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Risk of Inpatient Suicide in the Psychiatry Ward

Patients with mental health conditions requiring admission are at higher risk of suicide than the general population, and inpatient admission has often been regarded as protective to the patient and to society[1]. Inpatients receive thorough care, and the provision of their safety is a main focus of their acute psychiatry treatment. This includes protection against suicide.

Who is most at risk of inpatient suicides?

Interestingly, neither age, gender, marital status, employment nor educational qualifications are predictive factors for inpatient suicide. Patients with schizophrenia have a similar risk to those with an affective disorder, however the risk does decline differently. Depressive symptoms, a past history of self harm or attempted suicide are all predictive factors. There has been a suggestion that prior inpatient admission is also a risk factor[8,9].

Where, when and how do inpatient suicides occur?

An acute mental health ward is seven times more likely to report an inpatient suicide compared to a forensic mental health ward, mental health rehabilitation ward or an older adult mental health ward. The majority of attempts occur in the bedroom, followed by the toilet and the shower room, with over 80% of these suicides attempted by strangulation with an item of clothing such as a belt or lace[8,9].

Scale of the problem

A meta-analysis in 2015 showed that the overall suicide rate of inpatients with mental health conditions was 145 per 100,000 inpatient years.[2] It is difficult to interpret whether the trend for inpatient suicide is increasing or decreasing based on data from available literature. Determining the trend is further confounded by the rate of suicide in the general population and shorter inpatient stays. However, according to empirical studies in the UK, rates were generally increasing between 1950-1990 but falling from 1998 to date.

When comparing the situation between countries with single studies, an analysis in Germany shows a rate of 76 per 100,000[5], to 116 per 100,000 in Japan[6] and 368 per 100,000 in Australia[7]. Note that some of this data stretches back over a number of years and may not be a fully accurate representation of the difference of the scale of the problem in these countries today. Further detail is in Table 1.

Risk management

Research has shown that the vast majority of suicide preventions occurred by staff finding their patients during the suicide attempt, followed by a fellow patient. When prevented by staff, the staff members were usually performing intermittent observations or being 'inquisitive and vigilant'[8,9]. Regular observation has been cited as the most effective intervention[9-15]:

1. Close observation or one-to-one observation with the use of a standardised patient data support sheet identifying target behaviours that can be used at hand overs between shifts;
2. 69 hospitals in the USA employed observation of suicidal patients every fifteen minutes and reported that this was advantageous to patient safety, although resource intensive;
3. Staffing decisions should be made on the basis of more precise information about treatment requirements, not just staffing ratios;
4. Observation may be therapeutic as well as preventative. Observers could improve patient care by actively supporting them in particular interventions. However, observers' perceived attitudes could cause patient distress, requiring the need for careful supervision of observers.

Discharge protocols

1. Make sure the patient is involved in discharge planning;
2. Schedule follow-up within one week of discharge;
3. Discuss barriers to care;
4. Provide the number to a crisis centre;
5. Review whether the patient has access to lethal means;
6. Include written material, such as if the patient's condition should deteriorate and how to contact the emergency department;
7. Make sure the patient confirms understanding of their care plan;
8. Send relevant information to appropriate healthcare providers; and
9. Ensure the patient senses your care and concern[9-15].

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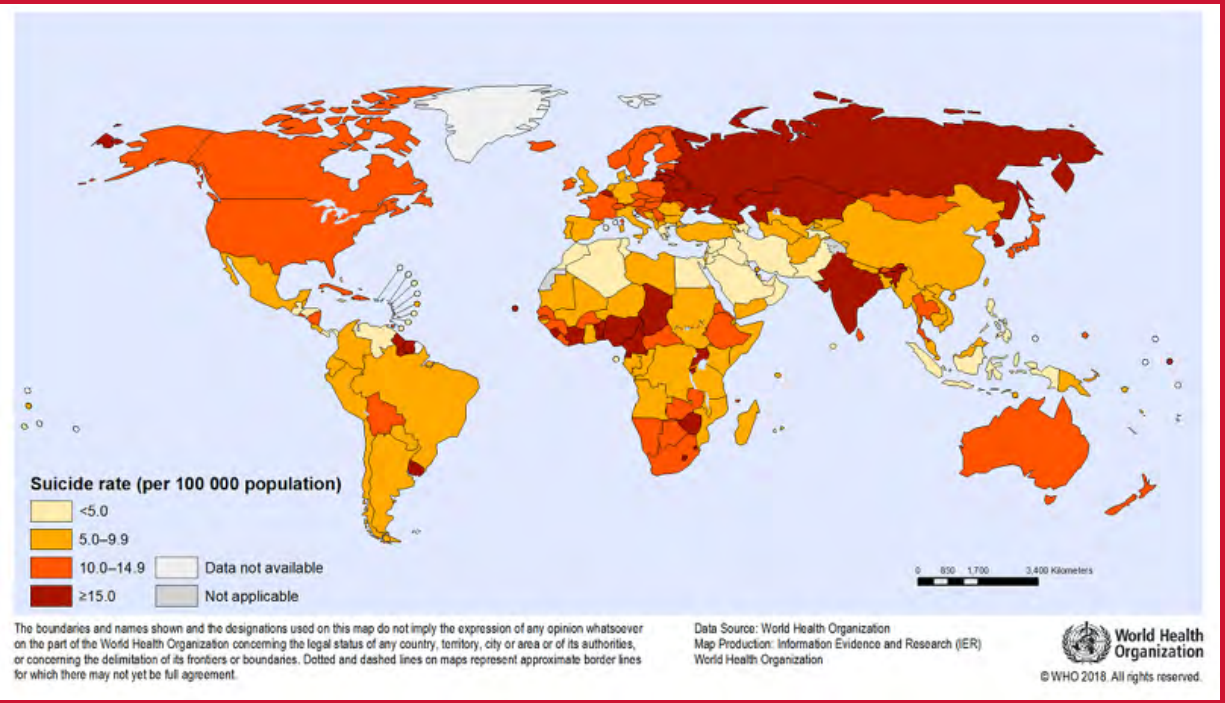
Age-standardized suicide rates (per 100,000 population) both sexes, 2016



