

Injury Mortality Australia **1994** 

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# 1. All injury deaths, Australia 1994

(ICD9 E-codes 800-999)

#### Table 1.1 Key indicators for all injury deaths



Indicator	Males	Females	Persons
Cases	5,089	、 2,100	7,189
Percent of all deaths	7.5%	3.5%	5.7%
Crude rate/100,000 pop	57.3	23.5	40.3
Age-adjusted rate/100,000 pop	58.9	21.3	39.7
Change in adj. rate since 1993	0%	4%	1%
Average years lost before age 75 yrs	34	25	31

Fig. 1.1: Age-specific rates of injury deaths from all causes, by sex, Australia 1994







Fig. 1.3: Age adjusted rates\* of injury deaths from all causes, by state & territory of registration, Australia 1994



### Age and sex distribution

- Injury rates continued to be highest for old age (75 plus years), with falls deaths in this age range accounting for 10% of all injury deaths (5% males, 23% females).
- Overall, 36% of all injury deaths occurred to young people in the range 20-39 years, with young males accounting for 41% and females 25%.
- Male injury death rates continue to be higher than female injury death rates for all age groups.

#### Trends in death rates

- Although overall male injury rates were reasonably static, down less than 1% from 1993, there was a slight up-turn in the overall injury rate for females, up 4% from 1993.
- Male injury rates were much higher than female rates for all age groups.
- A set of targets for injury control was published in 1994 in the report "Better Health Outcomes for Australians"(1). The indicator for some of these targets is injury mortality and trends for these are shown in this Bulletin. For brevity, they are described as "BHOA targets".
- The BHOA target for the year 2000 is to reduce injury rates by 20% of the 1992 rate of 42 injury deaths per 100,000. The age-adjusted rate 39.7 injury deaths per 100,000 recorded in 1994 was about 38% of the drop required to reach the target.
- Since 1979 overall injury rates have fallen by almost 35%, with male rates falling by around 33% and female rates falling by almost 41%.

- Injury rates in the NT were almost twice the national rate. In the period 1979-1994 the NT age-adjusted rates have fluctuated between a high of 199 per 100,000 in 1981 and a low of 85 per 100,000 in 1982. Since 1988 rates in the NT have fallen by almost 43% to around 88 per 100,000.
- Although the Tasmanian rate continues to be significantly higher than the national rate, the 1994 rate was the lowest recorded since 1979, down 1% from 1993. Suicide and transport related deaths continue to account for most of this excess.
- Victoria's age-adjusted rate of 32.3 deaths per 100,000 has been steadily decreasing since 1987 and is only marginally higher than the ACT's age-adjusted rate of 32.1 per 100,000 population. Victorian injury death rates were lower than the national rate for every major injury category in 1994, especially transport deaths (21% below national rate) and suicide (11% below national rate).
- In 1993 the ACT recorded an exceptionally low age-adjusted rate of 19.4 injury deaths per 100,000. The 1994 age-adjusted rate of 32 injury deaths per 100,000 was a return to a more typical value. The reason for the unusually low number of injury death registrations in the ACT for 1993 is not clear.
- The rates in both WA and Qld were also higher than the national rate. In Qld the excess was due mainly to higher rates of transport, suicide and falls deaths, while transport and poisoning (pharmaceutical and other) were higher in WA.

# Major types of injury deaths

- Transport and suicide deaths continued to be the major contributors to the overall injury death rate in Australia in 1994. Again, as in 1993, 67% of all male injury deaths and 51% of female injury deaths were due to these two major causes.
- "Falls" was the only category for which female numbers (up 24% from 1993) exceeded male numbers (up 9%).
- The upward trend in male suicide rates (up 17%) is in contrast to the downward trend in transport deaths (down 56%) in the period 1979-94.
- Slight rises in transport, suicide and falls deaths for females in 1994 accounted for the 4% rise in overall injury death rates.
- As has been observed in previous years, the proportions of different types of injury death varied with age. Drowning was prominent in the early childhood years, transport and suicide accounted for a large proportion of deaths among young adults and falls accounted for a large proportion of the deaths among the elderly.











