



Benchmarking Road Safety

THE 1999 REPORT



Comparing Road
Safety Statistics
Around the World
and Australia



Main findings2

International and domestic comparisons2

External causes of death in Australia2

International and domestic comparisons ...3

Data sources3

International definition of a road crash4

Road fatalities per 100 000 population5

Road fatalities per 10 000 registered vehicles ...9

Road fatalities per 100 million vehicle kilometres travelled13

External causes of death in Australia17

Data sources17

Definitions17

External causes of death in Australia, 1999 ...18

External causes of death in Australia 1989 to 199919

MAIN FINDINGS

Benchmarking Road Safety compares Australia's road safety record with the record of other OECD nations. The report also compares trends in death as a result of road crashes with other external causes of death in Australia such as drowning, assault and intentional self harm.

International and domestic comparisons

The report presents detailed tables of road fatality rates for OECD nations and Australian States and Territories. These rates allow Australia's road safety performance to be compared with other OECD nations while taking into account the differing levels of population, motorisation and distances travelled.

The report found that in 1999 Australia's fatality rates were all below the OECD median rates. Compared with other OECD nations, Australia:

- had the 10th lowest rate in terms of fatalities per 100 000 population of the 26 OECD nations for which information was available;
- had the 7th lowest rate in terms of fatalities per 10 000 registered vehicles of the 25 OECD nations for which information was available;

- had the 5th lowest rate in terms of fatalities per 100 million kilometres travelled of the 15 OECD nations for which information was available.

Of OECD nations for which 1999 data was available:

- the United Kingdom recorded the lowest rate of fatalities per 100 000 population;
- Norway recorded the lowest rate of fatalities per 10 000 registered vehicles;
- Sweden recorded the lowest rate of fatalities per 100 million vehicle kilometres travelled.

Of all Australian States and Territories:

- the Australian Capital Territory recorded the lowest road fatality rates in 1999;
- in terms of fatalities per 10 000 registered vehicles and fatalities per 100 million vehicle kilometres travelled the ACT had the lowest rates compared with any OECD nation or other Australian State or Territory;
- Victoria recorded rates matching the OECD best performance for fatalities per 10 000 registered vehicles and fatalities per 100 million kilometres travelled;
- The Northern Territory recorded the highest fatality rates of all Australian States and Territories.

External causes of death in Australia

Road crashes are a major cause of human trauma in Australia. In order to illustrate the extent of this problem the report compares trends in deaths due to road crashes with deaths due to other external causes in Australia.

The report found that in Australia in 1999, road crashes accounted for 20.8 per cent of deaths due to external causes. This was second only to intentional self-harm which accounted for 29.8 per cent of deaths due to external causes.

The number of deaths due to road crashes in Australia was also found to have declined significantly over the decade to 1999, particularly when compared with the trends of other external cause of deaths.

INTERNATIONAL AND DOMESTIC COMPARISONS

Data sources

International comparisons

Figures provided for all OECD nations, with the exception of Australia, were derived from the International Road Traffic Accident Database (IRTAD) through the IRTAD World Wide Web site. The IRTAD database is maintained by Bundesanstalt für Strassenwesen (BASt).

Each year, member nations supply the most recent data available and are able to update historical data provided to BASt which is placed on the IRTAD database. The information provided on IRTAD is, therefore, subject to revision with each new release of the database.

Further information on the IRTAD database is available on the BASt web site www.bast.de/irtad/

Australian States and Territories

Road fatalities per 100 000 population were obtained from the ATSB publication *Road Fatalities Australia: 2000 Statistical Summary*, Table 8.

Road fatalities per 10 000 registered vehicles were derived using the following data sources.

Vehicle registration data from 1996 to 1999 were obtained from the annual Australian Bureau of Statistics publication *Motor Vehicle Census* (catalogue no. 9309.0). Road fatality counts for this period were obtained from the ATSB publication *Road Fatalities Australia: 2000 Statistical Summary*, Table 31. Vehicle registration data from 1975 to 1995 were obtained from the Australian Bureau of Statistics publication *Motor Vehicle Registrations Australia*.

