Stimulant Prescribing Among Homeless vs. Housed U.S. Veterans

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INTRODUCTION

- **Stimulant prescribing has not been examined for the homeless population**, who are at high risk for substance use disorders and adverse outcomes.
- This study examined **frequency of stimulant prescriptions and risky and potentially inappropriate prescribing (RPIP)** in a **national sample of homeless veterans with mental illness** compared to those of housed veterans with mental illness in the Veterans Affairs (VA) health care system, the largest provider of homeless services in the US.

METHODS

- Using 2018-2019 national VA administrative data, we compared **frequency of stimulant prescriptions** using logistic regression and **indicators of RPIP of stimulants** using t tests between homeless veterans with mental illness **(n = 309,526)** and housed veterans **(n = 2,804,447)** with mental illness.

RESULTS

Multivariable Analysis of Sociodemographic and Clinical Characteristics Associated with a Prescription for any Stimulant or Non-Stimulant Medication

Variable	Any stimulant			Amphetamines			Methylphenidates			Non-stimulant (excluding bupropion)		
	OR	99% CI	p	OR	99% CI	p	OR	99% CI	p	OR	99% CI	p
Homeless	0.78	(0.76-0.80)	<.001	0.68	(0.65-0.71)	<.001	0.62	(0.58-0.67)	<.001	0.95	(0.92-0.99)	.009
Age (ref 60+)												
17-29	3.58	(3.47-3.69)	<.001	15.77	(14.96-16.62)	<.001	4.04	(3.77-4.33)	<.001	1.26	(1.19-1.32)	<.001
30-39	3.68	(3.60-3.76)	<.001	15.16	(14.50-15.86)	<.001	4.24	(4.03-4.46)	<.001	1.45	(1.41-1.50)	<.001
40-49	2.72	(2.65-2.78)	<.001	9.05	(8.63-9.48)	<.001	3.48	(3.30-3.67)	<.001	1.44	(1.40-1.49)	<.001
50-59	1.83	(1.79-1.87)	<.001	4.19	(3.98-4.41)	<.001	2.30	(2.17-2.43)	<.001	1.30	(1.26-1.34)	<.001
Race/ethnicity (ref non-Hispanic white)												
Non-Hispanic black	0.61	(0.60-0.62)	<.001	0.32	(0.30-0.33)	<.001	0.33	(0.31-0.35)	<.001	0.97	(0.95-1.00)	.021
Hispanic	0.65	(0.63-0.66)	<.001	0.60	(0.57-0.62)	<.001	0.62	(0.58-0.66)	<.001	0.71	(0.68-0.74)	<.001
Mixed race/other	0.78	(0.75-0.81)	<.001	0.73	(0.70-0.78)	<.001	0.71	(0.65-0.77)	<.001	0.86	(0.81-0.91)	<.001
Marital status (ref married)												
Single/never married	1.06	(1.04-1.08)	<.001	1.16	(1.13-1.19)	<.001	1.12	(1.07-1.17)	<.001	0.92	(0.90-0.95)	<.001
Divorced/separated	1.08	(1.06-1.10)	<.001	1.17	(1.14-1.21)	<.001	1.02	(0.98-1.06)	.305	1.02	(0.99-1.04)	.166
Widowed	0.86	(0.81-0.91)	<.001	0.71	(0.61-0.82)	<.001	0.61	(0.52-0.71)	<.001	0.96	(0.90-1.03)	.243
Percent service-connected (ref none/0%)												
10-40%	1.03	(1.00-1.06)	.042	1.05	(1.01-1.10)	.013	1.09	(1.03-1.16)	.004	0.96	(0.93-1.00)	.049
50-100%	1.11	(1.08-1.13)	<.001	0.98	(0.94-1.01)	.170	1.08	(1.03-1.13)	.003	1.24	(1.21-1.28)	<.001
Combat exposure	0.96	(0.94-0.98)	<.001	0.96	(0.93-0.99)	.008	0.95	(0.90-0.99)	.019	0.95	(0.93-0.98)	.001
PTSD	1.09	(1.07-1.11)	<.001	1.06	(1.03-1.10)	<.001	1.01	(0.96-1.06)	.713	1.12	(1.08-1.15)	<.001
Anxiety disorder	1.35	(1.33-1.38)	<.001	1.33	(1.29-1.37)	<.001	1.50	(1.43-1.57)	<.001	1.35	(1.31-1.40)	<.001
Alcohol use disorder	0.77	(0.75-0.79)	<.001	0.60	(0.57-0.63)	<.001	0.67	(0.63-0.72)	<.001	0.96	(0.93-0.99)	.020
Drug use disorder	1.38	(1.34-1.42)	<.001	0.85	(0.80-0.89)	<.001	0.81	(0.74-0.88)	<.001	2.04	(1.97-2.12)	<.001
MH outpatient visits	1.01	(1.01-1.01)	<.001	1.02	(1.02-1.02)	<.001	1.01	(1.01-1.02)	<.001	1.01	(1.01-1.01)	<.001
SA outpatient visits	1.00	(1.00-1.00)	<.001	1.00	(1.00-1.00)	<.001	1.00	(1.00-1.00)	.209	1.00	(1.00-1.01)	<.001
Medical outpatient visits	1.00	(1.00-1.00)	<.001	1.00	(1.00-1.00)	<.001	1.00	(1.00-1.00)	<.001	1.00	(1.00-1.00)	<.001
MH inpatient days	0.98	(0.98-0.98)	<.001	0.97	(0.97-0.97)	<.001	0.97	(0.97-0.98)	<.001	0.99	(0.99-0.99)	<.001
SA inpatient days	1.00	(0.99-1.00)	<.001	1.00	(0.99-1.00)	.047	0.99	(0.99-1.00)	.031	1.00	(0.99-1.00)	<.001
Medical inpatient days	1.00	(0.99-1.00)	<.001	0.99	(0.99-1.00)	<.001	0.99	(0.99-0.99)	<.001	1.00	(0.99-1.00)	<.001