Inpatient suicide rates, per country[3]

Country	Period	Scope	Prop of all suicides	Rate per 1k adms pa	Rate per 100k population pa	Paper
Australia	1972-1982	Hospital		1.01		Goldney, Positano, Spence and Rosenman (1985)
Australia	1973-1993	Hospital		3.25		Ganesvaran and Shah (1997)
Austria	1987-1994	Region		1.32		Deisenhammer, DeCol, Honeder and Hinterhuber (2000)
Canada	1986-1991	Region	0.01		16.40	Proulx, Lesage and Grudberg (1997)
Denmark	1950-1964	Hospital		1.20		Jensen (1966)
Denmark	1971-1981	Nation			1.42	Barner-Rasmussen, Dupont and Bille (1986)
Finland	1964-1972	Region		1.40		Niskanen, Lonnqvist, Achte and Rinta-Manty (1974)
Finland	1967-1992	Hospital		0.40		Talminen and Helenius (1994)
Finland	1971-1987	Region		2.60	1.80	Taiminen and Lehtinen (1990)
Germany	1950-1976	Region		0.06		Gorenc and Bruner (1985)
Germany	1955-1970	Region		1.00		Ritzel (1974)
Germany	1962-1968	Region		0.06		Koester and Engels (1970)
Germany	1966-1984	Hospital		0.99		Armbruster (1986)
Germany	1970-1992	Hospital		1.99		Finzen, Oestereich and Hoffmann-Richter (1999)
Germany	1970-2003	Region		2.02		Wolfersdorf, Keller and Kaschka (1997)
Germany	1970-2003	Region		1.65		Wolfersdorf, Keller and Vogl et al (2007)
Germany	1972-1978	Hospital		4.25		Schlosser and Strehle-Jung (1982)
Germany	1989-1999	Hospital		0.76	0.34	Spiebl, Hubner-Liebermann and Cording (2002)
Germany	2001-2004	Region		0.54		Wolfersdorf, Franke, Franz and Mattern (2005)
Hong Kong	1997-1999	Nation	0.04	2.69	0.45	Dong, Ho and Kan (2005)
Ireland	1974-1993	Region			0.39	Coakley, Carey and Owens (1996)
Netherlands	1970-1974	Nation	0.07	2.07		de Graaf (1979)
Netherlands	1984-1999	Nation	0.15	1.52		Brunenberg and Bijl (1998)
New Zealand	1984-1989	Region		2.04		Read, Thomas and Mellsop (1993)
Norway	1965-1974	Nation		2.26		Hësso (1977)
Slovenia	1983-1993	Hospital		2.43		Stebiaj, Tavcar and Dernovsek (1999)
Sweden	1977-1984	Region		1.60	2.80	Sundqvist-Stensman (1987)
Switzerland	1920-1979	Hospital			18.80	Maier (1981)
Switzerland	1961-1980	Region		1.80		Modestin (1982)
Switzerland	1971-1981	Region		4.52		Modestin and Hoffmann (1989)
UK	1963-1992	Region		1.37		Powell, Geddes, Deeks et al (2000)
UK	1972-1981	Region			0.66	Langley and Bayatti (1984)
UK	1976-1981	Hospital		4.30	2.80	Fernando and Storm (1984)
UK	1977-1985	Region			0.63	Goh, Salmons and Whittington (1989)
UK	1987-1991	Region			0.33	Blain and Donaldson (1995)
UK	1996-2000	Nation	0.04		0.28	Department of Health (2001)
UK	2000-2004	Nation	0.04		0.39	Appleby, Shaw and Kapur et al (2006)
USA	1946-1962	Hospital		0.78		Chapman (1965)
USA	1959-1966	Nation		5.66		Farberrow, Ganzler, Cutter and Reynolds (1971)
USA	1975-1977	Region		1.90		Gale, Mesnikoff, Fine and Talbott (1980)

Table 1

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13. Joint Commission: Decoding and Treating Suicidal Ideation in All Settings
14. Joint Commission: Incidence and Methods of Suicide in Hospitals in the United States
15. American Academy of Family Physicians: Immediate Action Protocol: A Tool to Help Your Practice Assess Suicidal Patients