

## 5 Poisoning

Poisoning is an unintentional cause of injury death (WHO 1977, WHO 1996). WHO classifies the cause of poisoning deaths by the substance causing the poisoning. These substances include *narcotics and hallucinogens, other pharmaceuticals, antidepressants, barbiturates and tranquilisers, gases and vapours* and *alcohol*. A poisoning can also be intentional. A self-inflicted poisoning resulting in death is classified as a suicide and a poisoning inflicted on one person by another resulting in death is classified as an interpersonal violence death (WHO 1977, WHO 1996). Deaths due to intentional poisoning are covered in other chapters (see suicide and interpersonal violence chapters).

Poisoning death data from 1986 to 2002 were used to describe the demographic profile of poisoning deaths 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.

Poisoning was the third leading cause of injury death from 1998–2002 and accounted for almost 9% of all injury deaths (see Table 2). During these years, 1118 people died from poisoning, at an overall rate of 3.4/100,000 population and 73% were male. Approximately 138 people died each year from 1986 to 2002 as the result of a poisoning.

Figure 8 shows the yearly trend in death rates for poisoning from 1986 to 2002. There was a statistically significant increase in poisoning death rate between 1986 and 2002.

**Figure 8. Yearly trend in death rates for poisoning: NSW, 1986–2002**

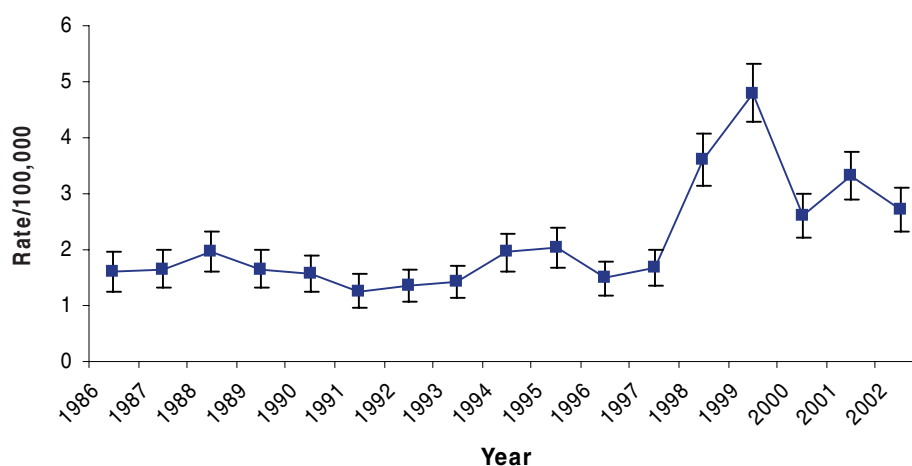


Figure 9 shows the age-specific death rates for poisoning between 1998 and 2002. People aged 25–44 years had the highest rates of death due to poisoning. Poisoning deaths in people aged 25–44 years accounted for 61% of all poisoning deaths between 1998 and 2002. The pattern of age-specific death rates for poisoning in Figure 9 is similar to the pattern of age-specific death rates for poisoning from 1995 to 1999 (Schmertmann and Williamson, 2002).

**Figure 9. Age-specific death rates for poisoning: NSW, 1998–2002**

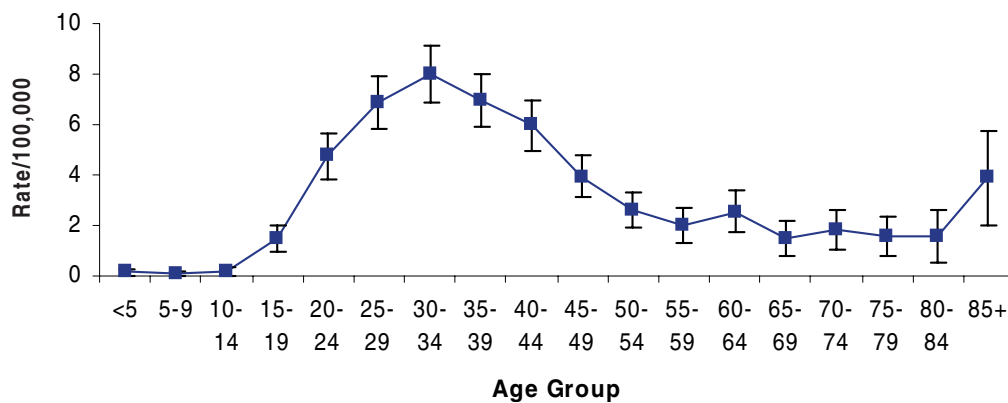


Table 7 shows the number of poisoning deaths and death rates by type of substance for all persons, males and females, during 1998–2002. These results are similar to data reported for poisoning deaths from 1995 to 1999 (Schmertmann and Williamson, 2002). *Narcotics and hallucinogens* and *other pharmaceuticals* were the types of substances that led to a poisoning death most often and accounted for 42% and 16% of all poisoning deaths respectively. Males accounted for 84% of all *narcotics and hallucinogens* poisoning deaths and 64% of all *other pharmaceuticals* poisoning deaths.

