

- There were 216 hospitalisations of Aboriginal and Torres Strait Islander children for burns and scalds. Indigenous children had a hospitalisation rate for injuries from burns and scalds approximately 2.3 times that for other Australian children (130.0 compared with 56.9). Indigenous boys had a higher rate than Indigenous girls (169.9 compared with 88.3).
- There were 188 hospitalisations of Aboriginal and Torres Strait Islander children for assault. Hospitalisation rates were higher for Indigenous children than for other Australian children. The difference was most apparent for infants, where the rate was 7.8 times higher than for other Australian infants (425.7 compared with 54.4). Among Indigenous infants, males had higher rates than females (559.1 compared with 285.3).
- There were 160 hospitalisations of Aboriginal and Torres Strait Islander children for injuries from pedal cycling. The rates of hospitalisation were different for Indigenous children and other Australian children aged 10–14 years. Other Australian children had hospitalisation rates 1.3 times higher than those for Indigenous children.
- There were 90 hospitalisations of Aboriginal and Torres Strait Islander children who were pedestrians injured in a transport accident. Hospitalisation rates were higher for Indigenous children than for other Australian children, with the overall rate for Indigenous children almost twice the rate for other children (55.1 compared with 27.7).

Children in metropolitan, rural and remote areas

Table 18.4: Hospitalisation rates for children aged 0–14 years in metropolitan, rural and remote areas for injuries, 1999–00 (per 100,000 children)

Age (years)	Falls	Pedal cyclist injured in transport accident	Accidental poisoning	Burns and scalds	Pedestrian injured in transport accident	Assault	Other causes
Metropolitan							
<1	323.3	0.6 ^(a)	94.2	115.7	3.4	47.6	431.6
1–4	623.2	33.0	247.1	113.6	35.3	14.5	798.6
5–9	733.3	111.2	16.9	22.0	30.1	6.1	559.7
10–14	575.5	170.3	17.5	16.7	32.0	24.0	681.9
0–14	624.0	102.1	84.0	51.2	30.3	17.0	654.9
Rural							
<1	367.9	—	138.6	124.2	4.8 ^(a)	113.1	614.8
1–4	669.6	38.2	353.0	152.2	31.3	23.9	923.3
5–9	839.8	117.5	23.0	29.1	26.7	8.3	740.4
10–14	714.1	201.4	22.4	35.6	17.4	27.2	1,042.9
0–14	720.7	115.8	119.0	70.7	23.4	25.8	880.0
Remote							
<1	610.9	10.2 ^(a)	162.9	244.3	10.2 ^(a)	305.4	814.5
1–4	952.6	42.0	464.0	306.0	81.4	56.8	1,396.8
5–9	1,129.5	131.7	46.5	73.6	50.4	36.8	1,398.8
10–14	835.0	244.0	35.8	143.3	29.1	98.5	1,893.9
0–14	950.1	136.2	162.6	170.3	49.0	80.8	1,520.7

(a) Figure denotes that the rate is based on a number less than 5.

Notes

1. Categories: Falls ICD-10-AM codes S00–T98 & W00–W19; Pedal cyclist injured in transport accident ICD-10-AM codes S00–T98 & V10–V19; Accidental poisoning ICD-10-AM codes S00–T98 & X40–X49; Burns and scalds ICD-10-AM codes S00–T98 & X10–X19 & X00–X09; Pedestrian injured in transport accident ICD-10-AM codes S00–T98 & V01–V09; Assault ICD-10-AM codes S00–T98 & X85–Y09.

Source: AIHW National Hospital Morbidity Database.