- Adjusted for sociodemographic and clinical characteristics, **homeless individuals were less likely to be prescribed any stimulant** (OR = 0.78, CI = 0.76-0.80) **or non-stimulant** (OR = 0.95, CI = 0.92-0.99) **relative to housed individuals.**
- However, among veterans prescribed stimulants, **homeless veterans had more indicators of RPIP relative to the housed group**, including being prescribed **stimulants in the presence of a psychotic disorder** (3.4% vs. 0.7%, p <.001), **anxiety disorder** (41.8% vs. 37.3, p <.001), **cocaine use** (16.5% vs. 2.1, p <.001), and other **stimulant use** (16.2% vs. 1.9%, p<.001).

Prescriptions for Stimulants among Homeless Veterans with Complicating Factors

Variable	Housed (N=125,942)		Homeless (N=13,299)		Chi-square	p
	N	%	N	%		
Psychotic disorder	899	0.7%	447	3.4%	880.60	<.001
Anxiety disorder	46,910	37.3%	5,558	41.8%	105.83	<.001
Cocaine abuse	2,676	2.1%	2,194	16.5%	7362.05	<.001
Other stimulant abuse	2,421	1.9%	2,151	16.2%	7693.51	<.001
Hyperthyroid	383	0.3%	49	0.4%	1.61	.204
Glaucoma	7,348	5.8%	772	5.8%	0.02	.890
Cardiac condition	51,636	41.0%	5,551	41.7%	2.72	.099
Pregnancy	976	0.8%	73	0.6%	8.22	.004

CONCLUSIONS

- Although homeless veterans with mental illness were less likely to be prescribed stimulants relative to housed veterans, stimulant prescriptions for homeless veterans exhibited **more characteristics of risky and potentially inappropriate prescribing relative to housed veterans**.
- Attention to more prudent prescribing of stimulants in the homeless veteran population is warranted.

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