Injury deaths, Australia 2002

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Injury deaths, Australia 2002

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A total of 7,820 injury deaths were registered in Australia 2002, 54% of which were males. The age-standardised rate was 56.5 injury deaths per 100,000 population for males and 23.3 per 100,000 for females. Rates of injury death were high for young adult males in the age range 20–39 years, who accounted for 26% of all injury deaths in 2002.

The most common cause of injury death was suicide, which accounted for 30% of all injury deaths registered in 2002. This was followed by transport-related injury which accounted for 24% of all injury deaths.

A slight downward trend in injury deaths, evident over the past few years, continued in 2002. This trend was slightly more marked for males.

The Northern Territory had a substantially higher rate of injury deaths than did the other States and Territories, rates for which did not differ greatly from one another.

Of all deaths registered in Australia in 2002, the most common underlying causes were diseases of the circulatory system (38%), neoplasms (29%), and diseases of the respiratory system (9%), followed by injury (6% of all deaths).

Injury and poisoning was the most common cause of death from early childhood through to middle age. In 2002, 50% of all deaths involving persons aged 1–44 years were due to injury or poisoning. (During the first year of life, congenital and perinatal conditions were the most common cause of death.)

Major causes of injury death in 2002

Major causes of injury death[(a)]	Number of deaths	Percentage of all injury deaths	Rate per 100,000 population
Unintentional			
Transport-related	1,907	24%	9.7
Falls	1,517	19%	7.5
Drowning	232	3%	1.2
Poisoning by drugs	496[(b)]	6%	2.5
Smoke, fire and flames, heat and hot substances deaths	115	1%	0.6
Intentional			
Suicide	2,320	30%	11.8
Homicide	303	4%	1.5

(a) See later sections for inclusion criteria. This table does not include 930 deaths with codes for other and unspecified external causes of injury.
(b) Another 109 drug related deaths, not coded to an external cause, are included by an expanded definition (see Section 7.2)

Transport

1,907 deaths were registered in 2002 as being the result of transport-related injury. Males accounted for 74% of all transport-related deaths in 2002.

Age-adjusted rates in the large population States were quite similar in 2002, being a little above or below 10 per 100,000 population. The rate for the Northern Territory was the highest among the States and Territories and that for the Australian Capital Territory was the lowest. The rate for the Northern Territory (34.13) was more than three times that for Australia (9.67).

1,666 of all transport-related deaths resulted from on-road collisions in which a motor vehicle had been involved. Of these 1,666 cases, 66% were motor vehicle occupants. Of the remainder, pedestrians accounted for 12%, pedal cyclists 10% and motorcyclists 2%. Drivers represented the largest group of vehicle occupant deaths and close to three times as many drivers were male.

By far the largest proportion of vehicle occupants died while travelling in a car. The involvement of occupants of heavy transport vehicles and pickup trucks or vans, was also very evident.

Suicide

2,320 suicide deaths were registered in 2002, representing an age-adjusted rate of 11.79 deaths per 100,000. As in previous years, males had higher rates of suicide than females in all age groups. In 2002, the overall male age-adjusted rate was 18.82 deaths per 100,000, almost 4 times the female rate of 5.02 deaths per 100,000.

The three most commonly coded means of suicide were *Suffocation* (45%, of which the major proportion would have been hangings); *Poisoning* (31%, which included car exhaust); and *Firearms* (9%).

Rates for the populous States were fairly similar (between 10.0 and 15.0 per 100,000 population). The rate for the Australian Capital Territory was lower than the national rate and those for Tasmania and the Northern Territory were higher.

Falls

1,517 fall-related deaths were registered in 2002, representing an age-adjusted rate of 7.5 deaths per 100,000 population and accounting for 19% of all injury deaths.

Fall rates were concentrated in the older age groups and were particularly high among both males and females aged 85 years and over.

Males had higher rates than females in most age groups. The larger rates for males were most apparent in young and middle age groups.

Rates appear to differ significantly between jurisdictions. However, these apparent differences should be interpreted cautiously because variations in collection and coding might contribute to the differences.

Drowning

232 deaths were registered in 2002 as having resulted from *Unintentional drowning*. This equates to an age-adjusted rate of 1.2 per 100,000 population. Approximately three times as

many men as women drowned during 2002 (176 males, 56 females). 18% (n=42) of *Unintentional drowning* deaths occurred to children aged 0–4 years, of whom n=20 drowned in a private swimming pool, n=5 in a bathtub, and another n=14 after 'falling or wandered into' a body of water other than a swimming pool. *Unintentional drowning* accounted for 33% of all injury deaths in the 0–4 year age group.

The drowning rates for all of the States and Territories were generally similar to those for 2001.

Unintentional poisoning by drugs

In 2002, 605 deaths, in which the Underlying Cause was the toxic effects of one or more drugs, were registered. This represented an overall, age-adjusted rate of 3 per 100,000 population. Close to two-thirds of these drug-related deaths involved males. The rates were highest for males aged 20–44 years.

The most commonly specified family of drugs was narcotics, which were the cause of 37% of the deaths in this category. In 49% of the cases, the Underlying Cause of death was *Multiple, other or unspecified drug use*.

A much smaller group of *Unintentional poisoning* deaths were associated with *Other substances*, including alcohol. In 2002, a total of 72 such deaths were registered. The two most common agents associated with this group of deaths were alcohol, and gases and vapours.

Only the rate for Queensland—which had the lowest rate of the jurisdictions—differed significantly from the Australian rate.

Smoke, fire and flames, heat and hot substances

Of the 153 deaths due to *Smoke, fire and flames, heat and hot substances* registered in 2002, 115 (75%) were recorded as unintentional. The remainder were recorded as suicide (n=29; 19%), homicide (n=7; 5%) and undetermined intent (n=2; 1%).

66 of the 105 unintentional deaths from this cause were the result of *an uncontrolled fire in a building or structure. Clothing ignition* accounted for 7 deaths; none of these were young children. The *Ignition of highly flammable materials* (e.g. petrol or kerosene) accounted for 7 deaths. A further 10 deaths were the result of *Scalds*, 9 from *Hot tap water* and one from another type of hot fluid. In all cases, deaths from scalds involved older people.

The male adjusted rate for this category of death was about twice the equivalent female rate.

Small case numbers in this category of deaths limit meaningful comparison between States and Territories.

Homicide

There were 303 deaths registered to this category in 2002, accounting for 4% of all injury deaths. The overall age-adjusted rate for homicide in 2002 was 1.5 deaths per 100,000 population.

Males were almost twice as likely as females to be the victims of homicide. 58% of male homicides occurred to males in the age range 20–44 years. Fifteen deaths were at ages 0–4 years, and another 3 died at ages 5–9 years.

For both male and female victims, the most frequently used means of assault was a sharp object, accounting for 34% and 29% respectively. A firearm was used in 10% of homicides in 2002.

As in previous years, the rate of homicide for the Northern Territory was well above the national rate. The majority of these deaths were recorded as Aboriginal or Indigenous (14 of 15).

Trends in injury deaths

The *International Classification of Diseases* (ICD) is used to code causes of death. The tenth revision of the ICD (ICD-10) replaced the ninth revision (ICD-9) for deaths registered from the beginning of 1999. The introduction of a new version of the ICD has produced an interruption of time-series, particularly for some types of injury death. The calculation of Australian estimated comparability ratios (CRs) indicates that the transition to ICD-10 has had minimal impact on the coding of *Unintentional drowning* (CR=1.02), *Transport* (CR=1.01), *Smoke fire and flames* (CR=0.99), *Suicide* (1.00) and *Homicide* (1.00). *Unintentional falls* (CR=0.39), *Unintentional poisoning (drugs)* (CR=1.07) and *Unintentional poisoning (other substances)* (CR=1.18) are affected to a greater extent (Kreisfeld & Harrison 2004).

Although there has been some fluctuation in recent years, the age-adjusted drowning rate for Australia has fallen by 48% in the period 1979–2002. This continues a generally downward trend since at least 1920. This decline has slowed or ceased in recent years.

For transport-related injury as a whole, the overall age-adjusted rate fell by 64% in the period 1979–2002. The fall in rates slowed in the 1990s, and rates have changed little in the last few years.

Assessment of trends in death due to smoke, fire, flame and hot substances is difficult because annual rates fluctuate considerably due to relatively small case numbers and because of clusters of cases for years in which bushfire disasters occurred. There has, however, been a general downward trend in rates and the age-adjusted rate for persons in 2002 was 56% lower than in 1979.

The rate of suicide registered in 2002 was about 7% lower than that registered in 2001. The adjusted suicide rate for males had an upward trend for about a decade to 1997. After peaking at 23.6 deaths per 100,000 population in 1997, the male rate declined gradually to 18.8 in 2002. The female rate has remained relatively constant since 1997.

Trends in relation to falls have been generally downward during the period 1979–2002, and similar for males and females. Between 1999 and 2002, there was a small decline for males and a small rise for females in the age-adjusted rate for all ages as well as across the age range 65 years and over.

Homicide rates have remained relatively constant between 1979 and 2002.

Comparability between 1998 and 2002 is complicated by the effects of the change of ICD revision for the remaining major cause groups, in particular *Unintentional falls* and *Unintentional poisoning*. Age-adjusted rates of mortality due to *Unintentional falls* have remained fairly constant since the early 1990s, and there is no indication of substantial change in 2002. The rate of mortality due to *Unintentional poisoning* by drugs has risen during the 1990s, most sharply after 1996.

Multiple causes of injury deaths

Since 1997, the ABS has coded up to 19 Multiple Causes of Death (MCoDs) in addition to the specified Underlying Cause of Death (UCoD). An MCoD is any morbid condition, disease or injury (additional to the UCoD) that appears on the death certificate as having been a part of the causal chain which led directly to a death.

Under the ICD coding rules applied by the ABS, injury and poisoning cannot be recorded as an Underlying Cause of Death. Instead, an External Cause of the injury and poisoning is normally recorded as the UCoD in these cases. However, codes for the injury or poisoning can be recorded in the MCoD data fields.

MCoD data have been used in two ways for this report.

First, they have enabled better understanding of some types of injury death previously specified solely in terms of UCoD codes representing External Causes of injury and poisoning (notably unintentional falls and poisoning by drugs).

Second, MCoD data provide some insight into the involvement of injury, poisoning (and External Cause of injury or poisoning) in the occurrence of deaths that have been given UCoD codes representing 'natural' causes of death (i.e. diseases).

In 2002, 7,820 deaths were registered which were given an External Cause as the UCoD. Another 5,104 deaths *did not have* an External Cause code as the Underlying Cause of Death, but *did have* at least one External Cause of injury or poisoning recorded as an MCoD. Most common among the latter were *Complications of medical and surgical care* and *Accidental falls.*

Patterns of External Causes differ between UCoD and MCoD fields. For example, *Complications of medical and surgical care (Y40–Y84)* are not commonly recorded as the UCoD (137 deaths were registered in 2002). However, during the same period, a total of 2,423 deaths were assigned at least one Multiple Cause of Death code (MCoD) indicating *Complications of medical and surgical care.*

Abbreviations used

ABS	Australian Bureau of Statistics
AIHW	Australian Institute for Health and Welfare
E-code	ICD External Cause code
ICD	International Classification of Diseases
ICD-9	International Classification of Diseases, 9th Revision
ICD-10	International Classification of Diseases, 10th Revision
MCoD	Multiple Cause of Death
nec	Not elsewhere classified
NISU	National Injury Surveillance Unit
RCIS	Research Centre for Injury Studies
UCoD	Underlying Cause of Death

1 Introduction

Every year, the Australian Bureau of Statistics (ABS), compiles data on all deaths registered in Australia. Since 1992, the National Injury Surveillance Unit (NISU) has used these data as the basis for annual reports on injury deaths. These annual reports have the aim of describing and monitoring the pattern of injury mortality in Australia. Their focus is on the presentation of detailed analyses of the External Causes of injury which also include a description of deaths according to major groupings of injury or poisoning.

An important use for injury statistics is the presentation of trends in the rates of injury. Since 1992, NISU has maintained a convention of reporting trends for injury related deaths in relation to several major injury groups: *Transportation*; *Suicide*; *Unintentional Falls*; *Drowning*; *Poisoning by drugs*; *Poisoning by other substances*; *Homicide*; *Fires/burns/scalds*; *Other unintentional injuries*; *Injuries of undetermined intent*; and *Medical misadventure or complications*. These trends have been calculated for the period commencing with 1979, when the International Classification of Diseases, Version 8 (ICD-8) was replaced by Version 9 (ICD-9) for the coding of mortality data.

The transition to ICD-10, at the beginning of 1999, disrupted comparability for at least some of the major groups of injury. The evidence and explanations for this were included in the report *Injury Deaths, Australia 1999* (Kreisfeld & Harrison 2004).

2 All injury deaths, Australia

ICD-10 V01–Y98

Table 2.1: Key indicators for all External Causes of death

Indicator	Males	Females	Persons
Cases	5,271	2,549	7,820
Injury and poisoning deaths as percentage of all deaths	7.7%	3.9%	5.9%
Crude rate/100,000 population	54.04	25.72	39.77
Age standardised rate/100,000 population	56.51	23.25	39.44
Average years potential life lost (YPLL) before age 75 years	31	21	27

2.1 Overview

133,707 deaths from all causes were registered in Australia in 2002. This represented an increase of 3.9% over 2001, for which 128,544 deaths were registered.

Of all deaths registered in Australia in 2002, the most common underlying causes were diseases of the circulatory system (38%), neoplasms (29%), and diseases of the respiratory system (9%), followed by injury (6% of all deaths).

Injury and poisoning was the most common cause of death from early childhood through to middle age. In 2002, 50% of all deaths involving persons aged 1–44 years were due to injury or poisoning. (During the first year of life, congenital and perinatal conditions were the most common cause of death.)

There were 7,820 injury deaths in 2002 where the Underlying cause of death was an External cause. Injury deaths can, however, be defined more broadly than this. In Section 7.2 of this report, for example, we have expanded the conventional definition of injury deaths to include cases of unintentional drug-related poisoning where the Underlying cause of death was not an external cause but where those deaths appeared to be similar in nature. In Chapter 11 , we have also considered another group of deaths which could be included within an expanded definition of injury deaths: deaths that were ***not*** assigned an External Cause as the Underlying Cause of Death, but ***were*** assigned an External Cause code as a Multiple Cause of Death (MCoD).

Of the 7,820 injury deaths in 2002, 137 were attributed to *Complications of medical and surgical care*. This category is sometimes considered separately from other injury deaths. In this report, *Complications of medical and surgical care* are included in the calculation of counts and rates of *All Injury Deaths*. They are included in the 'Unintentional' column of Table 2.2.

Of the 7,820 injury deaths registered in 2002, 5,130 (65.6%) were unintentional (including *Complications of care*), 2,320 (29.7%) were suicides and 303 (3.7%) homicides. A further 10 cases (0.1%) were the result of legal intervention/war and, in 66 cases (0.8%), the intent was undetermined.

Table 2.2 presents Australian injury mortality data for 2002 according to a matrix in which the columns represent types of involvement of human ***intent*** in the occurrence of injury deaths, and the rows represent some of the more important ways in which injury comes about (the latter are referred to as ***mechanisms*** here, though other terms could be used). This type of presentation reveals (for example) the breakdown of firearm deaths according to the role of human intent, and the breakdown of suicide deaths according to the means of death.

The matrix is produced by aggregating ICD 'External Causes' categories according to a scheme that was first published in the USA in 1997 (Centers for Disease Control and Prevention 1997). A preliminary version of a modification of the matrix which takes account of the changes that came about with the introduction of ICD-10, was published in June 2001. Table 2.2 adheres to the scheme used in this modification (Fingerhut 2001).

Construction of the matrix is constrained by features of the ICD 'External Causes' classification. In particular, the combinations of ***intent*** and ***mechanism*** that are shaded in Table 2.2 cannot be distinguished in terms of 'External Causes' categories. Despite its limitations, the matrix is a useful summary presentation of injury mortality data. If adopted widely, it will facilitate comparison of the injury experience of nations, States and other areas.

Table 2.2: Injury deaths by manner/intent and mechanism/cause, Australia 2002

Mechanism/cause	Manner/intent					
	Unintentional	Suicide	Homicide	Undetermined	Other	Total
Cut/pierce	**8**	**55**	**98**			**161**
Drowning	**232**	**40**	**3**	**9**		**284**
Fall	**629**	**106**	**2**	**5**		**742**
Fire, hot objects	**115**	**29**	**7**	**2**		**153**
Fire/flame	*103*	*29*	*7*	*2*		*141*
Hot object/substance	*12*					*12*
Firearm	**31**	**217**	**45**		**6**	**299**
Machinery	**16**					**16**
All transportation	**1,907**	**12**	**3**	**2**		**1,924**
Motor vehicle traffic:	*1,666*					*1,666*
Occupant	*1,104*					*1,104*
Motorcyclist	*214*					*214*
Pedal cyclist	*33*					*33*
Pedestrian	*244*					*244*
Unspecified	*71*					*71*
Pedal cyclist, other	*6*					*6*
Pedestrian, other	*63*					*63*
Other land transport	*91*					*91*
Other transport	*81*					*81*
Natural /environmental	**35**					**35**
Poisoning	**568**	**726**	**9**	**38**		**1,341**
Struck by or against	**52**		**71**			**123**
Suffocation[(a)]	**222**	**1,045**	**19**	**5**		**1,291**
Other specified, classifiable	**94**	**73**	**10**	**4**		**181**
Other specified, nec	**54**	**16**	**6**		**4**	**80**
Unspecified	**1,031**	**1**	**20**	**1**		**1,053**
Complications of medical/surgical Care:	**136**					**136**
Adverse effects of drugs, etc.	*36*					*36*
Misadventures during care	*100*					*100*
All Injury	**5,130**	**2,320**	**293**	**66**	**10**	**7,819**[(b)]

Note: The shaded cells in Table 2.2 represent combinations of mechanism and intent which cannot be distinguished in the ICD-10 External Cause classification.

nec Not elsewhere classified

(a) Includes hanging.
(b) One case did not have intent or mechanism recorded.

2.3 Age and sex distribution

Injury and poisoning is the leading cause of death for those aged 1–44 years. It accounted for 50% (n=3,828) of all deaths in this age group (n=7,714) in 2002. (Perinatal and congenital conditions account for most deaths in the first year of life.)

Male rates are consistently higher than female rates. The ratio between male and female age-adjusted rates was 2.4 in 2002. The ratio fluctuates from year to year, and has tended to rise somewhat over the period since 1979 (e.g. the ratio was 2.4 in 1979).

Rates for both sexes were lowest in childhood and highest at ages 75 and older (Figure 2.1). Rates for males were higher than rates for females at all ages. Male rates were around 4 times higher than female rates at ages 20–34 years. The rate ratio was lowest for very young children and in the oldest group (around 1.5–2.0).

Young adults, in the age range 20–39 years, accounted for 33% of all injury deaths. Young males, alone, accounted for more than 26% of the total (n=7,820).

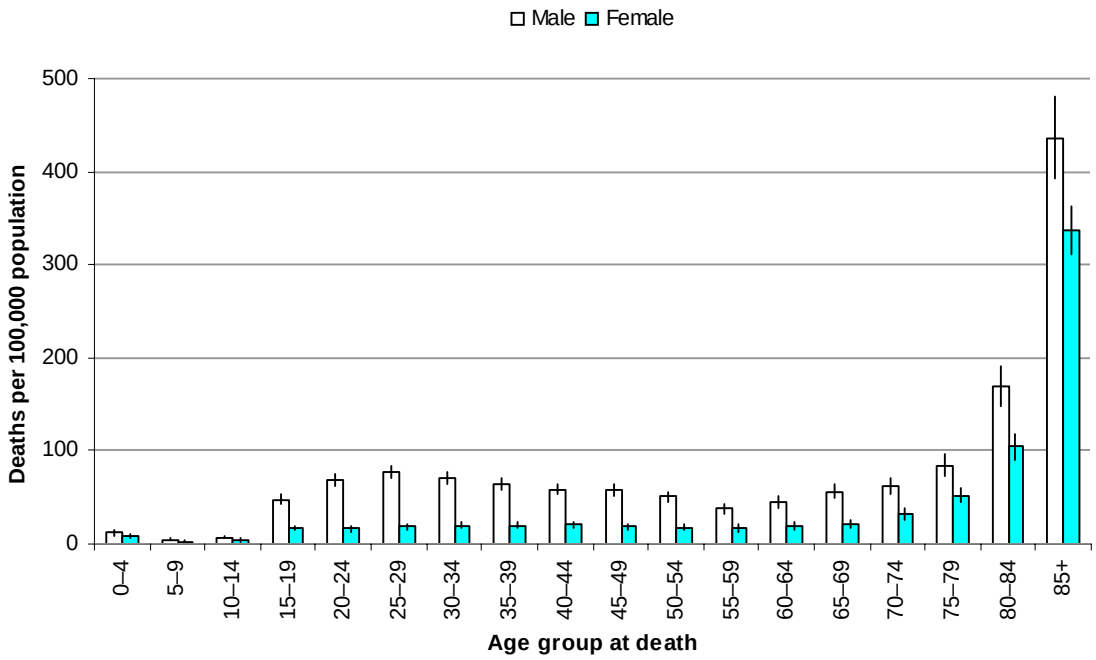


Figure 2.1: Deaths due to all External Causes of injury by age and sex, Australia 2002

2.4 Trends in death rates

Figure 2.2 shows age adjusted injury mortality rates for males, females and persons for the period 1979–2002. Male and female injury death rates fell during the period as a whole, but remained fairly steady after the mid-1990s. Between 2001 and 2002, the rate for females increased by 2.5 while the rate for males decreased by 0.9.

Between 1979 and 2002, overall age-standardised death rates due to injury decreased by 39%. Injury mortality has fallen since 1999 and the rate in 2002 was the lowest on record. The recent decline has mainly been for males (Figure 2.2) and reflects lower rates of suicide (Section 4) and poisoning by drugs (Section 7).

The introduction of ICD-10 in 1999 produced a break in series. As was discussed in Injury Deaths, Australia 1999 (Kreisfeld & Harrison 2004), analysis of dual-coded data for 1998 suggests that the net effect of the change in classification was an increase of 3.4%, between 1998 and 1999, in the number of deaths coded as being due to External Causes of injury and poisoning. The break in series is reflected in Figure 2.2.

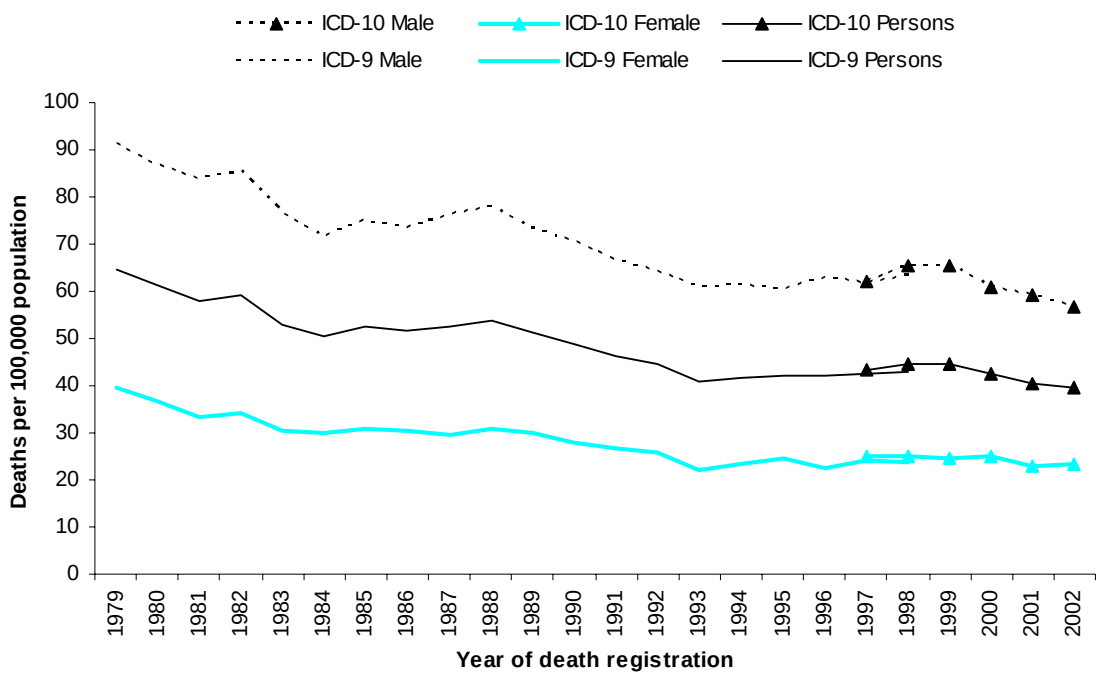
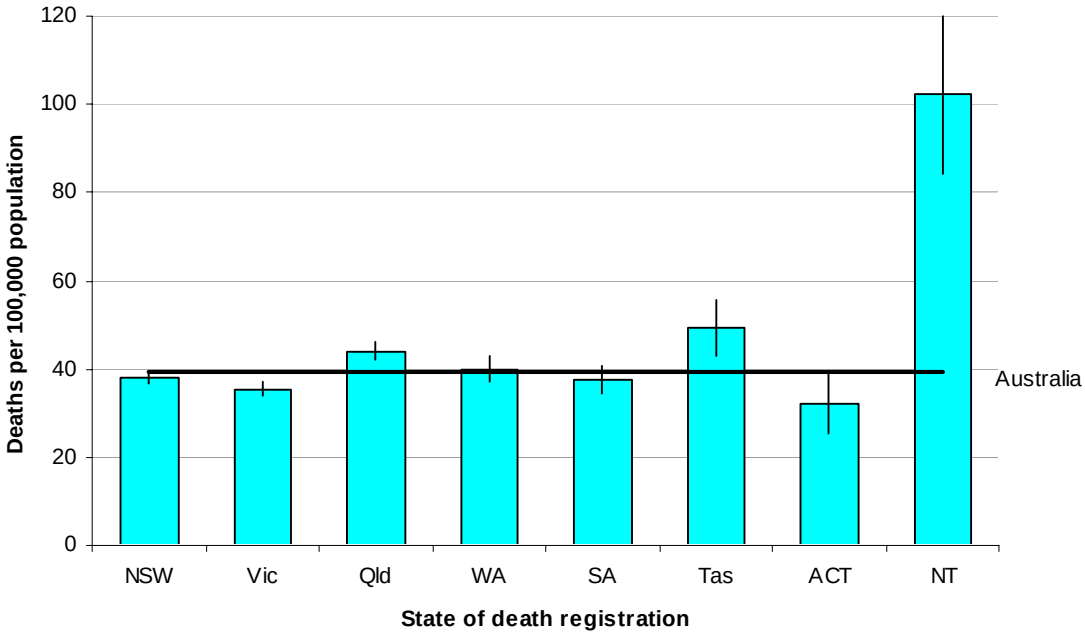


Figure 2.2: Age-adjusted rates of injury death from all causes, by sex, Australia 1979–02

2.5 State and Territory differences

There was considerable similarity between the age-adjusted injury mortality rates for all of the large population States in 2002; all were a little above or below 40 per 100,000 population. As in other recent years, the rate for the Northern Territory was the highest among the States and Territories, and the rate for New South Wales was the lowest. Considering only the 2002 data, the rates for the Northern Territory, Tasmania and Queensland were significantly above the overall rate for Australia, while the rates for Victoria and the Australian Capital Territory were significantly below it.