Road fatalities per 100 million kilometres travelled were obtained from the ATSB publication *Road Fatalities Australia: 2000 Statistical Summary*, Table 8. However, in Australia, the Survey of Motor Vehicle Use was conducted by the Australian Bureau of Statistics in 1976, 1979, 1982, 1988, 1991, 1995, 1998 and 1999 which required the following substitutions to be made: 1976 figures were provided against 1975; 1979 figures were provided against 1980; and 1991 figures were provided against 1990.

International definition of a road crash

The definition of a person killed in a road crash, as given in the Convention of Road Traffic (Vienna, 1968) is:

“ Any person who was killed outright or who died within 30 days as a result of the accident ”

(IRTAD Special Report, Definitions and Data Availability, p.6)

OECD nations that comply with the above definition include:

Australia	Belgium
Canada	Czech Republic
Denmark	Finland
Hungary	Iceland
Ireland	Luxemburg
Netherlands	New Zealand
Norway	Sweden
United Kingdom	United States of America

Nations that do not comply with the above definition have correction factors applied, by BAST, to their fatality figures to ensure consistency within the IRTAD database.

These nations include:

Austria	France
Germany	Greece
Italy	Japan
Korea	Poland
Portugal	Spain
Switzerland	Turkey

Road fatalities per 100 000 population

The number of road fatalities for every 100 000 of population is a measure of the public health risk associated with road trauma.

Population, Australian States and Territories 1999

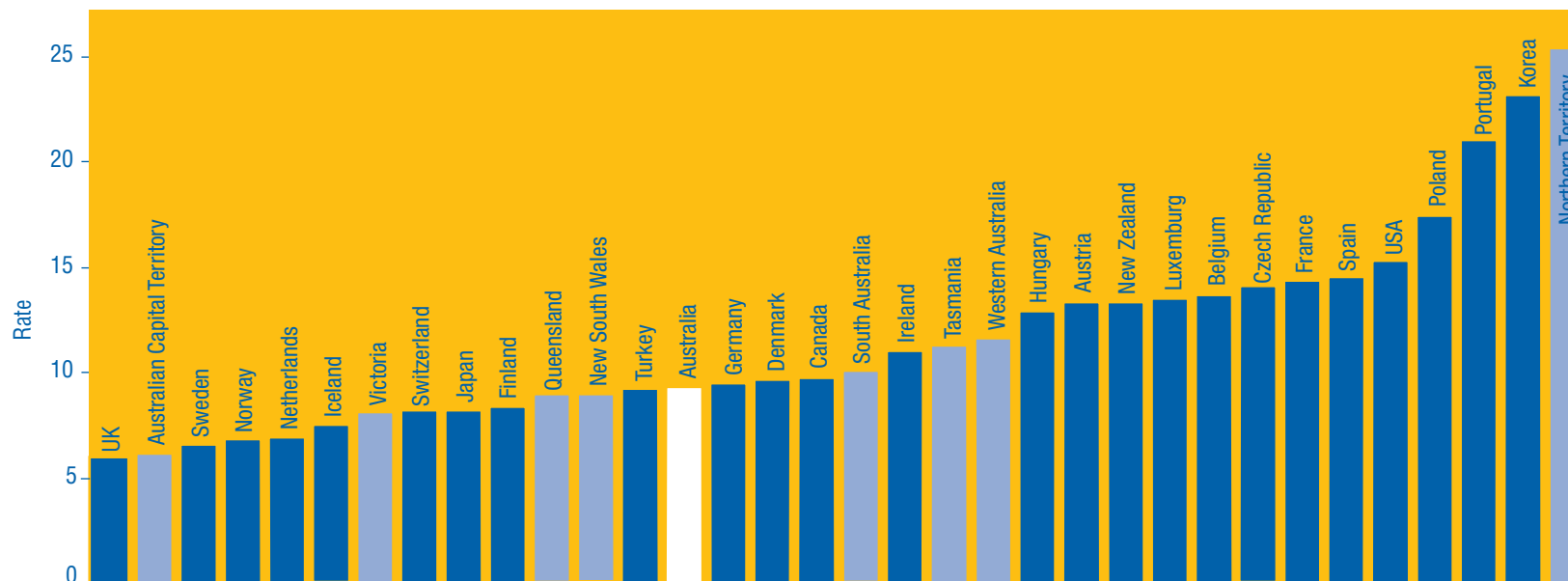
	Fatalities per 100 000 population	Total population (millions)	Total number killed
New South Wales	9.0	6.4	577
Victoria	8.1	4.7	383
Queensland	8.9	3.5	314
South Australia	10.1	1.5	151
Western Australia	11.7	1.9	217
Tasmania	11.3	0.5	53
Northern Territory	25.4	0.2	49
Australian Capital Territory	6.1	0.3	19

