

4 Motor vehicle transport

Motor vehicle transport is an unintentional cause of injury death (WHO 1977, WHO 1996). WHO classifies the cause of motor vehicle transport deaths according to a number of dimensions. Motor vehicle transport deaths occur in either in *traffic* situations (i.e., occurring on a public road) or *non-traffic* situations (i.e., occurring anywhere other than a public road). Motor vehicle transport deaths are also classified according to the type of road user involved (e.g. motorcyclist). Motor vehicle transport road-user classes include motor vehicle occupants (driver and passengers), motorcyclists (driver and passenger), pedal cyclists and pedestrians. The person that is injured is usually referred to by the type of traffic situation (i.e., traffic, non-traffic) and the road-user class (e.g. pedestrian).

Motor vehicle transport death data from 1986 to 2002 were used to describe the demographic profile of motor vehicle transport 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.

Motor vehicle transport was the second leading cause of injury death during 1998–2002 and accounted for 22% of all injury deaths (see Table 2). During these years, 2765 people died from motor vehicle transport injuries, at an overall rate of 8.5/100,000 population and 72% were male (Table 2). Approximately 682 people died each year from 1986 to 2002 as the result of motor vehicle transport.

Figure 6 shows the yearly trend in death rates for motor vehicle transport from 1986 to 2002. Overall, there was a statistically significant decline in the motor vehicle transport death rates between 1986 and 2002 although the rate of decline slowed post 1993.

Figure 6. Yearly trend in death rates for motor vehicle transport: NSW, 1986–2002

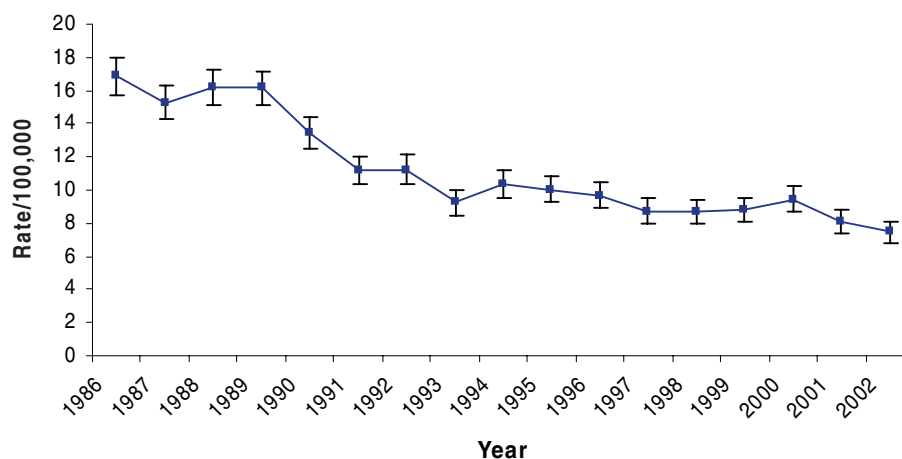


Figure 7 shows the age-specific death rates for motor vehicle transport between 1998 and 2002. People aged 15–24 and 80+ years had the highest rates of death due to motor vehicle transport. Motor vehicle transport deaths in people aged 15–24 and 80+ years accounted for 25% and 8% respectively, of all motor vehicle transport deaths between 1998 and 2002. Children under age ten years had much lower death rates in comparison to other age groups and death rates increased steadily in people from age 60 years onward. The pattern of age-specific death rates for motor vehicle transport in Figure 7 is similar to the pattern of age-specific death rates for motor vehicle transport from 1995 to 1999 (Schmertmann and Williamson, 2002).

