

## **Supplementary Material**

Article Title: Suicide Methods and Specific Types of Accidental Death and Fatal Poisoning Among

Discharged Psychiatric Patients: A National Cohort Study

Author(s): Florian Walter, MSc; Matthew J. Carr, PhD; Pearl L. H. Mok, PhD; Sussie Antonsen, MSc;

Carsten B. Pedersen, DrMedSc; Jenny Shaw, PhD; and Roger T. Webb, PhD

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### Supplementary Table 1: ICD-8 and ICD-10 coding ranges for all unnatural causes of death examined

Cause of death	ICD-8	ICD-10
Any suicide	E950-E959	X60- X84
Intentional self-poisoning	E950-E952	X60-X69
Prescribed or illicit drug	E950.0-E950.3	X60-X64
Self-poisoning by other agent	E950.4-E950.9; E951-E952	X65-X69
'Violent' method	E953-E958	X70-X84
Hanging, strangulation, suffocation	E953	X70
Drowning	E954	X71
Firearm & explosive	E955	X72-X75
Sharp instrument	E956	X78
Jumping from a height	E957	X80
All other 'violent' methods	E958	X76; X77; X79; X81-X84
Any accidental death	E800-E929, E940 - E942, E944-E946	V01- X59
Accidental self-poisoning	E850-E877; E942	X40-X49
Prescribed or illicit drug	E850-E859	X40-X44
Other poisoning agent	E860-E877	X45-X49
Transport accident	E800-E845; E927; E940; E941	V01-V99
Accidental fall	E880-E887; E943	W00-W19
All other types of accident	E890-E926; E928; E929; E944; E945; E946	W20-W99; X00-X39; X50-X59
Any fatal poisoning	E850-E877; E942; E950-E952; E980-E982	X40-X49; X60-X69; Y10-Y19
Intentional	E950-E952	X60-X69
Accidental	E950-E952 E850-E877; E942	X40-X49
Undetermined intent	E980-E982	Y10-Y19
Prescribed or illicit drug	E850-E859; E950.0-E950.3; E980.0-E980.3	X40-X44; X60-X64; Y10-Y14

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Other poisoning agent	E950.4-E950.9; E951-E952; E860-E877; E980.4-E980.9; E981-E982	X45-X49; X65-X69; Y15-Y19		
Psychotropic medication Narcotic or hallucinogen	- -	X41; X61; Y11 X42; X62; Y12		
Homicide	E960-E978	X85-Y09		

# <u>Supplementary Table 2</u>: Classification of psychiatric diagnostic categories at first inpatient episode according to ICD-10 and equivalent ICD-8 codes

ICD-10 codes	ICD-8 codes
F10-F19	291.x9, 294.39, 303.x9, 303.20, 303.28, 303.90, 304.x9
F20-F29	295.x9, 296.89, 297.x9, 298.29-298.99, 299.04, 299.05, 299.09, 301.83
F30-F39	296.x9 (excluding 296.89), 298.09, 298.19, 300.49, 301.19
F40-F48	300.x9 (excluding 300.49), 305.x9, 305.68, 307.99
F60	301.x9 (excluding 301.19), 301.80, 301.81, 301.82, 301.84
F50 F70-F79 F84 F90-F98	290.09, 290.10, 290.11, 290.18, 290.19, 292.x9, 293.x9, 294.x9, 309.x9 305.60, 306.50, 306.58, 306.59, 311.xx, 312.xx, 313.xx, 314.xx, 315.xx 299.00, 299.01, 299.02, 299.03 306.x9, 308.0x
	F10-F19 F20-F29 F30-F39 F40-F48 F60 F00-F09 F50 F70-F79 F84

# <u>Supplementary Table 3</u>: Sociodemographic and clinical characteristics of the 47,077 individuals at first discharge from inpatient psychiatric care

Characteristic	n	% of Total (N=47,077)
Gender:		
Male	23,042	49.0
Female	24,035	51.1
Age at first discharge (in years):		
15-19	12,677	26.9
20-24	13,393	28.4
25-29	9353	19.9
30-34	6538	13.9
35-39	3869	8.2
40 and over	1247	2.6
Psychiatric diagnostic category:		
Psychoactive substance abuse	10,488	22.3
Schizophrenia and related disorders	7018	14.9
Mood disorders	10,145	21.5
Neurotic, stress-related, and somatoform disorders	12,148	25.8
Personality disorders	3405	7.2
All other disorders combined	3873	8.2
Type of admission: <sup>a</sup>		
Voluntary	44,270	94.0
Involuntary	2792	5.9
Length of stay:		
Up to 7 days	22,334	47.4
8-30 days	11,340	24.1
31 days to 6 months	11,805	25.1
More than 6 months	1598	3.4
History of self-harm before first discharge <sup>b</sup>	9139	19.4

