

8 Drowning

Drowning is an unintentional cause of injury death (WHO 1977, WHO 1996). WHO classifies the cause of drowning deaths by the location in which the drowning occurred. The locations of drowning include a *bath tub*, *swimming pool*, *natural water* or a *boat-related* location. Drowning deaths can also be intentional. A self-inflicted drowning injury that results in death is classified as a suicide. Deaths due to intentional drowning are covered in the suicide chapter.

Drowning death data from 1986 to 2002 were used to describe the demographic profile of drowning 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.

Drowning was the sixth leading cause of injury death from 1998–2002 and accounted for almost 4% of all injury deaths (see Table 2). During these years, 468 people died from drowning, at an overall rate of 1.6/100,000 population and 78% were male. Approximately 102 people died each year from 1986 to 2002 as the result of drowning.

Figure 14 shows the yearly trend in death rates for drowning from 1986 to 2002. There was a statistically significant decline in the overall drowning death rate between 1986 and 2002.

Figure 14. Yearly trend in death rates for drowning: NSW, 1986–2002

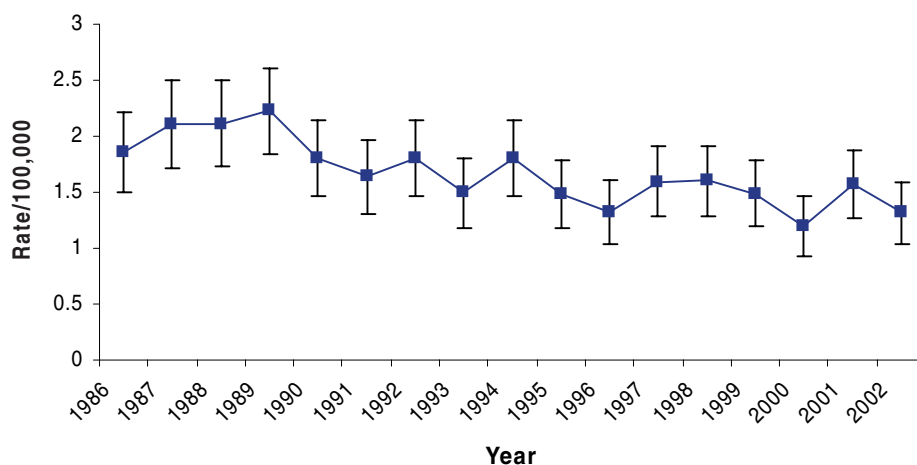


Figure 15 shows the age-specific death rates for drowning between 1998 and 2002. Children under age five years and people aged 75–79 years had the highest rates of death due to drowning. Drowning deaths in children aged under five years and people aged 75–79 years accounted for 16% and 5% respectively of all drowning deaths between 1998 and 2002.

The pattern of age-specific death rates for drowning in Figure 15 is similar to the pattern of age-specific death rates for drowning from 1995 to 1999 (Schmertmann and Williamson, 2002) with one exception. The drowning death rate for people aged 75–79 years was not one of the highest rates during 1995 to 1999.

Figure 15. Age-specific death rates for drowning: NSW, 1998–2002

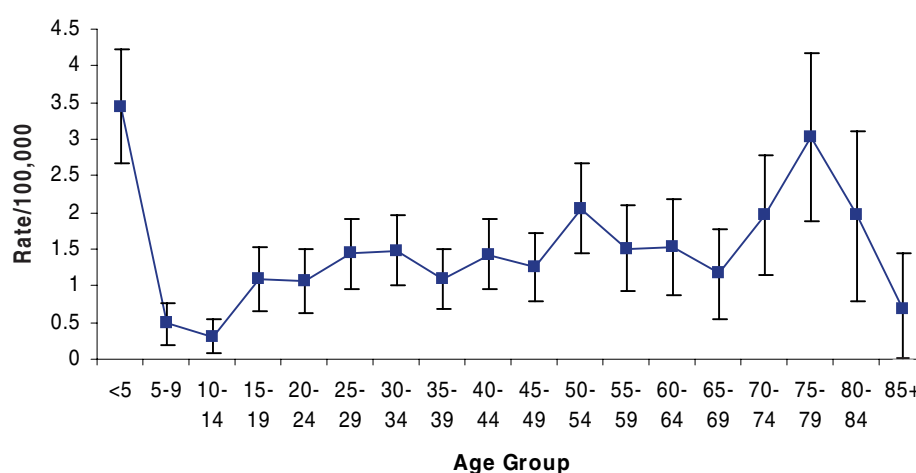


Table 13 shows the number of drowning deaths and death rates by location for all persons, males and females, during 1998–2002. *Natural water* and *pools* were the locations that led to a drowning death most often and accounted for 48% and 19% of all drowning deaths respectively. Males accounted for 85% of all drowning deaths in *natural water* and 76% of all drowning deaths in *pools*.