Note: The thick horizontal line shows the rate for Australia.

Figure 2.3: Deaths due to all External Causes of injury, States and Territories 2002: Persons (Age standardised rates)

2.6 Major types of injury deaths

35% of the 7,820 injury deaths registered in 2002 were the result of suicide (n=2,722) and 25% were the result of transport related injuries (n=2,038).

The proportion of different types of injuries varies with age (Figure 2.4). Drowning was most prevalent in early childhood; the impact of suicide and transport emerges in the adolescent years and continues until old age. A large proportion of deaths among the elderly were the result of falls and homicide accounted for a reasonably constant proportion of injury deaths from infancy to old age.

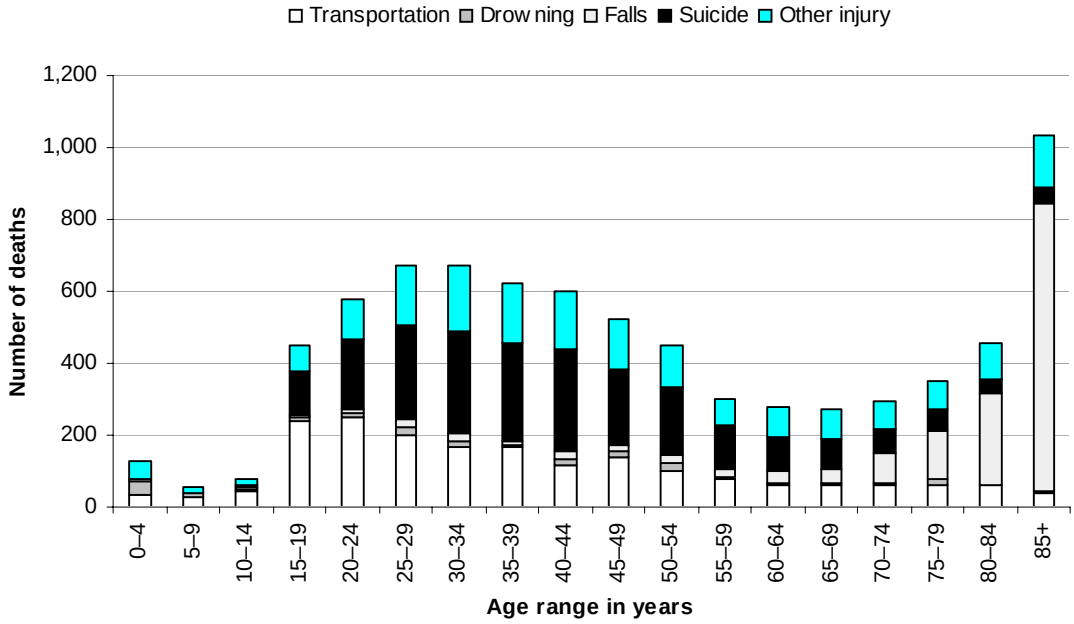


Figure 2.4: Age distribution of deaths for selected major causes of injury death, Australia 2002

Not only are rates of injury mortality higher for males than females (Figures 2.1 and 2.2), but the pattern of external causes differs between the sexes (Figure 2.5). Many more men than women die due to suicide and transport-related injuries. The main external cause of death for which the number of females exceeds the number of males is accidental falls. This reflects the preponderance of women in the age group at most risk of this cause (see Chapter 5).

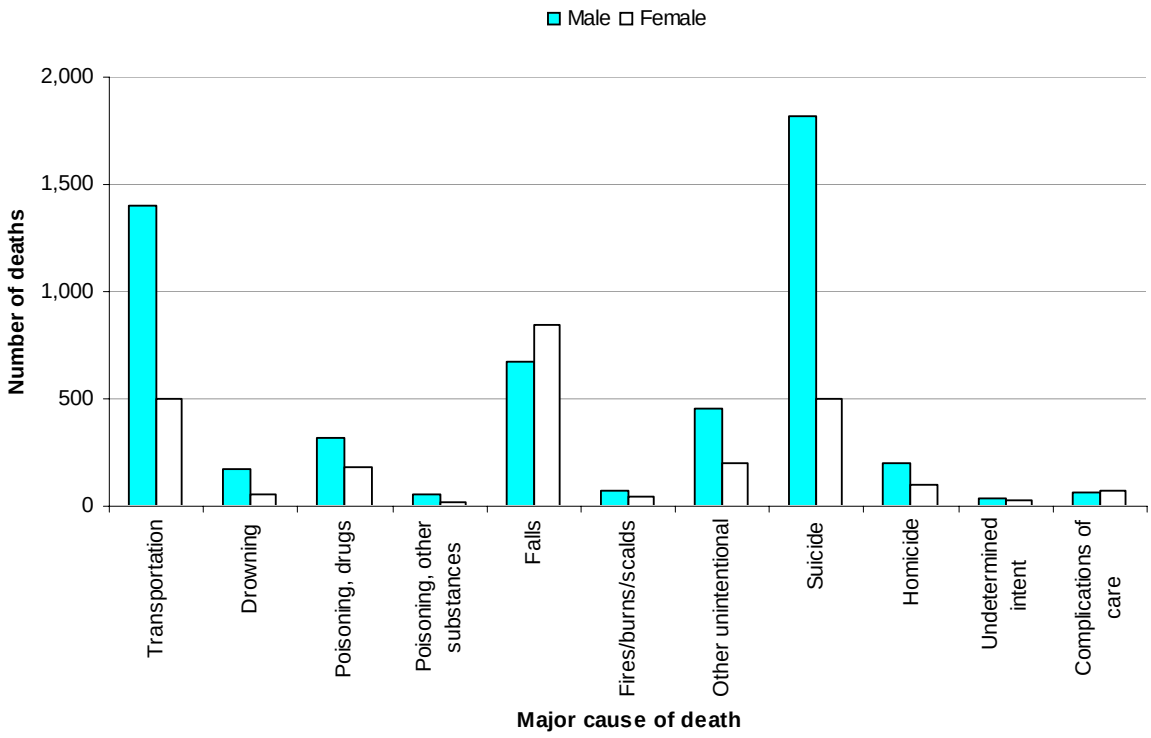
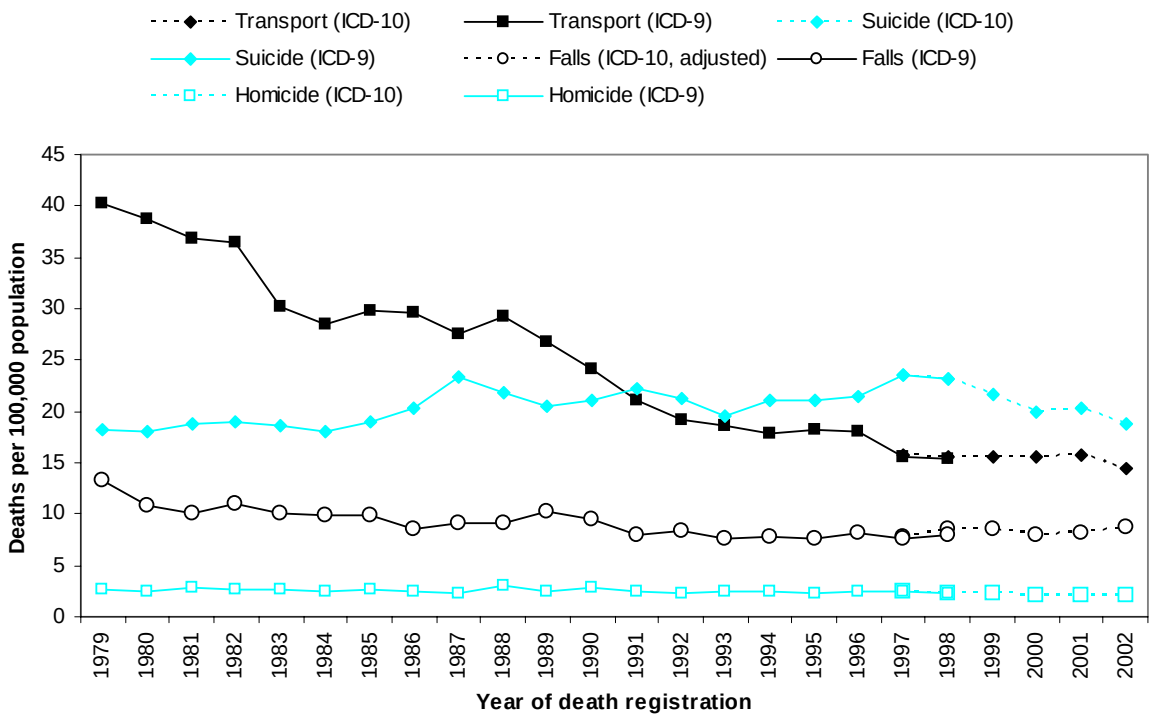


Figure 2.5: Major types of injury deaths, Australia 2002

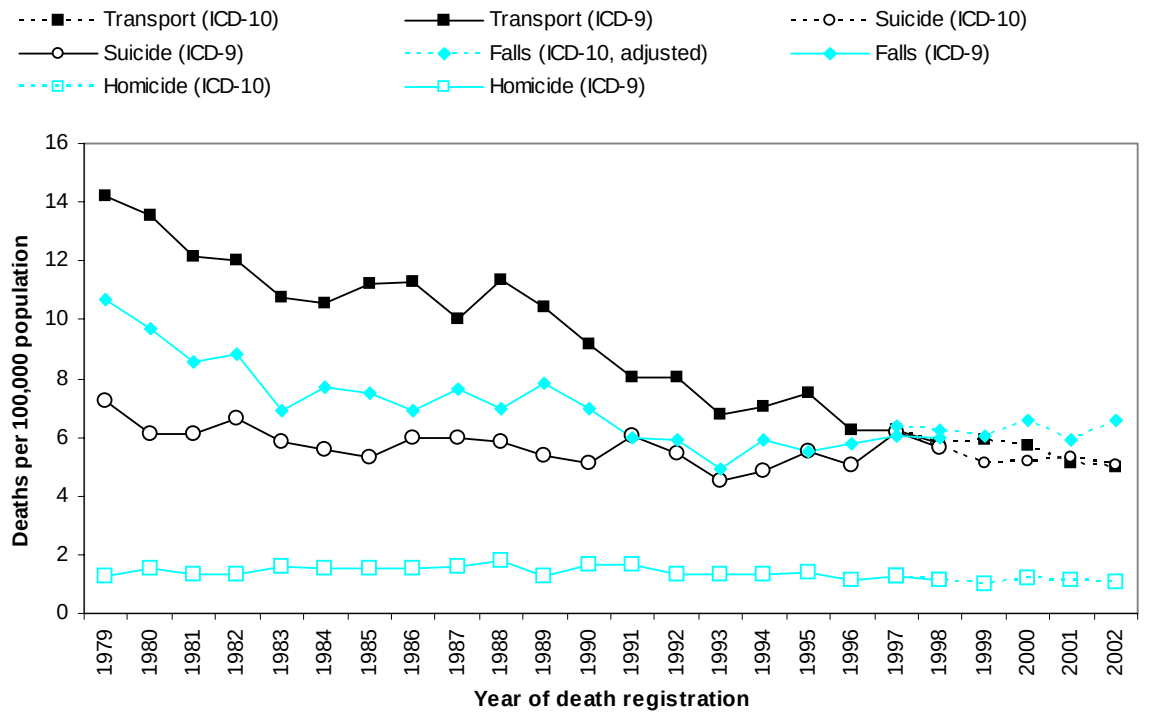
Trends since 1979 in rates for common types of injury deaths are shown in Figures 2.6 (males) and 2.7 (females). Suicide displaced transport-related death as the most common type of injury death for males in the early 1990s. Female rates for these causes had converged by the end of the decade.

The major types of injury deaths are described in more detail in Chapters 3 to 10 of this report.



Note: The ICD-10 data points for Falls mortality include deaths for which the UCoD is X59 and at least one code for 'fracture' appears in MCoD fields. This corrects for the lack of an ICD-10 code equivalent to ICD-9 E887.

Figure 2.6: Trends in major types of injury death rates, males, Australia 1979–02



Note: The ICD-10 data points for Falls mortality include deaths for which the UCoD is X59 and at least one code for 'fracture' appears in MCoD fields. This corrects for the lack of an ICD-10 code equivalent to ICD-9 E887.

Figure 2.7: Trends in major types of injury death rates, females, Australia 1979–02

2.7 Activity and place

Since 1999 the ABS has coded deaths according to the *Place* in which a fatal injury had occurred and provided information about the *Activity* being undertaken at time of injury.

According to standard ICD-10 coding rules, *Activity codes* are applicable within the range of External Cause categories V01–Y34. According to this criterion, 7,582 injury deaths registered in 2002 were eligible to receive an *Activity* code. Six cases outside the specified range were assigned a code. In 91% of the cases where a code was assigned, the type of *Activity* being undertaken at the time of injury was recorded as 'Other specified' activity or 'Unspecified'. Only in 678 (9%) of cases was an *Activity* recorded as being in one of the five specific categories provided in the classification. These 678 cases had been coded as follows: While engaged in sports activity (n=55), While engaged in leisure activity (n=167), While working for income (n=140), While engaged in other types of work (n=49), While resting, sleeping, eating or engaging in other vital activity (n=267). The large number of unspecified cases and the lack of formal validation makes interpretation of these counts very uncertain. For this reason, activity data are not reported extensively in this report.

Under ICD-10 coding rules, External Cause codes within the range W00–Y34 (with the exception of Y06 and Y07) can attract a *Place* code. In 2002, 5,674 injury deaths had an External Cause in this range recorded as the Underlying Cause of Death. 63 ineligible cases were assigned a *Place* code.

As in previous years, the most commonly recorded type of place in which fatal injury occurred was 'Home' (42% of deaths). In 32% of cases, the type of place is 'Unspecified' and in 13% of cases the place was 'Other specified'. *Place* data are summarised in Table 2.3 and in subsequent Chapters. These data should be interpreted cautiously because Place is unspecified for about one-third of eligible cases. Note that the range of codes for which the type of place code is required does not include Transport (V01–V98). Hence, the cases in Table 2.3 coded 'Street, highway' do not include deaths due to road traffic accidents.

Table 2.3: Place where fatal injury occurred, 2002[(a)]

Place	Persons	Per cent
Home	2,355	41.5%
Residential institution	120	2.1%
School, other institution, publicly administered area	78	1.4%
Sport, athletics area	70	1.2%
Street, highway	215	3.8%
Trade, service area	171	3.0%
Industrial, construction area	43	0.8%
Farm	55	1.0%
Other specified	726	12.8%
Unspecified	1,841	32.4%
Total eligible for a place code	**5,674**	**100.0%**

[(a)] Deaths registered in 2002 where the UCoD was an ICD-10 External Cause in the range W00–Y34 (except Y06 and Y07).

3 Transport deaths, Australia

ICD-10 V01–V99

Table 3.1: Key indicators for transport deaths

Indicator	Males	Females	Persons
Cases	1,403	504	1,907
Percentage of all injury deaths	26.6%	19.8%	24.4%
Crude rate/100,000 population	14.38	5.09	9.70
Age standardised rate/100,000 population	14.47	4.96	9.67
Average years potential life lost (YPLL) before age 75 years	38	33	36

This section covers all transport deaths including motor vehicle traffic and motor vehicle non-traffic, railway, water and air transport. It does not include transport-related injury deaths that were registered as intentional.

3.1 Overview

Table 3.2: Major mechanism of injury for transport deaths, Australia 2002

Major mechanism of injury	Description	Males	Females	Persons
Motor vehicle traffic	Includes all fatalities due to on-road accidents in which a motor vehicle was involved.	1,206	460	1,666
Other pedestrian and pedal cycle	Transport related cases where no motor vehicle was involved.	48	21	69
Other land transport		80	11	91
Other transport	Includes all fatalities related to air or water transport, as well as other specified transport (e.g. cable cars and ski lifts), and unspecified transport.	69	12	81
Total		**1,403**	**504**	**1,907**

3.2 Age and sex distribution

Males accounted for 73.6% (n=1, 403) of all transport-related deaths in 2002.

Males in the 15–29 year age range accounted for 28% (n=540) of all transport-related deaths in 2002 and females in the same age range accounted for a further 8% (n=149).

Adolescents, young adults and the elderly had the highest transport-related death rates.

Male age-specific rates were markedly higher than female rates from about 10 years of age.

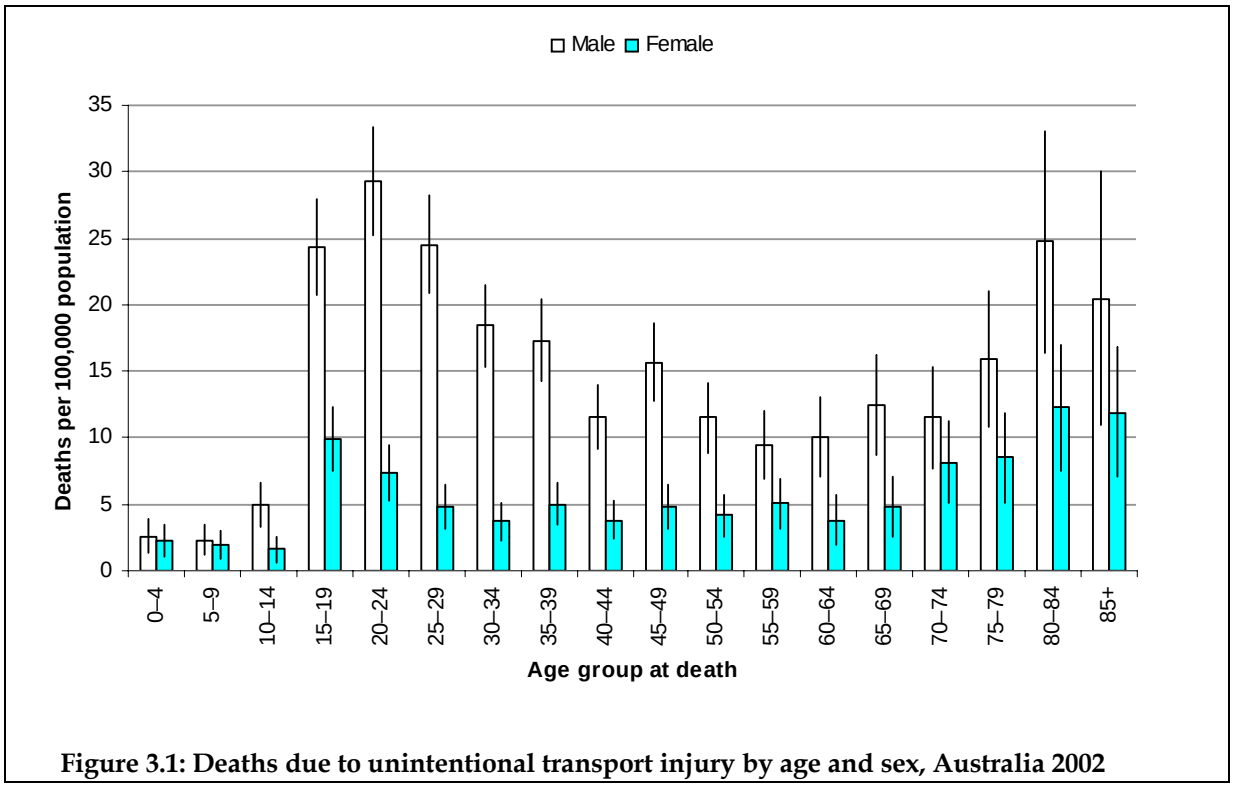


Figure 3.1: Deaths due to unintentional transport injury by age and sex, Australia 2002

3.3 Trends in death rates

Overall age-adjusted rates for persons fell by 64% in the period 1979–2002. The fall in rates slowed in the 1990s. Rates have changed little in the latest few years shown, though there is a slight downward trend.

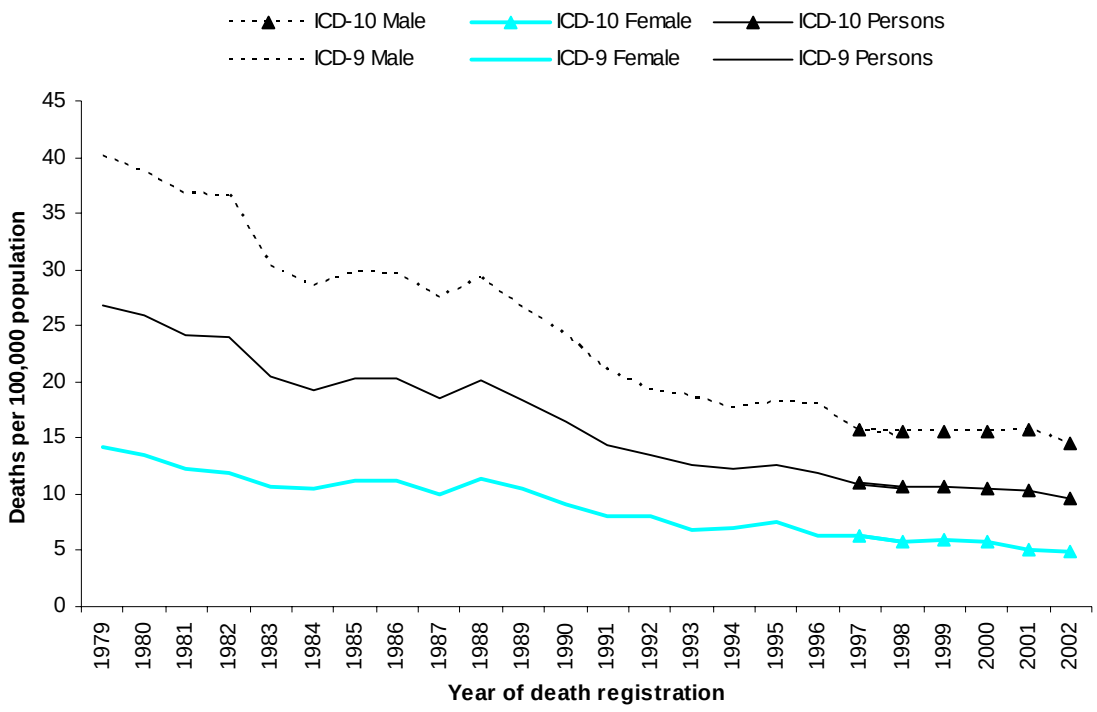
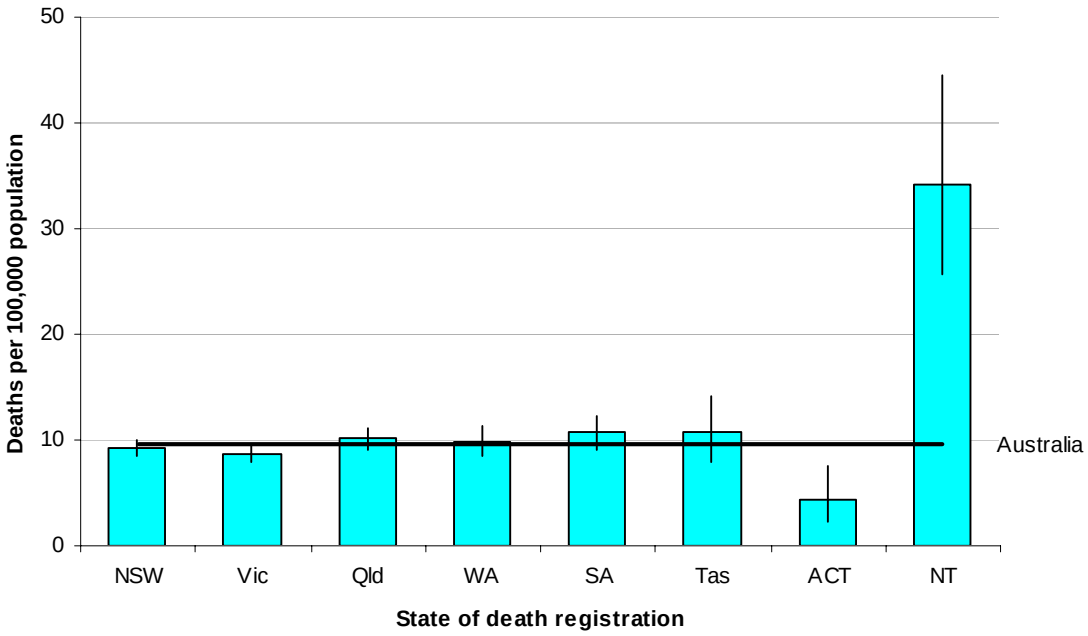


Figure 3.2: Age-adjusted rates of transport death, by sex, Australia 1979–02

3.4 State and Territory differences

Age-adjusted rates for all of the large population States were quite similar in 2002, being a little above or below 10 per 100,000 population. The rate for the Northern Territory was the highest among the States and Territories, and the rate for the Australian Capital Territory was the lowest. The rate for the Northern Territory (34.1) was close to three times that for Australia (9.7).



Note: The thick horizontal line shows the rate for Australia.

Figure 3.3: Deaths due to unintentional transport injury, States and Territories 2002: Persons (Age standardised rates)

3.5 Transport deaths: motor vehicle traffic

ICD-10: *Occupants:* V30–V39 (.4–.9), V40–V49 (.4–.9), V50–V59 (.4–.9), V60–V69 (.4–.9), V70–V79 (.4–.9), V81.1, V82.1, V83–V86 (.0–.3), *Motorcyclists:* V20–V28 (.3–.9), V29 (.4–.9), *Pedal cyclists:* V12–V14 (.3–.9), V19 (.4–.6), *Pedestrians:* V02–V04 (.1, .9), V09.2, *Other:* V80 (.3–.5), *Unspecified:* V87 (.0–.8), V89.2.

Table 3.3: Key indicators for road traffic deaths, Australia 2002

Indicator	Males	Females	Persons
Cases	1,206	460	1,666
Injury and poisoning deaths as percentage of all deaths	22.9%	18.0%	21.3%
Crude rate/100,000 population	12.36	4.64	8.47
Age standardised rate/100,000 population	12.45	4.53	8.45
Average years potential life lost (YPLL) before age 75 years	38	32	36

This section covers fatalities due to all on-road accidents in which a motor vehicle was involved.

The 1,666 motor vehicle traffic deaths in 2002 represented a decrease of 2% from the 1,693 motor vehicle traffic deaths recorded in 2001. The age-adjusted road traffic death rate decreased by 3% from 8.72 to 8.45 deaths per 100,000 population (Table 3.3).

3.5.1 Age and sex distribution

Males made up 72% (n=1,206) of motor vehicle traffic deaths in 2002.

Males aged 15–29 years and 75 years and older had the highest rates of motor vehicle traffic deaths in 2002.

Males in the 15–29 year age range accounted for 29% (n=482) of all motor vehicle traffic deaths in 2002.

Children and adolescents under the age of 15 years accounted for a further 80 motor vehicle traffic deaths in 2002, most as motor vehicle passengers (n=43) and pedestrians (n=25). Deaths in this age group represented 5% of all motor vehicle traffic deaths.