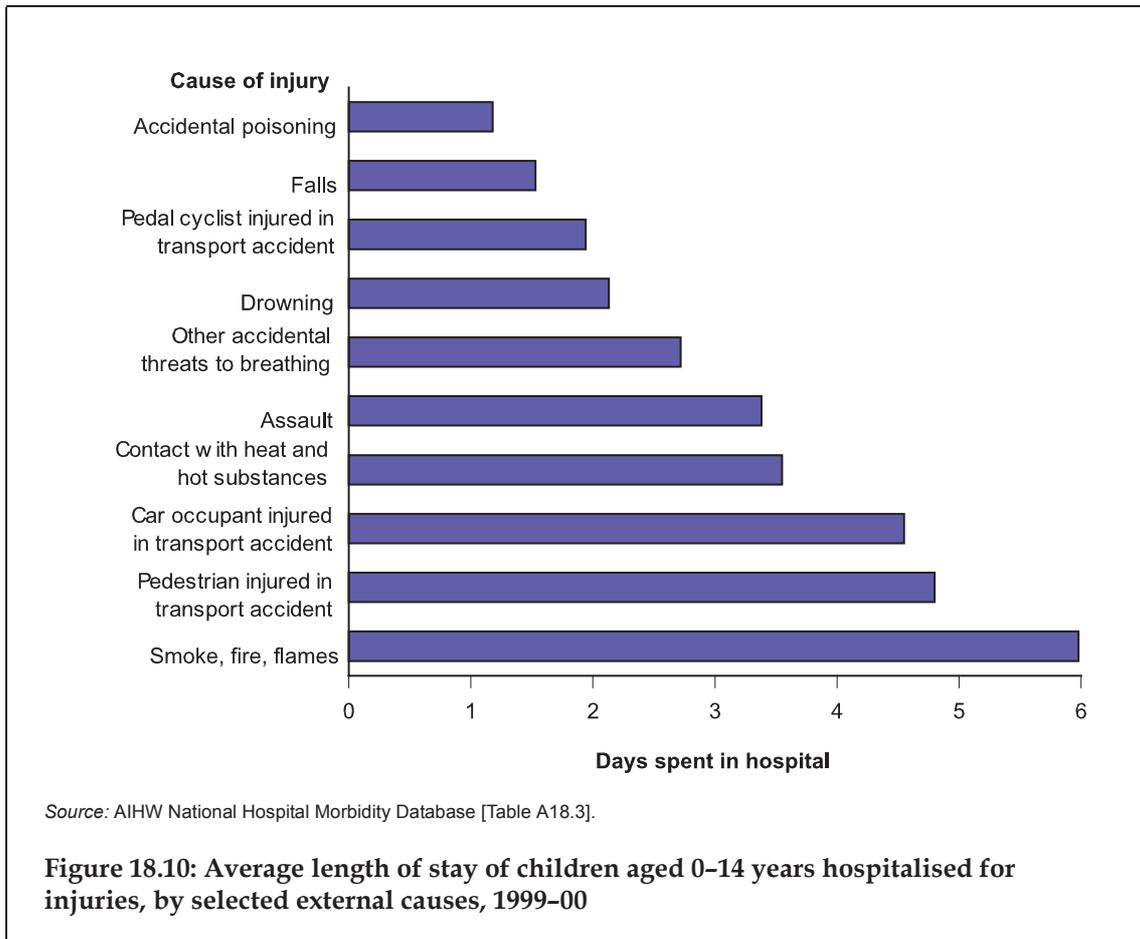
- For each of the six external causes of injuries, except for pedestrian injuries, the rate of hospitalisation in 1999–00 was highest for children living in remote areas, followed by those in rural areas, and was lowest for children in metropolitan areas. For pedestrian injuries, the rate was lowest for children in rural areas.
- Hospitalisation rates for falls for children living in remote areas were 1.5 times higher than those for children in metropolitan areas (950.1 compared with 624.0 per 100,000). Children in remote areas were also hospitalised at a rate 1.3 times higher than those in rural areas (720.7 per 100,000).
- Children living in remote areas were hospitalised for pedal cycling injuries at a slightly higher rate than those in rural and metropolitan regions (136.2, compared with 115.8 and 102.1, respectively).
- Hospitalisation rates for accidental poisoning were higher in rural and remote regions than in metropolitan areas. The rate was 1.9 times and 1.4 times higher for children in remote and rural regions, respectively, than for children from metropolitan areas.

- The hospitalisation rate for burns and scalds for children in metropolitan areas was 51.2 per 100,000 children, compared with 70.7 in rural areas and 170.3 in remote areas.
- The rate for child pedestrians injured in transport accident was highest for children living in remote areas (49.0 per 100,000), followed by metropolitan areas (30.3). Pedestrian injuries were least common in rural areas (23.4).
- Hospitalisation rates for assault were higher in rural and remote areas than in metropolitan areas. The overall rate in metropolitan areas was 17.0 per 100,000, compared with 25.8 in rural areas and 80.8 in remote regions.

Severity of injury

Severity of injury is difficult to quantify. Currently, the best proxy national indicator of injury severity available among hospitalisation data is the average length of hospital stay. This is not a perfect proxy as factors other than severity influence length of stay (e.g. social circumstances, hospital policy, etc.). Also, the way in which length of stay is currently calculated in hospital data tends to overestimate short stay and underestimate long stay.

In 1999–00, there were 129,381 bed days for which hospitalisations for injuries were the principal diagnoses, with an average length of stay of 1.4 days. Of these hospitalisations, 38% were short stay (same-day) hospitalisations. Injuries were also responsible for an additional 24,145 bed days where they were not the main reason for hospital stay but where they had to be managed during hospitalisations for other conditions. The average length of stay for particular types of injury causes are presented in Figure 18.10.



- In 1999-00, injuries related to exposure to smoke, fire and flames were responsible for the longest average length of hospital stay for children aged 0-14 years, with an average length of stay of approximately 6 days.
- This category was closely followed by injuries to pedestrians in transport accidents and injuries to car occupants in motor vehicle accidents, for which the average lengths of stay were almost 5 days.

Place where injury occurred

The place where an injury occurs can often provide important information for developing preventative strategies to reduce the number of children at risk of serious injury.

Unfortunately, the location of injuries is not always specified or collected (location was recorded for only 46% of hospitalisations for external causes of injury). The available data for 1999–00 are presented in Table 18.5.

Table 18.5: Location where injuries of children aged 0–14 years occurred, 1999–00 (per cent)

Location	Males	Females	Persons
Home	53.3	62.2	56.7
Sports and athletics area	18.8	11.8	16.1
School, other institution, and public administrative area	12.6	12.0	12.4
Other specified places	7.7	6.8	7.3
Street and highway	2.5	2.1	2.4
Trade and services area	1.9	2.6	2.1
Health services area	1.4	1.2	1.3
Residential institution	0.7	0.7	0.7
Farm	0.7	0.4	0.6
Industrial and construction area	0.5	0.3	0.4
Total	100	100	100

Note: Percentages calculated based upon those records where place of occurrence of injury was actually recorded.

Source: AIHW National Hospital Morbidity Database.

