of its affiliated entities.