In the 80+ age group there has been a notable increase in the number of female motor vehicle traffic deaths and a decrease in the number of male motor vehicle traffic deaths since 2000.

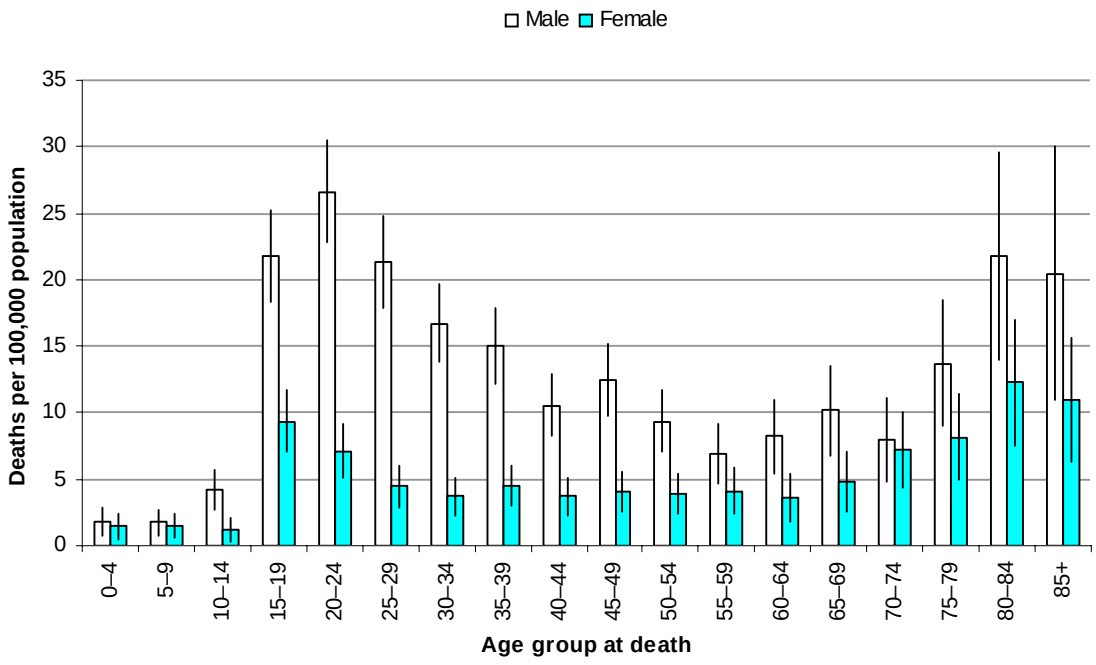
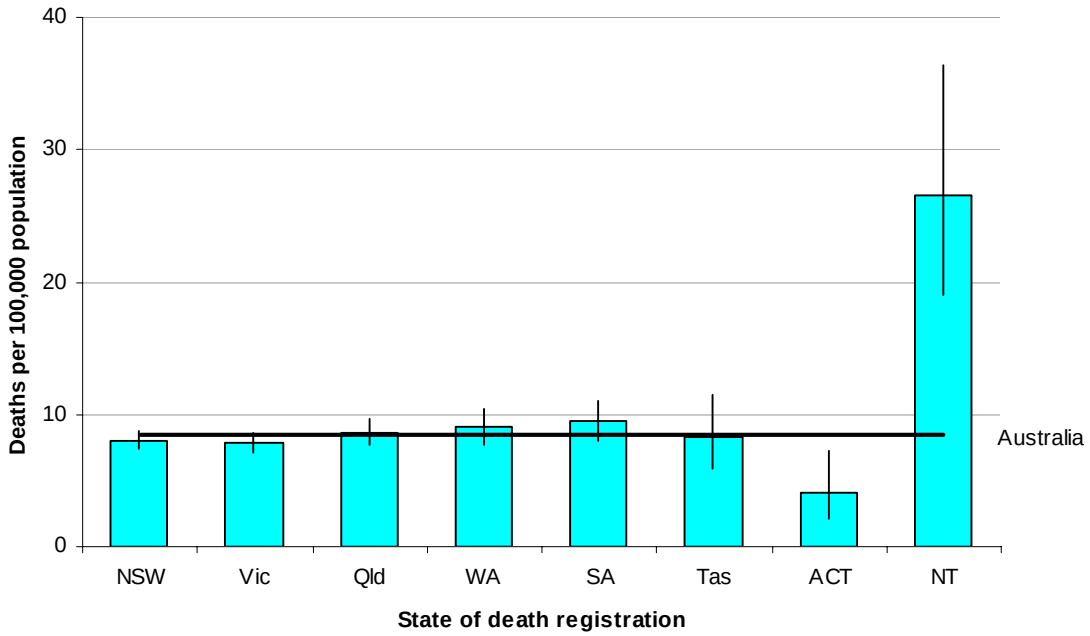


Figure 3.4: Deaths due to unintentional motor vehicle traffic injury by age and sex, Australia 2002

3.5.2 State and Territory differences

As for all fatal transport injuries (Figure 3.3), age-adjusted rates of death due to unintentional motor vehicle traffic injury did not differ much between Australia's States. The rate for the Northern Territory was the highest among the States and Territories, and the rate for the Australian Capital Territory was the lowest.



Note: The thick horizontal line shows the rate for Australia.

Figure 3.5: Deaths due to unintentional motor vehicle traffic injury, States and Territories 2002: Persons (Age standardised rates)

3.5.3 Trends in death rates

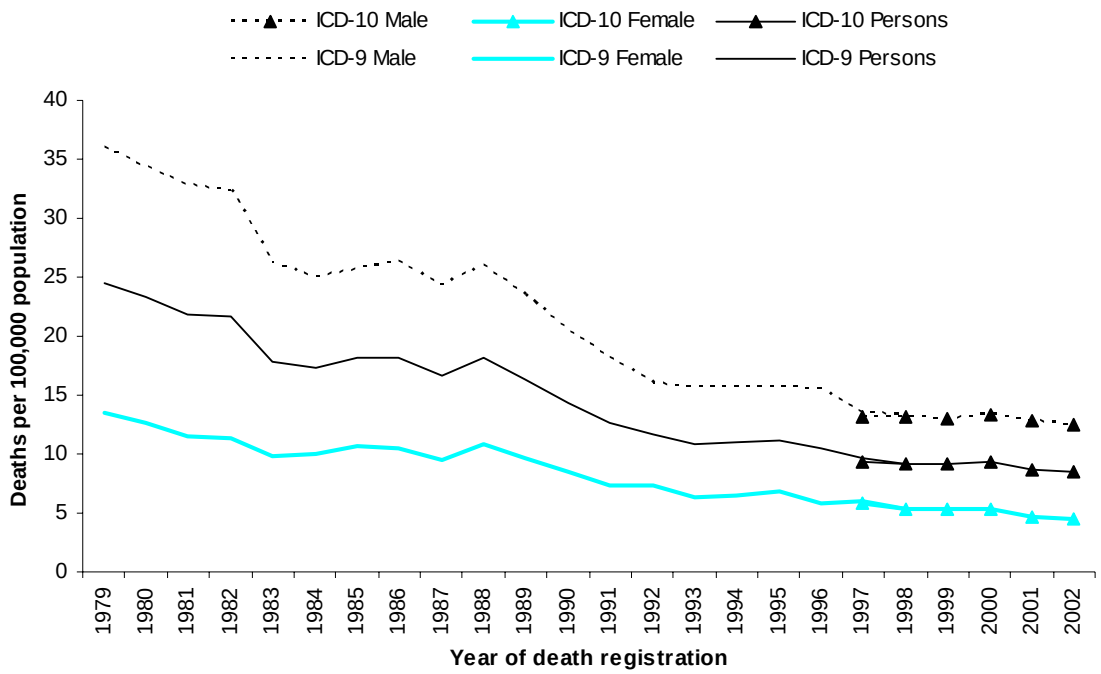


Figure 3.6: Deaths due to unintentional motor vehicle traffic injury, Australia 1979–2002: Persons (Age standardised rates)

3.5.4 Road user type

Of the 1,666 motor vehicle traffic deaths in 2002, 66% (n=1,104) were motor vehicle occupants. In the same year, pedestrians accounted for 13% of motor vehicle traffic deaths (n=214); motorcyclists 2% (n=33); and pedal cyclists 15% (n=244). The type of road user was not specified in 4% of cases (Table 3.4).

Since 2000 there has been an increase in the number of pedestrian and motorcyclist traffic deaths and a decrease in the number of occupant and pedal cyclist deaths.

Table 3.4: Motor vehicle traffic deaths, by road user type and sex, Australia 2002

Road user type	Males	Females	Persons
Occupant	760	344	1,104
Pedestrian	199	15	214
Motorcyclist	29	4	33
Pedal cyclist	169	75	244
Unspecified	49	22	71
Total	**1,206**	**460**	**1,666**

3.5.5 Occupant type

Drivers represented the largest group of vehicle occupant deaths 67% (n=725), reflecting the fact that the driver is the sole occupant of many vehicles. 75% of the drivers were males, compared with 55% of passengers, probably reflecting different gender-specific patterns of usage (Table 3.5).

Table 3.5: Motor vehicle occupant deaths, by sex and type of occupant, Australia 2002

Occupant type	Males	Females	Persons
Driver	544	181	725
Passenger	185	149	334
Unspecified occupant	31	14	45
Total	**760**	**344**	**1,104**

3.5.6 Vehicle type

By far the largest proportion of vehicle occupants died while travelling in a car (94%). The high proportion of males among fatally injured occupants of heavy transport vehicles and pickup trucks or vans was also very evident (Table 3.6).

Table 3.6: Motor vehicle occupant deaths, by sex and type of vehicle occupied, Australia 2002

Type of vehicle	Male	Female	Persons
Car	683	330	1,013
Pickup truck or van	24	7	31
Heavy transport vehicle	39	2	41
Bus	3	3	6
Special agricultural vehicle	11	2	13
Total	**760**	**344**	**1,104**

4 Suicide deaths, Australia

ICD-10 X60–X84

Table 4.1: Key indicators for suicide deaths

Indicator	Males	Females	Persons
Cases	1,817	503	2,320
Percentage of all injury deaths	34.5%	19.7%	29.7%
Crude rate/100,000 population	18.63	5.08	11.80
Age standardised rate/100,000 population	18.82	5.02	11.79
Average years potential life lost (YPLL) before age 75 years	33	31	33

4.1 Overview

There were 2,320 suicide deaths registered in 2002. This represented a decrease of 5% in the 2,457 registered suicides in 2001. Suicide was responsible for 30% of all injury deaths in 2002, at an age-adjusted rate of 12 deaths per 100,000. Suicide accounted for more deaths than transport related accidents, which had an age-adjusted rate of 10.

4.2 Age and sex distribution

Males continued to have higher rates than females in all age groups. The overall male age-adjusted rate of 18.82 per 100,000 in 2002 was about 3.75 times the female rate of 5.02 deaths per 100,000. The excess of male rates over female rates was greatest for young adults, and in the oldest group shown.

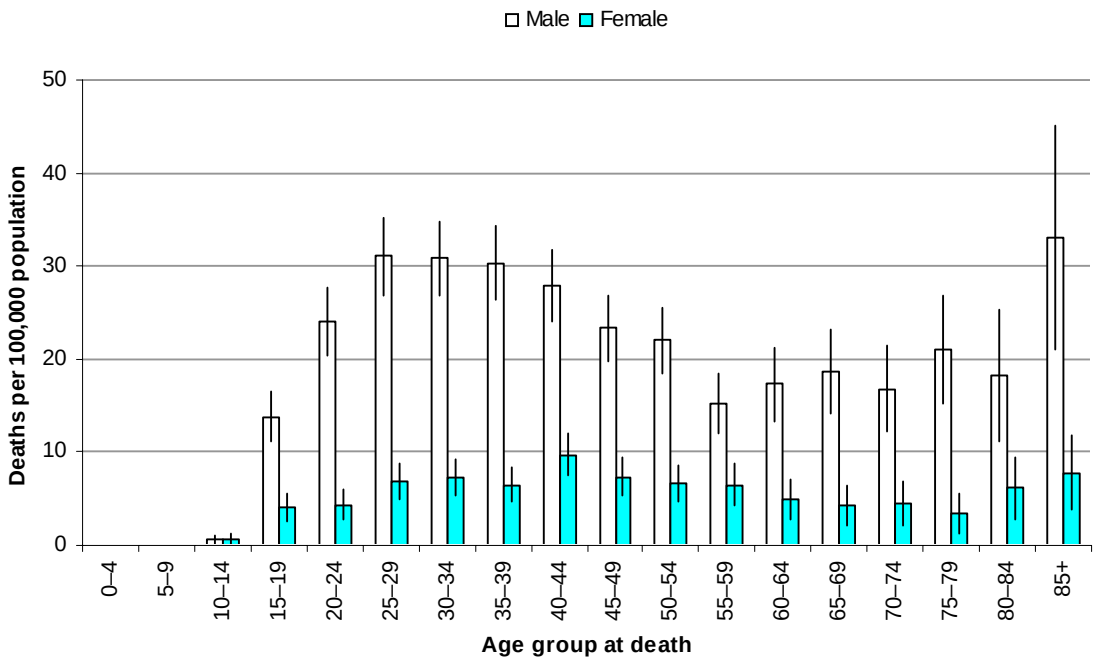


Figure 4.1: Deaths due to intentional self-harm (suicide) by age and sex, Australia 2002

4.3 Trends in death rates

The rate of suicide registered in 2002 was about 5% lower than that registered in 2001. The adjusted suicide rate for males had an upward trend for about a decade to 1997. After peaking at 23.6 deaths per 100,000 population in 1997, the male rate declined to 18.8 in 2002.

The age-adjusted male suicide rate in 2002 was the lowest since 1985, and was 20% lower than in 1997. The much lower female rates have changed very little in recent years.

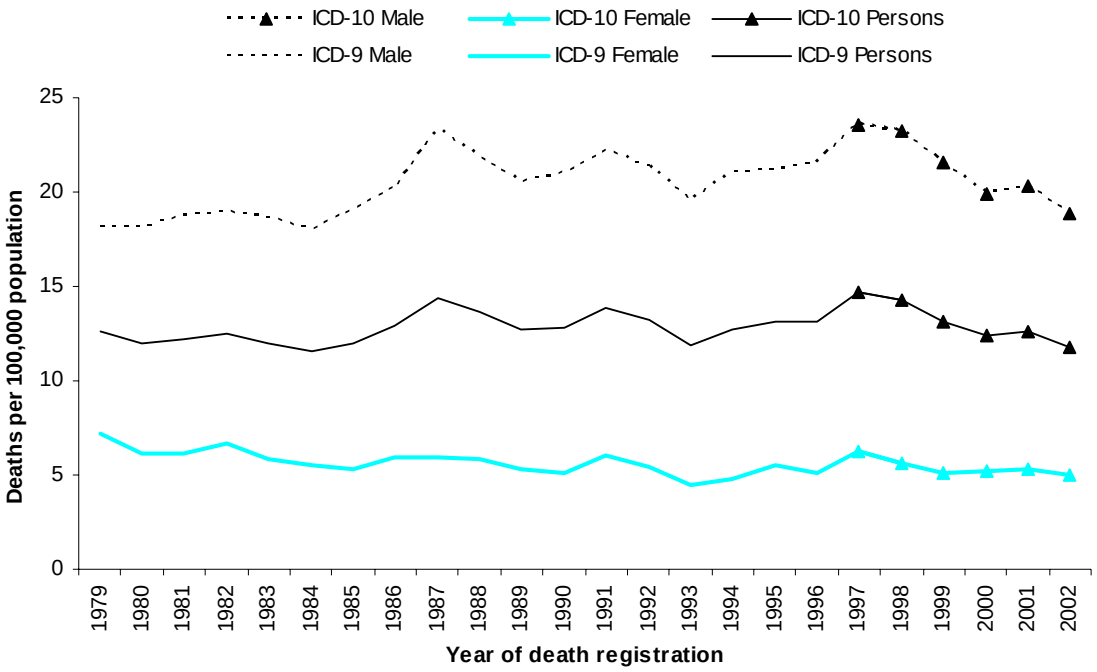
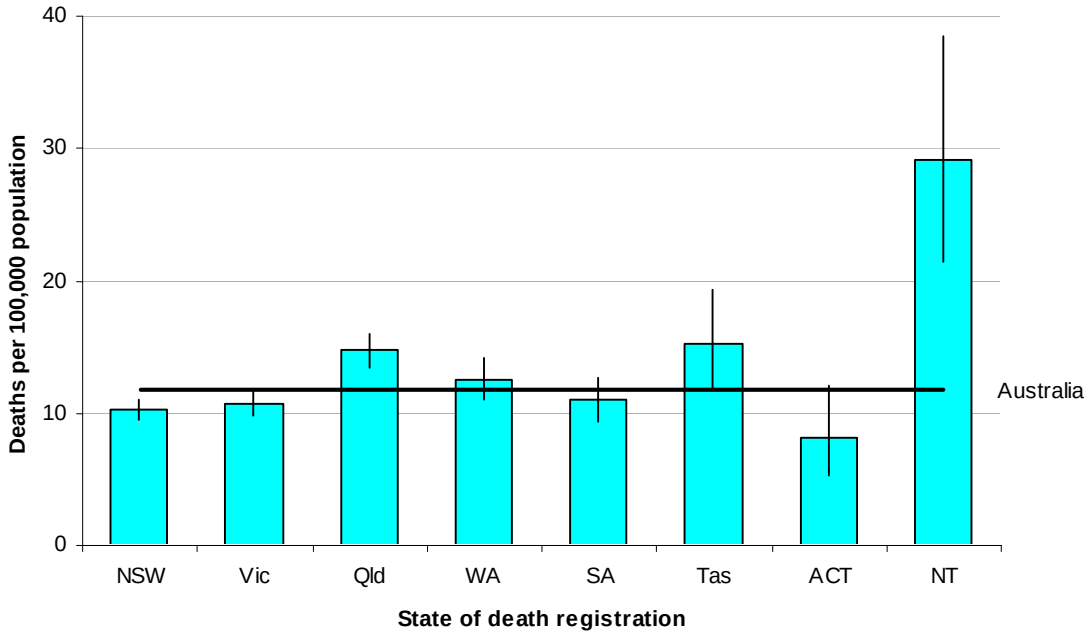


Figure 4.2: Deaths due to intentional self-harm (suicide), Australia 1979–2002 by sex: Age standardised rates

4.4 State and Territory differences

Rates for the populous States were fairly similar (between 10.0 and 15.0 per 100,000 population). The rate for the Australian Capital Territory was lower than the national rate and those for Tasmania, Queensland and the Northern Territory were slightly higher.



Note: The thick horizontal line shows the rate for Australia.

Figure 4.3: Deaths due to intentional self-harm (suicide), States and Territories 2002: Persons (Age standardised rates)

4.5 Associated factors

4.5.1 Methods used

The most frequently coded mechanism of suicide was hanging, strangulation and suffocation (ICD-10 code X70). Unlike ICD-9, ICD-10 does not provide a sub-category specifically for suicide by hanging. Under ICD-9, the great majority of suicide deaths by suffocation were attributed to hanging (97% in 1998).

The second and third most frequently recorded types of suicide method in 2002 were poisoning and firearms. Further details of these methods are provided in Tables 4.3 and 4.4.

The proportion of male and female suicide deaths differed considerably between the methods shown in Table 4.2. Only 5% of the persons who died by means of shooting suicide were females, whereas the number of males and females were equivalent for the less common method of suicide by drowning.

Overall since 2000, suffocation, falls, cut/pierce, fire/flame and transportation have increased in use as mechanisms of suicide. Poisoning, firearms and drowning have decreased in use as means of suicide.

Table 4.2: Major mechanism of suicide, Australia 2002

Major mechanism	Male	Female	Persons
Hanging, Strangulation and Suffocation	846	199	1,045
Poisoning	518	208	726
Firearm	206	11	217
Fall	78	28	106
Drowning	20	20	40
Cut/pierce	48	7	55
Fire/flame	23	6	29
All Transportation	11	1	12
Other specified, nec	15	1	16
Other specified, classifiable	52	21	73
Unspecified	0	1	1
Total	**1,817**	**503**	**2,320**

Table 4.3 provides further information about the types of substances recorded as the Underlying Cause of Death for the 726 deaths coded as suicides by poisoning in Australia in 2002.

The most numerous category in Table 4.3 is *Other gases and vapours* (X67). It is likely that the great majority of these deaths involved motor vehicle exhaust gas. ICD-9 provided a specific category for this External Cause of Death, but ICD-10 does not. In 1998, for example, 528 deaths were registered as due to suicide by means of motor vehicle exhaust gas. These were 94% of the 559 cases in that year coded to the ICD-9 categories which have similar scope to ICD-10 X67. (They were 95% of the cases attributed to motor vehicle exhaust, or to carbon monoxide from another source.)

Analysis of 2002 suicide data showed that, of the 416 cases where the Underlying Cause of Death (UCoD) was X67 *Other gases or vapours,* 395 (95%) also had a Multiple Cause of Death code (MCoD) indicating that the person had died as the result of the *Toxic effect of carbon monoxide* (ICD-10 Code T58).

Table 4.3: Suicide deaths where the Underlying Cause was poisoning, Australia 2002

Poisoning agent	Number	Total
Drugs and Alcohol:		**287**
Nonopioid analgesics, antipyretics and antirheumatics	5	
Antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, nec	77	
Narcotics and psychodysleptics (hallucinogens), not elsewhere classified	36	
Other drugs acting on the autonomic nervous system	3	
Other and unspecified drugs, medicaments and biological substances	166	
Alcohol	0	
Organic solvents and halogenated hydrocarbons and their vapours		0
Other gases and vapours		416
Pesticides		12
Other and unspecified chemicals and noxious substances		11
Total poisoning suicide deaths		**726**

Table 4.4 includes the 217 deaths registered in 2002 with an Underlying Cause code for suicide by means of a firearm (X72–X74). The table shows how these cases were coded according to ICD-10 Underlying Cause code and by the *Firearms Flag* categories, provided in the ABS deaths data file.

Table 4.4: Suicide deaths where the Underlying Cause was shooting, Australia 2002 by Underlying Cause of Death and Firearms Flag

	Underlying Cause of Death code			
	Handgun (X72)	Rifle, shotgun and larger firearm (X73)	Other and unspecified firearm (X74)	Total
Firearm flag				
Handgun	22	1	0	23
Shotgun	0	53	2	55
Hunting rifle	0	47	3	50
Military firearm	0	1	0	1
Unspecified firearm	2	63	23	88
Total	**24**	**165**	**28**	**217**

4.5.2 Place of suicide

Under ICD-10, all codes within the range W00–Y34 (with the exception of Y06 and Y07) can attract a *Place* code to indicate the type of setting in which injury occurred. The code range for suicide falls within this range (X60–X84).

All 2,320 cases of suicide in 2002 were eligible to receive a *Place* code. *Place* was specified in 2,156 (93%) of the cases (Table 4.5). 'Home' was the type of place most commonly specified for suicide. The 1,432 deaths given this *Place* code were 62% of all suicides and 67% of all suicides for which a type of place was specified.

Table 4.5: Place of suicide, Australia 2002

Place	Males	Females	Persons	Column percentage (persons)
Home	1,091	341	1,432	62%
Residential institution	25	9	34	2%
School, other institution and public administrative area	21	8	29	1%
Sports and athletics area	46	3	49	2%
Street and highway	109	16	125	5%
Trade and service area	67	12	79	3%
Industrial and construction area	11	0	11	1%
Farm	23	4	27	1%
Other specified places	299	71	370	16%
Unspecified place	125	39	164	7%
Group Total	**1,817**	**503**	**2,320**	**100%**

5 Fall deaths, Australia

ICD-10 W00–W19; or X59 and any Multiple Cause code S02, S12, S32, S42, S52, S62, S72, S82, S92, T02, T08, T10, T12, or T14.2

Table 5.1: Key indicators for fall deaths

Indicator	Males	Females	Persons
Cases	674	843	1,517
Percentage of all injury deaths	12.8%	33.1%	19.4%
Crude rate/100,000 population	6.9	8.5	7.7
Age standardised rate/100,000 population	8.7	6.6	7.5
Average years potential life lost (YPLL) before age 75 years	8	2	5

This chapter covers deaths due to unintentional falls. This category of deaths was substantially affected by the change, in 1999, from ICD-9 to ICD-10. The impact of this change in classification was described in *Injury Deaths, Australia 1999* (Kreisfeld & Harrison 2004). In order to achieve good comparability with previous practice, a revised approach has been adopted to specifying 'unintentional falls'. The rationale for this revised approach, which entails the inclusion of all cases whose UCoD was in the range W00–W19, or had as their UCoD X59 *Exposure to unspecified factor*, in combination with the presence of one or more MCoDs indicating that a fracture had been sustained, is described in the forthcoming NISU Technical Report 'ICD-9 to ICD-10: Analysis of injury deaths data, Australia 1997 and 1998' (Steenkamp & Harrison 2004).

Note that this chapter does not include falls found to be suicides (n=106 in 2002), homicides (n=2) or of undetermined intent (n=7); nor does it include most falls associated with vehicles, nor those from animals or burning structures, nor falls into water which resulted in drowning (refer to Table 6.2 in Chapter 6: *Drowning*).

The 1,517 falls deaths registered in 2002 accounted for about 19% of all injury deaths (male 13%, female 33%).

5.1 Age and sex distribution

Figure 5.1 shows age-specific death rates from falls for males and females. The Figure is based on deaths registered in 2002 that satisfy the revised definition of falls. Fall rates are concentrated in older age groups and are particularly high among both males and females over the age of 85.

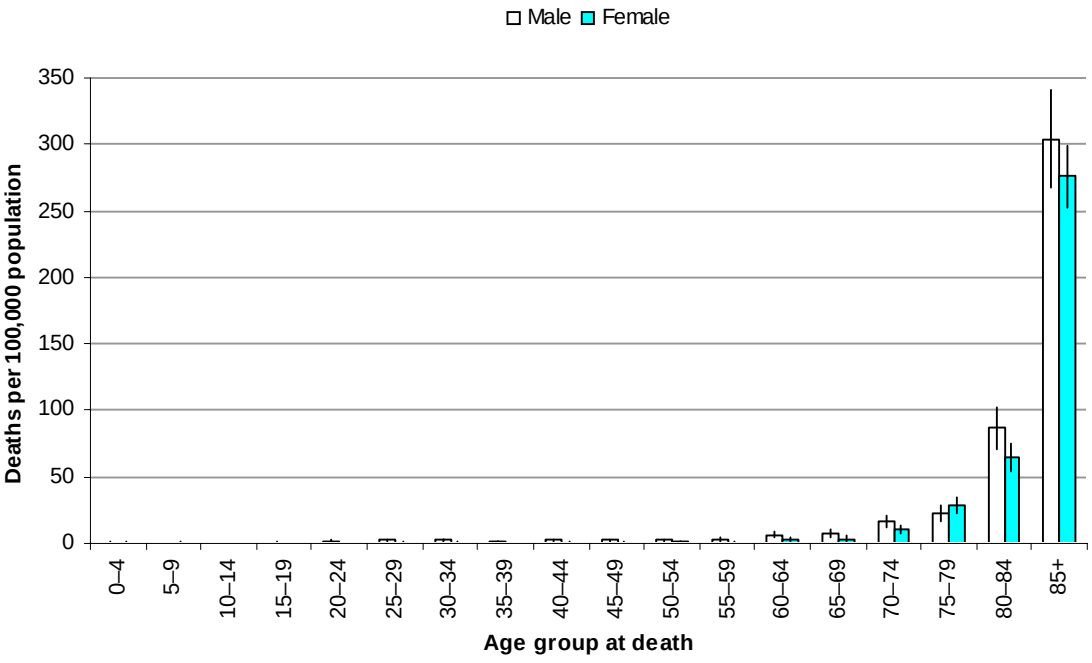


Figure 5.1: Deaths due to unintentional fall injury by age and sex, Australia 2002

5.2 Trends in death rates

Figures 5.2 and 5.3 present age-adjusted rates of fall deaths in Australia for the period 1979–2002.

