

### 3 Suicide

Suicide is the term used to describe purposely self-inflicted injury (WHO 1977, WHO 1996). WHO classifies the cause of suicide by the method used. These methods include *hanging, strangulation or suffocation, poisoning by overdose, shooting by firearm (gun), jumping from a high place or lying in front of moving object, drowning* and using a *sharp or blunt object* to cause bleeding or other type of injury.

Suicide death data from 1986 to 2002 were used to describe the demographic profile of suicide in NSW. Death data during 1998–2002 were used for the majority of the analyses, but trend analyses used death data from 1986 to 2002.

Suicide was the leading cause of injury death from 1998–2002 and accounted for 30% of all injury deaths (see Table 2). During these years, 3822 people died from suicide, at an overall rate of 11.7/100,000 population and 80% were male. Approximately 743 people died each year from 1986 to 2002 as a result of a suicide.

Figure 4 shows the yearly trend in death rates for suicide from 1986 to 2002. There was a statistically significant increase in the suicide death rates between 1986 and 1997, and a statistically significant decline from 1997 to 2002 (Figure 4). However, overall there was no significant trend in suicide deaths from 1986 to 2002.

**Figure 4. Yearly trend in death rates for suicide: NSW, 1986–2002**

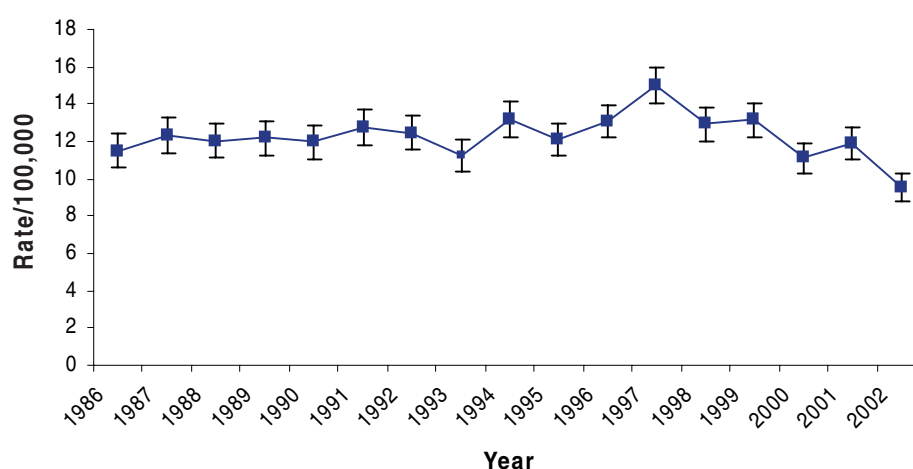


Figure 5 shows the age-specific death rates for suicide for the period 1998–2002. Although suicide deaths occurred in all age groups over 10 years of age, people aged 30–39 years and aged 85+ years had the highest and second highest rates of death due to suicide respectively. Suicide deaths in people aged

30–39 accounted for 24% of all suicide deaths between 1998 and 2002, whereas people aged 85+ years accounted for only 2% of all suicide deaths during the same years. There was also an upward trend in age-specific suicide death for those age 55 years or older.

Previous data from 1995 to 1999 showed people aged 20–29 were at greatest risk of suicide and other age groups had higher levels of risk than people aged 85 years and older (Schmertmann and Williamson, 2002). A separate analysis of the trend in suicide rates for people aged 20–39 by five-year age groups (i.e., 20–24, 25–29) confirmed that people aged 30–34 and 35–39 years had higher rates than people aged 20–24 and 25–29 years from 2000–2002.