# 2. Transport deaths, Australia 1994

(ICD9 E-codes 800-848)

#### Table 2.1 Key indicators for transport deaths

Indicator	Males	Females	Persons
Cases	1,562	635	2,197
Percent of all injury deaths	31%	30%	31%
Crude rate/100,000 pop	17.6	7.1	12.3
Age-adjusted rate/100,000 pop	17.9	7.0	12.3
Change in adj. rate since 1993	-5%	2%	-4%
Average years lost before age 75 yrs	38	34	37

Fig. 2.1: Age-specific rates of transport deaths, by sex, Australia 1994



# Fig. 2.2: Age-adjusted rates of transport deaths, by sex, Australia 1979-94



# Fig. 2.3: Age adjusted rates\* of transport deaths, by state & territory of registration, Australia 1994



### Age and sex distribution

- Adolescents, young adults and the elderly continued to record the highest transport related death rates.
- Male age-specific rates were significantly higher than female rates in the range 15-59 and 80 plus years. Young males 15-29 had rates 3-4 times the female rate in this age range.
- Motor vehicle occupants accounted for 60% of all male transport deaths, followed by pedestrians (18%) and motor cyclists (14%). 43% of the motor vehicle occupants, and 62% of motor cycle deaths were young males aged 15-29.
- There was a slight increase in female rates from 1993 (up 2%) with the majority of these being females aged 50 plus years.

### Trends in death rates

- Male and female age-adjusted rates have declined by similar proportions since 1979 (56% males, 50% females) with the male to female rate ratio remaining at around 3 to 1. The 1994 male rate of 18 transport deaths per 100,000 was the lowest since 1979.
- Motor vehicle traffic accidents accounted for just over 90% of all transport related deaths in 1994 (see next section).

- Transport injury deaths continued to be higher in the NT than elsewhere in 1994 and were significantly higher than the national rate. However, the rate of 29 per 100,000 was considerably lower than the high of 80 per 100,000 recorded in 1988 and represented an overall fall of 42% since 1979.
- The rate for the ACT, which had generally been lower than the national rate, was not significantly lower in 1994. The low rate of 2 per 100,000 recorded in 1993 did not continue into 1994 which saw the rate revert back to pre-1993 rates.
- In the period 1992-1994 the Victorian age-adjusted rate was significantly lower than the national rate.
- Rates in the other states and territories were relatively close to the national rate.



### Road traffic deaths

(ICD9 E-codes 810-819, 826-829)

#### Table 2.2 Key indicators for road traffic deaths

Indicator	Males	Females	Persons
Cases	1,379	600	1,979
Crude rate/100,000 pop	15.5	6.7	11.1
Age-adjusted rate/100,000 pop	15.9	6.6	11.1

- Road injury death rates fell by 56% in the period 1979-1994 (the 1994 rate was down by just under 1% from 1993).
- Males aged 15-24 and 75 plus years were the most at risk road users, with rates around 3 times the female rates in these age ranges.
- Males in the 15-24 age range accounted for over 21% (n=426) of all road deaths in 1994. Females in the same age range accounted for 7% (n=137).
- Motor vehicle occupants (driver/passengers) accounted for 65% (n=1278) of all road deaths. Two-thirds of the fatally injured occupants were male (n=844).
- There were 189 motor cycle (rider/pillion passenger) deaths in 1994, of which 95% (n=180) were male.
- Motor vehicle occupant rates (driver/passengers) for males aged 15-24, while still high at 19.8 deaths per 100,000 in 1994, fell by 60% in the period 1979-1994. Motor cycle (rider/pillion passenger) death rates fell by 78% in the same period.
- Pedestrian death rates were highest for people aged 70 or more years.

# Non-road traffic deaths

(ICD9 E-codes 820-825, 846-848)

- This section relates to any motor vehicle accident which occurs entirely in any place other than a public road.
- There were a total of 67 (51 male & 16 female) non-road traffic deaths recorded in 1994.
- Pedestrians (n=22) & motor cycle riders (n=18) accounted for 60% of all non-road traffic deaths. Of the 22 pedestrian deaths, 6 were in the age range 0-4 years with a further 9 deaths occurring to persons aged 25-54 years. Motor cycle riders aged 15-24 years accounted for 50% of all non-road traffic motor cycle deaths.
- Although non-road traffic death rates fell by 29% in the period 1979-1994, relatively small numbers in this category result in large year to year fluctuations.