Figure 7. Age-specific death rates for motor vehicle transport: NSW, 1998–2002

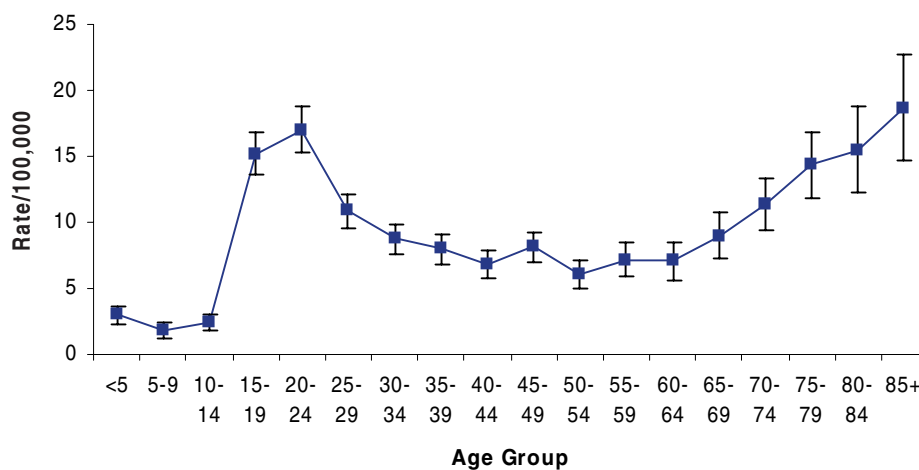


Table 5 shows the number of motor vehicle transport deaths and death rates by road-user class for all persons, males and females, during 1998–2002. *Motor vehicle occupants in traffic* and *pedestrians in traffic* were the road-user classes that died most often and accounted for 62% and 17% of all motor vehicle transport deaths respectively. Males accounted for 68% of all *motor vehicle occupants in traffic* deaths and 67% of all *pedestrians in traffic* deaths. The results for males and females in Table 5 are similar to data reported for motor vehicle transport deaths from 1995 to 1999 (Schmertmann and Williamson, 2002).

Motor vehicle occupants in traffic was the leading road-user class for male motor vehicle transport deaths and accounted for 59% of all male motor vehicle transport deaths. The rate for males exceeded the corresponding rate for females for each road-user class in Table 5. Male rates were significantly higher for the following motor vehicle transport road-user classes:

- motor vehicle occupant—traffic
- pedestrian—traffic
- motorcyclist—traffic

- other/unspecified road user—traffic
- motor vehicle occupant—non-traffic
- pedal cyclist—traffic.

Male road class user rates were more than six times the corresponding female rates for *motorcyclist—traffic* and *motor vehicle occupant—non-traffic*.

Motor vehicle occupants in traffic was also the leading road-user class in female motor vehicle transport deaths during 1998–2002 and accounted for 69% of all female motor vehicle transport deaths.

Table 5. Number of motor vehicle transport deaths and death rates/100,000* by road-user class: NSW, 1998–2002

Road-user class	All persons		Males		Females		Ratio‡
	N	Rate†	N	Rate† (CI)††	N	Rate† (CI)	
Motor vehicle occupant—traffic	1715	5.27	1173	7.37 (6.94–7.79)	542	3.27 (2.99–3.54)	2.26
Pedestrian—traffic	484	1.49	324	2.11 (1.88–2.34)	160	0.93 (0.78–1.07)	2.27
Motorcyclist—traffic	280	0.85	263	1.60 (1.40–1.79)	17	0.11 (0.06–0.16)	15.00
Other and unspecified road user—traffic	97	0.30	69	0.44 (0.34–0.55)	28	0.16 (0.10–0.23)	2.67
Motor vehicle occupant—non-traffic	79	0.24	68	0.44 (0.33–0.54)	11	0.07 (0.03–0.11)	6.61
Pedestrian—non-traffic	43	0.13	29	0.18 (0.11–0.24)	14	0.08 (0.04–0.13)	2.17
Pedal cyclist—traffic	39	0.12	30	0.19 (0.12–0.25)	9	0.06 (0.02–0.09)	3.34
Motorcyclist—non-traffic	26	0.08	25	0.15 (0.09–0.21)			–
Pedal cyclist—non-traffic	#		#				–
Other and unspecified road user—non-traffic	#		#		***		–
All motor vehicle transport	2765	8.49	1983	12.48 (11.93–13.04)	782	4.68 (4.35–5.01)	2.67

* 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. **includes motorcyclist—non-traffic for females. ††95% confidence interval

Table 6 shows motor vehicle transport deaths by age group and road-user class in NSW for 1998–2002. *Motor vehicle occupant in traffic* was the leading road-user class for all motor vehicle transport deaths, except in children aged 5–9 years. Children aged 5–9 years died most often during 1998–2002 as *pedestrians in traffic*. Children under age five years, people aged 10–14 years and all aged groups

above 45 years had the second highest number of motor vehicle transport deaths during 1998–2002 as *pedestrians in traffic*. People aged 15–44 years had the second highest number of motor vehicle transport deaths during 1998–2002 as *motorcyclists in traffic*.

The results in Table 6 are similar to data from 1995 to 1999 (Schmertmann and Williamson, 2002), but there is one difference. From 1995–1999, children aged 5–9 years died more often as occupants than as pedestrians.

SUMMARY

Motor vehicle transport was a leading cause of injury death for people in NSW, accounting for approximately 682 deaths each year from 1986 to 2002. Analysis of the trend for motor vehicle transport death rates showed a statistically significant decline overall between 1986 and 2002 although the rate of decline has slowed since 1993.

Compared to data on motor vehicle transport deaths from 1995 to 1999 (Schmertmann and Williamson, 2002), the pattern of age-specific rates has remained unchanged. People aged 15–24 and 80+ years had the highest rates of death due to motor vehicle transport in NSW during 1998–2002.