The rates in Figure 5.2 are for fall deaths at all ages, while the rates in Figure 5.3 are for deaths at ages 65 years and older. Note that the scale of the vertical axis differs between these two figures, reflecting the much higher rates for this cause of death at older ages.

The Figures show rates for males and females. The age-adjusted rates for males are generally higher than those for females. The excess male rate is more marked in Figure 5.2 (falls deaths at all ages) than in Figure 5.3, reflecting the large male excess in death from this cause in early and middle adult years (compare Tables A2.3 and A2.4).

Trends were generally downward during the period to the early 1990s and were similar for males and females. More recently, age-adjusted rates have changed little.

The rates shown here are all age-adjusted. Hence, they do not show the large increase that occurred in case numbers during this period, due to the rapid increase in the size of the population at highest risk of this cause of death (i.e. persons aged about 70 years or older).

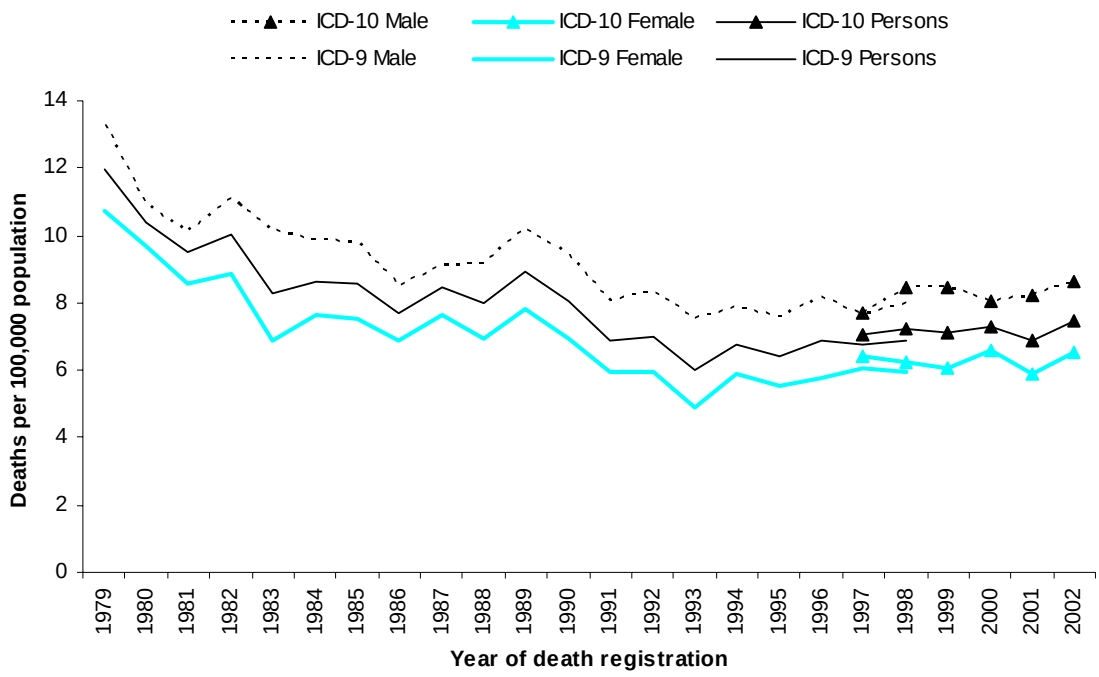


Figure 5.2: Deaths due to unintentional fall injury, Australia 1979–2002 by sex: Age standardised rates (all ages)

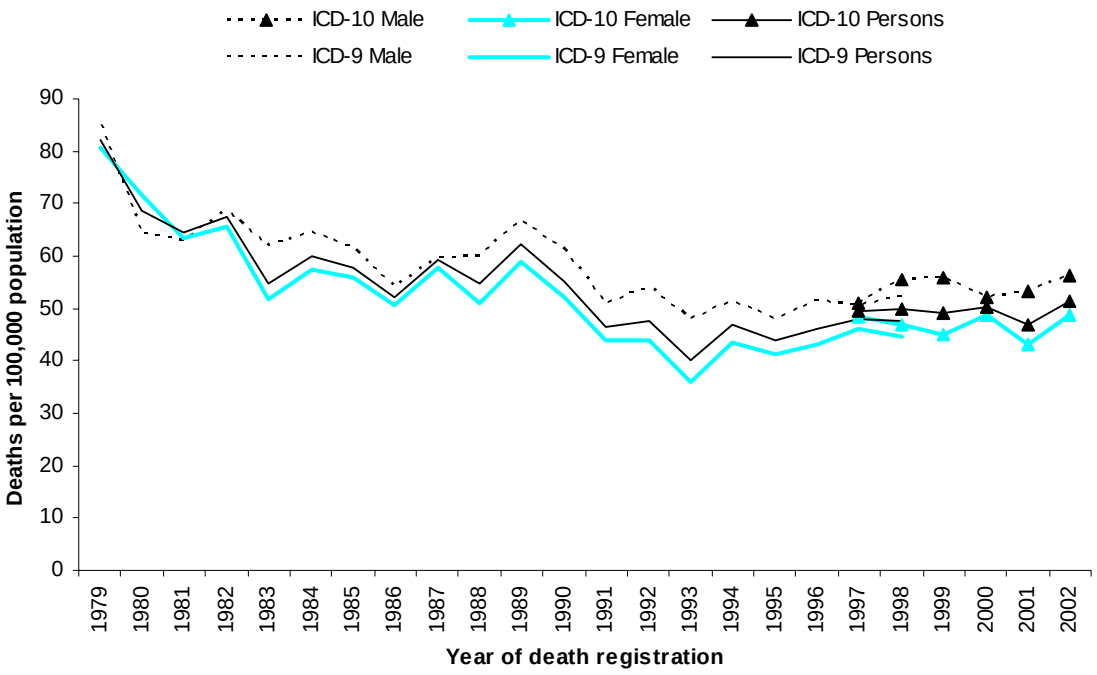
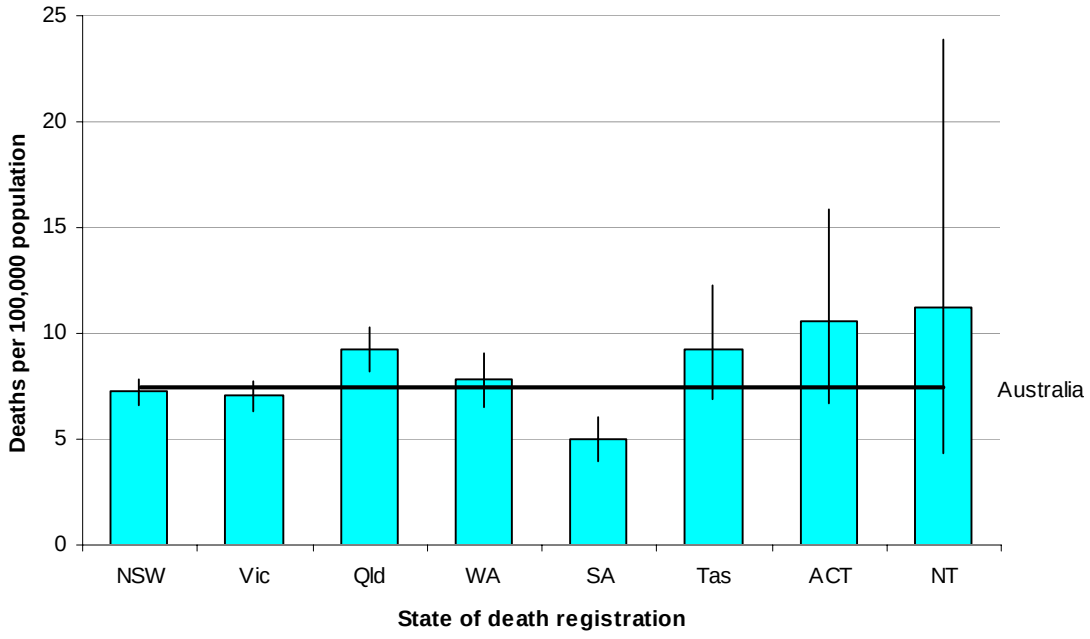


Figure 5.3: Deaths due to unintentional fall injury, Australia 1979–2002 by sex: Age standardised rates (ages 65 years and older)

5.3 State and Territory differences

Figure 5.4 shows age-adjusted rates of falls deaths registered in 2002 for Australia's States and Territories.

Rates appear to differ between jurisdictions. However, these apparent differences should be interpreted cautiously, because variations in collection and coding might contribute to them. The pattern of jurisdiction-specific rates in 2002 is similar to that seen for deaths registered in 2000 and 2001, being lowest for South Australia and highest for Queensland, Tasmania, the Australian Capital Territory and the Northern Territory.



Note: The thick horizontal line shows the rate for Australia.

Figure 5.4: Deaths due to unintentional fall injury, States and Territories 2002: Persons (Age standardised rates)

5.4 Associated factors

The ICD-10 categories in the 'Falls' range (W00–W19) refer to a range of objects, activities and circumstances which are sometimes associated with falling. As noted above, only 629 of the 1,517 deaths in 2002 that meet the revised definition have an Underlying Cause of Death code in this range. No information on External Causes is available for the other 888 deaths.

Information is limited even for the 629 deaths coded to W00–W19 (Table 5.2). Over half of these cases were coded to W19 'Unspecified fall'.

Table 5.2: Factors contributing to fall-related deaths during 2002

		Age group					
Nature of fall	**ICD-10 code**	**0–14**	**15–29**	**30–44**	**45–59**	**60+**	**Total**
Fall on same level from slipping, tripping and stumbling	W01	1	2	5	12	55	75
Fall from skateboard	W02		4	1	0	0	5
Fall while being carried or supported by other persons	W04	0	1	0	0	0	1
Fall involving wheelchair	W05	0	0	0	0	3	3
Fall involving bed	W06	0	0	0	2	15	17
Fall involving chair	W07	0	0	1	0	8	9
Fall involving other furniture	W08	1	0	0	1	2	4
Fall on and from stairs and steps	W10	0	3	4	7	25	39
Fall on and from ladder	W11	0	1	3	5	16	25
Fall from, out of or through building or structure	W13	3	13	16	4	15	51
Fall from tree	W14	3	0	0	2	1	6
Fall from cliff	W15	0	7	3	3	2	15
Other fall from one level to another	W17	1	1	2	6	9	19
Other fall on same level	W18	0	2	4	1	11	18
Unspecified fall	W19,X59	3	5	11	21	1,190	1, 230
Total		**12**	**39**	**50**	**64**	**1,352**	**1,517**

6 Drowning deaths, Australia

Unintentional drowning: ICD-10 W65–W74

All identifiable drowning (as shown in Table 6.2):

ICD-10 W65–W74, V90, V92, X71, X92, Y21, plus various others

Table 6.1: Key indicators for unintentional drowning deaths

Indicator	Males	Females	Persons
Cases	176	56	232
Percentage of all injury deaths	3.3%	2.2%	3.0%
Crude rate/100,000 population	1.8	0.6	1.2
Age standardised rate/100,000 population	1.8	0.6	1.2
Average years potential life lost (YPLL) before age 75 years	40	39	39

For consistency with past practice, this chapter focuses on *Unintentional drowning and submersion* as defined by the ICD-10 category of that name (W65–W74). This category includes 64% (n=232) of the 352 deaths registered in 2002, in which the UCoD was an External Cause, and for which there is evidence that drowning was involved. In 2002, drowning deaths (including the other 36%), were coded as shown in Table 6.2.

While the focus of this chapter is on *Unintentional Drownings* in 2002, some information has also been included in relation to *Total Drownings* during that year in Section 6.5 below.

6.1 Overview

There were 232 *Unintentional drowning* deaths registered in 2002 with an External Cause code, down 11% from 2001. They accounted for 3% of all injury deaths. *Total drowning* (including *Other identifiable* and *Hidden*) accounted for 345 (4%) of injury deaths registered in 2002, compared with 383 (5%) in 2001.

Table 6.2: All identifiable drowning cases in 2002

No in 2002	Percentage of all drowning cases in 2002	ICD-10 codes UCoD	ICD Category	Coverage in this report	Terminology in this report
232	64%	W65–W74	Unintentional drowning and submersion	Drowning	Unintentional drowning
40	11%	V90, V92	Water transport accident	Other transport deaths	
40	11%	X71	Suicide and self inflicted injury by drowning	Suicide	Other drowning identified by external cause codes
3	1%	X92	Assault by submersion	Homicide	
9	2%	Y21	Undetermined whether unintentionally or purposely inflicted	Undetermined intent	
28	8%	Various	Various External Cause codes that do not mention drowning (e.g. road crash)	Various	Hidden drowning
352	**96%**				**Total drowning with an External Cause code**
13	4%	F102, G409, I219, I251, I259, Q039	Other, not an External Cause	Out of scope	
365	**100%**				**Total drowning**

Note: The total number of drowning deaths was identified by using a combination of the relevant External Cause codes and the supplementary *drowning flag* which the ABS uses to identify and code the location and circumstances of drowning deaths.

6.2 Age and sex distribution

About 3½ times as many men as women drowned during 2002 (Males: 176; Females: 56).

18% (n=42) of *Unintentional drowning* deaths occurred to children aged 0–4 years, of whom 16 drowned by falling or wandering into a swimming pool and 14 more drowned by falling or wandering into a body of water other than a swimming pool. Five children drowned whilst swimming in a body of water and 5 drowned in a bathtub, whilst details about the circumstances were not specified for 2 cases in this age group. *Unintentional drowning* accounted for 33% of all injury deaths in this age group.

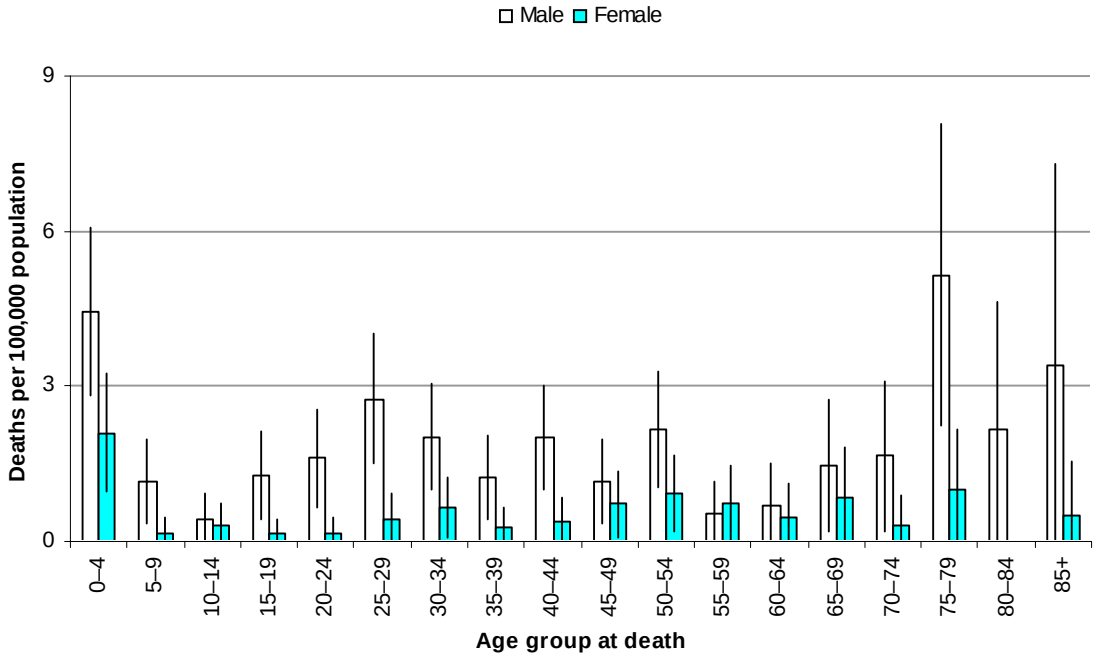


Figure 6.1: Deaths due to unintentional drowning by age and sex, Australia 2002

6.3 Trends in death rates

Despite some fluctuation in recent years, the age-adjusted *Unintentional drowning* rate for Australia has fallen by 48% overall in the period 1979–2002. This continues a general downward trend since at least 1920 (Bordeaux & Harrison 1998). Although this decline has slowed in recent years, the drop of 13% in the age-adjusted rate between 2001 and 2002 is noteworthy.

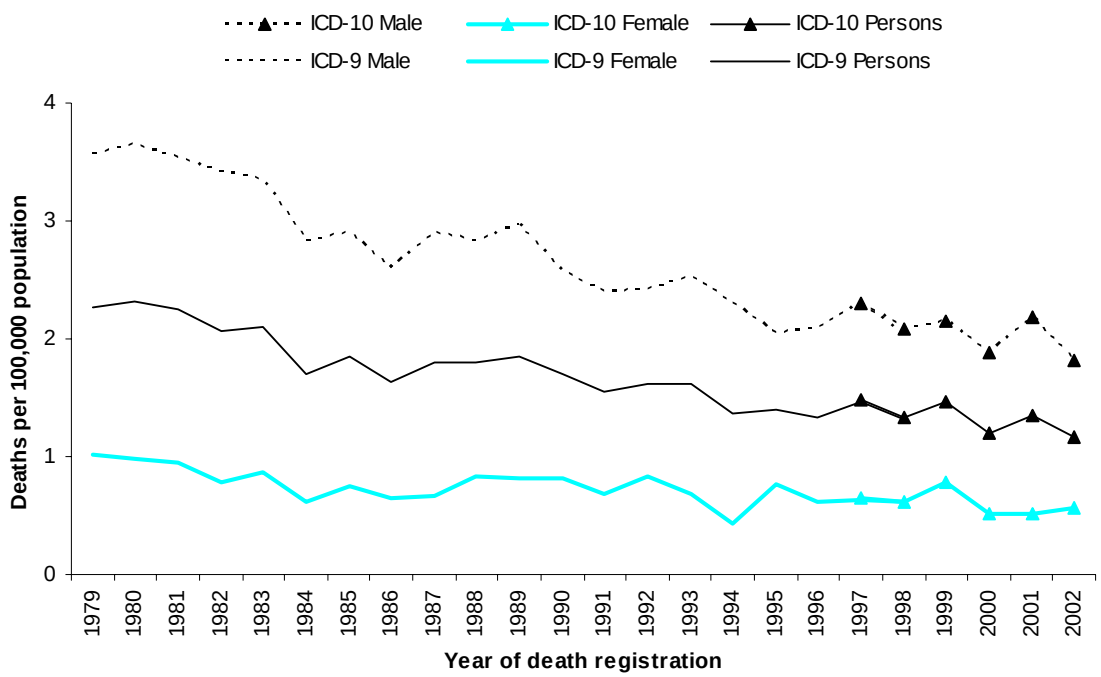


Figure 6.2: Deaths due to unintentional drowning, Australia 1979–2002 by sex: Age standardised rates

Drowning of young children in swimming pools is a matter of concern. Swimming pools could not be distinguished as a place of drowning under ICD-9. However, a special data item on circumstances of unintentional drowning has been coded by the ABS since the early 1990s. Table 6.3 and Figure 6.3 present rates of deaths for which the Underlying Cause was an External Cause and the Drowning item indicated that a swimming pool was the location. (Information based on the *Drowning Flag* was not reliable before 1993.) Annual rates have fluctuated, partly as a consequence of fairly small case numbers. There appears to be a downward trend.

Table 6.3: Swimming pool drownings among children aged 0–4 years, Australia 1993–2002

Year of death registration	Number	Age-specific rate
1993	26	2.0
1994	25	1.9
1995	35	2.7
1996	28	2.2
1997	26	2.0
1998	16	1.3
1999	27	2.1
2000	20	1.6
2001	14	1.1
2002	20	1.6

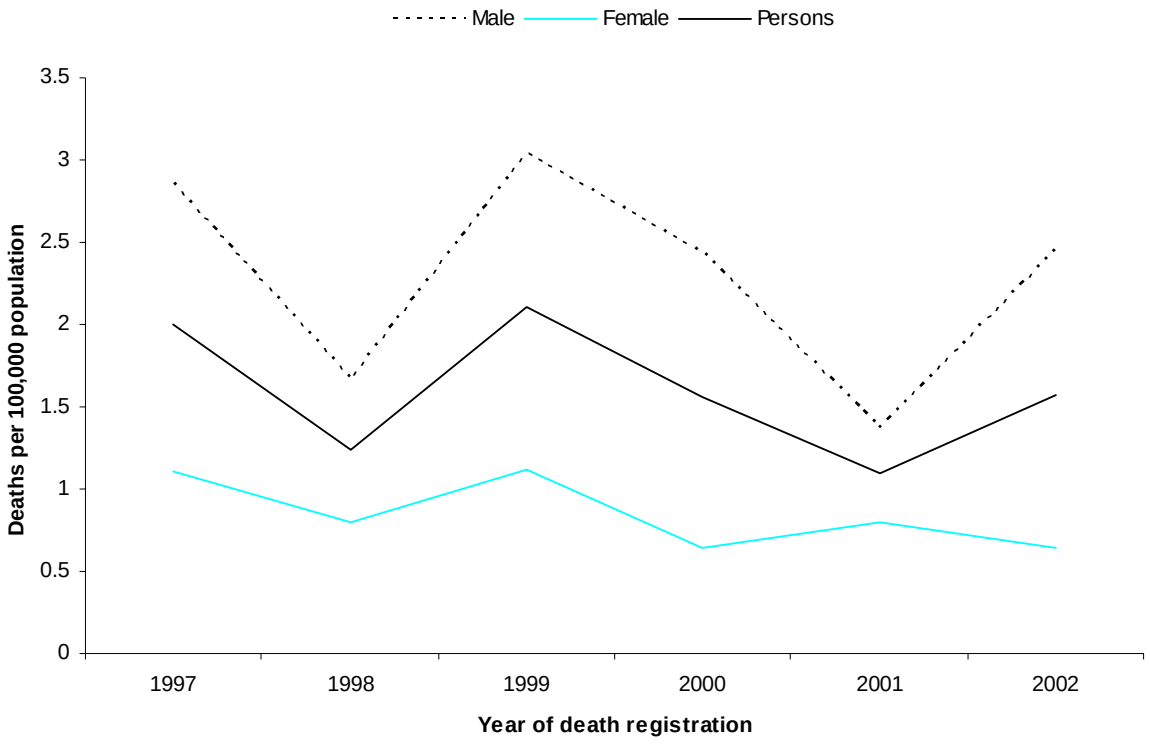
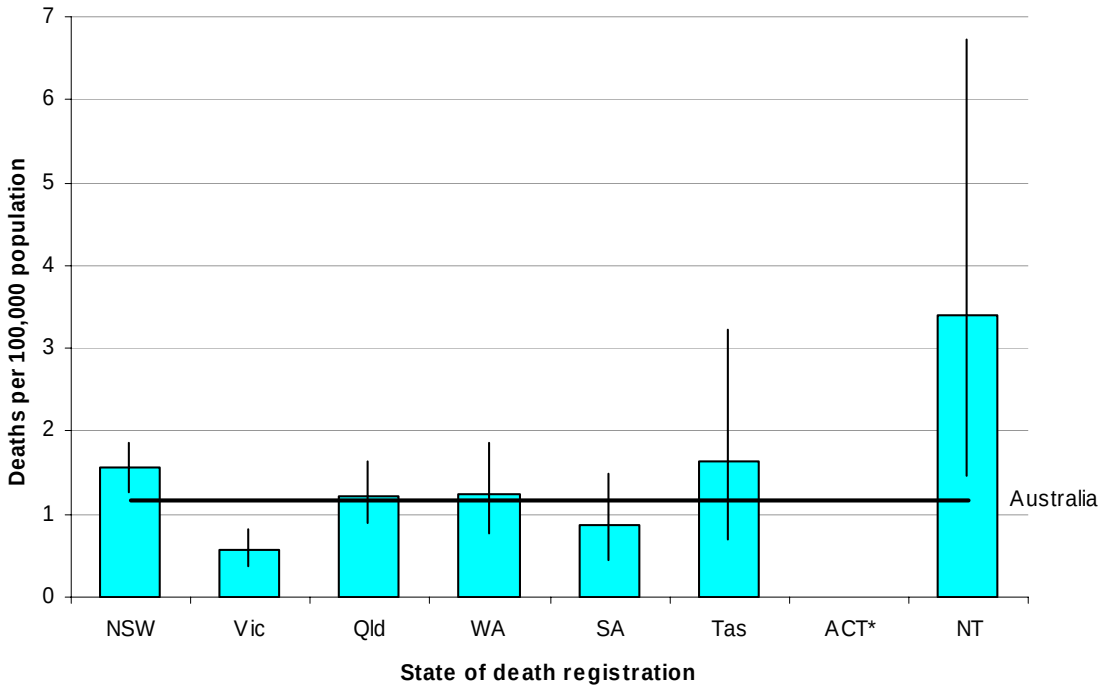


Figure 6.3: Age-adjusted rates of swimming pool drownings among children aged 0–4 years, Australia 1993–02

6.4 State and Territory differences

The drowning rates for all of the States and Territories were generally similar to those for 2001. The Northern Territory, New South Wales and Tasmania recorded the highest rates, while the Australian Capital Territory and Victoria recorded the lowest. Victoria (low) and the Northern Territory (high) had rates that were statistically significantly different from that for Australia as a whole.



Note: The thick horizontal line shows the rate for Australia.
* fewer than 4 cases

Figure 6.4: Deaths due to unintentional drowning, States and Territories 2002: Persons (Age standardised rates)

6.5 Total drownings

This section looks at some aspects of the *Total drownings with an External Cause code* that were registered during 2002 (n=352).

Table 6.4: Major mechanism of injury by intent for all drowning deaths, Australia 2002

	Intent				
Major mechanism of injury death	**Unintentional**	**Suicide**	**Homicide**	**Undetermined**	**Group Total**
Drowning	232	40	..	9	284
Fall	0	0	..	0	..
Cut/Pierce	..	5	0	0	6
Motor vehicle occupants	11	0	0	0	11
Other land transport	4	0	0	0	4
Other transport	43	0	0	0	43
Poisoning	0	..	0	0	..
Struck by or against	..	0	0	0	..
Suffocation	0	0	..	0	..
Total drownings	**292**	**46**	**5**	**9**	**352**

.. = fewer than 4 cases

While the greatest proportion of *Total drownings* during 2002 (n=352) were *Unintentional* (n=292; 83%), a notable proportion were the result of *Suicide* (n=46; 13%).