# Fig. 2.6: Age-adjusted rates of non-road traffic deaths, by road-user category, Australia 1979-94



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### Other transport deaths

(ICD9 E-codes 800-807, 830-838, 840-845)

#### transport deaths, by type, Australia 1979-94 0.9 Bailway 0.8 Water Deaths per 100,000 population 0.3 Air 0.6 0.5 0.4 0.3 0.2 0. 0 979 980 981 982 983 984 985 986 987 988 Year of death registration

Fig. 2.7 Trends in age-adjusted rates of other

#### Table 2.3 Key indicators for other transport deaths

Indicator	Males	Females	Persons
Cases	132	19	151
Crude rate/100,000 pop	1.5	, 0.2	0.9
Age-adjusted rate/100,000 pop	1.5	0.2	· 0.9

#### Table 2.4 Number of deaths by other modes of transport

Mode of transport	Males	Females	Persons
Rail	33	6	39
Water	59	3	62
Air	40	10	50

- This section deals with transport deaths other than road and non-road motor vehicle traffic deaths. It covers railway, water and air transport.
- Of the 39 railway deaths recorded in 1994, 85% (n=33) were hit by a train, either as a pedestrian (n=22) or unspecified person (n=11). Young adults aged 10-24 years accounted for 11 deaths.
- In total there were 62 water transport deaths registered in 1994 of which 95% (n=59) were male. Submersion and drowning as a result of an accident to watercraft (small boat, powered and unpowered) accounted for 45% of all water transport accident deaths. A further 13% (n=8) were recorded as drowning as a result of an accident other than accident to the watercraft.
- There were 50 air transport deaths recorded in 1994. Occupants of "other and unspecified" powered aircraft engaged in non-commercial activities, such as occupants of private planes, accounted for 32% (n=16) of all air transport fatalities. Occupants of powered aircraft, either taking off or landing, accounted for another 18% (n=9). Accidents to unpowered aircraft, such as balloons or hang gliders resulted in 5 deaths.
- Overall, there has been a small decline in the number of deaths attributed to these types of accidents since 1979. Railway rates have fallen by 46%, water transport rates by 53% and air transport rates have fallen by 24%.
- As with road transport injury deaths, males are more at risk than females, with 87% of all other transport deaths being male.

# 3. Suicide deaths, Australia 1994

(ICD9 E-codes 950-959)

#### Table 3.1 Key indicators of suicide deaths

Indicator	Males	Females	Persons
Cases	1,830	428	2,258
Percent of all injury deaths	36%	20%	31%
Crude rate/100,000 pop	20.6	4.8	12.7
Age-adjusted rate/100,000 pop	20.7	4.7	12.6
Change in adj. rate since 1993	7%	7%	7%
Average years lost before age 75 yrs	36	26	34



 Male suicide rates were greater than female rates for all ages.

Suicide

Other injuries

 The male rate was more than 4 times the female rate.









Fig. 3.3: Age adjusted rates\* of suicide deaths, by state & territory of registration, Australia 1994



### Age and sex distribution

- Male rates were highest at ages 20-29, while female rates were highest at ages 35-39. While both male and female rates were high at 80 or more years they only accounted for 3% of all suicide deaths.
- Males continued to have higher rates than females in all age groups, with the overall male rate being more than 4 times the female rate and more than 6 times the rate at ages 15-24.
- Males aged 20–44 comprised 45% of all suicide deaths in 1994 whereas females in the same age range accounted for just under 10% of all suicide deaths.

# Trends in death rates

- There was a slight up-turn in suicide rates for both males and females in 1994.
- In Figure 3.2, the lower line for males and for females shows trends in the rates of deaths registered as suicide. Some deaths registered as being of "undetermined intent" (E980-989) may also be suicides. The upper line in each pair includes these deaths as well.
- The 17% rise in male suicide rates since 1979 was due, in part, to large increases in suicide by motor vehicle exhaust fumes (up 114%) and suicide by hanging (up 143%). Suicide by firearms, the most common form of suicide for males in 1979 at 2-3 times the rate of other forms of suicide, fell by 35% over the period 1979–1994.
- In contrast to male suicide rates, female rates fell by 32% in the period 1979–1994.
- Although male suicide rates have increased since 1979, the BHOA target of reducing suicide rates by 15% over 10 years may be achievable. Taking 1992 as the base, male suicide rates have decreased by 2%, while female rates have dropped by 12% since 1992.

- Tasmanian suicide rates, which have been markedly higher than the national rate especially since 1992, decreased by 15% in 1994. The 1994 rate was not significantly different than the national rate.
- The suicide rate for the ACT, which was significantly lower than the national rate in 1993, rose by 53% in 1994 returning to pre-1993 levels.
- Overall, no state or territory was significantly different than the national rate in 1994.