**Figure 5. Age-specific death rates for suicide: NSW, 1998–2002**

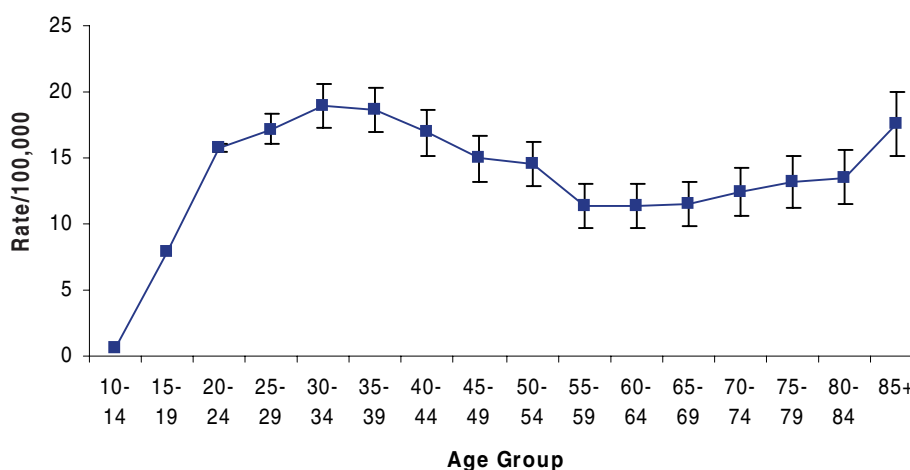


Table 3 shows the number of suicide deaths and death rates by the method used for all persons, males and females, during 1998–2002. The results in Table 3 are similar to data reported for suicide from 1995 to 1999 (Schmertmann and Williamson, 2002). *Hanging, strangulation or suffocation* and *poisoning* were the suicide methods used most often and accounted for 44% and 30% of all suicides respectively. Males accounted for 83% of all suicides by *hanging, strangulation or suffocation* and 73% of all suicides by *poisoning*.

*Hanging, strangulation or suffocation* was the suicide method used most often by males and accounted for 46% of all male suicide deaths. The rate for males exceeded the corresponding rate for females for each suicide method in Table 3. Male rates were significantly higher than females for all suicide methods except *drowning*. Male rates were more than five times higher than the corresponding female rates for suicide by *firearm* and by *hanging, strangulation or suffocation*.

Poisoning was the most common suicide method used by females during 1998–2002 and accounted for almost 40% of all female suicides. Nonetheless, male *poisoning* suicide death rates were still 2.9 times higher than those in females.

Table 4 shows suicide deaths by age group and method used in NSW for 1998–2002. *Hanging, strangulation or suffocation* was the leading suicide method for persons aged 10–44 years and 65+ years, while poisoning ranked highest for persons aged 45–64 years followed by *hanging, strangulation or suffocation*. Suicide by *firearms* was the second most common method of suicide for 10- to 14-year-olds and the third most common method all people aged 35+ years.

**Table 3. Number of suicide deaths and death rates/100,000\* by method used: NSW, 1998–2002**

Method	All persons		Males		Females		Ratio <sup>‡</sup>
	N	Rate <sup>†</sup>	N	Rate <sup>†</sup> (CI) <sup>††</sup>	N	Rate <sup>†</sup> (CI)	
Hanging, strangulation or suffocation	1700	5.20	1415	8.80 (8.34–9.26)	285	1.74 (1.53–1.94)	5.07
Poisoning	1152	3.54	847	5.32 (4.96–5.68)	305	1.84 (1.63–2.05)	2.89
Firearm	354	1.08	333	2.14 (1.90–2.37)	21	0.13 (0.07–0.18)	16.53
Jumping from building/high place	224	0.69	170	1.07 (0.90–1.23)	54	0.33 (0.24–0.42)	3.23
Jumping/lying in front of moving object	126	0.39	100	0.61 (0.49–0.73)	26	0.16 (0.10–0.22)	3.85
Other and unspecified means	112	0.34	84	0.52 (0.41–0.63)	28	0.17 (0.10–0.23)	3.12
Drowning	77	0.24	42	0.29 (0.20–0.38)	35	0.21 (0.14–0.28)	1.38
Sharp or blunt object	77	0.24	60	0.38 (0.29–0.48)	17	0.10 (0.05–0.15)	3.79
All suicide	3822	11.71	3051	19.12 (18.44–19.80)	771	4.67 (4.34–5.00)	4.09

\* Death rates have been age-adjusted using the 2001 Australian census population. † Rate/100,000. ‡ Mortality ratio for male/female. ††95% confidence interval

These results are also comparable to previous data, with the exception of the third leading method of suicide. From 1995 to 1999, *firearms* were the third leading method of suicide for all age groups over age 14 years (Schmertmann and Williamson, 2002). From 1998–2002, *firearms* were the third leading cause for people aged 15–24 years and people aged over 34 years. For people aged 25–34 years, *jumping from a building or other high place* was the third leading method of suicide during 1998–2002.