Patterns of drowning in 2002 varied by age (Table 6.5). Swimming pools were a common setting in which young children drowned (20/44; 46%) and most people recorded as drowning in a swimming pool were young children (20/32; 63%). In 16 of these 20 cases, the young child was recorded as having fallen or wandered into the pool. Another common cause of drowning death amongst children aged 0–4 years was having fallen or wandered into a body of water other than a swimming pool (10/44; 23%).

The settings in which young children drown are particularly closely related to age. Table 6.6 shows data on all recorded drowning deaths in Australia at ages 0–6 years, inclusive. Cases registered in the six years 1997–2002 have been combined, because of small numbers at single years of age.

Almost two-thirds of drowning deaths before one year of age occurred in a bathtub. Drowning in this setting was less frequent at older ages.

Drowning in a swimming pool was most frequent at ages one and two years, and this was the most common setting of drowning at ages 2, 3 and 4 years of age. The swimming pool was recorded as being private in 113 (88%) of the 129 cases, and public in 4 cases.

Drowning after falling or wandering into water other than a swimming pool was more common than drowning in a pool for toddlers aged one year, and was the second most common setting of cases at 2, 3 and 4 years of age. In 64 (58%) of the 110 deaths in this group, the child was recorded as having fallen or wandered into a lake, lagoon, dam or water-hole, and in 12 cases the child fell or wandered into an object containing water or other liquid.

Table 6.5: Overview of major circumstances of total drownings by age group, Australia 2002

	Age group													
	0–4 years		5–14		15–29		30–44		45–59		60+		All ages	
Circumstances of drowning*	Number	Column per cent	Number	Column per cent	Number	Column per cent	Number	Column per cent	Number	Column per cent	Number	Column per cent	Number	Column per cent
Swimming pool	20	46%	..		..		..	4%	..		..		**32**	**9%**
Swimming, not in a pool	..		5	28%	21	30%	17	24%	17	22%	10	12%	**71**	**20%**
Swept from rocks	0	0%	..		..		5	7%	..		..		**11**	**3%**
Fell or wandered into water (other than a swimming pool)	10	23%	..		7	10%	8	11%	9	12%	12	14%	**48**	**13%**
Bathtub	5	11%	..		..		4	5%	6	8%	6	7%	**25**	**7%**
Watercraft	0	0%	..		11	16%	10	14%	10	13%	9	11%	**42**	**12%**
Other or unspecified	8	18%	..		24	34%	24	34%	34	44%	44	52%	**136**	**37%**
Group Total	**44**	**100%**	**18**	**100%**	**70**	**100%**	**71**	**100%**	**78**	**100%**	**84**	**100%**	**365**	**100%**

* Aggregation of categories in the 'Drowning' data item in the deaths data file.
.. = fewer than 4 cases

Table 6.6: Overview of major circumstances of drowning at ages 0–6 years, Australia 1997–2002

	Age at death (completed years)													
	0		1		2		3		4		5		6	
Circumstances of Drowning*	Number	Column per cent	Number	Column per cent	Number	Column per cent	Number	Column per cent	Number	Column per cent	Number	Column per cent	Number	Column per cent
Bathtub	24	63%	12	11%	7	9%	..		6	17%	..		..	
Swimming pool	..		41	38%	41	53%	23	43%	15	42%	5	33%	..	
Fell or wandered into water (other than a swimming pool)	9	24%	49	46%	21	27%	19	35%	8	22%	..		..	
Other			..		5	6%	7	13%	5	14%	5	33%	7	50%
Unspecified	..		5	5%	4	5%	..		..		..		..	
Total	**38**	**100%**	**107**	**100%**	**78**	**100%**	**54**	**100%**	**36**	**100%**	**15**	**100%**	**14**	**100%**

* Aggregation of categories in the 'Drowning' data item in the deaths data file.
.. = fewer than 4 cases

7 Poisoning deaths, Australia

Unintentional Poisoning: ICD-10 X40–X49, F11–F16, F19

All poisoning (Section 7.1): Multiple cause code in the range ICD-10 T36–T65

The subject of this chapter is deaths involving poisoning. The main focus is unintentional poisoning, but section 7.1 provides an overview of ***all*** poisoning, irrespective of intent.

NISU now uses a definition of *Unintentional poisoning* which has been expanded to include deaths whose Underlying Cause code is in a relevant range in ICD-10 Chapter V *Mental and behavioural disorders* (F11–F16, F19), or the equivalent ICD-9 code (304). This has been done to better reflect the way in which mortality due to *Unintentional poisoning* by drugs is coded in Australia. Information in section 7.1 indicates the rationale for this approach, which is explained further in Injury deaths, Australia 1999 (Kreisfeld & Harrison 2004).

Unintentional poisoning deaths can be divided into two main types, *Poisoning by drugs* (ICD-10 X40–X44, F11–F16, F19; ICD-9 E850–E858, 340) and *Poisoning by other substances* (ICD-10 X45–X49; ICD-9 E860–E869). In 2002, 605 and 72 deaths, respectively, were coded to these two categories. These two types of cases are considered separately in subsections 7.2 and 7.3 below, according to both the expanded case definition and the previous one.

7.1 Overview of total poisoning deaths

Identification of deaths involving poisoning among all registered deaths can be done in several ways. Selection methods which make use of Multiple Causes of Death codes appear to provide more complete and reliable information than methods which use only UCoD codes. The relevant MCoD code ranges are:

	ICD-10
Poisoning by drugs, medicaments and biological substances ('Drugs')	T36–T50
Toxic effects of substances chiefly non-medicinal as to source ('Other substances')	T51–T65

All deaths registered in Australia in 2002 are summarised in Table 7.1, according to Underlying Cause of Death and whether a poisoning code (T36–T65) was allocated as a Multiple Cause of Death.

Table 7.1: Deaths with Multiple Cause codes for poisoning*, Australia 2002, by Underlying Cause of Death.

	Multiple Cause code for Poisoning (ICD-10 T36–T65)	
Underlying Cause of death	**No**	**Yes**
Unintentional Poisoning (X40–X49)	1	567
Intentional self-harm (X60–X84)	1,525	795
Deaths due to other External Causes (V01–X39, X50–X59, X85–Y98)	4,712	220
Deaths due to mental and behavioural disorders due to use of psychoactive drugs (F11–F16, F19)	13	96
All other underlying causes of death (A00–F10, F17, F20–R99)	125,649	129
Total	131,900	1,807

* Defined as presence in any Multiple Cause of Death field of a code in the range T36–T65.

1,582 (88%) of the 1,807 deaths registered in 2002 that have a multiple cause code indicating poisoning have an External Cause code as the underlying cause of death.

Intentional self-harm (suicide) was recorded as the Underlying Cause of 795 (44%) of the 1,807 poisoning deaths. The next largest group was *Unintentional Poisoning* (X40–X49) (31%).

Of the 225 poisoning deaths not coded to an External Cause, 96 (43%) were coded to a group of underlying cause categories representing death due to mental and behavioural disorders due to the use of psychoactive drugs (F11–F16 and F19). 88% of all records given these underlying cause of death codes also include a multiple cause code indicating poisoning. These 109 deaths appear to be similar to the cases coded to External Cause codes X40-X44, and are included within the expanded definition of unintentional poisoning by drugs that is used in Section 7.2.

7.1.1 Short-term trends

Figure 7.1 shows the number of poisoning deaths, of the types distinguished in Table 7.1, that were registered in each year from 1997–2002.

Table 7.1 and Figure 7.1 show that not all deaths in which poisoning played a part have an 'External Cause' code as the Underlying Cause of Death. Furthermore, Figure 7.1 shows that the proportion of poisoning deaths which were given an Underlying Cause code outside the External Causes chapter of ICD-10 declined considerably from 1997–2002. Most of the recent reduction in poisoning deaths has been in the group given a UCoD in the range F11–F19.

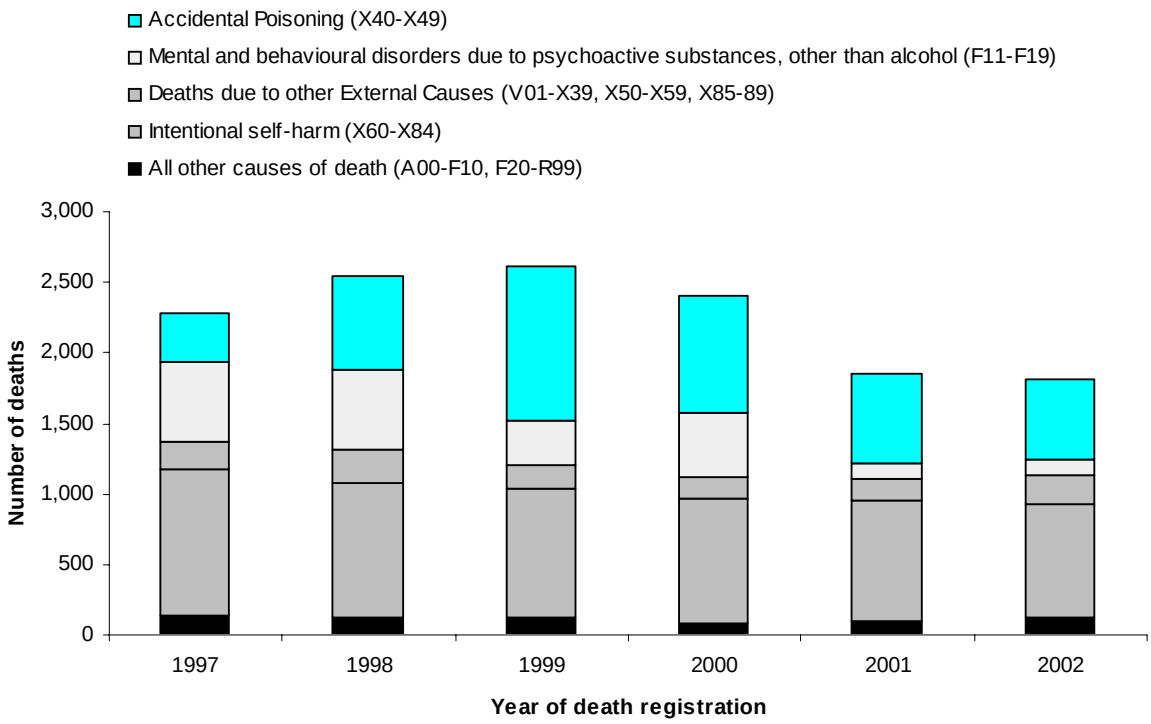


Figure 7.1: Deaths with poisoning codes (T36–T65) by Underlying Cause of Death, Australia 1997–2002

7.1.2 Longer-term trends

The approach used in section 7.1.1 to examine short-term trends in deaths for which poisoning is mentioned as a cause requires Multiple Cause codes, which are only available for deaths registered from 1997. In this section, findings based on the period for which Multiple Cause codes are available are used as a basis for examining older data, for which multiple causes are not available.

Nearly all deaths with a poisoning code (ICD-10 T36–T65) as an MCoD have one of three types of UCoD code: *Unintentional poisoning* (ICD-10 X40–X49); *Intentional self-poisoning* (ICD-10 X60–X69, grouped here with Undetermined Intent Y10–Y19); or *Mental and behavioural disorders due to use of psychoactive substances,* except alcohol (F11–F19).

These three groups of cases, specified in terms of Underlying Cause of Death, include most cases with a poisoning code (T36–T65), and a small proportion of other deaths. Considering deaths registered in the years 1997–2002 (the years for which Multiple Cause codes are available), 93.9% (range for individual years 91.6% to 95.4%) of records in these three groups included a Multiple Cause code for poisoning. Of all records in which a Multiple Cause code for poisoning was present, 86.1% (range 78.2% to 89.4%) were in one of these three groups.

On this basis, we have used presence of one of these three types of UCoD as an approximate indicator of poisoning deaths in the period 1979–1996, before MCoD codes became available.

Figure 7.2 shows case numbers for these three indicator groups of deaths from 1997–2002, along with the number of cases in each of these years that included a poisoning code as a Multiple Cause (black line).

Figure 7.2 also shows annual case numbers from 1979–1996 for three conceptually equivalent indicator groups, specified in terms of ICD-9. If the relationship between 'poisoning' and the presence of the three indicator groups that was found in the period 1997–2002 also held in the earlier period, then the Figure provides an indication of the incidence of poisoning mortality in the period before multiple cause coding commenced.

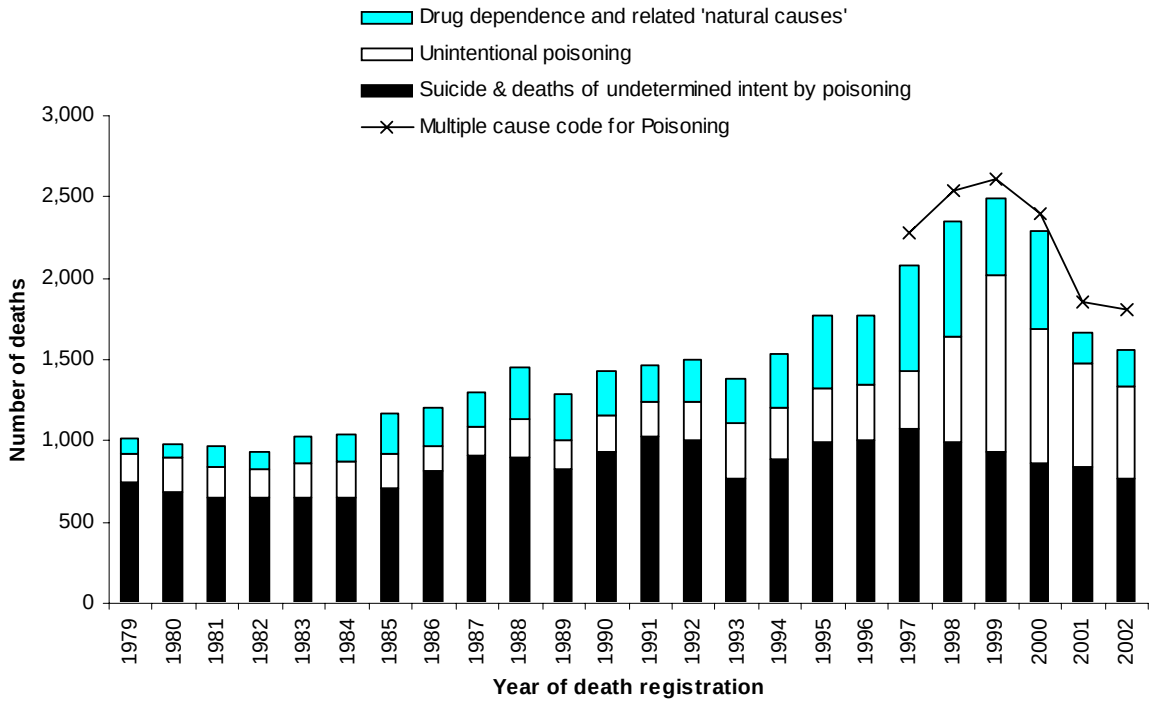


Figure 7.2: Poisoning deaths coded to External Causes *Unintentional Poisoning*, *Suicide*, and *Undetermined Intent*, and all deaths coded to 'natural cause' categories for drug dependency and related causes, Australia 1979–2002: case counts

Category inclusions: *Unintentional poisoning* ICD-9 E850–E869; ICD-10 X40–X49. *Suicide & deaths of undetermined intent by poisoning* ICD-9 E950–E952, E980–E982; ICD-10 X60–X69, Y10–Y19. *Drug dependence and related 'natural causes'* ICD-9 304; ICD-10 F11–F19. *Multiple Cause code for Poisoning* ICD-10 T36–T65. Based on ICD-9 coded data for 1979 to 1996 and ICD-10 coded data for 1997–2002.

7.2 Unintentional poisoning by drugs

ICD-10 X40–X44, F11–F16, F19

Table 7.2: Key indicators of deaths due to unintentional poisoning by drugs, Australia 2002

	Unintentional poisoning (drugs) Restricted to External Cause codes X40–X44			Unintentional poisoning (drugs) Expanded definition X40–X44, F11–F16, F19		
Indicator	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
Cases	318	178	496	402	203	605
Percentage of all injury deaths	6.0%	7.0%	6.3%	7.6%	8.0%	7.7%
Crude rate/100,000 population	3.26	1.80	2.52	4.12	2.05	3.08
Age standardised rate/100,000 population	3.26	1.79	2.53	4.12	2.04	3.08
Average years of potential life lost (YPLL) before age 75 years	38	32	36	39	33	37

In 2002, 605 deaths were categorised as *Unintentional poisoning by drugs,* using the expanded definition (X40–X44, F11–F16, F19). The corresponding rate, 3.1 deaths per 100,000, was lower than the equivalent rate in 2001 (3.6 deaths per 100,000), though this annual decline was smaller than that between 2000 (6.6) and 2001 (3.6).

7.2.1 Age and sex distribution

Figure 7.3 shows the age and sex distribution for deaths due to unintentional poisoning by drugs. In 2002, males accounted for 66% (n=402) of *Unintentional poisoning* deaths due to drugs. Rates were highest for males aged 20–44 years and this age group accounted for 64% of all male unintentional drug deaths.

Males between 20–39 years had rates around 3½ times higher than females in the equivalent age group.

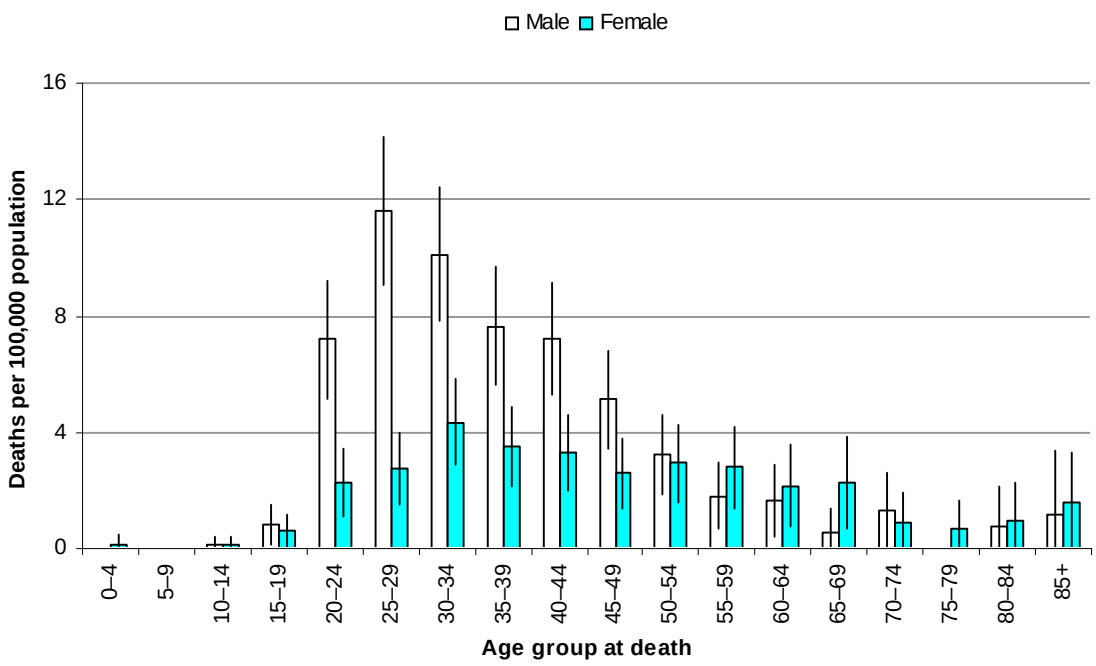


Figure 7.3: Deaths due to unintentional poisoning by drugs by age and sex, Australia 2002

7.2.2 Trends in death rates

Long-term trends in *Unintentional poisoning* by drugs are not reportable in a meaningful manner at present for reasons discussed in Section 7.1 above. Figure 7.2, in the previous section, presents estimated trends in total deaths related to poisoning for the period since 1979. Figure 7.4 presents trends in deaths due to *Unintentional poisoning* by drugs for the period for which ICD-10 data are available. The main feature is the end of the recent epidemic of drug poisoning, mainly poisoning by opiate narcotics (chiefly heroin).

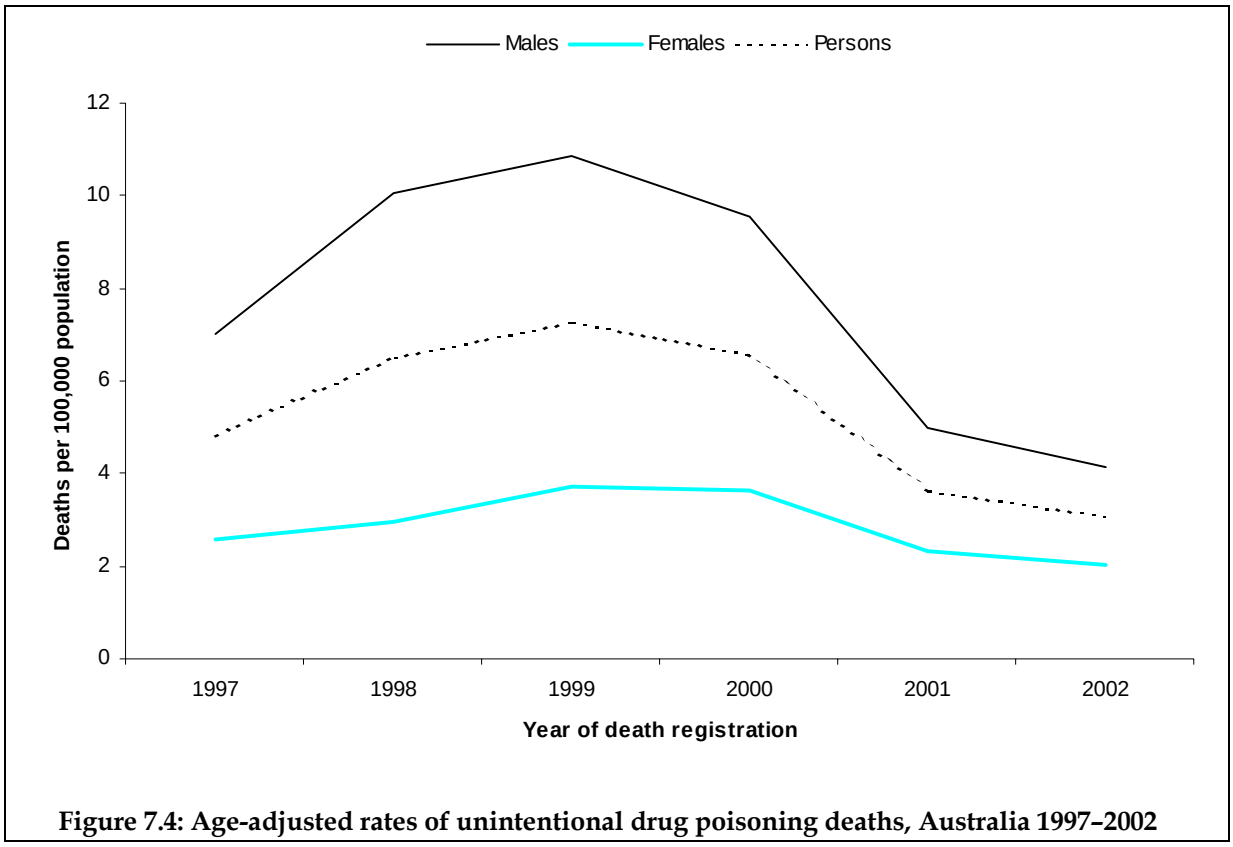
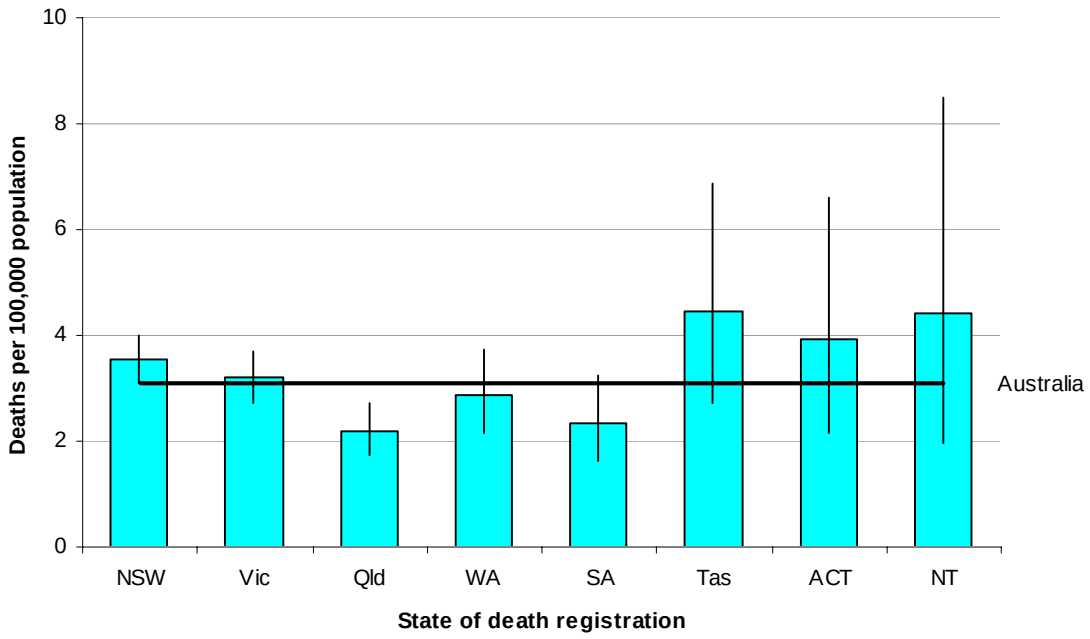


Figure 7.4: Age-adjusted rates of unintentional drug poisoning deaths, Australia 1997–2002

7.2.3 State and Territory differences

Figure 7.5 shows rates based on deaths registered in 2002 in which the Underlying Cause of Death was recorded as involving a drug, excluding cases where poisoning was found to be intentional. Specifically, the rates include cases where the Underlying Cause was an ICD-10 code in the ranges X40–X44 or F11–F16, F19. Only the rate for Queensland—which had the lowest rate of the jurisdictions—differed significantly from the Australian rate. Caution should be exercised in interpreting differences between jurisdictions, however, because differences in certification and coding practices might have affected the proportion of drug poisoning deaths which were assigned codes from ICD-10 Chapter V *Mental and Behavioural Disorders*.



Note: The thick horizontal line shows the rate for Australia.

Figure 7.5: Deaths due to unintentional poisoning by drugs, States and Territories 2002: Persons (Age standardised rates)

7.2.4 Associated factors

221 of the cases (37%) were coded to the category *Narcotics (including opiates, cannabis and cocaine* (185 males, 36 females). 203 (92%) of these 221 cases were in the age range 20–49 years.

The most frequently recorded category was *Multiple, other or unspecified drug use* (n=295; 49%).

