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Supplementary Material

Article Title: Effects of Electroconvulsive Therapy on Suicidal Behavior and Emergency Department Use Among Homeless Veterans: A Propensity Score–Matched Study

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Supplementary Table 1. Core definitions used in analysis

Term	Codes
Homelessness	Stop Codes: 501, 504, 507, 508, 511,515,522,528,529,530,555,556,590 ICD9 Diagnoses: V600 ICD10 Diagnoses: Z590 Inpatient Bed Section: 28, 29, 37, 39
ECT	CPT Codes 90870 90871 4066F ICD9 Procedure Codes: 9426 9427 ICD10 Procedure Codes: GZB0ZZZ GZB1ZZZ GZB2ZZZ GZB3ZZZ
Suicidal Ideation	ICD9 Code: V6284 ICD10 Code: R45851 <i>From SPAN, SBOR reports: Event type= "Ideation"</i>
Suicide Attempt	ICD9 Code: E950, E951, E952, E953, E954, E955, E956, E957, E958 ICD10 Code: T14.91, T36-65 or T71 ending in 2A, 2D, 2XA, or 2XD, X71-X83 <i>Excluding any of the above codes ending in "S"</i> <i>From SPAN, SBOR reports: Event type= "Attempt"</i>
Emergency Department Visit	Stop Codes: 131, 130, 297

Supplementary Table 2. Characteristics in the unmatched patient population demonstrating differences in matched and unmatched populations at baseline

	Did not receive ECT (n= 106836)		Received ECT (n= 1527)		Relative risk ratio	<i>p</i> value
History of Suicidal Behavior	N	%	N	%		
Any suicide attempt in previous year [^]	6599	6.18	285	18.66	3.02	<0.001
Any suicidal ideation in previous year [^]	10801	10.11	447	29.27	2.90	<0.001
Sex[#]						
Female	7394	6.92	171	11.20	1.62	<0.001
Age[#]						
18-29	10819	10.13	98	6.42	0.63	<0.001
30-64	89502	83.78	1288	84.35	1.01	0.546
65+	6511	6.09	141	9.23	1.52	<0.001
Marital Status						
Single	40899	38.28	552	36.15	0.94	0.089
Married	19007	17.79	273	17.88	1.00	0.929
Divorced	42582	39.86	646	42.31	1.06	0.052
Widowed	3221	3.01	50	3.27	1.09	0.556
Unknown	1127	1.05	6	0.39	0.37	0.012
Urban Residence[#]	83964	78.59	1200	78.59	1.00	0.023
Race/Ethnicity[#]						
White	65579	61.38	1215	79.57	1.30	<0.001
Black	32863	30.76	181	11.85	0.39	<0.001
Hispanic	4942	4.63	77	5.04	1.09	0.442
American Indian/Alaska Native	1238	1.16	20	1.31	1.13	0.584
Asian/Pacific Islander	1340	1.25	26	1.70	1.36	0.119
Unknown	874	0.82	8	0.52	0.64	0.204
Service Connection						
None	68336	63.96	978	64.05	1.00	0.946
0-60%	22216	20.79	248	16.24	0.78	<0.001
61-100%	16284	15.24	301	19.71	1.29	<0.001
Service History						
Any combat exposure	12654	11.84	138	9.04	0.76	0.001
Military sexual trauma	8288	7.76	179	11.72	1.51	0.000
OEF/OIF deployment [#]	20042	18.76	267	17.49	0.93	0.205
RX						
Clonazepam	10571	9.89	385	25.21	2.55	<0.001
Lorazepam	9310	8.71	294	19.25	2.21	<0.001
Mirtazapine	11149	10.44	466	30.52	2.92	<0.001