*Narcotics and hallucinogens* were the leading type of substances for male poisoning deaths and accounted for 48% of all male poisoning deaths. The rate for males exceeded the corresponding rate for females for each type of substance in Table 7. Male rates were significantly higher for all types of substances causing death, except for *antidepressants, barbiturates and tranquilisers*. Male poisoning death rates were more than five times higher than the corresponding female poisoning death rates for *narcotics and hallucinogens*.

*Other pharmaceuticals* were the leading type of substance in female poisoning deaths during 1998–2002 and accounted for 54% of all female poisoning deaths. Nonetheless, males had a poisoning death rate two times the corresponding female rate for this type of substance.

Table 8 shows poisoning deaths by age group and type of substance in NSW for 1998–2002. *Narcotics and hallucinogens* caused the highest number of poisoning deaths in people aged 15–44 years. *Other pharmaceuticals* caused the highest number of poisoning deaths in people aged 45+ years.

**Table 7. Number of poisoning deaths and death rates/100,000\* by type of substance: NSW, 1998–2002**

Type of substance	All persons		Males		Females		Ratio <sup>‡</sup>
	N	Rate <sup>†</sup>	N	Rate <sup>†</sup> (CI) <sup>††</sup>	N	Rate <sup>†</sup> (CI)	
Narcotics and hallucinogens	473	1.44	399	2.44 (2.20–2.68)	74	0.45 (0.35–0.56)	5.39
Other pharmaceuticals	453	1.38	293	1.80 (1.59–2.01)	160	0.97 (0.82–1.12)	1.86
Antidepressants, barbiturates and tranquilisers	117	0.36	64	0.40 (0.30–0.50)	53	0.32 (0.24–0.41)	1.24
Gases and vapours	28	0.08	25	0.15 (0.09–0.21)	#		–
Alcohol	26	0.08	23	0.14 (0.08–0.20)	#		–
Other and unspecified	21	0.07	17	0.11 (0.06–0.17)	#		–
All poisoning	1118	3.41	821	5.04 (4.70–5.39)	297	1.80 (1.59–2.00)	2.80

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

## SUMMARY

Poisoning was a leading cause of injury death for people in NSW, accounting for approximately 138 deaths each year from 1986 to 2002. Analysis of the poisoning death rates over 1986 to 2002 showed no statistically significant trend. Compared to data on poisoning deaths from 1995 to 1999 (Schmertmann and Williamson, 2002), the pattern of age-specific rates has remained unchanged. People aged 25–44 years had the highest rates of death due to poisoning in NSW during 1998–2002.

*Narcotics and hallucinogens* and *other pharmaceuticals* were the types of substances that led to a poisoning death most often during 1998–2002 in NSW. *Narcotics and hallucinogens* caused the highest number of poisoning deaths in people aged 15–44 years. *Other pharmaceuticals* caused the highest number of poisoning deaths in people aged 45+ years.

Males accounted for nearly 73% of all poisoning deaths in NSW during 1998–2002. They accounted for 84% of all *narcotics and hallucinogens* poisoning deaths and 64% of all *other pharmaceuticals* poisoning deaths. Male rates were significantly higher for all types of substances causing death, except for *antidepressants, barbiturates and tranquilisers*.

These results indicate that poisoning is still a serious public health problem for people in NSW, especially those aged 25–44 years. *Narcotics and hallucinogens* and *other pharmaceuticals* were the substances used most often that resulted in a poisoning death. More research needs to be done to identify the factors associated with poisoning due to use of pharmaceuticals by people aged 45+ years (i.e., unintentional poisonings) and narcotics and hallucinogens by people aged 25–44 years (i.e., overdoses) in NSW.

Table 8. Poisoning deaths\* by age group and substance used: NSW, 1998-2002

Rank	Age group										Total
	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	
1	Other pharmaceuticals #	Narcotics and hallucinogens #	Other and unspecified #	Other pharmaceuticals #	Narcotics and hallucinogens 71	Narcotics and hallucinogens 190	Narcotics and hallucinogens 142	Other pharmaceuticals 60	Other pharmaceuticals 24	Other pharmaceuticals 41	Narcotics and hallucinogens 473
2				Other and unspecified #	Other pharmaceuticals 51	Other pharmaceuticals 132	Other pharmaceuticals 140	Narcotics and hallucinogens 47	Antidepressants, barbiturates and tranquilisers 22	Antidepressants, barbiturates and tranquilisers 13	Other pharmaceuticals 453
3				Narcotics and hallucinogens #	Antidepressants, barbiturates and tranquilisers 6	Antidepressants, barbiturates and tranquilisers 23	Antidepressants, barbiturates and tranquilisers 28	Antidepressants, barbiturates and tranquilisers 25	Narcotics and hallucinogens 14	Narcotics and hallucinogens 7	Antidepressants, barbiturates and tranquilisers 117
4					Other and unspecified #	Gases and vapours 11	Gases and vapours 6	Alcohol #	Alcohol 6	Alcohol 7	Gases and vapours 28
5					Gases and vapours #	Alcohol #	Alcohol #	Other and unspecified #	Gases and vapours #	Other and unspecified 7	Alcohol 26
6					Alcohol #	Other and unspecified #	Other and unspecified #	Gases and vapours #	Other and unspecified #	Gases and vapours #	Other and unspecified 21

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