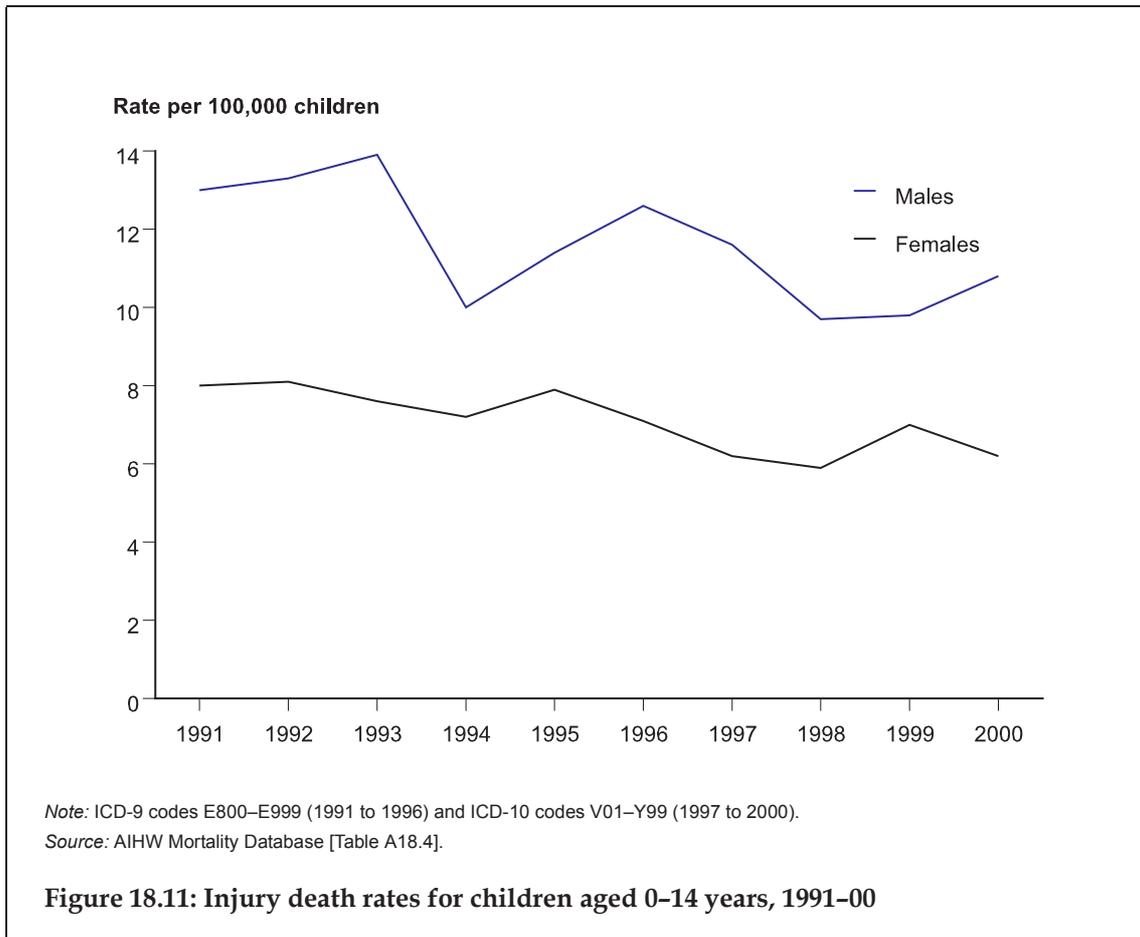
- The majority of injuries to children occurred in the home (56.7%).
- Injuries were also commonly sustained while at sports and athletics areas, grounds and playing fields (16.1%) and while at institutions such as school, libraries or child care (12.4%).
- Only 2.1% of the injuries were received in trade and services (shopping) areas.

Deaths from all injuries

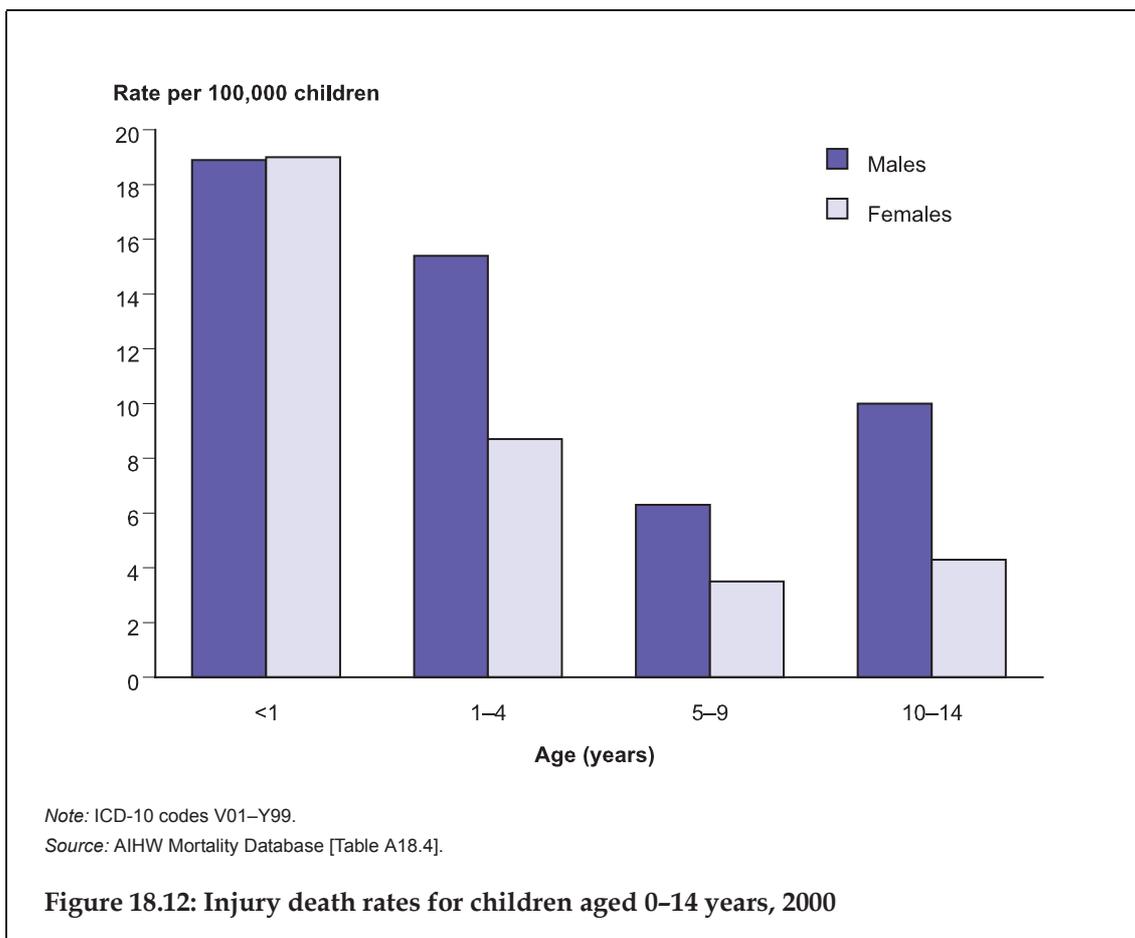
Deaths from injury are more common for boys than for girls. In a comparison of all OECD countries between 1991 and 1995 (UNICEF 2001), boys aged 1–14 years were 1.7 times more likely to die from injuries than girls. The difference between the sexes was greatest for children aged 10–14 years. The study also showed that a boy aged 1–4 years was 1.4 times more likely to die from injury than a girl of the same age.

