

Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. List of ICD-10 Codes Used

	ICD-10 codes
Main diagnosis	
Moderate depression	F32.1, F33.1
Severe depression without psychotic symptoms	F32.2, F33.2
Severe depression with psychotic symptoms	F32.3, F33.3
Psychiatric comorbidity	
Anxiety disorder	F40-F48
Personality disorder	F60-F61
Alcohol use disorder	F10
Substance use disorder	F11-F16, F18-F19
Somatic comorbidity	
Ischemic heart disease	I20-I25
Heart failure	I50
Stroke	I60-I66
Cancer	C00-C97
Spinal disease	M45-M54
Suicide attempt	
Poisoning	X60-X69, Y10-Y19
Other method	X70-X84, Y20-Y34
Suicide	X60-X84, Y10-Y34

eTable 2. Anatomical Therapeutic Chemical Classification (ATC) Codes

	ATC
Antidepressants	N06A
Lithium	N05AN
Drugs used in diabetes	A10
Drugs for obstructive airway diseases	R03

eTable 3. National Classification of Health Interventions Codes (KVÄ) for ECT

	KVÄ
ECT, unspecified	DA006
ECT, unilateral	DA024
ECT, bilateral	DA025

eTable 4. Details of ECT

	Mean (SD)	N
Pulse width (ms)	0.50 (0.12)	3818
Frequency (Hz)	62 (20)	3801
Duration (s)	6.7 (1.4)	3778
Current (s)	841 (57)	3784
Charge (mA)	346 (147)	3817
Seizure duration (s)	49 (23)	3705

eTable 5. Baseline Characteristics of Patients With Depression Treated With and Without Electroconvulsive Therapy Based on Inpatient Episodes

	ECT group (n = 11578)	Non-ECT group (n = 31591)	
	n (%)	n (%)	P-value
Sex			<0.001
Male	4507 (38.9)	13786 (43.6)	
Female	7071 (61.1)	17805 (56.4)	
Age, mean years (SD)	57.2 (18.5)	46.3 (19.1)	
Marital status			<0.001
Married/cohabiting	4483 (38.7)	8313 (26.3)	
Divorced	2103 (18.2)	5979 (18.9)	
Widowed	1250 (10.8)	1754 (5.6)	
Unmarried or unknown	3742 (32.3)	15545 (49.2)	
Household			<0.001
Not living alone	6094 (52.6)	15583 (49.3)	
Living alone or unknown	5484 (47.4)	16008 (50.7)	
Education level			<0.001
Low (≤ 9 years) or unknown	3009 (25.7)	8896 (27.9)	
Middle (9–12 years)	5290 (45.2)	14647 (45.9)	
High (>12 years)	3413 (29.1)	8366 (26.2)	
Parental education level			<0.001
Low (≤ 9 years)	2535 (21.9)	5551 (17.6)	
Middle (9–12 years)	2728 (23.6)	9966 (31.5)	
High (>12 years)	1718 (14.8)	6816 (21.6)	
Unknown	4597 (39.7)	9258 (29.3)	
Employment status			<0.001
Employed	5464 (47.2)	17972 (56.9)	
Unemployed or unknown	6114 (52.8)	13619 (43.1)	
Severity of depression			<0.001
Moderate (F32.1, F33.1)	2405 (20.8)	15220 (48.2)	
Severe without psychosis (F32.2, F33.2)	6243 (53.9)	11956 (37.8)	
Severe with psychosis (F32.3, F33.3)	2930 (25.3)	4415 (14.0)	
Psychiatric comorbidity			
Anxiety disorder	4286 (37.0)	11058 (35.0)	<0.001
Personality disorder	919 (7.9)	2719 (8.6)	0.027
Alcohol use disorder	1027 (8.9)	4214 (13.3)	<0.001
Substance use disorder	1118 (9.7)	3915 (12.4)	<0.001
Somatic comorbidity			
Drugs used in diabetes	1071 (9.3)	2447 (7.7)	<0.001
Drugs for obstructive airway diseases	2678 (23.1)	7875 (24.9)	<0.001
Ischemic heart disease	673 (5.8)	1662 (5.3)	0.025
Heart failure	278 (2.4)	852 (2.7)	0.088
Stroke	411 (3.5)	1161 (3.7)	0.538
Cancer	773 (6.7)	1428 (4.5)	<0.001

Spinal disease	788 (6.8)	2291 (7.3)	0.111
Suicide attempt – poisoning			<0.001
Within 365 days	979 (8.5)	3406 (10.8)	
Earlier than 365 days	1041 (9.0)	3133 (9.9)	
No	9558 (82.6)	25052 (79.3)	
Suicide attempt – other method			0.288
Within 365 days	232 (2.0)	711 (2.3)	
Later than 365 days	327 (2.8)	875 (2.8)	
No	11019 (95.2)	30005 (95.0)	
Pharmacotherapy within 3 months before admission			
Antidepressants	9356 (80.7)	20737 (65.6)	<0.001
Lithium	607 (5.2)	864 (2.7)	<0.001
Pharmacotherapy within 3 months after admission			
Antidepressants	10036 (86.7)	26882 (85.1)	<0.001
Lithium	1254 (10.8)	1263 (4.0)	<0.001
Pharmacotherapy within 12 months after admission			
Antidepressants	11090 (95.8)	29023 (91.9)	<0.001
Lithium	2101 (18.1)	2132 (6.7)	<0.001
Compulsory psychiatric treatment			<0.001
Yes	1929 (16.7)	4464 (14.1)	
No	9649 (83.3)	27127 (85.9)	
Family history of mental disorder			0.734
Yes	1304 (11.3)	3595 (11.4)	
No	10274 (88.7)	27996 (88.6)	
Family history of suicide			0.024
Yes	453 (3.9)	1092 (3.5)	
No	11125 (96.1)	30499 (96.5)	

