

## 16 Machinery

Machinery is an unintentional cause of injury death (WHO 1977, WHO 1996). WHO classifies the cause of machinery-related deaths by the type of machinery causing the death. These types include *agricultural* and *lifting and transmission machinery*.

Machinery death data from 1986 to 2002 were used to describe the demographic profile of machinery 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.

Machinery was the fourteenth leading cause of injury death from 1998–2002 and accounted for less than 1% of all injury deaths (see Table 2). During these years, 40 people died from machinery-related events at an overall rate of 0.1 people/100,000 and all were male. Approximately 18 people died each year from 1986 to 2002 as the result of machinery-related events.

Figure 30 shows the yearly trend in death rates from machinery from 1986 to 2002. The machinery associated death rate showed a statistically significant decline between 1986 and 2002.

**Figure 30. Yearly trend in death rates for machinery: NSW, 1986–2002**

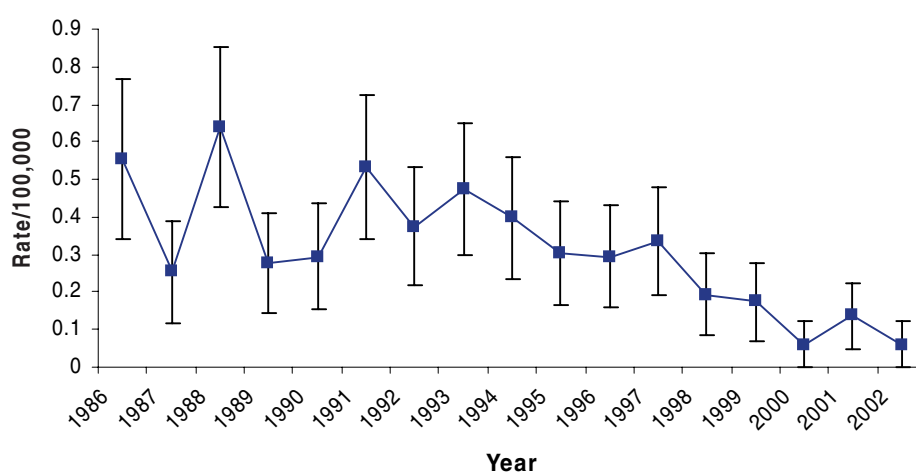


Figure 31 shows the age-specific death rates from machinery between 1998 and 2002. People aged 50–54 years had the highest rate of death due to machinery. Deaths in people aged 50–54 years accounted for almost one quarter of all machinery deaths between 1998 and 2002. There were no machinery-related deaths in people aged under 15 years.

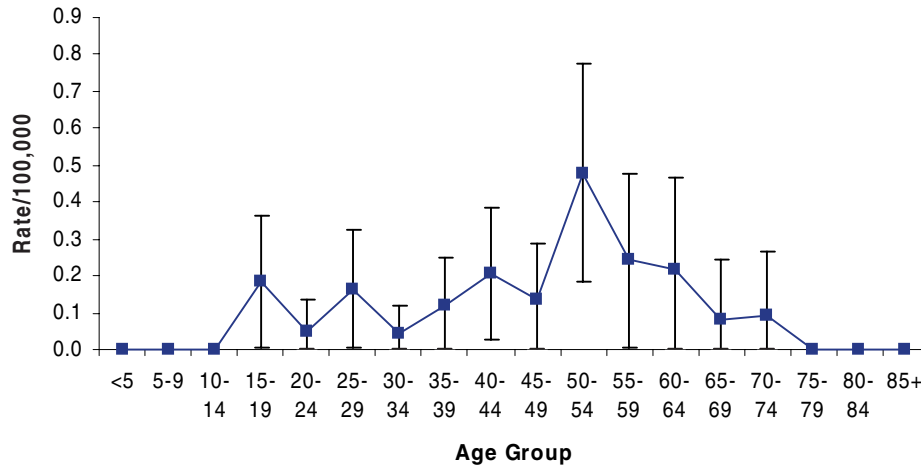
**Figure 31. Age-specific death rates associated with machinery: NSW, 1998–2002**

Table 29 shows the number of machinery deaths and death rates by type for all persons, males and females, during 1998–2002. *Other and unspecified types* led to a machinery-related death most often and accounted for 60% of all machinery deaths. Males accounted for all machinery deaths in NSW during 1998–2002. There were no female machinery-related deaths reported during 1998–2002.

**Table 29. Number of machinery deaths and death rates/100,000\* by type used: NSW, 1998–2002**

Type	All persons		Males		Females		Ratio <sup>‡</sup>
	N	Rate <sup>†</sup>	N	Rate <sup>†</sup> (CI) <sup>††</sup>	N	Rate <sup>†</sup> (CI)	
Other and unspecified	24	0.07	24	0.15 (0.09–0.21)	0	–	–
Agricultural	8	0.02	8	0.05 (0.02–0.08)	0	–	–
Lifting and transmission	8	0.02	8	0.05 (0.02–0.08)	0	–	–
All machinery	40	0.12	40	0.25 (0.17–0.32)	0	–	–

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

Table 30 shows machinery-related deaths by age group and type of machinery used in NSW for 1998–2002. No machinery-related deaths occurred in children under age 15 years. *Other and unspecified machinery* was the leading cause of machinery-related death in all people aged 15+ years, with the exception of people aged 25–34 years. *Agricultural machinery* was the leading cause of machinery-related death for people in this group

## SUMMARY

Machinery-related events accounted for approximately 18 deaths each year in NSW from 1986 to 2002. Analysis of the trend for machinery-related death rates showed a statistically significant decline between 1986 and 2002. All machinery-related deaths occurred in males of working age, with no deaths in children under age 15 years. The majority of deaths occurred in males aged 15–65 years. Males aged 50–54 years had the highest rate of death due to machinery in NSW during 1998–2002. Males accounted for all machinery-related deaths in NSW during 1998–2002. No comparison can be made with previous figures as machinery-related deaths were not examined from 1995 to 1999 by Schmertmann and Williamson (2002).

*Other and unspecified types* led to a machinery-related death most often in NSW during 1998–2002. *Other and unspecified machinery* was the leading cause of machinery-related death in males aged 15+ years, with the exception of males aged 25–34 years. *Agricultural machinery* was the leading cause of machinery-related death for males in this group

These results indicate that death due to working around machinery is a serious problem for males in NSW. The majority of the deaths caused by machinery were classified as *other and unspecified types*, indicating a need for better classification of machinery-related deaths.

Future research efforts should focus on improvements that need to be made in the data collection and coding systems so that the number of machinery-related deaths coded as *other and unspecified* is greatly reduced. Until these changes can be made, an alternate data source (e.g. coronial data) should be used to investigate the nature of machinery-related deaths coded as *other and unspecified*.

**Table 30. Machinery-related deaths\* by age group and type of machinery†: NSW, 1998–2002**

Rank	Age group							Total
	<14	15–24	25–34	35–44	45–54	55–64	65+	
1		Other and unspecified #	Agricultural #	Other and unspecified 5	Other and unspecified 7	Other and unspecified 6	Other and unspecified #	Other and unspecified 24
2		Agricultural #	Other and unspecified #	Lifting and transmission #	Lifting and transmission #	Agricultural #	Agricultural #	Agricultural 8
3			Lifting and transmission #		Agricultural #			Lifting and transmission 8

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