Australia has the seventh lowest child injury death rate among OECD countries for children aged 10–14 years. However, the death rate for those aged 1–4 years does not compare favourably with other OECD countries, with a ranking of twentieth place (UNICEF 2001).

The indicator for all injuries death rate is the number of deaths from all injuries in children aged 0–14 years in a given year as a rate per 100,000 children (Figure 18.11).



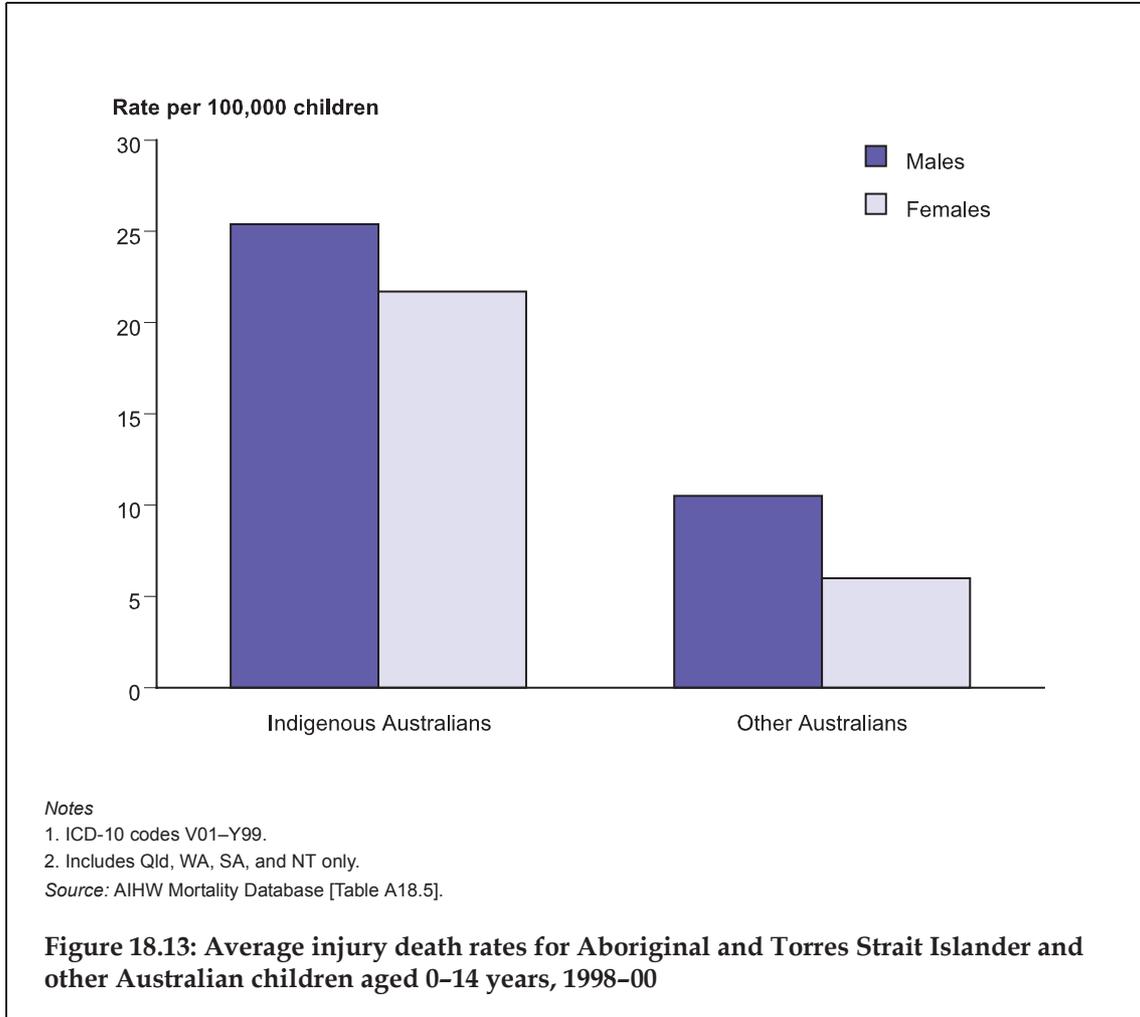
- Over the period 1991 to 2000, 3,635 children died from injury. However, the death rate from injury has generally declined over time. In 1991, it was 10.5 per 100,000 children, but by 2000 it had fallen to 8.6 per 100,000 children, representing a reduction of 18%.
- In all years examined, the rate was higher for boys than for girls.
- The rate for boys fell from 13.0 in 1991 to 10.8 in 2000 (17% decrease). Over the same period, the rate for girls fell from 8.0 to 6.2 (23% decrease).