Population, OECD countries 1999

	Fatalities per 100 000 population	Total population (millions)	Total number killed
Australia	9.3	19.0	1763
Austria	13.4	8.1	1079
Belgium	13.7	10.2	1397
Canada	9.7	30.5	2972
Czech Republic	14.1	10.3	1455
Denmark	9.7	5.3	514
Finland	8.4	5.2	431
France	14.4	59.0	8487
Germany	9.5	82.0	7772
Greece	-	-	2116
Hungary	12.9	10.1	1306
Iceland	7.5	0.3	21
Ireland	11.0	3.7	413
Italy	-	-	-
Japan	8.2	126.7	10372
Korea	23.2	46.4	10756
Luxemburg	13.5	0.4	58
Netherlands	6.9	15.8	1090
New Zealand	13.4	3.8	509
Norway	6.8	4.4	304
Poland	17.4	38.7	6730
Portugal	21.0	9.5	1995
Spain	14.6	39.4	5738
Sweden	6.6	8.9	580
Switzerland	8.2	7.1	583
Turkey	9.2	64.8	5975
UK	6.0	59.5	3564
USA	15.3	272.7	41611
OECD median	10.4		



Fatalities per 100 000 population, OECD nations and Australian States/Territories, 1999



OECD countries, 1999

In 1999, Australia recorded 9.3 fatalities per 100 000 population. Australia's rate was the tenth lowest of the 26 OECD nations for which this information is available.

In 1999, of the 26 OECD nations where data is available:

- The UK had the lowest rate, recording 6.0 fatalities per 100 000 population.
- Korea, with 23.2 fatalities per 100 000 population, had the highest rate.

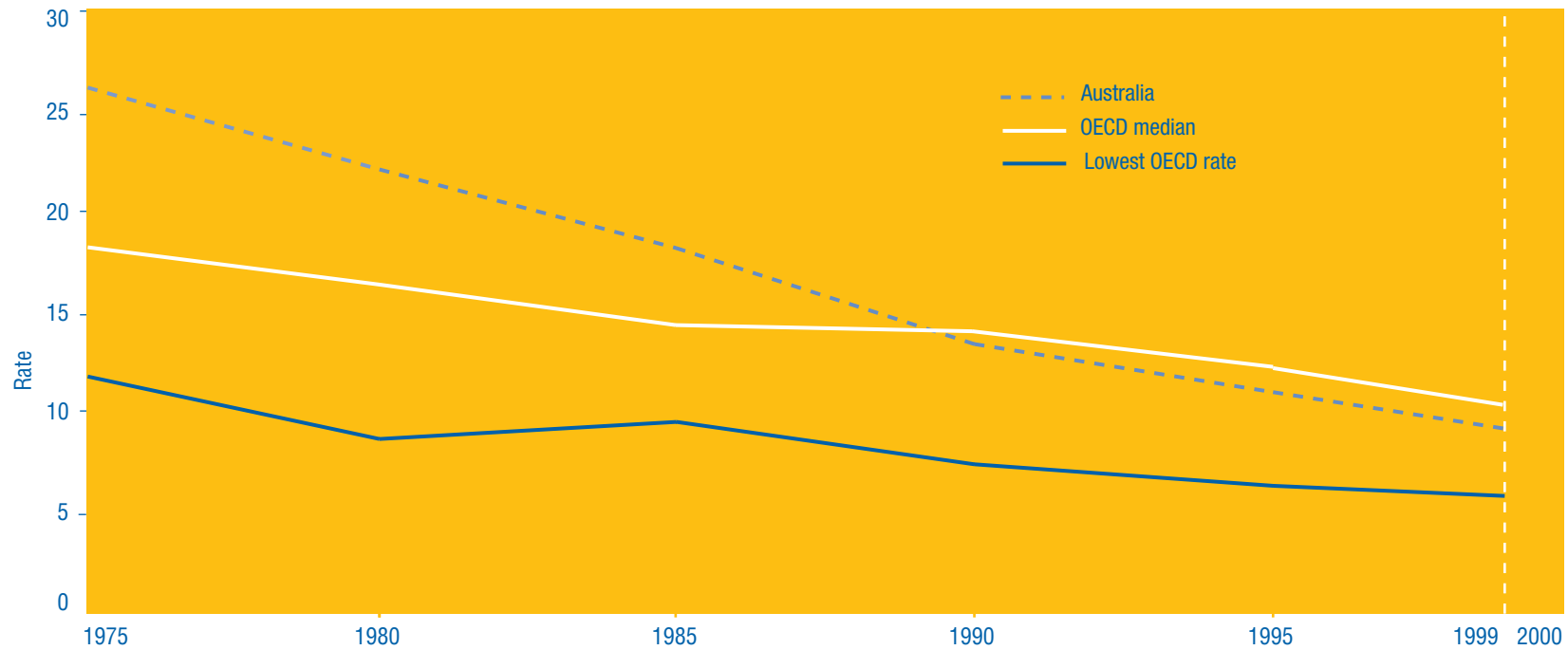
The OECD median fatalities per 100 000 population was 10.4 in 1999.