#### Youth suicide: males 15-29 years

- As was observed with road transport deaths, young males aged 15–29 years have particularly high rates. However, while transport death rates declined over the period 1979-1994, suicide death rates for males in this age range increased by 40%. This was in sharp contrast to the female rate which fell by 24% in the same period
- Of note was the large rise in suicide by hanging which rose from 41 deaths in 1979 (2.2 per 100,000 population) to 201 deaths in 1994 (9.5 per 100,000), up 331%. The rise in the rate of suicide by hanging for males aged 20-24 years was most pronounced, with an overall rise of 641%.
- The rate of suicide by motor vehicle exhaust fumes also increased, up from 2.2 per 100,000 in 1979 to 4.6 per 100,000 in 1994. One notable feature of the hanging and motor vehicle exhaust suicides was the large rise in hanging rates after 1986 compared to motor vehicle exhaust rates. Prior to 1986 both rates were reasonably similar, however, after 1986 the motor vehicle exhaust rate fell by 19% while the rate for hanging increased by 144%.
- The increases in the rates of suicide deaths by hanging and motor vehicle exhaust fumes for males aged 15-29 was contrasted by falls in the rates of suicide by firearms which fell by 30% from 9 deaths per 100,000 in 1979 to 6.3 per 100,000 in 1994, and suicide by poisoning which fell by 27% from 3.7 per 100,000 in 1979 to 2.7 per 100,000 in 1994.

Motor vehicle exhau

Other and unspecifi

Hanging Firearm Poison (solid/liquid)





Fig. 3.4: Trends in rates of suicide for males 15-29, by method used, Australia 1979-94

# 4. Falls deaths, Australia 1994

(ICD9 E-codes 880-888)

#### Table 4.1 Key indicators of falls deaths



Indicator	Males	Females	Persons
Cases	457	545	1,002
Percent of all injury deaths	9%	26%	14%
Crude rate/100,000 pop	5.2	6.1	5.6
Age-adjusted rate/100,000 pop	6.2	4.4	· 5.2
Change in adj. rate since 1993	4%	20%	13%
Average years lost before age 75 yrs	10	2	6

Fig. 4.1: Age-specific rates of falls deaths, by sex. Australia 1994



Fig. 4.2: Age-adjusted rates of falls deaths, by sex, Australia 1979-94



Fig. 4.3: Age adjusted rates\* of falls deaths, by state & territory of registration, Australia 1994



# Age and sex distribution

- The majority of falls deaths occur to people over the age of 75 years.
- Male rates were higher than female rates for all age groups, with rates rising rapidly around 60 years.
- The age-adjusted rate of falls deaths for all ages was 5.2 deaths per 100,000 in 1994, for persons over 75 it was 89 deaths per 100,000, and for those 85 plus years it was 238 deaths per 100,000.
- Of the 545 female falls deaths recorded in 1994, 87% (n=476) occurred to women aged 75 years or more. In comparison, males 75 or more years accounted for 58% (n=268) of all male falls deaths.
- There were 4 falls deaths recorded for children aged 0-14 in 1994, with all of these being male.
- Female case numbers were more numerous than males after 75 years because more women than men survive to old age.

# Trends in death rates

- The rate of falls deaths has declined by 43% since 1979 (40% males, 45% females).
- The overall male age-adjusted rate has been around 1.4 times the female rate since 1979.
- The BHOA target for the year 2000 is to reduce the rate of falls deaths of people aged 65 and over by 10% of the 1992 rate to approximately 35.2 deaths per 100,000 population. The rate was 38.3 deaths per 100,000 in 1994, up 17% from 1993, and no clear trend has been apparent in recent years.

- Rates for this type of injury are similar throughout Australia.
- Queensland was the only state whose rate was significantly higher than the national average in 1994. This was due to a large increase in the number of deaths recorded in persons aged 75 or more years, with an increase of 33 deaths for males and 105 deaths for females in this age range compared to 1993.