- In 2000, 332 children died as the result of injury. The overall injury death rate for children aged 0–14 years was 8.6 per 100,000 children. The rate for boys was higher than for girls (10.8 compared with 6.2). Boys aged 1–14 years had higher rates than girls of the same age.
- Rates were highest for young children (<1 year and 1–4 years).

Aboriginal and Torres Strait Islander children

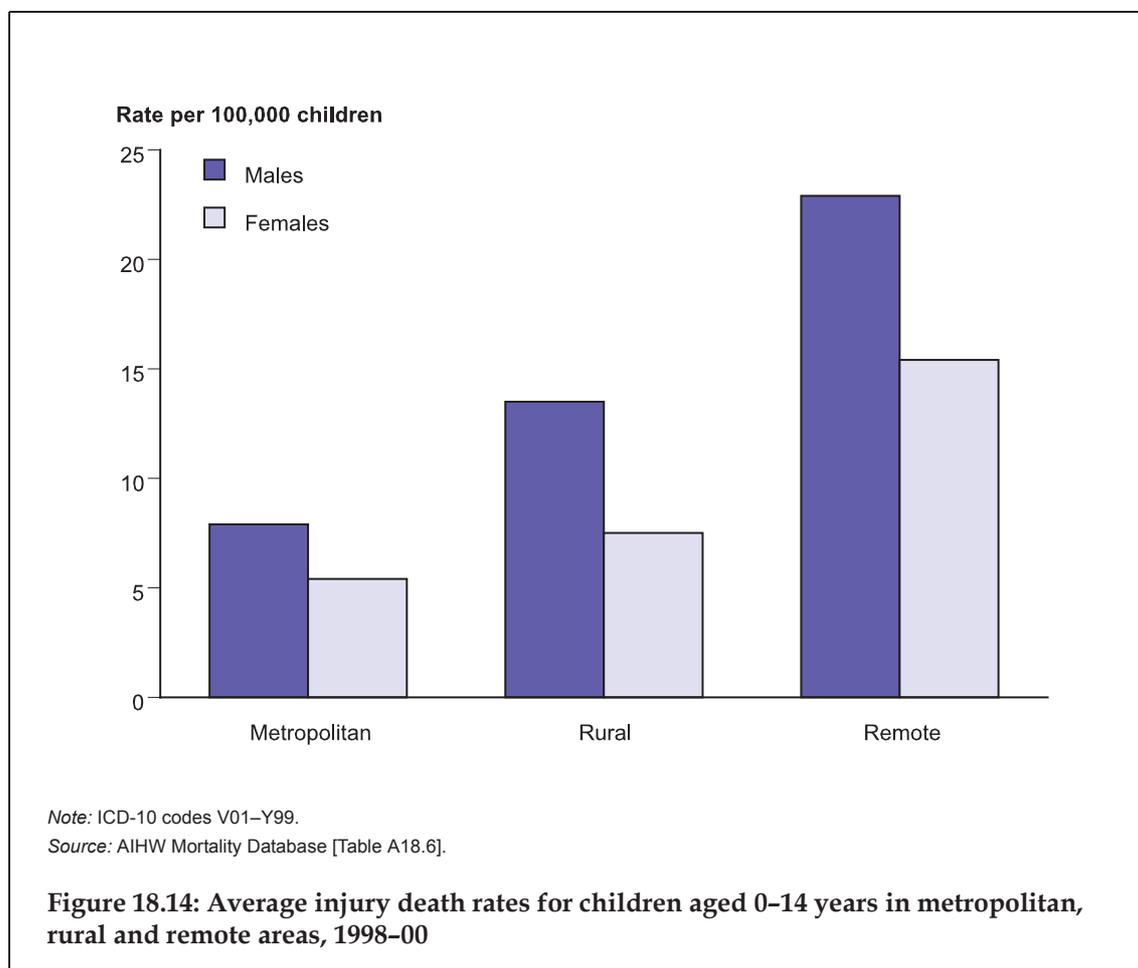
Deaths from injury in 1998–00 of Aboriginal and Torres Strait Islander children compared with other Australian children are presented in Figure 18.13.



- A total of 71 Aboriginal and Torres Strait Islander children from Queensland, Western Australia, South Australia and the Northern Territory died from injuries between 1998 and 2000. The average death rate of Indigenous children was 2.8 times that of other Australian children.
- Indigenous boys had higher rates than Indigenous girls (25.4 per 100,000 boys compared with 21.7 per 100,000 girls).

Children in metropolitan, rural and remote areas

Death rates for children in rural and remote areas compared with children in metropolitan areas are presented in Figure 18.14.