## SUMMARY

Suicide was the leading cause of injury death for people in NSW during 1998–2002, accounting for approximately 743 deaths each year. Analysis of the suicide death rates found no statistically significant trend overall during 1986–2002. However, there was evidence of a statistically significant incline from 1986 to 1997 and then a statistically significant decline from 1997 to 2002.

Compared to data on suicide deaths from 1995 to 1999, the pattern of age-specific rates has changed. People aged 30–39 years had the highest death rates due to suicide in NSW during 1998–2002. There was also an upward trend in suicide incidence from age 55 years onward, with people aged 85+ years having suicide death rates almost as high as those for people aged 30–39 years.

The leading suicide methods during 1998–2002 in NSW were *hanging, strangulation or suffocation* and *poisoning*. *Hanging, strangulation or suffocation* was the suicide method used most often by persons aged 10–34 years and 65+ years, while *poisoning* ranked highest for persons aged 35–64 years followed fairly closely by *hanging, strangulation or suffocation*.

Males accounted for nearly 80% of all suicide deaths in NSW during 1998–2002. In particular, they accounted for 83% of all suicides by *hanging, strangulation or suffocation* and 73% of all suicides by *poisoning*. Males also had significantly higher rates for each method of suicide used in comparison to females, with the exception of *drowning*.

These results indicate that suicide is a serious public health problem in NSW, especially amongst males and that *hanging, strangulation or suffocation* was the method used most often.

Further study may be needed to understand the age-related factors which influence the choice of suicide method used, especially for males compared to females. It would also be useful for future coding systems to allow for more differentiation within the broader category of *hanging, strangulation or suffocation* because different age groups may use one of the three more often compared to other age groups.

**Table 4. Suicide deaths\* by age group and method used†: NSW, 1998–2002**

Rank	Age group							Total
	10–14	15–24	25–34	35–44	45–54	55–64	65+	
1	Hanging, strangulation or suffocation 11	Hanging, strangulation or suffocation 303	Hanging, strangulation or suffocation 463	Hanging, strangulation or suffocation 383	Poisoning 255	Poisoning 125	Hanging, strangulation or suffocation 192	Hanging, strangulation or suffocation 1700
2	Firearm #	Poisoning 74	Poisoning 233	Poisoning 302	Hanging, strangulation or suffocation 236	Hanging, strangulation or suffocation 112	Poisoning 163	Poisoning 1152
3	Jumping/lying in front of moving object #	Firearm 43	Jumping from high place 53	Firearm 65	Firearm 53	Firearm 47	Firearm 97	Firearm 354
4		Jumping from high place 40	Firearm 48	Jumping from high place 55	Jumping from high place 32	Jumping from high place 18	Drowning 32	Jumping from high place 224
5		Jumping/lying in front of moving object 34	Jumping/lying in front of moving object 41	Other and unspecified method 26	Other and unspecified method 20	Other and unspecified method 15	Jumping from high place 26	Jumping/lying in front of moving object 126
6		Other and unspecified method 12	Other and unspecified method 20	Jumping/lying in front of moving object 25	Sharp or blunt object 19	Sharp or blunt object 9	Other and unspecified method 18	Other and unspecified method 112
7		Sharp or blunt object 5	Sharp or blunt object 12	Sharp or blunt object 17	Drowning 13	Drowning 9	Sharp or blunt object 15	Drowning 77
8		Drowning #	Drowning 6	Drowning 13	Jumping/lying in front of moving object 11	Jumping/lying in front of moving object 9	Jumping/lying in front of moving object 5	Sharp or blunt object 77

\* Numbers represent the number of cases. † See Appendix 4 for suicide method codes. # Cell size less than five cases