# 5. Drowning deaths, Australia 1994

(ICD9 E-code 910)

#### Table 5.1 Key indicators of drowning deaths

Indicator	Males	Females	Persons
Cases	209	41	250
Percent of all injury deaths	4%	2%	4%
Crude rate/100,000 pop	2.4	0.5	1.4
Age-adjusted rate/100,000 pop	2.3	0.5	1.4
Change in adj. rate since 1993	-9%	-35%	-14%
Average years lost before age 75 yrs	43	45	44

Fig. 5.1: Age-specific rates of drowning deaths, by sex, Australia 1994







Fig. 5.3: Age adjusted rates<sup>4</sup> of drowning deaths, by state & territory of registration. Australia 1994



# Age and sex distribution

- The full introduction of special drowning codes occurred in 1992. These drowning codes allow a more detailed analysis of drowning episodes (see data issues).
- Males aged 0-4 and 15-39 years had significantly higher drowning rates than females. In all other age categories the male drowning rate was higher but not statistically different to the female rate; the all ages male rate was almost 5 times the corresponding female rate.
- In 1994, 17% (n=36) of all male drowning deaths occurred to children 0-4 years. Of these, 19 were attributed to "fell, wandered into private swimming pool" and a further 5 were recorded as "fell, wandered into lake, lagoon, dam etc.".
- Female rates were down 34% from 1993. The fall in rates was due in part to a decrease in the number of 0-4 year old drownings, down 43%, and drowning deaths at 60 or more years, down 57%.
- Swimming in open areas such as the ocean, rivers, lakes and dams etc., accounted for 19% of all drowning deaths, with 50% of these being persons aged 15-39 years.

# Trends in death rates

- The overall drowning rate has fallen by almost 40% since 1979. Rates for young children 0-4 years have decreased by 56% (36% males, 77% females).
- A BHOA target for the year 2000 is to reduce drowning deaths of young children 0-4 years by 50% of the 1992 rate of 5.9 deaths per 100,000. The 1994 0-4 years rate of 3.7 deaths per 100,000 is 37% below the 1992 base, indicating that this target is achievable.
- In Figure 5.2, the lower lines for males and for females show trends in rates of "accidental drowning". The upper line in each pair shows rates including the other identifiable drowning cases. (Almost all drowning cases at ages 0-4 years are coded to the "accidental drowning" (E910) category, so only one line has been charted for this age group.)

# State and territory differences

- The rate for the ACT was significantly lower than the national rate in 1994. However, only one case of accidental drowning was registered in the ACT in 1994.
- The rate for the NT whilst being the highest, was not significantly different than the national rate, as was the case in 1993. Relatively small numbers of drowning deaths in this territory (1993 n=10; 1994 n=7) result in large fluctuations making comparisons difficult.
- No other state or territory differed significantly from the national rate.

Drowning Other injuries

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# 6. Poisoning by drugs, etc., Australia 1994

(ICD9 E-codes 850-858)



#### Table 6.1 Key indicators of deaths due to poisoning by drugs, etc.

Indicator	Males	Females	Persons	
Cases	183	102	285	<ul> <li>Young adults are</li> </ul>
Percent of all injury deaths	4%	<b>`</b> 5%	4%	at rísk.
Crude rate/100,000 pop	2.1	1.1	1.6	
Age-adjusted rate/100,000 pop	2.1	1.1	1.6	
Change in adj. rate since 1993	-4%	3%	-2%	a
Average years lost before age 75 yrs	41	33	38	

most

Fig. 6.1: Age-specific rates of poisoning by drugs, etc. deaths. by sex, Australia 1994



#### Fig. 6.2: Age-adjusted rates of poisoning by drugs, etc. deaths, by sex, Australia 1979-94 4.5 4 Deaths per 100,000 population Males 25-34 year 3.5 \$ Males 2.5 Females



Fig. 6.3: Age adjusted rates\* of poisoning by drugs, etc. deaths, by state & territory of registration, Australia 1994



### Age and sex distribution

- Young adults aged 20-39 years are most at risk, with males in this age range accounting for 42% of the total number of deaths due to "accidental poisoning by drugs".
- 55% of all male drug poisoning deaths were due to heroin; four-fifths of those occurred to males aged 20-39 years. Other types of death due to poisoning by drugs were anti-depressants (15%) and unspecified drugs (13%).
- · 25% of female "accidental poisoning by drugs" deaths was due to heroin and another 25% was due to antidepressants.

### Trends in death rates

- After the large rise in accidental poisoning deaths rates observed in 1993 rates remained reasonably static in 1994 (down by just under 2%). However, the rates recorded in 1993 and 1994 remain the highest since 1979 and represent an almost 80% rise in the period 1979-1994.
- The rise in fatal poisoning rates has been due almost entirely to a large rise in deaths attributed to accidental opiate poisoning (generally heroin). In contrast, barbiturate poisoning has fallen to very low levels (one person died in 1994 compared to 52 in 1979).
- Young children remain a low risk with only 4 accidental poisoning deaths recorded to children under the age of 15 years in 1994.