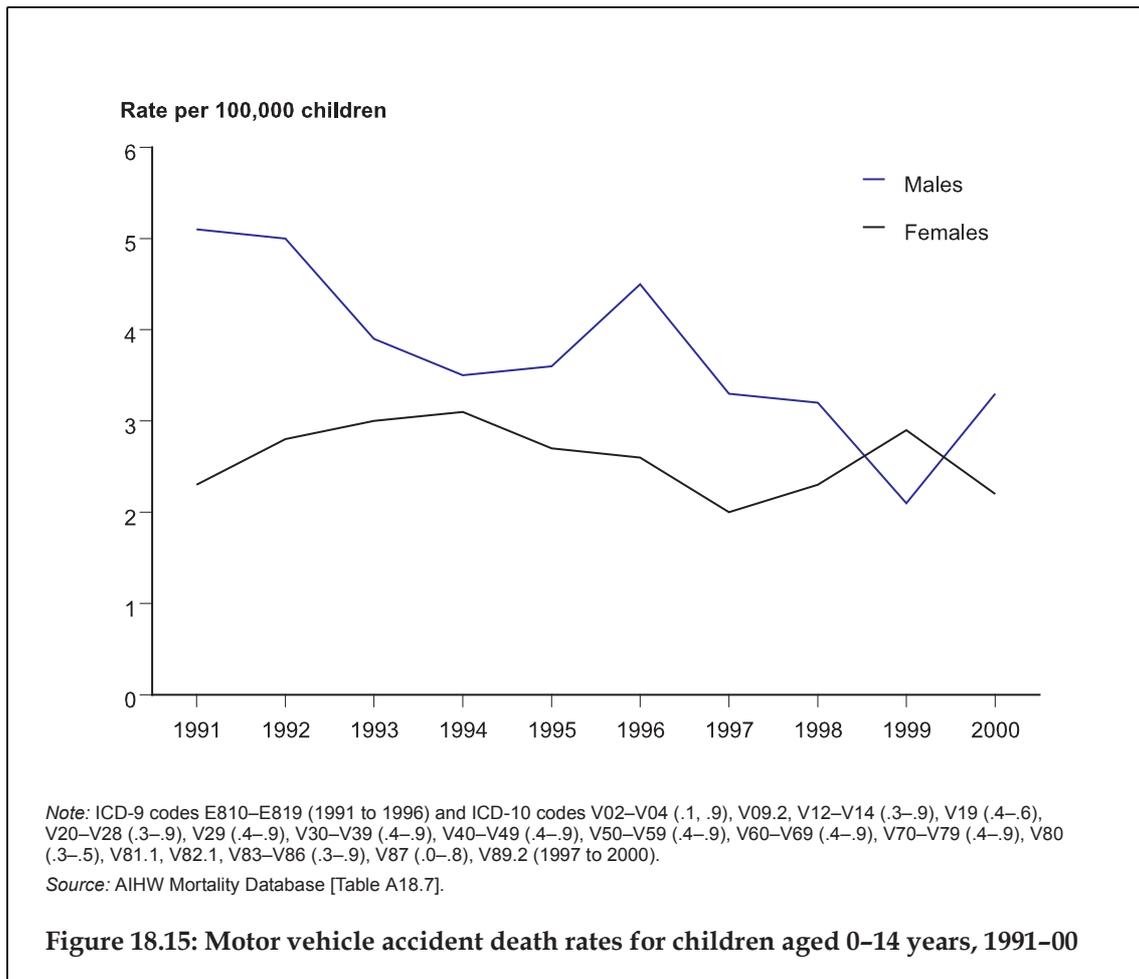
- Between 1998 and 2000, 537 children in metropolitan areas, 334 in rural areas and 84 in remote areas died from injuries.
- Average child injury deaths were 2.9 times as common in remote areas (19.2 per 100,000) and 1.6 times as common in rural areas (10.6) as in metropolitan areas (6.7).
- Boys had higher rates than girls, regardless of area.

Deaths from specific injuries

This section examines deaths from injuries caused by motor vehicle accidents, accidental drowning and assaults.

Motor vehicle accidents

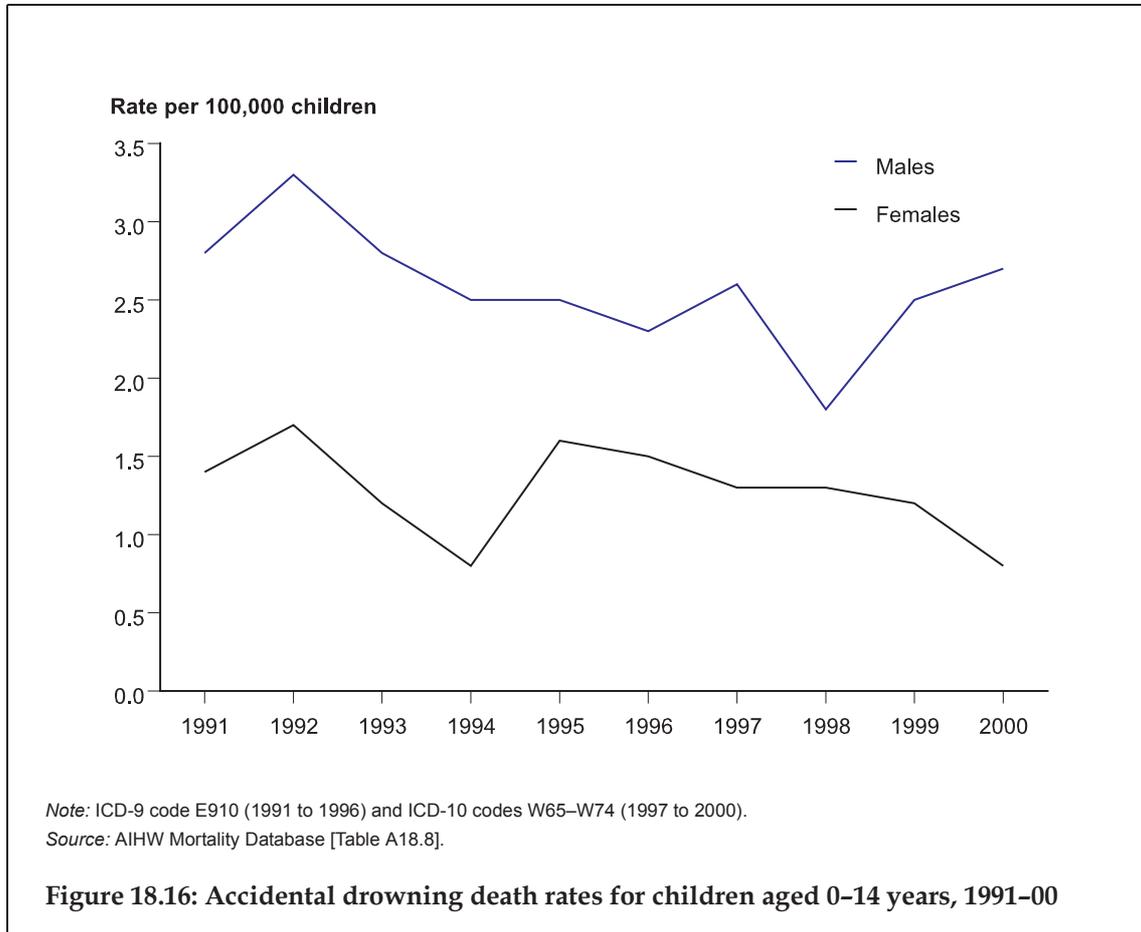
The indicator for motor vehicle accident deaths is the number of deaths from motor vehicle accidents of children aged 0–14 years in a given year as a rate per 100,000 children (Figure 18.15).