Australian States and Territories, 1999

The ACT had the lowest rate of all states and territories, recording 6.1 fatalities per 100 000 population.

The Northern Territory had the highest rate of all Australian States and Territories recording 25.4 fatalities per 100 000 population.

Fatalities per 100 000 population, OECD median and Australia



Historical trends

The public health risk associated with road use declined significantly in Australia between 1975 and 1999.

In 1975 there were 26.6 fatalities per 100 000 population in Australia. In 1999 this had decreased to 9.3.

The median rate for OECD nations also declined. In 1975, the OECD median was 18.4, by 1999 it was 10.4.

However, Australia's reduction in the rate of fatalities per 100 000 population greatly exceeds that of the OECD median.

- In 1975, the Australian rate was 45 per cent above the OECD median
- In 1999, the Australian rate was 11 per cent below the OECD median.

Fatalities per 100 000 population – OECD nations and Australian States/Territories 1975 to 1999

	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Australia	26.6	22.3	18.6	16.6	13.7	12.2	11.3	11.1	10.8	11.2	10.8	9.5	9.4	9.3
Austria	33.4	26.5	20.1	20.6	20.3	20.0	17.8	16.1	16.7	15.0	12.7	13.7	11.9	13.4
Belgium	24.0	24.3	18.3	20.1	19.9	18.8	16.7	16.5	16.8	14.3	13.4	13.4	14.7	13.7
Canada	26.7	22.7	17.3	16.2	14.9	13.7	12.3	12.6	11.2	11.4	10.4	10.2	9.7	9.7
Czech Republic	16.3	12.2	9.6	10.4	12.5	12.8	14.9	14.8	15.8	15.4	15.2	15.5	13.2	14.1
Denmark	16.4	13.5	15.1	13.1	12.3	11.8	11.2	10.8	10.5	11.2	9.8	9.3	9.4	9.7
Finland	19.4	11.5	11.1	14.8	13.0	12.6	12.0	9.6	9.5	8.6	7.9	8.5	7.8	8.4
France	27.3	25.4	20.7	20.5	19.9	18.5	17.3	16.6	15.6	15.3	14.7	14.4	15.2	14.4
Germany	22.0	19.3	13.0	12.5	14.0	14.2	13.2	12.3	12.1	11.6	10.7	10.4	9.5	9.5
Greece	13.8	15.0	20.2	19.9	20.2	20.6	20.9	20.8	21.6	23.1	20.6	20.0	-	-
Hungary	16.0	15.2	16.5	20.4	23.4	20.5	20.3	16.3	15.2	15.5	13.4	13.7	13.5	12.9
Iceland	-	11.0	10.0	11.1	9.4	10.5	8.1	6.4	4.5	9.0	3.7	5.5	9.8	7.5
Ireland	18.4	16.6	11.6	13.1	13.6	12.6	11.7	12.1	11.4	12.1	12.4	12.8	12.4	11.0