- Since 1990 both SA and WA have been recording rates significantly higher than the national average.
- The rate for Victoria in 1993 of 1.4 poisoning deaths per 100,000 was around 8 times the rate for the previous 3 years 1990-1992. The rate of 0.6 per 100,000 recorded in 1994 marked a return to pre-1990 rates.
- Queensland has recorded significantly lower rates than the national average since 1988. The rate of 1 death per 100,000 recorded in 1994 continued this trend.
- The rate of 5.4 per 100,000 population recorded in the NT in 1994 was well above the 1993 rate of less than 1 per 100,000. However, the small number of cases recorded in the NT limits meaningful interpretation. This is also true of the ACT where small numbers result in large fluctuations in rates.

# 7. Poisoning by other substances, Australia 1994

(ICD9 E-codes 860-869)



Table 7.1 Key indicators of deaths due to poisoning by other substand	aths due to poisoning by other substances
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Indicator	Males	Females	Persons
Cases	25	. 11	36
Percent of all injury deaths	1%	1%	1%
Crude rate/100,000 pop	0.3	0.1	0.2
Age-adjusted rate/100,000 pop	0.3	0.1	0.2
Change in adj. rate since 1993	0%	1%	0%
Average years lost before age 75 yrs	39	23	34

Fig. 7.1: Age-specific rates of poisoning by other substances deaths, by sex, Australia 1994



### Age and sex distribution

- This section deals with poisoning by substances other than drugs, medicaments, etc. This category includes poisoning by alcoholic beverages, petroleum substances, agricultural chemicals, motor vehicle exhaust gas and foodstuffs and poisonous plants.
- There are relatively few deaths attributable to accidental poisoning by other substances.
- Rates were highest for males 10-39 years and 65 plus years. Female rates were highest at 65 plus years and were similar to male rates in this age group.
- Petroleum products (n=4) and other and unspecified substances (n=25) accounted for 81% of all poisoning by other sustance deaths.

# Fig. 7.2: Age-adjusted rates of poisoning by other substances, by sex, Australia 1979-94



Trends in death rates

• Small case numbers in this category result in large year-to-year fluctuations which are not meaningful.

Fig. 7.3: Age adjusted rates\* of poisoning by other substances deaths, by state & territory of registration, Australia 1994



### State and territory differences

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- Small case numbers also limit meaningful comparison between states and territories. Case numbers in the NT have declined from a high of 9 cases in 1991 to 0 recorded cases in 1994.
- There were 15 cases of accidental poisoning recorded in Victoria in 1993 compared to one death recorded in 1992. This number fell to 6 cases in 1994 which was around the usual number recorded in Victoria prior to 1993.

# 8. Fires, flames & scalds deaths, Australia 1994

(ICD9 E-codes 890-899, 924.0, 924.8, 924.9)

#### Table 8.1 Key indicators of fires, flames and scalds deaths

Indicator	Males	Females	Persons
Cases	86	58	144
Percent of all injury deaths	2%	3%	2%
Crude rate/100,000 pop	2.1	1.1	1.6
Age-adjusted rate/100,000 pop	2.1	1.1	1.6
Change in adj. rate since 1993	-4%	3%	-2%
Average years lost before age 75 yrs	41	33	38

Fig. 8.1: Age-specific rates of deaths from fires, flames & scalds, by sex, Australia 1994



Fig. 8.2: Age-adjusted rates of deaths from fires, flames & scalds, by sex, Australia 1979-94



2.5 Deaths per 100,000 population 2 1.5 1 0.5 0 NSW Vic QId SA WA Tas NT ACT \* Error bars and dashes indicate 95% confidence intervals for rates

Fig. 8.3: Age adjusted rates\* of deaths from fires, flames & scalds, by state & territory of registration, Australia 1994

### Age and sex distribution

• While male and female rates were not significantly different at any age group, male rates tended to be slightly higher at around 1.5 times the female rate. Rates rose after age 65 for both males and females.

Fires. flames.

scalds

Other injuries

- Housefires accounted for 66% (n=96) of all fire injury deaths in 1994. Of these, 71 were overcome by smoke and fumes and 23 died from burns. Other categories were "clothing ignition" (12%), and "hot substance or object" (8%).
- All deaths attributed to "hot substance or object" (n=11) occurred to people aged 60 or more years.