- Between 1991 and 2000, 1,234 children aged 0–14 years died from motor vehicle accidents. The death rate declined from 3.7 per 100,000 children in 1991 to 2.7 in 2000.
- In all years except 1999, more boys died than girls. In 1999, 55 girls and 43 boys were killed in motor vehicle accidents.

Accidental drowning

The indicator for accidental drowning is the number of deaths from accidental drowning of children aged 0–14 years in a given year as a rate per 100,000 children.



- Over the period 1991 to 2000, 750 children died as a result of accidental drowning. The death rate over the period declined from 2.1 to 1.8 deaths per 100,000 children. Fencing of swimming pools has been shown to significantly reduce the risk of child deaths due to accidental drowning (Thompson & Rivara 2001). In Australia in 1993–94, a mandatory requirement was introduced for all new pools to be fenced (AIHW NISU: Moller & Kreisfeld 1997).
- The rate was consistently higher for boys than for girls across the whole period. In 2000, the rate for boys was more than 3 times that for girls (2.7 compared with 0.8).
- Young children aged 1–4 years had the highest rate.
- Of all accidental drowning deaths in 2000, over a third (23, or 34%) occurred in swimming pools.

Assaults

The indicator for assault deaths is the number of deaths of children aged 0–14 years from assault in a given year as a rate per 100,000 children.

Table 18.6: Assault death rates for children aged 0–14 years, 1991–99 (per 100,000 children)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Males	0.6	0.2 ^(a)	1.3	0.8	0.9	0.6	0.9	0.9	0.9	0.8
Females	1.0	0.7	0.9	1.0	0.8	0.7	0.6	0.6	0.6	0.6
Persons	0.8	0.4	1.1	0.9	0.9	0.7	0.8	0.8	0.7	0.7

(a) Rate based on a number less than 5.

Note: ICD-9 codes E960–E969 (1991 to 1996) and ICD-10 codes X85–Y09 (1997 to 2000).

Source: AIHW Mortality Database.

- Over the period 1991 to 2000, 291 children died as a result of assault. Assault death rates for children varied from year to year, ranging between 0.4 and 1.1 per 100,000 children.
- In 2000, 26 children died from injuries inflicted by another person. The assault death rate for boys was 1.3 times higher than the rate for girls.

Aboriginal and Torres Strait Islander children

Table 18.7: Deaths from motor vehicle accidents, accidental drowning and assault in Aboriginal and Torres Strait Islander and other Australian children aged 0–14 years, 1998–00

Cause of death	Indigenous Australians		Other Australians	
	Total number	Average rate per 100,000 children	Total number	Average rate per 100,000 children
Motor vehicle	23	7.9	116	2.8
Accidental drowning	9	2.9	83	2.0
Assault	5	1.6	34	0.8

Notes

1. Includes Qld, WA, SA, and NT only.

2. ICD-10-AM codes used for drowning were W65–W74; for assault were X85–Y09; for motor vehicle were V02–V04 (.1. .9), V09.2, V12–V14 (.3–.9), V19 (.4–.6), V20–V28 (.3–.9), V29 (.4–.9), V30–V39 (.4–.9), V40–V49 (.4–.9), V50–V59 (.4–.9), V60–V69 (.4–.9), V70–V79 (.4–.9), V80 (.3–.5), V81.1, V82.1, V83–V86 (.3–.9), V87 (.0–.8), V89.2.

Source: AIHW Mortality Database.

- For 1998–00, the average motor vehicle accident death rate was 2.8 times higher for Aboriginal and Torres Strait Islander children than for other Australian children (7.9 compared with 2.8 per 100,000).
- The average assault death rate for Aboriginal and Torres Strait Islander children was twice that of other Australian children (1.6 compared with 0.8).
- The average accidental drowning death rate for Aboriginal and Torres Strait Islander children was almost 1.5 times that of other Australian children (2.9 compared with 2.0).