An examination of Multiple Causes of Death assigned for the 605 cases of *Poisoning by drugs* showed that a total of 1,052 ICD-10 Chapter XIX codes in the range T36–T50 had been assigned. Each case can attract up to 20 Multiple Causes of Death. Of the 1,052 codes assigned, 449 (43%) were T40 *Poisoning by narcotics and psychodysleptics [hallucinogens]*; 219

(21%) were T43 *Poisoning by psychotropic drugs, not elsewhere classified*; and 185 (18%) were T42 *Poisoning by antiepileptic, sedative-hypnotic and antiparkinsonism drugs*. These three categories of drug accounted for 81% of the total number of codes assigned from the range T36–50.

In 58% of cases, instances of poisoning by drugs were coded as having occurred at home. Place of occurrence was unspecified in 25% of cases.

7.2.5 Unintentional poisoning (drugs)—restricted to External Cause codes X40–X44

This section contains summary statistics for cases of unintentional poisoning by drugs where case selection criteria were restricted to deaths with an Underlying Cause in the range ICD-10 X40–X44. This is the definition of unintentional poisoning that was used in our reports on injury deaths registered before 2000. Reports in this series for injury deaths registered in 2000 and subsequent years include a section like this one, to facilitate comparisons with earlier reports.

Table 7.3: Counts and age-specific rates of unintentional poisoning by drugs, Australia 2002[(a)]

	Counts			Age specific rates		
Age group	Males	Females	Persons	Males	Females	Persons
0–4	0	1	1	0.00	0.16	0.08
5–9	0	0	0	0.00	0.00	0.00
10–14	0	0	0	0.00	0.00	0.00
15–19	6	3	9	0.85	0.45	0.65
20–24	35	10	45	5.13	1.51	3.34
25–29	57	18	75	8.28	2.61	5.44
30–34	62	28	90	8.36	3.70	6.00
35–39	40	24	64	5.46	3.24	4.34
40–44	41	24	65	5.47	3.16	4.31
45–49	32	16	48	4.69	2.31	3.49
50–54	20	16	36	3.08	2.46	2.77
55–59	10	13	23	1.82	2.43	2.12
60–64	7	7	14	1.64	1.67	1.65
65–69	2	8	10	0.58	2.26	1.43
70–74	4	3	7	1.32	0.90	1.10
75–79	0	2	2	0.00	0.68	0.38
80–84	1	2	3	0.73	0.94	0.86
85+	1	3	4	1.14	1.56	1.43
All Ages	**318**	**178**	**496**	**3.26**	**1.79**	**2.53**

(a) Includes all cases where the UCoD was in the range ICD-10 X40–X44

Table 7.4: Annual age-adjusted rates of unintentional poisoning by drugs, Australia 1979–2002 (persons)[(a)]

Annual rates		
Year of death registration	Age Adjusted rate, persons	
	ICD-10	ICD-9
1979		1.30
1980		1.57
1981		1.47
1982		1.29
1983		1.42
1984		1.42
1985		1.38
1986		1.01
1987		1.03
1988		1.40
1989		1.06
1990		1.24
1991		1.19
1992		1.32
1993		1.86
1994		1.79
1995		1.81
1996		1.88
1997	1.90	1.94
1998	3.49	3.22
1999	5.68	
2000	4.27	
2001	3.30	
2002	2.53	

(a) Includes all cases where the UCoD was in the range ICD-10 X40–X44

7.3 Unintentional poisoning by other substances

ICD-10 X45–X49

This sub-section deals with unintentional poisoning by substances other than drugs. It includes acute poisoning by alcoholic beverages, petroleum substances, agricultural chemicals, motor vehicle exhaust gas, foodstuffs and poisonous plants.

In 2002, 72 deaths were registered as being due to unintentional poisoning by *Other substances*. The small number of cases limits analysis and interpretation.

Table 7.5: Key indicators of deaths due to poisoning by other substances, Australia 2002

	Poisoning by other substances		
Indicator	**Males**	**Females**	**Persons**
Cases	55	17	72
Percentage of all injury deaths	1.0%	0.7%	0.9%
Crude rate/100,000 population	0.56	0.17	0.37
Age standardised rate/100,000 population	0.58	0.16	0.36
Average years potential life lost (YPLL) before age 75 years	29	23	28

7.3.1 Age and sex distribution

The small number of cases in this group complicates interpretation of age and sex-specific rates. Although rates are comparatively high for some groups of young adult males, a strong peak (as was observed for drug poisoning cases) is not evident.

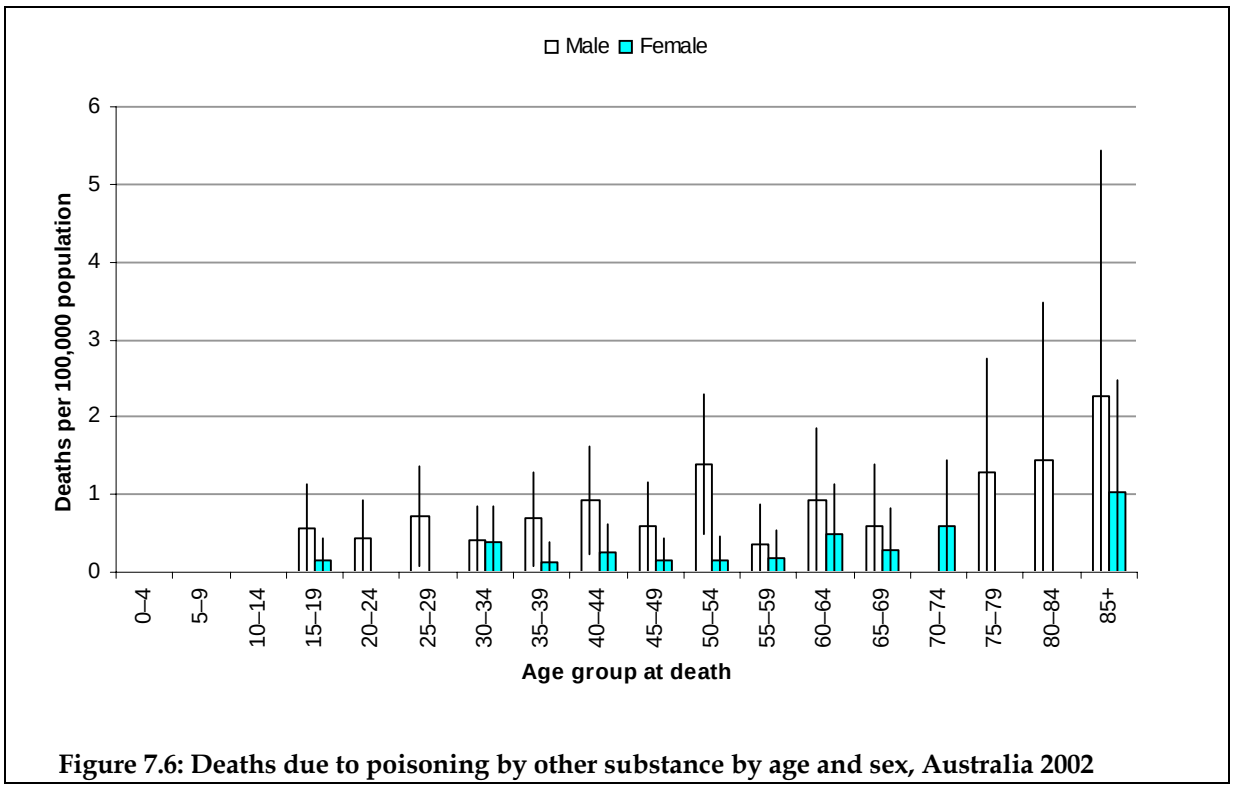


Figure 7.6: Deaths due to poisoning by other substance by age and sex, Australia 2002

7.3.2 Trends in death rates

Trends in death due to poisoning by other substances are difficult to assess. This is for the reasons discussed in section 7.1 above. In addition, the relatively small numbers of cases coded to this category results in larger random variation.

Figure 7.7 shows rates of deaths from 1979–2002 for which the Underlying Cause of Death was coded as poisoning by other substances. The code ranges included are ICD-9 E960–E969 (1979–1998) and ICD-10 X45–X49 (1997–2002).

The point-estimate rate for 2002 was high compared with 2001 data. However, the 2002 rates were similar to the 2000 rates. Whether this reflects an underlying increase, or is a consequence of variation affected by the factors discussed in section 7.1, is difficult to determine from the available data.

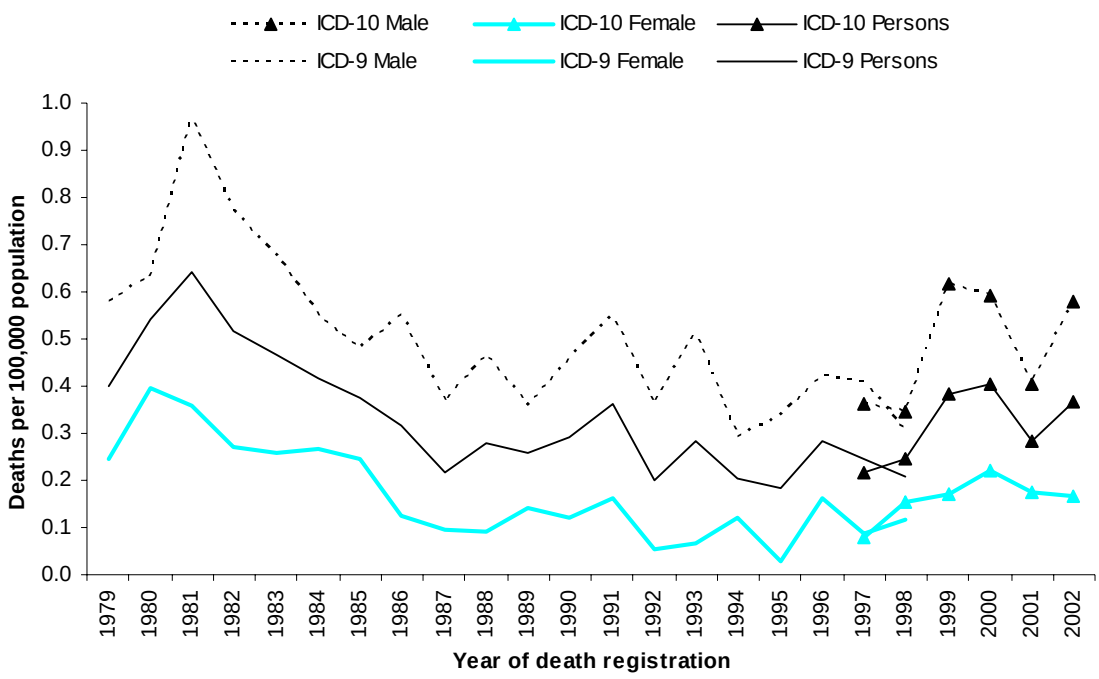


Figure 7.7: Age-adjusted rates of poisoning by other substances, by sex, Australia 1979–02

7.3.3 State and Territory differences

Because of small numbers, it is difficult to interpret jurisdiction-specific rates for deaths due to poisoning by other substances. Consequently, the chart has not been included.

7.3.4 Associated factors

Of the 72 deaths caused through poisoning by other substances, 33% (n=24) were associated with exposure to certain types of *Gases and vapours* such as carbon monoxide, motor vehicle exhaust gas, nitrogen oxide and sulphur dioxide. *Alcohol* was the substance responsible in 29 cases (40%). *Pesticides* caused one death, and *Organic solvents and halogenated hydrocarbons and their vapours* caused 3 deaths. A poisoning agent was not specified in 15 cases (21%).

Place of occurrence was specified in 42 cases. Of these, 26 occurred at home.

8 Smoke, fire and flames, heat and hot substances deaths, Australia

ICD-10 X00–X19

Table 8.1: Key indicators for unintentional deaths caused by smoke, fire and flames, heat and hot substances.

Indicator	Males	Females	Persons
Cases	72	43	115
Percentage of all injury deaths	1.4%	1.7%	1.5%
Crude rate/100,000 population	0.74	0.43	0.58
Age standardised rate/100,000 population	0.79	0.40	0.58
Average years potential life lost (YPLL) before age 75 years	23	17	21

8.1 Overview

Of 153 deaths registered in 2002 due to burns, or exposure to fire or hot substances, 115 (75%) were recorded as unintentional. The remainder were recorded as suicide (n=29; 19%), homicide (n=7; 5%) and undetermined intent (n=2; 1%). This section reports the deaths attributed to unintentional exposure.

Of the 115 cases recorded as being unintentional, 57% were the result of an *Uncontrolled fire in building or structure* (n=66); 2 of these cases involved a child (in the range 0–4 years). *Clothing ignition* accounted for 7 deaths. The *Ignition of highly flammable materials* (e.g. petrol or kerosene) accounted for 7 deaths. A further 10 deaths were the result of *Scalds*, 9 from *Hot tap water* and one from another type of hot fluid. In most cases, deaths from scalds involved older people.

Table 8.2: Deaths as the result of unintentional exposure to fire/flame or hot object/substance, 2002

Major mechanism	Males	Females	Persons
Uncontrolled building fire	42	24	66
Uncontrolled fire in other location	5	2	7
Controlled building fire	1	0	1
Controlled fire in other location	1	0	1
Ignition of highly flammable material	4	3	7
Ignition of nightwear	3	0	3
Ignition of other clothing	2	2	4
Hot tap water	4	5	9
Other hot fluids	0	1	1
Hot household appliances	1	0	1
Other specified smoke, fire and flames	4	0	4
Other and unspecified heat and hot substances	1	0	1
Unspecified	4	6	10
Total	**72**	**43**	**115**

8.2 Age and sex distribution

115 unintentional deaths due to smoke, fire, flames, heat and hot substances were registered in 2002, 42 more than in 2001.

The all-ages male adjusted rate was nearly twice the equivalent female rate. While there were differences between male and female rates in a number of age groups, none of these were statistically significant. Rates were higher in the older age groups.

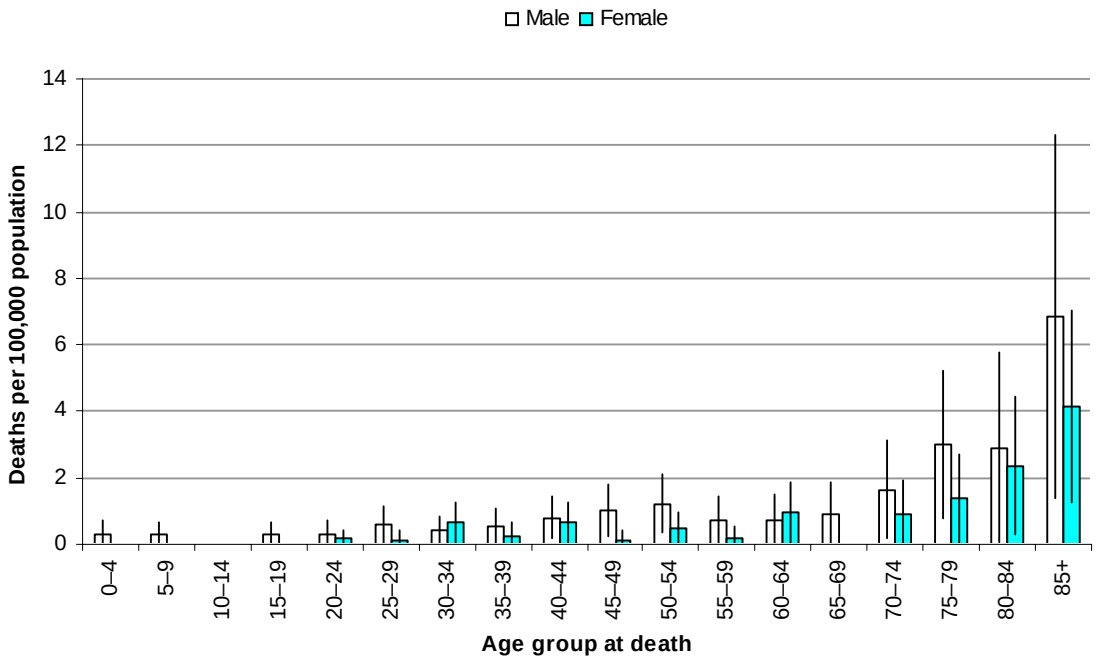


Figure 8.1: Deaths due to unintentional exposure to fire, or hot gas or liquid by age and sex, Australia 2002

8.3 Trends in death rates

Annual rates fluctuate because of relatively small case numbers and because of clusters of cases for years in which bushfire disasters occurred. There has, however, been a general downward trend in rates, and the age-adjusted rate for persons in 2002 was 56% lower than in 1979. However, there was an increase between 2001 and 2002.

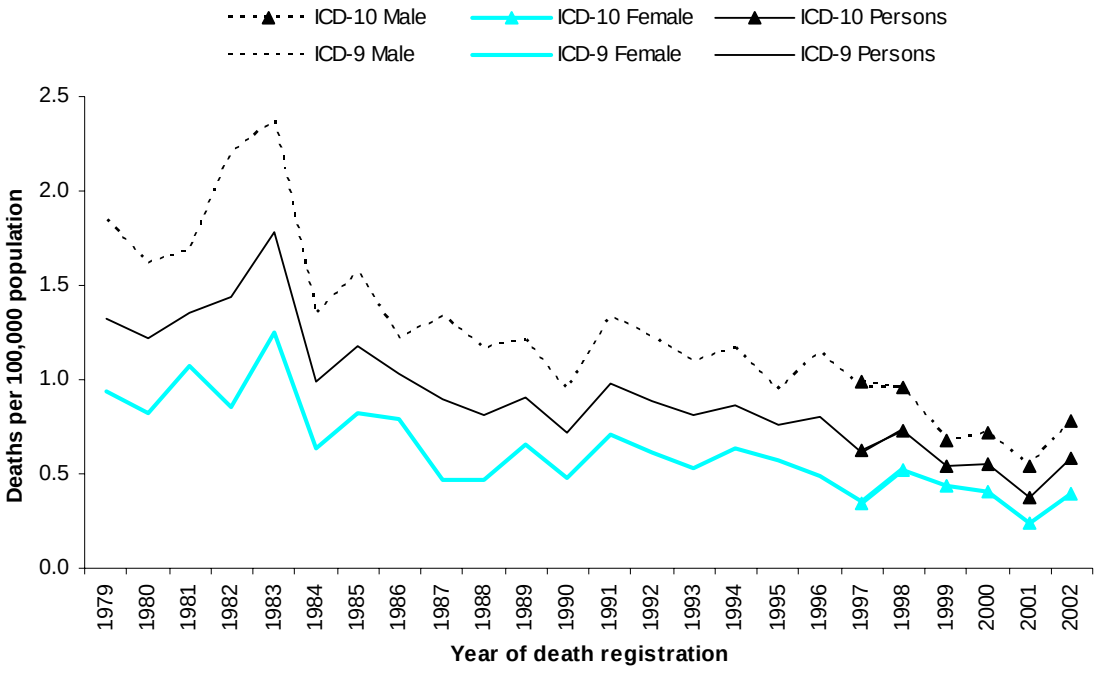


Figure 8.2: Deaths due to unintentional exposure to fire, or hot gas or liquid, Australia 1979–2002 by sex: Age standardised rates

8.4 State and Territory differences

Small case numbers in this category limit meaningful comparison between States and Territories.

Note: The thick horizontal line shows the rate for Australia.

Figure 8.3: Deaths due to unintentional exposure to fire, or hot gas or liquid, States and Territories 2002: Persons (Age standardised rates)

8.5 Associated factors

In 31 of the 115 cases, a drug was also involved in the death (the *Drug Flag* is described in Appendix 1: *Data Issues*). Of the 31 cases where a code had been assigned, 20 were classified as being alcohol-related, 11 were related to smoking tobacco, and 3 involved some other type of drug.

The majority of deaths in this category occurred at home (n=80; 69.6%).

Table 8.3: Place of death, Australia 2002

Place	No	Per cent
Home	80	69.6%
Residential institution	1	0.9%
Street and highway	5	4.3%
Trade and service area	2	1.7%
Farm	1	0.9%
Other specified places	8	7.0%
Unspecified places	18	15.7%
Total	**115**	**100.0%**

9 Other unintentional injury deaths, Australia

ICD-10 W20–W64, W75–W99, X20–X39, X50–X58, X59 (unless MCoD = fracture), Y85, Y86, Y89.9

This residual category includes all injury deaths recorded as 'unintentional' and not covered by one of the previous sections.

In 2002, a total of 1,031 deaths had a UCoD coded to X59 *Exposure to unspecified factor*. As was explained in Chapter 5, in cases where UCoD X59 appeared in combination with one or more MCoDs indicating that a fracture had been sustained, the death was treated as having been due to an unintentional fall. 888 such cases have been included in Chapter 5. The remaining 143 cases with X59 as the UCoD (but not accompanied by a fracture code as an MCoD) are considered in this chapter.

Table 9.1: Key indicators for other unintentional injury deaths, Australia 2002

Indicator	Males	Females	Persons
Cases	458	198	656
Percentage of all injury deaths	8.7%	7.8%	8.4%
Crude rate/100,000 population	4.70	2.00	3.34
Age standardised rate/100,000 population	4.99	1.80	3.29
Average years potential life lost (YPLL) before age 75 years	25	20	23

9.1 Overview

The 656 unintentional injury deaths included in this group equate to a rate of 3.34 deaths per 100,000, and account for 8.4% of all injury deaths registered in 2002.

This category covers many types of injury death.

Prominent for their frequency in 2002 were *Suffocation and choking as a result foodstuffs, non-food stuffs and mechanical means* (n=222, 34%); *Sequelae of accidents* (n=88, 13%); *Unintentional discharge of firearms* (n=31, 5%); *Electrocution* (n=26, 4%); and *Contact with machinery* (n=15; 2%). A complete listing of the Underlying Causes of other unintentional injury deaths is provided in Table 9.2.

Table 9.2: Underlying causes of Other Unintentional Injury Deaths, Australia 2002

ICD-10 Code	Underlying Cause of Death ICD-10	Frequency	Per cent
W20	Struck by thrown, projected or falling object	37	6%
W21	Striking against or struck by sports equipment	2	0%
W22	Striking against or struck by other objects	8	1%
W23	Caught, crushed, jammed or pinched in or between objects	23	4%
W24	Contact with lifting and transmission devices, not elsewhere classified	3	1%
W25	Contact with sharp glass	3	1%
W26	Contact with knife, sword or dagger	2	0%
W29	Contact with other powered hand tools and household machinery	2	0%
W30	Contact with agricultural machinery	8	1%
W31	Contact with other and unspecified machinery	5	1%
W32	Handgun discharge	1	0%
W33	Rifle, shotgun and larger firearm discharge	10	2%
W34	Discharge from other and unspecified firearms	20	3%
W36	Explosion and rupture of gas cylinder	1	0%
W39	Discharge of firework	1	0%
W40	Explosion of other materials	3	1%
W44	Foreign body entering into or through eye or natural orifice	1	0%
W45	Foreign body or object entering through skin	1	0%
W49	Exposure to other and unspecified inanimate mechanical forces	4	1%
W51	Striking against or bumped into by another person	5	1%
W54	Bitten or struck by dog	2	0%
W55	Bitten or struck by other mammals	1	0%
W56	Contact with marine animal	1	0%
W64	Exposure to other and unspecified animate mechanical forces	1	0%
W75	Unintentional suffocation and strangulation in bed	11	2%
W76	Other accidental hanging and strangulation	91	14%
W77	Threat to breathing due to cave-in, falling earth and other substances	2	0%
W78	Inhalation of gastric contents	18	3%
W79	Inhalation and ingestion of food causing obstruction of respiratory tract	37	6%
W80	Inhalation and ingestion of other objects causing obstruction of respiratory tract	53	8
W83	Other specified threats to breathing	1	0
W84	Unspecified threat to breathing	9	1
W85	Exposure to electric transmission lines	6	1
W86	Exposure to other specified electric current	12	2
W87	Exposure to unspecified electric current	8	1
W94	Exposure to high and low air pressure and changes in air pressure	1	0
X20	Contact with venomous snakes and lizards	1	0
X23	Contact with hornets, wasps and bees	2	0
X26	Contact with venomous marine animals and plants	8	1
X30	Exposure to excessive natural heat	12	2
X31	Exposure to excessive natural cold	2	0
X37	Victim of cataclysmic storm	1	0
X51	Travel and motion	3	1
X58	Exposure to other specified factors	1	0
X59	Exposure to unspecified factor[(a)]	143	22
Y850	Sequelae of motor vehicle accident	33	5
Y859	Sequelae of other and unspecified transport accidents	2	0
Y86	Sequelae of other accidents	53	8
Y899	Sequelae of unspecified External Cause	1	0
Total		**656**	**100**

(a) n=888 other cases in which UCoD=X59 was combined with one or more MCoD fracture codes have been re-assigned to Chapter 5: Unintentional Falls. This is described in detail in that chapter.

9.2 Age and sex distribution

As with most other External Causes of injury deaths, male rates were higher than female rates. Males tended to have much larger rates throughout, and significantly so in all 5 year age groups between 15–19 and 55–59. Work-related deaths are likely to contribute to this male excess.

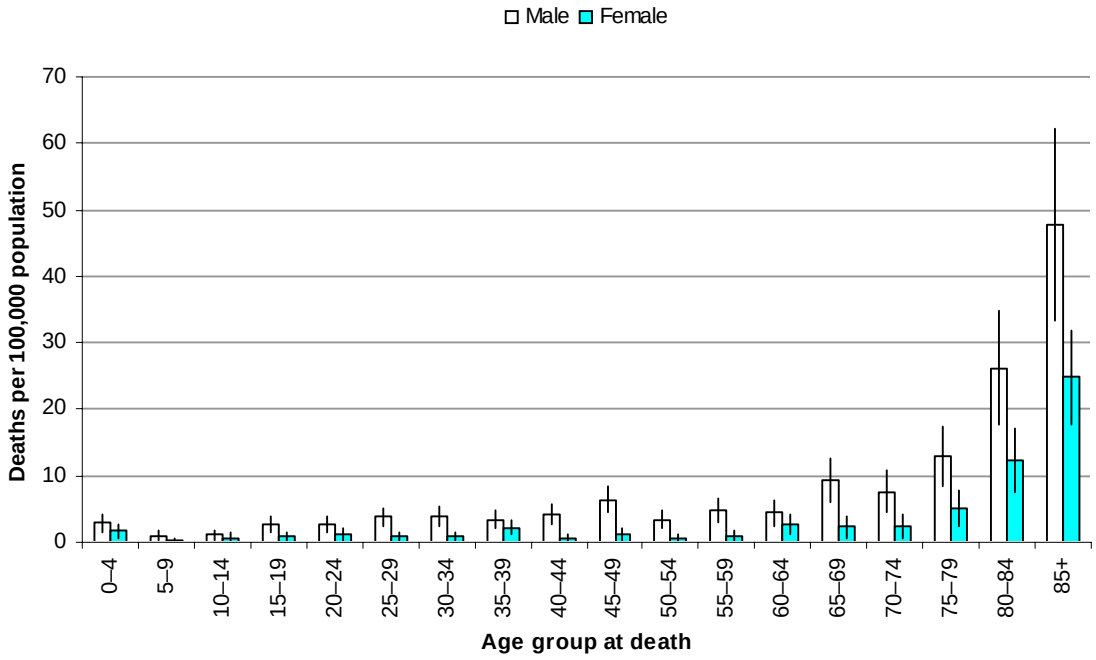
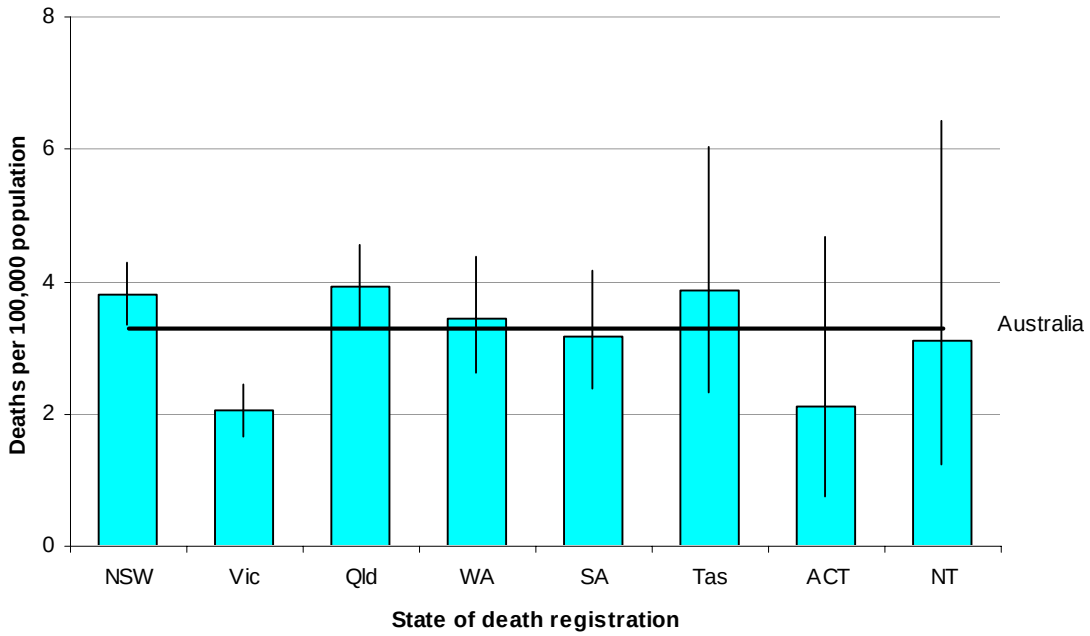


Figure 9.1: Deaths due to other unintentional External Cause of injury by age and sex, Australia 2002

9.3 State and Territory differences



Note: The thick horizontal line shows the rate for Australia.