# Trends in death rates

- Despite yearly fluctuations in rates due to relatively low numbers and clusters of cases for years in which bushfire disasters occurred, the overall rate has declined by around 35% since 1979.
- A reduction of 50% by the year 2000 of the 1992 rate of 2.4 deaths per 100,000 due to burns and scalds for persons aged 55 or more is a BHOA target. The 1994 rate of 1.9 deaths per 100,000 for persons 55 or more years was higher than the rate for 1993, but a reduction of 21% since 1992.

# State and territory differences

• No state or territory differed significantly from the national rate in 1994.

# 9. Other unintentional injury deaths, Australia 1994

(ICD9 E-codes E900-909, 911-923, 924.1, 925-929)



Table 9.1 Key	<sup>,</sup> indicators o	of other	unintentional	injur	y deaths
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Indicator	Males	Females	Persons
Cases	413	102	515
Percent of all injury deaths	8%	5%	7%
Crude rate/100,000 pop	4.7	1.1	2.9
Age-adjusted rate/100,000 pop	4.7	1.0	2.8
Change in adj. rate since 1993	-6%	-29%	-12%
Average years lost before age 75 yrs	30	24	29

Fig. 9.1: Age-specific rates of other unintentional deaths. by sex, Australia 1994



# Age and sex distribution

- This residual category includes many types of injury deaths, including choking, suffocation, machinery, electrocution, excessive heat and cold among others.
- Suffocation and choking accounted for 62% of "other unintentional" injury deaths for children aged 0-4 years (n=16). Machinery accidents and being struck by falling objects accounted for a further 19% (n=5).
- Unintentional injuries as a result of choking food and non-food (n=55), mechanical suffocation (n=27), struck by falling objects (n=48) machinery accidents (n=73) and electrocution (n=45), were the most common causes of "other unintentional" injury deaths for males.
- 26% of all "other unintentional" injury deaths occurred to persons aged 65 or more years. Choking - food and non-food (n=39), excessive cold (n=18) and machinery accidents (n=11) were the most common causes of death in this age range.

#### Fig. 9.2: Age-adjusted rates of other unintentional deaths, by sex, Australia 1979-94





Fig. 9.3: Age adjusted rates\* of other unintentional deaths, by state & territory of registration, Australia 1994



# Trends in death rates

- "Other unintentional" injury deaths were down 12% from 1993. Since 1979 this rate has declined by 43%.
- Female rates which have remained relatively constant in the period 1979-1993, fell by 29% from 1993 to 1 death per 100,000 in 1994, the lowest level recorded since 1979. Overall, female rates have declined by 38% since 1979.
- Male rates have also declined since 1979, falling by 6% from 1993 and by 43% from 1979 to a rate of 4.7 deaths per 100,000 in 1994.
- The number of accidental firearm deaths continued to fall, down 74% since 1979. This fall was predominantly due to a large decrease in the number of recorded male deaths, down from 53 in 1979 to 15 in 1994.

# State and territory differences

• No state or territory rate differed significantly from the national rate in 1994.

# 10. Homicide deaths, Australia 1994

(ICD9 E-codes 960-978, 990-999)

#### Table 10.1 Key indicators of homicide deaths

Homicide	
	Other injuries

Indicator	Males	Females	Persons
Cases	221	122	343
Percent of all injury deaths	4%	6%	5%
Crude rate/100,000 pop	2.5	1.4	1.9
Age-adjusted rate/100,000 pop	2.5	1.4	1.9
Change in adj. rate since 1993	2%	5%	3%
Average years lost before age 75 yrs	40	42	41

Fig. 10.1: Age-specific rates of homicide deaths, by sex, Australia 1994







Fig. 10.3: Age adjusted rates\* of homicide deaths, by state & territory of registration, Australia 1994



### Age and sex distribution

- The male 20–29 years homicide rate of 4.4 deaths per 100,000 was almost 3 times the female rate, this was the only age range where there was any substantial difference between males and females. Overall, homicide rates vary less by age than most other injury types.
- Death as a result of cutting or stabbing accounted for 35% (n=121) and firearms 22% (n=76) of all homicide deaths. Unarmed fight or brawl 8% (n=28) and other or unspecified causes 33% (n=112) were the other main types of homicide in 1994.
- Six children aged 0-4 years died as a result of child battering or maltreatment.
- Stabbing rates were highest for people aged between 20-49 years, while firearm rates were highest for the 20-29 year age group.