Children in metropolitan, rural and remote areas

Table 18.8: Deaths from motor vehicle accidents, accidental drowning and assault in children aged 0–14 years in metropolitan, rural and remote areas, 1998–00

Cause of death	Metropolitan		Rural		Remote	
	Total number	Average rate per 100,000 children	Total number	Average rate per 100,000 children	Total number	Average rate per 100,000 children
Motor vehicle	174	2.2	110	3.4	27	6.2
Accidental drowning	117	1.5	66	2.2	15	3.3
Assault	62	0.8	18	0.6	3	0.7

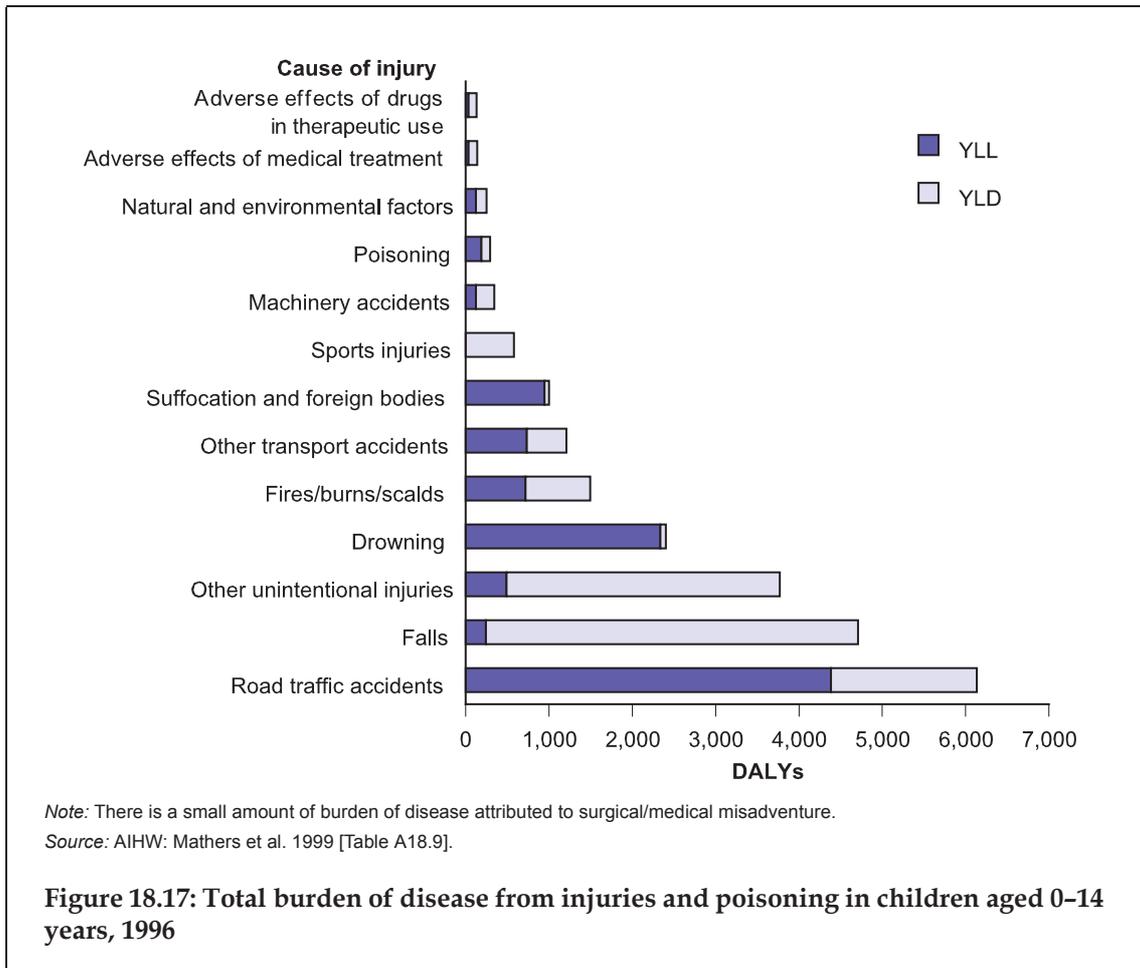
Note: 1CD-10 codes W65–W74, X85–Y09, V02–V04 (.1, .9), V09.2, V12–V14 (.3–.9), V19 (.4–.6), V20–V28 (.3–.9), V29 (.4–.9), V30–V39 (.4–.9), V40–V49 (.4–.9), V50–V59 (.4–.9), V60–V69 (.4–.9), V70–V79 (.4–.9), V80 (.3–.5), V81.1, V82.1, V83–V86 (.3–.9), V87 (.0–.8), V89.2.

Source: AIHW Mortality Database.

- For 1998–00, the average motor vehicle accident death rate was higher for children in remote areas than for those in rural or metropolitan areas (6.2 compared with 3.4 and 2.2 per 100,000 children, respectively).
- The average accidental drowning death rate was also higher in remote areas, and was more than twice the rate in metropolitan areas.
- The average assault death rate in rural areas (0.6 per 100,000 children) was lower than that in metropolitan and remote areas (0.8 and 0.7, respectively).

Burden of disease attributable to injuries

Injuries can cause a range of physical, cognitive and psychological disabilities that can seriously affect the quality of life of children and their families (AIHW: Mathers et al. 1999). In 1996, injuries were estimated to account for 11.1% of the total disease burden in children aged 0–14 years (23,769 DALYs). The total burden was higher in boys (64% of total) than in girls (36%). Injuries cause a slightly higher disability burden (12,164 YLD; 51% of total) than mortality burden (11,605 YLL; 49%).



- Of all causes of injury in 1996, road traffic accidents were responsible for the highest burden of disease, accounting for 27% of the injury burden. The mortality burden was greater than the disability burden for traffic accidents.
- Falls and other unintentional injuries were also responsible for a considerable proportion of the injury disease burden, although the disability burden from these conditions was far greater than the mortality burden.