Traffic-related motor transport deaths were much more common than non-traffic motor transport deaths. *Motor vehicle occupant in traffic* and *pedestrian in traffic* were the road-user classes that died most often during 1998–2002 in NSW. *Motor vehicle occupant in traffic* was the leading road-user class for all motor vehicle transport deaths except in children aged 5–9 years. Children aged 5–9 years died most often during 1998–2002 as *pedestrians in traffic*.

Males accounted for nearly 72% of all motor vehicle transport deaths in NSW during 1998–2002. They also accounted for 68% of all *motor vehicle occupants* in traffic deaths and 67% of all *pedestrians in traffic* deaths. Males also had significantly higher rates for each road-user class in traffic as well as one road-user class in non traffic (i.e., *motor vehicle occupant—non-traffic*) in comparison to females.

These results indicate that motor vehicle transport death continues to be a serious public health problem for young adults and older adults in NSW. *Pedestrians in traffic* are also a significant motor vehicle transport death problem. Finally, males continued to have an excess burden of motor vehicle transport deaths.

Further preventive actions into road safety should focus on the following areas in NSW:

- young people aged 15–24 years as occupants (and/or drivers) in traffic situations
- older people (65+ years) as occupants (and/or drivers) in traffic situations
- pedestrians in traffic situations, especially children aged 5–9 years and people aged over 45 years.

Table 6. Motor vehicle transport deaths* by age group and road-user class: 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	Motor vehicle occupant—traffic #	Motor vehicle occupant—traffic 26	Pedestrian—traffic 20	Pedestrian—traffic 24	Motor vehicle occupant—traffic 515	Motor vehicle occupant—traffic 289	Motor vehicle occupant—traffic 228	Motor vehicle occupant—traffic 192	Motor vehicle occupant—traffic 120	Motor vehicle occupant—traffic 303	Motor vehicle occupant—traffic 1715
2	Pedestrian—traffic #	Pedestrian—non-traffic 20	Motor vehicle occupant—non-traffic 15	Pedestrian—traffic 13	Motorcyclist—traffic 73	Motorcyclist—traffic 96	Motorcyclist—traffic 60	Pedestrian—traffic 47	Pedestrian—traffic 49	Pedestrian—traffic 162	Pedestrian—traffic 484
3		Pedestrian—non-traffic 13	Pedestrian—non-traffic #	Motorcyclist—traffic #	Pedestrian—traffic 69	Pedestrian—traffic 54	Pedestrian—traffic 49	Motorcyclist—traffic 26	Motorcyclist—traffic 14	Other and unspecified road user—traffic 25	Motorcyclist—traffic 280
4		Motor vehicle occupant—non-traffic #	Motor vehicle occupant—non-traffic #	Pedal cyclist—traffic #	Other and unspecified road user—traffic 16	Other and unspecified road user—traffic 15	Other and unspecified road user—traffic 15	Motor vehicle occupant—non-traffic 17	Motor vehicle occupant—non-traffic 14	Motor vehicle occupant—non-traffic 20	Other and unspecified road user—traffic 97
5			Motorcyclist—traffic #	Motorcyclist—non-traffic #	Pedal cyclist—traffic 10	Motor vehicle occupant—non-traffic 9	Motor vehicle occupant—non-traffic 7	Other and unspecified road user—traffic 12	Other and unspecified road user—traffic 11	Pedestrian—non-traffic 7	Motor vehicle occupant—non-traffic 79
6			Pedal cyclist—traffic #	Other and unspecified road user—traffic #	Motorcyclist—non-traffic 9	Motorcyclist—non-traffic 7	Pedal cyclist—traffic 5	Pedestrian—non-traffic 7	Pedestrian—non-traffic #	Motorcyclist—traffic 6	Pedestrian—non-traffic 43
7				Motor vehicle occupant—non-traffic #	Motor vehicle occupant—non-traffic 6	Pedal cyclist—traffic #	Pedestrian—non-traffic #	Pedal cyclist—traffic 5	Pedal cyclist—traffic #	Pedal cyclist—traffic 6	Pedal cyclist—traffic 39
8				Pedestrian—non-traffic #	Pedestrian—non-traffic #	Pedestrian—non-traffic #	Motorcyclist—non-traffic #	Motorcyclist—non-traffic #	Motorcyclist—non-traffic #	Motorcyclist—non-traffic #	Motorcyclist—non-traffic 26
9					Pedal cyclist—non-traffic #	Pedal cyclist—non-traffic #					Pedal cyclist—non-traffic #
10					Other and unspecified road user—non-traffic #	Other and unspecified road user—non-traffic #					Other and unspecified road user—non-traffic #

* Numbers represent the number of cases. † See Appendix 4 for motor vehicle transport road-user class codes. # Cell size less than five cases