Zolpidem	7115	6.66	265	17.35	2.61	<0.001
Sedative Anxiolytics	19978	18.70	610	39.95	2.14	<0.001
Stimulants [#]	1581	1.48	92	6.02	4.07	<0.001
Anticonvulsive Mood Stabilizer	39706	37.17	1021	66.86	1.80	<0.001
Antidepressants [#]	69102	64.68	1356	88.80	1.37	<0.001
Antipsychotics [#]	43367	40.59	1154	75.57	1.86	<0.001
Benzodiazepines	33161	31.04	881	57.69	1.86	<0.001
Physical Health (PH) Index						
Low PH (0 diagnoses)	24563	22.99	183	11.98	0.52	<0.001
Med PH (1-2 diagnoses)	46910	43.91	509	33.33	0.76	<0.001
High PH (3 or more diagnoses) [#]	35363	33.10	835	54.68	1.65	<0.001
Mental Health (MH) Index						
Low MH (0 diagnoses)						
Med MH (1-2 diagnoses)	16153	15.12	65	4.26	0.28	<0.001
High MH (3 or more diagnoses)	90677	84.87	1461	95.68	1.13	<0.001
Diagnoses						
Chronic Pain [#]	7980	7.47	244	15.98	2.14	<0.001
Anxiety [#]	39901	37.35	899	58.87	1.58	<0.001
Conduct disorder [#]	12429	11.63	141	9.23	0.79	0.004
Bipolar disorder [#]	30957	28.98	826	54.09	1.87	<0.001
Dementia	4597	4.30	89	5.83	1.35	0.004
Depression [#]	86188	80.67	1485	97.25	1.21	<0.001
Dissociative	655	0.61	20	1.31	2.14	0.001
Neuro-developmental Disorder	4570	4.28	121	7.92	1.85	<0.001
Obsessive Compulsive Disorder	2148	2.01	75	4.91	2.44	<0.001
Other Psychosis	18486	17.30	339	22.20	1.28	<0.001
Other Mental Health disorder	35223	32.97	678	44.40	1.35	<0.001
Personality disorder [#]	31392	29.38	664	43.48	1.48	<0.001
Psychotic disorder	36993	34.63	657	43.03	1.24	<0.001
Sleeping disorder [#]	26379	24.69	683	44.73	1.81	<0.001
Somatic disorder	4881	4.57	146	9.56	2.09	<0.001
MDD [#]	39768	37.22	1109	72.63	1.95	<0.001
PTSD	34905	32.67	657	43.03	1.32	<0.001
Substance Use Disorder (Any) [#]	91772	85.90	1165	76.29	0.89	<0.001
Alcohol use disorder	70947	66.41	867	56.78	0.85	<0.001
Cannabis use disorder	29361	27.48	362	23.71	0.86	0.001
Cocaine use disorder	37866	35.44	360	23.58	0.67	<0.001
Opioid use disorder	19935	18.66	256	16.76	0.90	0.059
Service Use (year prior)						

Mental Health Inpatient service [#]	51202	47.9	1065	69.7	1.5	<0.001
Emergency Department (ED) service	67455	63.1	1038	68.0	1.10	<0.001
Number of ED visits						
N±STD	1.86±2.70		2.85±4.10		0.40*	<0.001

Note: ^ denotes the variable was used in exact matching; # denotes the variable was used in matching; * denotes Cohen's *d* statistic

Supplementary Table 3. Logistic regressions comparing propensity-matched groups of homeless veterans who did and did not receive electroconvulsive therapy with sensitivity to any inpatient readmissions

	Crude estimates		
	OR	95% CI	<i>p</i> value
Any suicidal ideation, 30 days after	1.64	(1.34-1.99)	<0.001
Any suicidal ideation, 90 days after	2.00	(1.74-2.31)	<0.001
Any suicidal ideation, 1 year after	1.82	(1.54-2.15)	<0.001
Any suicide attempt, 30 days after	1.50	(1.13-2.00)	<0.001
Any suicide attempt, 90 days after	1.43	(1.15-1.79)	0.001
Any suicide attempt, 1 year after	1.49	(1.26-1.78)	<0.001
Any emergency department use, 30 days after	0.63	(0.52-0.75)	<.001
Any emergency department use, 90 days after	0.79	(0.69-0.92)	0.001
Any emergency department use, 1 year after	0.87	(0.77-1.00)	0.04

Note: Values shown are with sensitivity to any inpatient readmissions within the same time frames. For example, any suicidal ideation 30 days after with sensitivity to any inpatient readmission within 30 days or any emergency department use 1 year after with sensitivity to any inpatient readmission within 1 year.