<sup>&</sup>lt;sup>a</sup> Admission type was not recorded for 15 persons, who were omitted from the denominator for this prevalence estimate

<sup>&</sup>lt;sup>b</sup> Cases of self-harm were delineated using a previously applied algorithm<sup>42</sup> using data extracted from the Psychiatric Central Research Register and the National Patient Register

Supplementary Table 4: Incidence rate ratios (IRRs) for suicide methods according to psychiatric diagnoses

Outcome and psychiatric diagnosis	Discharged patients: N=47,077				
	Number of deaths	Incidence rate per 100,000 person years	IRR <sup>a</sup>	95% CI	
A	37.555	J			
Any suicide method					
Psychoactive substance abuse	186	233.6	31.4	26.8	36.8
Schizophrenia and related disorders	168	245.8	40.4	34.3	47.6
Mood disorders	100	160.2	38.0	30.8	46.9
Neurotic, stress-related, and somatoform disorders	96	102.8	21.9	17.8	27.1
Personality disorders	62	183.8	38.1	29.5	49.3
All other disorders combined	31	83.85	18.9	13.2	27.1
Intentional self-poisoning					
Psychoactive substance abuse	62	77.9	42.6	32.0	56.6
Schizophrenia and related disorders	38	55.6	35.7	25.3	50.3
Mood disorders	43	68.9	61.6	44.0	86.1
Neurotic, stress-related, and somatoform disorders	31	33.2	26.8	18.4	39.1
Personality disorders	25	74.1	57.4	38.0	86.6
All other disorders combined	15	40.6	34.5	20.5	58.1
'Violent' method					
Psychoactive substance abuse	124	155.7	27.8	23.0	33.8
Schizophrenia and related disorders	130	190.2	42.1	34.9	50.8
Mood disorders	57	91.3	29.6	22.5	38.9
Neurotic, stress-related, and somatoform disorders	65	69.6	20.2	15.7	26.1
Personality disorders	37	109.7	31.2	22.4	43.4
All other disorders combined	16	43.3	13.3	8.1	21.9

<sup>&</sup>lt;sup>a</sup> Estimated IRRs were adjusted for gender, age- and calendar year

**Supplementary Table 5:** Incidence rate ratios (IRRs) for types of accidental death according to psychiatric diagnoses

Outcome and psychiatric diagnosis	Discharged patients: N=47,077				
	Number of deaths	Incidence rate per 100,000 person years	IRR <sup>a</sup>	95% CI	
Any accidental death					
Psychoactive substance abuse	312	391.9	21.4	19.0	24.1
Schizophrenia and related disorders	51	74.6	4.8	3.6	6.3
Mood disorders	23	36.9	3.6	2.4	5.4
Neurotic, stress-related, and somatoform disorders	57	61.0	5.1	3.9	6.6
Personality disorders	26	77.1	6.0	4.1	8.9
All other disorders combined	25	67.6	5.4	3.6	8.0
Accidental self-poisoning					
Psychoactive substance abuse	231	290.1	78.3	66.5	92.1
Schizophrenia and related disorders	31	45.4	14.9	10.3	21.4
Mood disorders	6	9.6	4.2	1.9	9.5
Neurotic, stress-related, and somatoform disorders	33	35.3	14.6	10.2	20.9
Personality disorders	14	41.5	18.0	10.6	30.6
All other disorders combined	17	46.0	22.2	13.7	36.0
All other accidental deaths					
Psychoactive substance abuse	81	101.7	7.1	5.7	8.8
Schizophrenia and related disorders	20	29.3	2.3	1.5	3.6
Mood disorders	17	27.2	3.4	2.1	5.4
Neurotic, stress-related, and somatoform disorders	24	25.7	2.7	1.8	4.0
Personality disorders	12	35.6	3.4	1.9	6.0
All other disorders combined	8	21.6	2.1	1.0	4.1

<sup>&</sup>lt;sup>a</sup> Estimated IRRs were adjusted for gender, age- and calendar year