Natural water was the location of the majority of male drowning deaths and accounted for 53% of all male drowning deaths. The rate for male drowning deaths exceeded the corresponding rate for females for each location in Table 13 except for drowning in *bathtubs*. Male drowning death rates were also significantly higher for all locations except for drowning in bathtubs. Male death rates were more than five times higher than the corresponding female death rates for drowning in natural water incidents.

Natural water was also the location of the majority of female drowning death during 1998–2002 and accounted for 34% of all female drowning deaths.

The results in Table 13 are similar to data reported for drowning deaths from 1995 to 1999 (Schmertmann and Williamson, 2002).

Table 14 shows drowning deaths by age group and location in NSW for 1998–2002. *Bathtubs* were the location where the majority of drowning deaths occurred in children under age one year. *Pools* were the location where the majority of drowning deaths occurred in children aged one to four years. For people over age five years, *natural water* was the location where the majority of drowning deaths occurred.

Table 13. Number of drowning deaths and death rates/100,000* by location: NSW, 1998–2002

Location	All persons		Males		Females		Ratio‡
	N	Rate†	N	Rate† (CI) ††	N	Rate† (CI)	
Natural water	227	0.70	192	1.19 (1.02–1.36)	35	0.21 (0.14–0.28)	5.55
Pools	91	0.28	69	0.44 (0.33–0.54)	22	0.13 (0.08–0.19)	3.30
Other and unspecified	55	0.17	42	0.26 (0.18–0.34)	13	0.08 (0.04–0.12)	3.29
Boat-related	49	0.15	45	0.28 (0.20–0.36)	#		–
Bathtub	46	0.14	18	0.11 (0.06–0.16)	28	0.17 (0.11–0.23)	0.65
All drowning	468	1.44	366	2.28 (2.04–2.51)	102	0.62 (0.50–0.74)	3.68

* 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

Drowning was a leading cause of injury death for people in NSW, accounting for approximately 102 deaths each year from 1986 to 2002. Analysis of the trend for drowning death rates showed a statistically significant decline over the period 1986 and 2002.

Compared to data on drowning deaths from 1995 to 1999 (Schmertmann and Williamson, 2002), the pattern of age-specific rates for 1998–2002 is similar for most age groups. Children under age five years and people aged 75–79 years had the highest rates of death due to drowning in NSW during 1998–2002.

Natural water and *pools* were the locations that led to a drowning death most often during 1998–2002 in NSW. *Bathtubs* were the location where the majority of drowning deaths occurred in children under age one year. *Swimming pools* were the location where the majority of drowning deaths occurred in children aged one to four years. For people over age five years, natural water the location where the majority of drowning deaths occurred.

Males accounted for nearly 78% of all drowning deaths in NSW during 1998–2002. They accounted for 85% of all drowning deaths in *natural water* and 76% of all drowning deaths in *pools*. Male drowning death rates were also significantly higher for all locations except for drowning in *bathtubs*.

These results indicate that drowning is still a serious public health problem for people in NSW. People of all ages are at risk for drowning in various locations. The high rates in children under age five years warrant particular further attention.

Table 14. Drowning deaths* by age group and location†: 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	Bathtub 11	Pools 32	Natural water 6	Natural water #	Natural water 34	Natural water 41	Natural water 42	Natural water 44	Natural water 20	Natural water 28	Natural water 227
2	Pools #	Other and unspecified location 10	Pools #	Pools #	Pools 8	Boat-related 14	Other and unspecified location 9	Other and unspecified location 7	Boat-related 10	Pools 20	Pools 91
3	Other and unspecified location #	Natural water 10	Other and unspecified location #	Bathtub #	Other and unspecified location #	Pools 7	Boat-related 8	Boat-related 7	Pools 7	Other and unspecified location 13	Other and unspecified location 55
4		Bathtub 9		Boat-related #	Boat-related #	Other and unspecified location 6	Pools #	Pools 7	Bathtub 6	Bathtub 9	Boat-related 49
5		Boat-related #			Bathtub #	Bathtub #		Bathtub 6	Other and unspecified location #	Boat-related 7	Bathtub 46

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