Figure 9.2: Deaths due to other unintentional External Cause of injury, States and Territories 2002: Persons (Age standardised rates)

10 Homicide deaths, Australia

ICD-10 X85–Y09

Table 10.1: Key indicators for homicide deaths

Indicator	Males	Females	Persons
Cases	199	104	303
% of all injury deaths	3.8	4.1	3.9
Crude rate/100,000 population	2.04	1.05	1.54
Age standardised rate/100,000 population	2.04	1.06	1.54
Average years potential life lost (YPLL) before age 75 years	39	40	40

10.1 Age and sex distribution

The 303 deaths registered to this category in 2002 accounted for 3.9% of all injury deaths.

Of the 199 male deaths registered in 2002, 34% (n=68) were due to *Assault by a sharp object,* 17% (n=34) were due to *Assault by firearms*, 15% (n=29) resulted from *Assault by bodily force* and 13% (n=26) resulted from *Assault by a blunt object*. 135 (68%) of the male homicides occurred to males in the age range 15–44 years.

For females, *Assault by a sharp object* accounted for 29% (n=30), 14% (n=15) resulted from *Hanging, strangulation and suffocation*, and 13% (n=14) of cases were due to *Assault by a blunt object*.

20 (7%) of homicide deaths involved children. 15 were at ages 0–4 years, 3 at ages 5–9 years, and 2 at ages 10–14 years.

A firearm was used in 52 (17%) homicides in 2002. A *Handgun* was coded as having been used in 13 (25%) cases, a *Shotgun* in 6 (12%) cases, and a *Hunting rifle* in 5 (10%) cases. In the remaining 28 cases, the type of firearm was not specified.

Male rates were greater than female rates in most five year age groups. The difference was particularly evident in the age range 40–64 years, where the mean rate was more than 3 times as high for males.

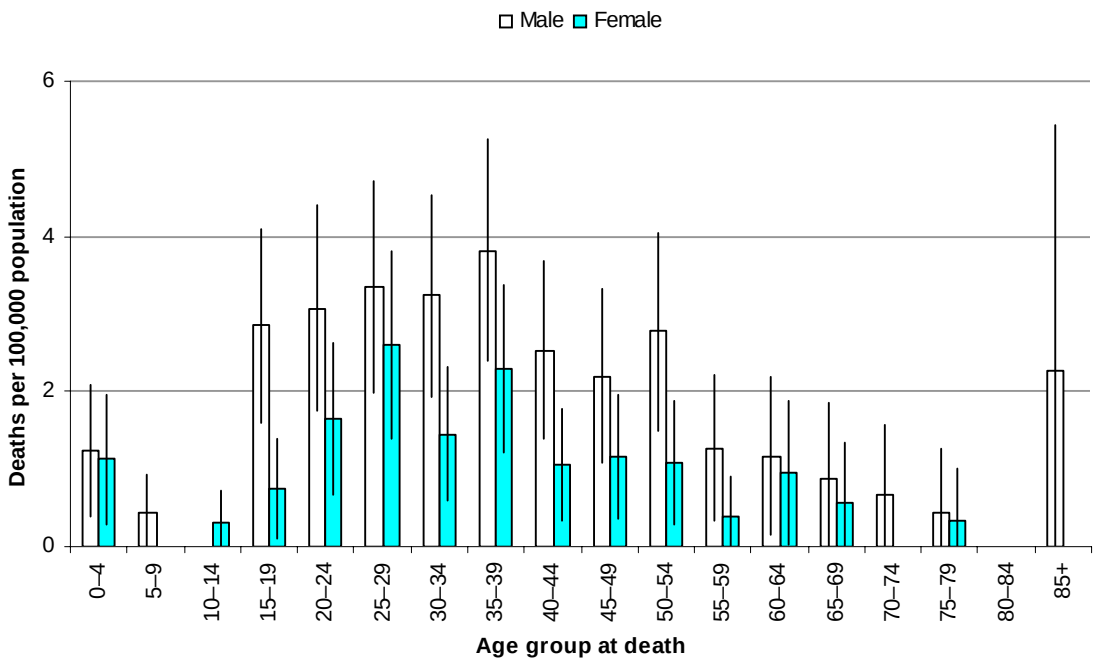


Figure 10.1: Deaths due to intentional harm by another person by age and sex, Australia 2002

10.2 Trends in death rates

There was a small downward trend in homicide death rates during the 1990s.

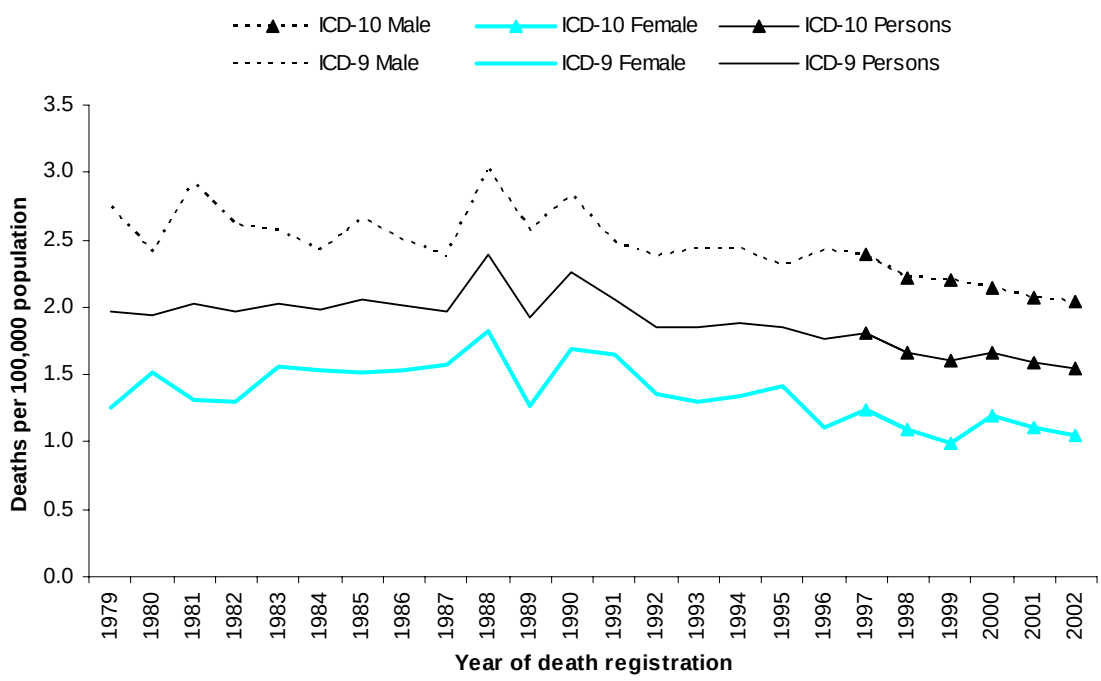
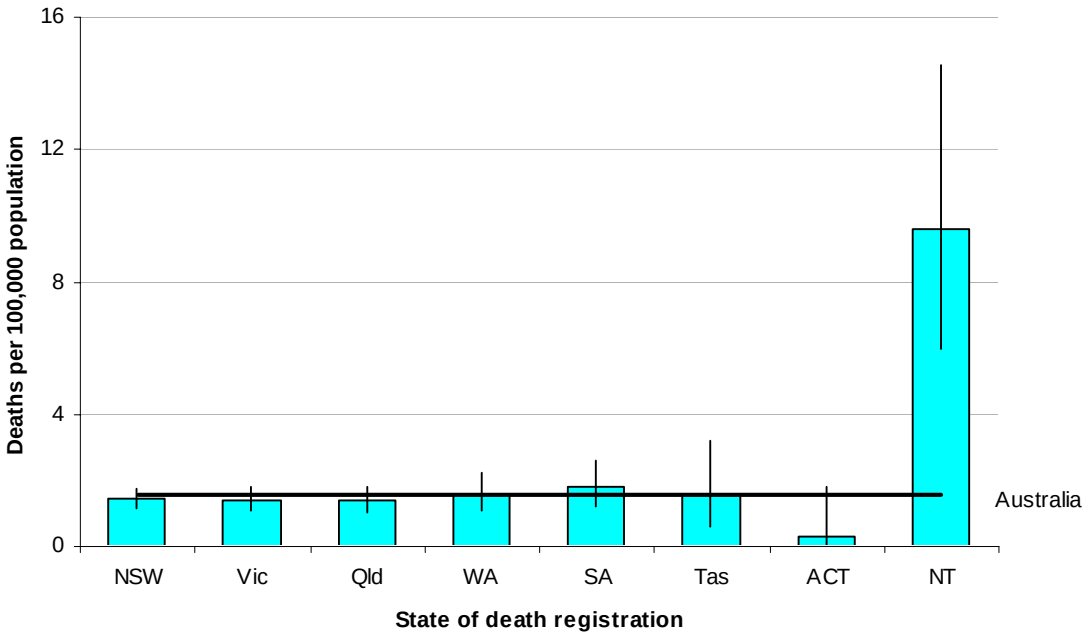


Figure 10.2: Deaths due to intentional harm by another person, Australia 1979–2002 by sex: Age standardised rates

10.3 State and Territory differences

As in previous years, the rate of homicide for the Northern Territory was well above the national rate. 17 of the 23 people registered as dying due to homicide in the Northern Territory in 2002, were recorded as being an Aboriginal or Torres Strait Islander.



Note: The thick horizontal line shows the rate for Australia.

Figure 10.3: Deaths due to intentional harm by another person, States and Territories 2002: Persons (Age standardised rates)

11 Multiple causes of death

In 2002, the total number of deaths registered from all causes in Australia was 133,707. Of these, 7,820 deaths had an Underlying Cause of Death (UCoD) code referring to an External Cause (ICD-10 V01–Y89). These deaths are the subject of Chapters 2 to 10 of this report.

Some parts of the analysis of these 'External Causes' deaths (notably in Chapters 5, 6 and 7) made use of the Multiple Cause of Death data provided by the ABS, beginning with deaths registered in 1997. For deaths registered in 2002, provision was made for up to 19 such codes to be recorded for each death, in addition to the UCoD (see also Appendix 1: Data Issues).

In Chapter 5 (Falls), Multiple Causes information is used to overcome a problem resulting from a difference between ICD-9 and ICD-10, which results in the movement of a large number of cases from 'Unintentional Falls' to unspecified accidents.

In Chapter 7 (Poisoning), Multiple Causes information is used to investigate variations in assignment of Underlying Cause codes for deaths involving poisoning, and to enable more complete coverage of this type of death.

In this chapter, we consider briefly all deaths registered in 2002 which were ***not*** assigned an External Cause as the Underlying Cause of Death, but ***were*** assigned an External Cause code (ICD-10 V01–Y89) as a Multiple Cause of Death (MCoD).

Of the 125,887 deaths registered in 2002 that do not have an External Cause as the Underlying Cause, 5,104 have at least one External Cause code as a Multiple Cause. 3,818 of the 125,887 cases were given a code from ICD-10 Chapter XIX Injury, poisoning and certain other consequences of External Causes.

11.1 Age and sex distribution

The 5,104 cases included a slightly higher proportion of males (n=2,599, 51%) than females (n=2,505, 49%). 83% (n=4,217) of the cases were deaths of people aged 60 years and over.

11.2 Major causes of death

The Multiple Cause of Death codes which were from ICD-10 Chapter XX, External Causes, were categorised according to the scheme used in Chapters 3 to 10 of this report. Their distribution among these categories is shown in Table 11.1.

Table 11.1: External Cause codes allocated as Multiple Causes of Death to the 5,104 Natural Causes deaths registered in Australia in 2002 with one or more ICD-10 Chapter XX codes in Multiple Cause of Death fields

Major group	No. of MCoDs	%
Complications of surgical and medical care (ICD-10 Y60–Y69)	2,423	46
Falls (ICD-10 W00–W19; or X59 and any Multiple Cause code S02, S12, S32, S42, S52, S62, S72, S82, S92, T02, T08, T10, T12, or T14.2)	1,579	30
Other unintentional (ICD-10 W20–W64, W75–W99, X20–X39, X50–X59, Y85, Y86, Y89.9)	988	19
Unintentional poisoning by drugs (ICD-10 X40–X44)	142	3
Unintentional poisoning by other substances (ICD-10 X45–X49)	106	2
Transport (ICD-10 V01–V99)	32	1
Drowning (ICD-10 W65–W74)	11	0
Fire (ICD-10 X00–X19)	7	0
Homicide (ICD-10 X85–Y09)	0	0
Suicide (ICD-10 X60–X84)	0	0
Undetermined intent (ICD-10 Y10–Y34)	0	0
Total no of MCoDs coded to ICD-10 Chapter XX	**5,288***	**100**

* Number of assigned MCoD values is greater than the number of deaths because up to 19 causes can be assigned to each death. In some cases, this means that there is some overlap between the designated categories.

Table 11.1 shows that the largest major cause groups are, in order of frequency: Complications of surgical and medical care; Falls; Other unintentional injuries; Unintentional poisoning by drugs; and Unintentional poisoning by other substances. These groups are described further below.

11.2.1 Complications of surgical and medical care

This category falls outside the scope of the main part of this report (see sub-section 12.3). For this reason, only information about its age and sex profile are included below.

Of the 2,423 cases in this category, 55% (n=1,329) were male and 45% (n=1,094) were female. The cases were clustered in older age groups, with 78% (n=1,840) being aged 60 years or more. The number of deaths in this category was 38% lower in 2002 than in 2000 (n=2,940).

11.2.2 Falls

Of the 1,579 cases which met the criteria for inclusion in this category, 997 (63%) were females and 582 (37%) were males. Deaths in this category were concentrated in older age groups. 98% were people aged 60 years and over; 88% were aged 75 years and over.

A total of 1,654 injury and poisoning codes from ICD-10 Chapter XIX were assigned to this group of cases. A review of these Chapter XIX codes showed that by far the most commonly sustained injury was to the hip and thigh (n=1,112; 67%).

The three most commonly coded Underlying Causes of Death in this category were: diseases of the circulatory system (n=766, 50%); neoplasms (n=206, 14%); and diseases of the respiratory system (n=157, 10%).

11.2.3 Other unintentional injury

There were 988 cases in this category. Males accounted for 557 cases (56%) and 431 (44%) were females. As for falls, cases in this category were concentrated in older age groups. 83% were persons aged 60 years and over and 61% were persons aged 75 years and over.

A substantial proportion of the total of 1,054 External Cause codes assigned to the cases in this category resulted from "Unintentional threats to breathing" (n=665; 63%). Within this broader ICD-10 group, the codes most commonly assigned were for *Inhalation and ingestion of other objects causing obstruction of respiratory tract* (n=521); *Inhalation of gastric contents* (n=113); and *Inhalation and ingestion of food causing obstruction of respiratory tract* (n=31).

11.2.4 Unintentional poisoning by drugs

142 cases met the criteria for inclusion in this category. Close to three-quarters of these were males. A substantial proportion (65%, n=92) were males in the age range 20–44 years.

A major proportion of the cases in this category had, as their Underlying Cause of Death, a code from ICD-10 Chapter V Mental and Behavioural disorders (n=100; 70%). With one exception, the codes assigned from this chapter identified the use of drugs or alcohol. The most frequent subcategories were Opioid dependence (n=64, 45%) and Multiple drug dependence (n=27, 19%).

11.2.5 Unintentional poisoning by other substances

Of the 106 cases in this category, 88 (83%) were males. The cases were most frequently males in the age range 30–44 years (n=33, 31%).

A total of 139 External Cause codes were assigned to this category. 63 (45%) of these were coded to *Unintentional poisoning by and exposure to alcohol.*

11.3 Evaluation

For many purposes, 'injury deaths' have been defined as those given an External Cause code as the Underlying Cause of Death. Multiple Cause of Death codes enable identification of a large number of additional deaths in which injury and poisoning, or their External Causes, appear to be involved.

Should all or some of these 'additional' injury deaths be included for purposes such as routine surveillance of injury mortality?

The role played by injury and External Causes in the 5,104 deaths in which codes for these conditions and causal factors appear only in Multiple Cause of Death fields, might not be the same as in the 7,820 deaths in which the Underlying Cause is an External Cause code. For example, an unintentional fall mentioned as a Multiple Cause might, typically, have had a less direct causal role than a fall mentioned as the Underlying Cause.

Nevertheless, at least some 'additional' injury deaths are likely to be sufficiently similar to the deaths usually reported as injury to warrant inclusion. Selection of 'additional' injury

deaths for inclusion requires decisions on conceptual scope, and technical assessment of cases for similarity. Here are examples of these issues:

Conceptual scope: For some purposes, it might be decided to distinguish Complications of Medical and Surgical Care—the most common External Cause among natural causes deaths—from other External Causes of injury. Emerging international criteria for injury indicators provide a basis for such decisions (Langley J & Brenner R 2003).

Technical assessment: Section 7.1 provides an example of internal analysis of Multiple Causes mortality data to assess whether certain 'additional' cases should be included. This approach is constrained by the limited case information in the ABS mortality file. Coroner records contain more information, but most of the candidate cases (78%) were not referred to a coroner. Linkage to sources such as electronic hospital discharge summary records offers some potential, but direct examination of hospital files might be necessary.

12 References

Anderson RN & Rosenberg HM 1998. Age standardization of death rates: Implementation of the year 2000 standard. National Vital Statistics Reports 47 (3):1–17.

Bordeaux S & Harrison J 1998. Australian Injury Prevention Bulletin No 17 : Injury mortality Australia 1995. 17. Adelaide: Australian Institute of Health and Welfare.

Centers for Disease Control and Prevention 1997. Recommended Framework for Presenting Injury Mortality Data. MMWR 46 (RR-14).

Fingerhut L2001. Preliminary external cause of injury mortality matrix for ICD-10, 12 June 2001: National Center for Health Statistics, Centers for Disease Control.

Kreisfeld R & Harrison J 2004. Injury Deaths, Australia 1999. Adelaide: Australian Institute of Health and Welfare.

Langley J & Brenner R 2003. What is an injury? Paper presented at Proceedings of the International Collaborative Effort on Injury Statistics, Paris Meeting.

Steenkamp M & Harrison JE 2004. ICD-9 to ICD-10: Analysis of injury deaths data, Australia 1997 and 1998. Adelaide: Australian Institute of Health and Welfare.

World Health Organization 1977. International Classification of Diseases: Manual of the International Statistical Classification of Diseases, Injuries and Causes of Death.

World Health Organization 1992. International Statistical Classification of Diseases and Related Health Problems: Tenth Revision. Geneva.

Appendix 1: Data issues

Data sources

Deaths data are from the Australian Bureau of Statistics (ABS) mortality unit record data collection, 1979–2002. Population data were obtained from the ABS.

Transition from ICD-9 to ICD-10

Beginning with deaths registered in 1999, the Australian Bureau of Statistics has coded Australian Mortality Data according to the 10th Revision of the International Classification of Diseases (ICD-10) (World Health Organization 1992). From 1979 until 1998, national deaths data were coded according to the 9th Revision of ICD (World Health Organization 1977).

The transition from ICD-9 to ICD-10 has affected comparability between 1999 data and that from previous years. This issue was discussed in detail in Injury Deaths, Australia 1999 (Kreisfeld & Harrison 2004).

Cause code aggregations

NISU statistical publications have traditionally made use of standard aggregations of the ICD-9 External Cause (E-code) classification. With the introduction of ICD-10 at the beginning of 1999, a map was developed by NISU in order to arrive at an equivalent set of standard aggregations under the new classification scheme (Kreisfeld & Harrison 2004).

Years of potential life lost

This report has applied the method used by the Australian Bureau of Statistics for calculating years of potential life lost (YPLL) with one change. The ABS estimated YPLL for ages 1–75 years, inclusive. We have calculated YPLL for ages 0–74 years, inclusive. The methodology is described in the following extract from the ABS publication *3303.0 Causes of Death Australia 1999,* with our amendments in italics.

> Estimates of YPLL were calculated for deaths of persons aged *0–74 years (i.e. <75 years)* years based on the assumption that deaths occurring at these ages are untimely. A number of variables are used in these calculations, as described below.
>
> YPLL is derived from:
>
> $YPLL = \sum_x (D_x (74\text{-}A_x))$
>
> Where:
>
> A_x = adjusted age at death. As age at death is only available in completed years, the midpoint of the reported age was chosen (e.g. age at death 34 years was adjusted to 34.5).
>
> D_x = registered number of deaths at age x due to a particular cause of death.

Mean YPLL (<75 years) per case was calculated using as the denominator all deaths in the group of interest, irrespective of age at death.

Age adjustment

Most all-ages rates have been adjusted for age to overcome the effect of differences in the proportions of people of different ages (and different injury risks) in the populations that are compared. Direct standardisation was employed, taking the Australian population in 2001 as the standard. Changes in age composition are small within narrow age bands (e.g. 65–69 years) and adjustment has not been applied to five year age groups. Where crude rates are reported, this is noted.

Confidence intervals

Nearly all deaths are believed to be included in the sources used for this report, so sampling errors do not apply to these data. However, the time periods used to group the cases (e.g. calendar years) are arbitrary. Use of another period (e.g. April to March) would result in different rates, especially where case numbers are small. The 95% confidence intervals of these rates are based on a Poisson assumption about the number of cases in a time period. Chance variation alone would be expected to lead to a rate outside the 95% confidence interval on 5% of occasions. Confidence intervals were calculated using the methods described by Anderson and Rosenberg (Anderson & Rosenberg 1998). Asymmetrical confidence intervals were calculated for case numbers up to 100. Symmetrical intervals, based on a normal approximation, were calculated where case numbers exceed 100.

Case definition

The Underlying Cause of each death (**UCoD**) registered in Australia is classified by the ABS according to the *International Classification of Diseases* (ICD). The *9th Revision* (ICD-9) was used for death registrations between 1979 and 1998 (World Health Organization 1977). The *10th Revision* (ICD-10) was used for deaths registered from 1999 onwards (World Health Organization 1992). All deaths registered in 2002 and given an ICD-10 External Cause code by the ABS are included in this report.

In general, the inclusion criterion used for the report was that the UCoD was an External Cause. Additional cases are included in some sections, as described in the text.

Data are presented according to the year in which deaths were registered. 5% of injury deaths registered in 2002 occurred in an earlier year. A similar proportion of deaths that occurred in 2002 will not have been registered until after 2002. Information on these cases was not available at the time of writing. State-specific data are presented on the basis of the State or Territory in which death was registered. This is usually the one in which death occurred.

Multiple causes of death

Until the end of 1996, the ABS coded only one cause for each death. This is the Underlying Cause (UCoD) which the Bureau defines as being 'the disease or injury which initiated the train of morbid events leading directly to death' (in keeping with WHO rules). The Underlying Cause is derived from information on the death certificate according to rules that form part of the *International Classification of Diseases*.

Beginning with deaths registered in 1997, other morbid conditions, diseases and injuries entered on the death certificate were also coded as ***Multiple Causes of Death (MCoDs)***. Up to

19 ***MCoDs*** may be recorded for each death, with one of the ***MCoDs*** being a duplicate of the ***UCoD*** for that death.

Where they are assigned, ***MCoD*** codes can provide additional information about deaths where the ***UCoD*** was an External Cause (injury or poisoning). ***MCoDs*** also make it possible to identify an additional subset of deaths, namely those where the ***UCoD*** was not an External Cause, but where one or more External Causes have been specified on the death certificate as having contributed to the death. Information about the latter group of deaths that occurred in 2002 is summarised in *Chapter 11: Multiple Causes of Death.*

Time series

Time trends have been presented, where possible, for the period 1979–2002. Australian deaths data registered in the period 1979–1998 were classified according to the *9th Revision of the International Classification of Diseases* (ICD-9) and, for 1999–2002, according to the *10th Revision of the International Classification of Diseases* (ICD-10). The change to ICD-10 has had an impact on the ability to produce meaningful time trends for some aspects of injury. This was discussed in detail in Injury deaths, Australia 1999 (Kreisfeld & Harrison 2004).

Data quality

The reliability of information about cause of death depends on the reliability of ICD codes provided by the ABS. This depends largely on the adequacy of the information provided to the ABS through Registrars of Births, Deaths and Marriages, and originating from coroners and medical practitioners. Little published information is available on the quality of the data resulting from this process, particularly as it applies to injury deaths. Centralisation of mortality coding in the Brisbane office of the ABS since the mid 1990s has reduced the potential for variation due to local differences in coding practice. However, factors affecting information recording, provision, or coding could affect data in different ways for different jurisdictions, periods or population groups. Hence, apparent differences should be interpreted with caution.