ECT: electroconvulsive therapy; SD: standard deviation.

eTable 6. Results of Univariate and Multivariate Cox Regression Analyses of the Risk of Suicide Within 3 Months After Discharge for Patients With Depression, Based on Inpatient Episodes

	HR (95% CI)	P-value	aHR (95% CI)	P-value
Treatment				
Non-ECT	Reference		Reference	
ECT	0.66 (0.47–0.93)	0.017	0.58 (0.40–0.83)	0.003
Sex				
Male	Reference		Reference	
Female	0.41 (0.31–0.54)	<0.001	0.46 (0.34–0.61)	<0.001
Age	1.01 (1.00–1.01)	0.054	1.03 (1.02–1.04)	<0.001
Marital status				
Married/cohabiting	Reference		Reference	
Divorced	0.97 (0.65–1.44)	0.86	1.05 (0.64–1.70)	0.86
Widowed	0.34 (0.14–0.83)	0.02	0.35 (0.13–0.92)	0.03
Unmarried or unknown	1.06 (0.77–1.44)	0.74	1.41 (0.91–2.18)	0.13
Household				
Not living alone	Reference		Reference	
Living alone or unknown	1.03 (0.79–1.35)	0.83	0.93 (0.65–1.32)	0.67
Education level				
Low (≤9 years) or unknown	Reference		Reference	
Middle (9–12 years)	1.28 (0.90–1.81)	0.17	1.28 (0.89–1.83)	0.18
High (>12 years)	1.46 (0.999–2.12)	0.051	1.42 (0.95–2.11)	0.09
Parental education level				
Low	1.28 (0.87–1.88)	0.21	1.21 (0.80–1.82)	0.37
Middle	0.94 (0.65–1.36)	0.75	1.13 (0.72–1.76)	0.60
High	1.43 (0.99–2.06)	0.60	1.82 (1.13–2.91)	0.01
Unknown	Reference		Reference	
Employment status				
Employed	1.12 (0.85–1.47)	0.43	1.07 (0.78–1.46)	0.69
Unemployed or unknown	Reference		Reference	
Severity of depression				
Moderate (F32.1, F33.1)	Reference		Reference	
Severe without psychosis (F32.2, F33.2)	1.28 (0.95–1.73)	0.11	1.31 (0.96–1.78)	0.09
Severe with psychosis (F32.3, F33.3)	1.16 (0.78–1.72)	0.48	1.13 (0.74–1.74)	0.56
Psychiatric comorbidity				
Anxiety disorder	0.86 (0.66–1.18)	0.41	0.99 (0.72–1.37)	0.97
Personality disorder	0.54 (0.29–1.02)	0.058	0.60 (0.30–1.19)	0.15
Alcohol use disorder	1.30 (0.89–1.89)	0.17	1.07 (0.70–1.62)	0.76
Substance use disorder	1.21 (0.82–1.79)	0.34	1.31 (0.84–2.05)	0.23
Somatic comorbidity				
Drugs used in diabetes	0.69 (0.38–1.23)	0.21	0.67 (0.37–1.21)	0.18
Drugs for obstructive airway diseases	0.68 (0.48–0.97)	0.033	0.76 (0.53–1.09)	0.13

Ischemic heart disease	0.97 (0.51–1.79)	0.93	0.83 (0.44–1.59)	0.58
Heart failure	0.93 (0.38–2.25)	0.87	0.81 (0.32–2.05)	0.66
Stroke	0.52 (0.19–1.39)	0.19	0.41 (0.15–1.13)	0.09
Cancer	1.88 (1.17–3.01)	0.009	1.86 (1.14–3.05)	0.01
Spinal disease	0.79 (0.44–1.42)	0.43	0.77 (0.43–1.40)	0.40
Suicide attempt – poisoning				
Within 365 days 2	1.44 (0.97–2.12)	0.07	1.66 (1.10–2.52)	0.02
Earlier than 365 days 1	0.75 (0.44–1.28)	0.29	0.93 (0.53–1.63)	0.79
No	Reference		Reference	
Suicide attempt – other method				
Within 365 days	2.24 (1.19–4.22)	0.01	1.97 (1.03–3.77)	0.04
Earlier than 365 days	0.87 (0.36–2.12)	0.76	1.01 (0.41–2.53)	0.98
No	Reference		Reference	
Pharmacotherapy				
Antidepressants	0.69 (0.48–1.001)	0.051	0.77 (0.52–1.13)	0.18
Lithium	0.64 (0.35–1.18)	0.16	0.71 (0.38–1.32)	0.28
Compulsory psychiatric treatment				
Yes	1.23 (0.87–1.76)	0.25	1.19 (0.82–1.72)	0.37
No	Reference		Reference	
Family history of mental disorder				
Yes	1.46 (1.01–2.12)	0.046	1.52 (1.04–2.21)	0.03
No	Reference		Reference	
Family history of suicide				
Yes	1.35 (0.72–2.55)	0.35	1.19 (0.63–2.25)	0.60
No	Reference		Reference	

aHR: adjusted hazard ratio; ECT: electroconvulsive therapy; HR: hazard ratio.