### Trends in death rates

- Although the overall homicide rate has changed little for both males and females since the mid 1980's, cause by cause comparisons show that while this is true for unarmed fights, the rate for stabbing deaths has increased by 66% since 1979 and firearm deaths have decreased by 37% in the same period.
- Persons aged 20-39 years have been identified as the most at risk group for death by interpersonal violence. BHOA targets for the year 2000 are aimed at maintaining the rates for these groups at 1992 levels (3.4 and 2.4 deaths per 100,000 for males and females respectively). The 1994 rate of 4.1 homicide deaths per 100,000 for males 20-39 years was 21% above the 1992 rate. The female rate of 1.9 deaths per 100,000, down 21% from 1992, indicates that the target may be achievable for females.
- A second BHOA target for the year 2000 is to reduce the death rate of children 0-9 years due to abuse or battering by 25% of the 1992 levels. However, it should be noted that the 1992 rate of 0.6 deaths per 100,000 was unusually low. The rate of 1.2 deaths per 100,000 recorded in 1994, while more than double the 1992 base rate, was more in line with annual rates recorded since 1979. Since yearly fluctuations can be expected it may be some time before any significant trend can be established.

### State and territory differences

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- The NT continues to record rates well above the national rate. The majority of these deaths were recorded as Aboriginal (18 of 23), with 50% of these being stabbing deaths.
- The rate for the ACT, which has been lower than the national rate in recent years, was not significantly different from the national rate in 1994. However, small numbers recorded for the ACT result in large yearly fluctuations.

# Homicide deaths - continued



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http://www.nisu.flinders.edu.au.

# Data issues

### 1. Data sources

Deaths data are from the Australian Bureau of Statistics (ABS) mortality unit record data collection, 1979-94. Population data were obtained from the ABS.

# 2. Case definition

The cause of each death registered in Australia is classified by the ABS according to the International Classification of Diseases (ICD). The 9th revision (ICD9) has been used for death registrations beginning in 1979 (2). All deaths given an ICD9 "External Cause" code by the ABS are included in this Bulletin.

Data are presented according to the year in which deaths were registered. Nine percent of deaths registered in 1994 occurred in an earlier year. A similar proportion of deaths which occurred in 1994 will not have been registered until after 1994. Information on these cases is not yet available. State-specific data are presented on the basis of the state or territory in which death was registered. This is normally the one in which death occurred.

# 3. Age adjustment

Most all-ages rates have been adjusted 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 1991 as the standard.

# 4. Confidence intervals

All deaths are registered, so sampling errors do not apply to these data. However, the time periods used to group the cases (ie. calendar years) are arbitrary. Use of another period (eg. July to June) can result in different rates. Where case numbers are small, the effect of chance variation on rates can be large. Confidence intervals (95%, based on a Poisson assumption about the number of cases in a time period) have been placed around rates as a guide to the size of this variation. Chance variation alone would be expected to lead to a rate outside the interval only once out of 20 occasions. An extreme rate in a single period of enumeration should not be ignored simply because of a wide confidence interval – a time series may show such a rate to be part of a more significant pattern.

# 5. Time series

Time trends have been presented for the period 1979 to 1994. This is the period during which Australian deaths data have been classified according to the 9th revision of the International Classification of Diseases (ICD9).

### 6. Cause code aggregations

NISU statistical publications make use of standard aggregations of the ICD9 external cause (E-code) classification. The E-code equivalents of most groups presented in this Bulletin are noted in the text. In 1992, a uniform supplementary classification was, for the first time, applied to drowning deaths in all states and territories. This supplementary classification allows for the identification of more detailed groups of drowning cases than is possible under the ICD9 classification, eg. drowning in domestic swimming pools. The reliability of the supplementary classification for drowning is unknown. For further information, refer to NISU's WWW site (http://www.nisu.flinders.edu.au) or contact NISU.

# 7. Data reliability

The chief question concerns the reliability of information about type of injury death. This depends principally on the information available in coroner's records, and on the reliability of the application of ICD9 E-codes, generally based on that information. Little empirical information is available. There is considerable potential for factors to do with information recording or coding to affect data in different ways for different states and territories. Hence, apparent differences between jurisdictions should be interpreted with caution. Beginning with 1993 registrations, coding has been centralised at the Brisbane office of the ABS.

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