Drugs Flag

The ABS introduced a *Drugs Flag* in 1999 in order to increase the level of detailed information about the role played by drugs in Australian deaths. The sub-categories employed are:

1 Smoking related death

2 Alcohol related death

3 Drug other than alcohol or tobacco

4 Combination of 1 and 2 (i.e. tobacco *plus* alcohol)

5 Combination of 1 and 3 (i.e. tobacco *plus* drug other than alcohol)

6 Combination of 2 and 3 (i.e. alcohol *plus* drug other than alcohol)

7 Combination of 1, 2 and 3 (i.e. tobacco *plus* alcohol *plus* drug other than alcohol)

Firearms Flag

ICD-10 provides less detail concerning types of firearms involved in injury than ICD-9. In response to public interest in the details of firearms associated with Australian deaths, the ABS introduced a *Firearms Flag* with the following categories: Handgun; Shotgun; Hunting rifle; Military firearms; Other firearms; Unspecified firearms. The categories are similar to those that were provided in ICD-9 (e.g. subcategories of E922).

Suppression of small cell counts in data tables

In some instances, cell counts in tables that are 4 cases or fewer have been suppressed, as have rates derived from them, to protect confidentiality and because values based on very small numbers are sometimes difficult to interpret.

Appendix 2: Summary data tables

Table A2.1: Counts, age-specific rates and male to female rate ratio of death registrations by five-year age groups for males, females, and persons; Australia, 2002[(a)]

Age group (years)	Males		Females		Persons		M:F Rate Ratio
	Case counts	Rates	Case counts	Rates	Case counts	Rates	
0–4	79	12.1	50	8.1	129	10.2	1.5
5–9	36	5.2	19	2.9	55	4.1	1.8
10–14	52	7.4	26	3.9	78	5.7	1.9
15–19	334	47.5	115	17.1	449	32.6	2.8
20–24	468	68.6	112	16.9	580	43.1	4.1
25–29	538	78.2	132	19.1	670	48.6	4.1
30–34	525	70.8	149	19.7	674	45.0	3.6
35–39	474	64.7	150	20.2	624	42.3	1.5
40–44	440	58.7	162	21.3	602	39.9	2.8
45–49	394	57.7	130	18.8	524	38.1	3.1
50–54	331	50.9	118	18.2	449	34.5	2.8
55–59	207	37.6	93	17.4	300	27.6	2.2
60–64	193	45.2	85	20.3	278	32.8	2.2
65–69	194	56.5	76	21.4	270	38.7	2.6
70–74	189	62.4	106	31.9	295	46.5	2.0
75–79	196	84.1	154	52.3	350	66.4	1.6
80–84	234	170.1	221	104.4	455	130.3	1.6
85 plus	383	436.3	648	336.5	1031	367.7	1.3
No age [(b)]	4		3		7		
All ages	**5,271**	**56.5**	**2,549**	**23.3**	**7,820**	**39.4**	**2.4**

(a) Deaths registered in 2002 where the Underlying Cause of Death was an External Cause code in the range V00–Y89 (ICD-10).
(b) Age was not reported for 7 cases.

Table A2.2 : Death registrations—counts and age-specific rates for males, females and persons by five-year age groups for States and Territories; Australia, 2002[a]

Age group (years)	NEW SOUTH WALES						VICTORIA					
	Males		Females		Persons		Males		Females		Persons	
	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates
0–4	24	10.84	9	4.29	33	7.65	12	7.64	9	6.02	21	6.85
5–9	7	3.03	8	3.64	15	3.33	10	5.98	..	1.89	13	3.99
10–14	17	7.28	4	1.80	21	4.61	11	6.55	8	4.97	19	5.78
15–19	101	43.44	29	13.08	130	28.62	66	38.90	22	13.43	88	26.39
20–24	139	61.49	24	10.96	163	36.62	111	64.86	22	13.10	133	39.23
25–29	153	65.21	30	12.71	183	38.88	127	73.20	34	19.48	161	46.26
30–34	198	79.00	50	19.62	248	49.06	105	55.70	30	15.35	135	35.17
35–39	171	68.48	48	19.32	219	43.97	105	57.65	39	20.87	144	39.02
40–44	142	55.90	39	15.30	181	35.57	95	51.60	44	23.46	139	37.40
45–49	151	65.87	43	18.70	194	42.25	90	53.95	27	15.78	117	34.63
50–54	110	50.67	38	17.65	148	34.23	74	47.30	29	18.07	103	32.49
55–59	64	34.45	31	17.20	95	25.95	49	37.06	27	20.45	76	28.76
60–64	71	49.05	28	19.57	99	34.40	40	38.13	18	17.12	58	27.62
65–69	63	52.86	22	17.83	85	35.04	41	47.72	19	20.89	60	33.93
70–74	69	64.88	35	29.80	104	46.47	45	58.59	33	38.61	78	48.07
75–79	61	74.55	62	59.57	123	66.16	47	79.24	38	49.43	85	62.41
80–84	98	200.65	79	104.69	177	142.40	46	132.74	40	73.87	86	96.84
85+	137	453.72	221	325.98	358	365.34	93	407.00	157	312.84	250	342.30
No age	4		0		4		0		0		0	
Total [b]	**1,780**	**56.27**	**800**	**21.01**	**2,580**	**38.12**	**1,167**	**50.34**	**599**	**21.61**	**1,766**	**39.44**

Continued

.. Case counts are not shown where the cell count is less than 4.
(a) Deaths registered in 2002 where the Underlying Cause of Death was an External Cause code in the range V00–Y89 (ICD-10).
(b) Total rates are age-standardised rates, while the others in this table are age-specific.

Table A2.2 (continued): Death registrations—counts and age-specific rates for males, females and persons by five-year age groups for States and Territories; Australia, 2002 [a]

Age group (years)	QUEENSLAND						WESTERN AUSTRALIA					
	Males		Females		Persons		Males		Females		Persons	
	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates
0–4	19	14.94	14	11.63	33	13.33	11	17.17	..	4.90	14	11.17
5–9	9	6.61	..	2.34	12	4.54	..	2.90	..	3.07	4	2.98
10–14	10	7.29	8	6.12	18	6.72	8	11.16	4	5.87	12	8.58
15–19	74	54.25	31	23.74	105	39.33	42	57.44	13	18.67	55	38.53
20–24	111	85.91	30	23.48	141	54.87	50	71.96	16	24.07	66	48.54
25–29	117	91.53	31	23.70	148	57.22	61	90.53	19	28.67	80	59.86
30–34	97	71.25	29	20.53	126	45.43	61	82.53	13	17.74	74	50.28
35–39	99	73.75	24	17.18	123	44.91	27	36.83	16	21.72	43	29.26
40–44	101	72.35	38	26.48	139	49.10	34	45.18	16	21.15	50	33.13
45–49	68	53.25	22	16.91	90	34.91	31	44.40	14	19.83	45	32.05
50–54	68	54.57	18	14.60	86	34.69	31	46.75	14	21.71	45	34.41
55–59	50	46.93	11	10.75	61	29.20	13	24.26	12	23.94	25	24.10
60–64	42	51.31	17	21.83	59	36.94	19	46.66	9	22.90	28	34.99
65–69	46	72.63	10	15.98	56	44.48	20	63.84	12	37.26	32	50.37
70–74	41	75.98	17	29.65	58	52.11	9	33.68	5	17.50	14	25.32
75–79	42	102.18	23	46.44	65	71.72	23	115.32	15	62.02	38	86.11
80–84	50	202.86	52	143.95	102	167.85	19	170.27	21	121.54	40	140.66
85+	65	417.01	122	381.31	187	393.01	30	401.12	59	353.70	89	368.38
No age	0		0		0		0		2		2	
Total [b]	**1,109**	**63.62**	**500**	**25.28**	**1,609**	**44.13**	**491**	**54.30**	**265**	**26.06**	**756**	**39.44**

Continued

.. Case counts are not shown where the cell count is less than 4.
(a) Deaths registered in 2002 where the Underlying Cause of Death was an External Cause code in the range V00–Y89 (ICD-10).
(b) Total rates are age-standardised rates, while the others in this table are age-specific.

Table A2.2 (continued): Death registrations - counts and age-specific rates for males, females and persons by five-year age groups for States and Territories; Australia, 2002 (a)

Age group (years)	SOUTH AUSTRALIA						TASMANIA					
	Males		Females		Persons		Males		Females		Persons	
	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates
0–4	7	15.14	8	18.02	15	16.55	..	19.02	..	13.43	5	16.30
5–9	5	9.92	..	0.00	5	5.09	..	17.66	..	0.00	..	9.08
10–14	..	5.79	..	4.09	5	4.96	..	11.49	..	0.00	..	5.87
15–19	31	58.19	7	13.74	38	36.46	11	63.48	..	11.98	13	38.21
20–24	29	57.97	6	12.63	35	35.89	7	48.23	5	35.27	12	41.83
25–29	33	66.64	7	14.72	40	41.21	16	118.95	4	28.51	20	72.78
30–34	35	63.47	10	18.52	45	41.24	11	71.01	7	42.93	18	56.61
35–39	38	68.01	9	16.22	47	42.20	14	87.72	7	41.21	21	63.74
40–44	40	68.69	16	27.18	56	47.82	14	77.43	..	16.14	17	46.36
45–49	26	48.52	14	25.61	40	36.95	8	47.41	6	34.72	14	40.99
50–54	31	60.11	12	22.72	43	41.19	7	43.18	4	24.65	11	33.91
55–59	16	36.30	6	13.51	22	24.86	10	71.06	..	21.62	13	46.51
60–64	16	46.94	7	20.17	23	33.44	4	35.08	6	53.36	10	44.16
65–69	12	41.77	5	16.53	17	28.83	7	76.64	4	42.33	11	59.19
70–74	19	71.84	10	33.72	29	51.70	4	49.65	..	22.73	6	35.60
75–79	13	60.36	9	32.38	22	44.59	5	80.81	4	51.88	9	64.76
80–84	13	100.63	18	88.94	31	93.49	..	57.13	4	69.47	6	64.80
85+	33	399.61	53	286.66	86	321.53	16	680.85	30	577.70	46	609.84
No age	0		0		0		0		0		0	
Total [(b)]	**400**	**54.04**	**199**	**21.92**	**599**	**37.67**	**144**	**65.73**	**93**	**33.96**	**237**	**49.42**

Continued

.. Case counts are not shown where the cell count is less than 4.

(a) Deaths registered in 2002 where the Underlying Cause of Death was an External Cause code in the range V00–Y89 (ICD-10).

(a) Total rates are age-standardised rates, while the others in this table are age-specific.

Table A2.2 (continued): Death registrations–counts and age-specific rates for males, females and persons by five-year age groups for States and Territories; Australia, 2002[a]

Age group (years)	AUSTRALIAN CAPITAL TERRITORY						NORTHERN TERRITORY					
	Males		Females		Persons		Males		Females		Persons	
	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates	Case Counts	Rates
0–4	..	7.64	..	6.02	..	6.85	..	22.04	..	34.99	5	28.33
5–9	..	5.98	..	1.89	..	3.99	..	0.00	..	24.24	..	11.70
10–14	..	6.55	..	4.97	..	5.78	..	11.81	..	0.00	..	6.18
15–19	..	38.90	..	13.43	4	26.39	6	78.47	10	139.00	16	107.82
20–24	5	64.86	..	13.10	7	39.23	16	191.07	7	93.20	23	144.79
25–29	..	73.20	..	19.48	..	46.26	29	316.91	6	69.96	35	197.44
30–34	4	55.70	4	15.35	8	35.17	14	149.29	6	65.62	20	107.99
35–39	6	57.65	..	20.87	7	39.02	14	158.25	6	74.44	20	118.29
40–44	4	51.60	..	23.46	6	37.40	10	122.03	4	53.13	14	89.04
45–49	7	53.95	..	15.78	9	34.63	13	183.98	..	30.62	15	110.31
50–54	..	47.30	..	18.07	..	32.49	8	121.84	..	35.34	10	81.80
55–59	..	37.06	..	20.45	..	28.76	4	84.53	..	27.55	5	59.79
60–64	..	38.13	..	17.12	..	27.62	..	30.76	..	0.00	..	18.02
65–69	..	47.72	..	20.89	..	33.93	..	174.11	..	224.38	6	196.08
70–74	..	58.59	..	38.61	..	48.07	..	167.36	..	211.64	4	186.92
75–79	..	79.24	..	49.43	5	62.41	..	305.81	..	163.13	..	236.78
80–84	6	132.74	7	73.87	13	96.84	..	0.00	..	0.00	..	0.00
85+	6	407.00	6	312.84	12	342.30	..	1200.00	..	0.00	..	519.03
No age	0		0		0		0		1		..	
Total [b]	**52**	**42.33**	**37**	**24.64**	**89**	**31.93**	**128**	**139.21**	**56**	**64.89**	**184**	**102.23**

.. Case counts are not shown where the cell count is less than 4.
a) Deaths registered in 2002 where the Underlying Cause of Death was an External Cause code in the range V00–Y89 (ICD-10).
b) Total rates are age-standardised rates, while the others in this table are age-specific.

Table A2.3: Case counts and rates for major causes of death for males; Australia 2002(a)

Age-group (Years)	Transportation V01–V99		Drowning W65–W74		Poisoning (drugs) X40–X44, F11–F16, F19		Poisoning (other substances) X45–X49		Falls W00–W19, X59 plus MCoD fracture code		Smoke, fire and flames, heat and hot substances X00–X19		Other unintentional W20–W64, W75–W99, X20–X39, X50–X59, Y85, Y86, Y89.9		Suicide X60–X84	
	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates
0–4	17	2.61	29	4.45	0	0.00	0	0.00	4	0.61	..	0.31	19	2.92	0	0.00
5–9	16	2.32	8	1.16	0	0.00	0	0.00	0	0.00	..	0.29	7	1.01	0	0.00
10–14	35	5.00	..	0.43	0	0.00	0	0.00	..	0.14	0	0.00	8	1.14	4	0.57
15–19	171	24.34	9	1.28	6	0.85	4	0.57	5	0.71	..	0.28	19	2.70	97	13.80
20–24	200	29.30	11	1.61	35	5.13	..	0.44	12	1.76	..	0.29	18	2.64	164	24.02
25–29	169	24.55	19	2.76	57	8.28	5	0.73	16	2.32	4	0.58	26	3.78	214	31.09
30–34	137	18.46	15	2.02	62	8.36	..	0.40	17	2.29	..	0.40	29	3.91	229	30.86
35–39	127	17.34	9	1.23	40	5.46	5	0.68	9	1.23	4	0.55	25	3.41	222	30.32
40–44	87	11.60	15	2.00	41	5.47	7	0.93	17	2.27	6	0.80	31	4.13	209	27.88
45–49	107	15.68	8	1.17	32	4.69	4	0.59	16	2.34	7	1.03	44	6.45	159	23.29
50–54	75	11.54	14	2.15	20	3.08	9	1.38	16	2.46	8	1.23	22	3.38	143	22.00
55–59	52	9.46	..	0.55	10	1.82	..	0.36	18	3.27	4	0.73	26	4.73	84	15.28
60–64	43	10.07	..	0.70	7	1.64	4	0.94	28	6.56	..	0.70	19	4.45	74	17.33
65–69	43	12.52	5	1.46	..	0.58	..	0.58	27	7.86	..	0.87	32	9.31	64	18.63
70–74	35	11.55	5	1.65	4	1.32	0	0.00	49	16.17	5	1.65	23	7.59	51	16.83
75–79	37	15.87	12	5.15	0	0.00	..	1.29	53	22.73	7	3.00	30	12.87	49	21.02
80–84	34	24.72	..	2.18	..	0.73	..	1.45	119	86.53	4	2.91	36	26.18	25	18.18
85+	18	20.50	..	3.42	..	1.14	..	2.28	267	304.14	6	6.83	42	47.84	29	33.03
No age	0		2		0		0		0		0		2		0	
All ages [b]	**1,403**	**14.47**	**176**	**1.81**	**318**	**3.26**	**55**	**0.58**	**674**	**8.65**	**72**	**0.79**	**458**	**4.99**	**1,817**	**18.82**

Continued

.. Case counts are not shown where the cell count is less than 4.
(a) Deaths registered in 2002 where the Underlying Cause of Death was an External Cause code in the range V00–Y89 (ICD-10).
(b) Total rates are age-standardised rates, while the others in this table are age-specific.

Table A2.3 (continued): Case counts and rates for major causes of death for males; Australia 2002(a)

Age-group (Years)	Homicide X85–Y09		Undetermined intent Y10–Y34		Complications of care Y40–Y84	
	Case counts	Rates	Case counts	Rates	Case counts	Rates
0–4	8	1.23	0	0.00	0	0.00
5–9	..	0.43	0	0.00	0	0.00
10–14	0	0.00	0	0.00	..	0.14
15–19	20	2.85	..	0.14	0	0.00
20–24	21	3.08	..	0.29	0	0.00
25–29	23	3.34	4	0.58	..	0.15
30–34	24	3.23	5	0.67	..	0.13
35–39	28	3.82	5	0.68	0	0.00
40–44	19	2.53	5	0.67	..	0.40
45–49	15	2.20	..	0.29	0	0.00
50–54	18	2.77	4	0.62	..	0.31
55–59	7	1.27	0	0.00	..	0.18
60–64	5	1.17	..	0.47	5	1.17
65–69	..	0.87	..	0.29	12	3.49
70–74	..	0.66	..	0.66	13	4.29
75–79	..	0.43	0	0.00	4	1.72
80–84	0	0.00	0	0.00	10	7.27
85+	..	2.28	..	2.28	11	12.53
No age	0		0		0	
All ages(b)	**199**	**2.04**	**35**	**0.37**	**64**	**0.75**

.. Case counts are not shown where the cell count is less than 4.
(a) Deaths registered in 2002 where the Underlying Cause of Death was an External Cause code in the range V00–Y89 (ICD-10).
(b) Total rates are age-standardised rates, while the others in this table are age-specific.

Table A2.4: Case counts and rates for major causes of death for females; Australia 2002(a)

Age-group (Years)	Transportation ICD10 V01–V99		Drowning W65–W74		Poisoning (drugs) X40–X44, F11–F16, F19		Poisoning (other substances) X45–X49		Falls W00–W19, X59 plus MCoD fracture code		Smoke, fire and flames, heat and hot substances X00–X19		Other unintentional W20–W64, W75–W99, X20–X39, X50–X59, Y85, Y86, Y89.9		Suicide X60–X84	
	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates
0–4	14	2.26	13	2.10	..	0.16	0	0.00	..	0.48	0	0.00	11	1.78	0	0.00
5–9	13	1.99	..	0.15	0	0.00	0	0.00	..	0.46	0	0.00	..	0.31	0	0.00
10–14	11	1.65	..	0.30	0	0.00	0	0.00	..	0.15	0	0.00	5	0.75	4	0.60
15–19	67	9.96	..	0.15	..	0.45	..	0.15	..	0.30	0	0.00	6	0.89	27	4.01
20–24	49	7.38	..	0.15	10	1.51	0	0.00	..	0.15	..	0.15	8	1.20	29	4.37
25–29	33	4.78	..	0.43	18	2.61	0	0.00	..	0.43	..	0.14	6	0.87	47	6.81
30–34	28	3.70	5	0.66	28	3.70	..	0.40	..	0.53	5	0.66	6	0.79	56	7.39
35–39	37	4.99	..	0.27	24	3.24	..	0.13	0	0.00	..	0.27	16	2.16	48	6.47
40–44	29	3.82	..	0.39	24	3.16	..	0.26	..	0.39	5	0.66	5	0.66	74	9.74
45–49	33	4.76	5	0.72	16	2.31	..	0.14	..	0.58	..	0.14	8	1.16	51	7.36
50–54	27	4.15	6	0.92	16	2.46	..	0.15	7	1.08	..	0.46	4	0.62	43	6.62
55–59	27	5.04	4	0.75	13	2.43	..	0.19	..	0.56	..	0.19	5	0.93	35	6.54
60–64	16	3.81	..	0.48	7	1.67	..	0.48	10	2.38	4	0.95	11	2.62	21	5.01
65–69	17	4.79	..	0.85	8	2.26	..	0.28	13	3.67	0	0.00	8	2.26	15	4.23
70–74	27	8.13	..	0.30	..	0.90	..	0.60	35	10.54	..	0.90	8	2.41	15	4.52
75–79	25	8.50	..	1.02	..	0.68	0	0.00	83	28.21	4	1.36	15	5.10	10	3.40
80–84	26	12.28	0	0.00	..	0.94	0	0.00	137	64.70	5	2.36	26	12.28	13	6.14
85+	23	11.94	..	0.52	..	1.56	..	1.04	531	275.71	8	4.15	48	24.92	15	7.79
No age	2		0		0		0		0		0		0		0	
All ages(b)	**504**	**4.96**	**56**	**0.57**	**178**	**1.79**	**17**	**0.16**	**843**	**6.55**	**43**	**0.4**	**198**	**1.8**	**503**	**5.02**

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.. Case counts are not shown where the cell count is less than 4.
(a) Deaths registered in 2002 where the Underlying Cause of Death was an External Cause code in the range V00–Y89 (ICD-10).
(b) Total rates are age-standardised rates, while the others in this table are age-specific.

Table A2.4 (continued): Case counts and rates for major causes of death for females; Australia 2002(a)

Age-group (Years)	Homicide X85–Y09		Undetermined intent Y10–Y34		Complications of care Y40–Y84	
	Case counts	Rates	Case counts	Rates	Case counts	Rates
0–4	7	1.13	0	0.00	..	0.16
5–9	0	0.00	0	0.00	0	0.00
10–14	..	0.30	..	0.15	0	0.00
15–19	5	0.74	..	0.45	0	0.00
20–24	11	1.66	..	0.30	0	0.00
25–29	18	2.61	..	0.43	0	0.00
30–34	11	1.45	..	0.13	..	0.26
35–39	17	2.29	..	0.13	..	0.27
40–44	8	1.05	7	0.92	..	0.26
45–49	8	1.16	..	0.43	0	0.00
50–54	7	1.08	..	0.31	..	0.31
55–59	..	0.37	..	0.19	..	0.19
60–64	4	0.95	..	0.72	5	1.19
65–69	..	0.56	0	0.00	9	2.54
70–74	0	0.00	..	0.30	11	3.31
75–79	..	0.34	..	0.68	9	3.06
80–84	0	0.00	0	0.00	12	5.67
85+	0	0.00	0	0.00	17	8.83
No age	1		0		0	
All ages(b)	**104**	**1.06**	**30**	**0.3**	**73**	**0.65**

.. Case counts are not shown where the cell count is less than 4.
(a) Deaths registered in 2002 where the Underlying Cause of Death was an External Cause code in the range V00–Y89 (ICD-10).
(b) Total rates are age-standardised rates, while the others in this table are age-specific.

Table A2.5: Case counts and rates for major causes of death for persons; Australia 2002

Age-group (Years)	Transportation V01–V99		Drowning W65–W74		Poisoning (drugs) X40–X44, F11–16, F19		Poisoning (other substances) X45–X49		Falls W00–W19, X59 plus MCoD fracture code		Smoke, fire and flames, heat and hot substances X00–X19		Other unintentional W20–W64, W75–W99, X20–X39, X50–X59, Y85, Y86, Y89.9		Suicide X60–X84	
	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates	Case counts	Rates
0–4	31	2.44	42	3.31	..	0.08	0	0.00	7	0.55	..	0.16	30	2.36	0	0.00
5–9	29	2.16	9	0.67	0	0.00	0	0.00	..	0.22	..	0.15	9	0.67	0	0.00
10–14	46	3.37	5	0.37	0	0.00	0	0.00	..	0.15	0	0.00	13	0.95	8	0.59
15–19	238	17.30	10	0.73	9	0.65	5	0.36	7	0.51	..	0.15	25	1.82	124	9.02
20–24	249	18.49	12	0.89	45	3.34	..	0.22	13	0.97	..	0.22	26	1.93	193	14.33
25–29	202	14.65	22	1.60	75	5.44	5	0.36	19	1.38	5	0.36	32	2.32	261	18.93
30–34	165	11.00	20	1.33	90	6.00	6	0.40	21	1.40	8	0.53	35	2.33	285	19.01
35–39	164	11.13	11	0.75	64	4.34	6	0.41	9	0.61	6	0.41	41	2.78	270	18.32
40–44	116	7.69	18	1.19	65	4.31	9	0.60	20	1.33	11	0.73	36	2.39	283	18.75
45–49	140	10.18	13	0.95	48	3.49	5	0.36	20	1.45	8	0.58	52	3.78	210	15.27
50–54	102	7.85	20	1.54	36	2.77	10	0.77	23	1.77	11	0.85	26	2.00	186	14.31
55–59	79	7.28	7	0.65	23	2.12	..	0.28	21	1.94	5	0.46	31	2.86	119	10.97
60–64	59	6.97	5	0.59	14	1.65	6	0.71	38	4.49	7	0.83	30	3.54	95	11.22
65–69	60	8.59	8	1.15	10	1.43	..	0.43	40	5.73	..	0.43	40	5.73	79	11.32
70–74	62	9.77	6	0.95	7	1.10	..	0.32	84	13.23	8	1.26	31	4.88	66	10.40
75–79	62	11.76	15	2.84	..	0.38	..	0.57	136	25.79	11	2.09	45	8.53	59	11.19
80–84	60	17.18	..	0.86	..	0.86	..	0.57	256	73.30	9	2.58	62	17.75	38	10.88
85+	41	14.62	4	1.43	4	1.43	4	1.43	798	284.61	14	4.99	90	32.10	44	15.69
No age	2		2		0		0		0		0		2		0	
All ages [b]	**1,907**	**9.67**	**232**	**1.17**	**496**	**2.53**	**72**	**0.36**	**1,517**	**7.49**	**115**	**0.58**	**656**	**3.29**	**2,320**	**11.79**

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.. Case counts are not shown where the cell count is less than 4.
(a) Deaths registered in 2002 where the Underlying Cause of Death was an External Cause code in the range V00–Y89 (ICD-10).
(b) Total rates are age-standardised rates, while the others in this table are age-specific.

Table A2.5 (continued): Case counts and rates for major causes of death for persons; Australia 2002

Age-group (Years)	Homicide X85–Y09		Undetermined intent Y10–Y34		Complications of care Y40–Y84	
	Case counts	Rates	Case counts	Rates	Case counts	Rates
0–4	15	1.18	0	0.00	..	0.08
5–9	..	0.22	0	0.00	0	0.00
10–14	..	0.15	..	0.07	..	0.07
15–19	25	1.82	4	0.29	0	0.00
20–24	32	2.38	4	0.30	0	0.00
25–29	41	2.97	7	0.51	..	0.07
30–34	35	2.33	6	0.40	..	0.20
35–39	45	3.05	6	0.41	..	0.14
40–44	27	1.79	12	0.80	5	0.33
45–49	23	1.67	5	0.36	0	0.00
50–54	25	1.92	6	0.46	4	0.31
55–59	9	0.83	..	0.09	..	0.18
60–64	9	1.06	5	0.59	10	1.18
65–69	5	0.72	..	0.14	21	3.01
70–74	..	0.32	..	0.47	24	3.78
75–79	..	0.38	..	0.38	13	2.47
80–84	0	0.00	0	0.00	22	6.30
85+	..	0.71	..	0.71	28	9.99
No age	1		0		0	
All ages[(b)]	**303**	**1.54**	**65**	**0.33**	**137**	**0.69**

.. Case counts are not shown where the cell count is less than 4.
(a) Deaths registered in 2002 where the Underlying Cause of Death was an External Cause code in the range V00–Y89 (ICD-10).
(b) Total rates are age-standardised rates, while the others in this table are age-specific.