Italy	18.6	16.4	13.5	12.0	12.4	14.0	14.1	12.6	12.4	12.3	11.7	11.7	11.0	-
Japan	12.5	9.7	9.9	11.7	11.8	11.6	12.0	10.6	10.2	10.1	9.3	8.9	8.5	8.2
Korea	12.6	17.2	21.4	34.5	33.4	36.0	31.0	27.4	26.3	26.6	32.3	29.3	22.6	23.2
Luxemburg	-	27.0	21.6	17.9	18.5	20.8	18.7	19.2	16.5	17.0	17.2	14.4	13.4	13.5
Netherlands	17.1	14.2	9.9	9.8	9.2	8.5	8.5	8.2	8.5	8.6	7.6	7.5	6.8	6.9
New Zealand	20.3	18.9	22.7	22.7	21.5	19.0	18.8	17.2	16.5	16.2	14.1	14.4	13.3	13.4
Norway	13.5	8.9	9.7	9.0	7.8	7.6	7.6	6.5	6.5	7.0	5.8	6.9	8.0	6.8
Poland	16.5	16.8	12.6	-	19.2	20.6	18.1	16.5	17.5	17.9	16.5	18.9	18.3	17.4
Portugal	39.5	31.5	25.2	27.6	28.2	30.2	28.9	25.2	23.3	25.2	25.4	23.4	22.4	21.0
Spain	16.6	17.6	16.6	24.1	23.2	22.7	20.1	16.3	14.4	14.7	14.0	14.3	15.1	14.6
Sweden	14.3	10.2	9.7	10.7	9.1	8.7	8.8	7.3	6.7	6.5	6.1	6.1	6.0	6.6
Switzerland	19.0	19.2	13.6	13.5	13.9	12.4	12.2	10.5	9.7	9.9	8.7	8.3	8.4	8.2
Turkey	-	-	14.3	15.2	14.8	14.4	14.1	14.3	-	-	-	10.6	10.1	9.2
UK	11.9	11.1	9.4	9.7	9.4	8.2	7.5	6.8	6.5	6.4	6.4	6.3	6.0	6.0
USA	20.7	22.5	18.4	18.5	17.9	16.4	15.4	15.6	15.6	15.9	15.9	15.7	15.4	15.3
OECD median	18.4	16.8	14.7	15.2	14.4	14.1	14.1	13.5	12.4	12.3	12.4	12.2	11.0	10.4
New South Wales	26.1	25.2	19.5	16.6	13.7	11.2	10.9	9.7	10.7	10.1	9.4	9.2	8.8	9.0
Victoria	24.0	16.8	16.6	18.0	12.5	11.4	8.9	9.7	8.4	9.3	9.1	8.2	8.4	8.1
Queensland	31.0	24.6	19.5	15.1	13.8	13.3	13.7	12.7	13.1	13.9	11.5	10.6	8.1	8.9
South Australia	26.8	20.6	19.5	15.6	15.8	12.7	11.3	14.9	10.8	12.3	12.3	10.0	11.3	10.1
Western Australia	26.3	23.1	17.1	15.2	12.2	12.7	12.1	12.5	12.4	12.1	14.0	11.0	12.2	11.7
Tasmania	27.8	23.6	17.6	17.7	15.4	16.5	15.8	12.3	12.5	12.1	13.5	6.8	10.2	11.3
Northern Territory	68.9	53.3	45.1	39.0	41.5	40.5	32.3	26.0	24.0	35.0	39.6	32.1	36.3	25.4
Australian Capital Territory	16.1	13.4	13.1	11.5	9.2	5.9	6.8	4.0	5.6	4.9	7.5	5.5	7.1	6.1



Road fatalities per 10 000 registered vehicles

The number of deaths for every 10 000 registered vehicle is a method of comparing road fatality levels between countries taking into account different levels of motorisation.

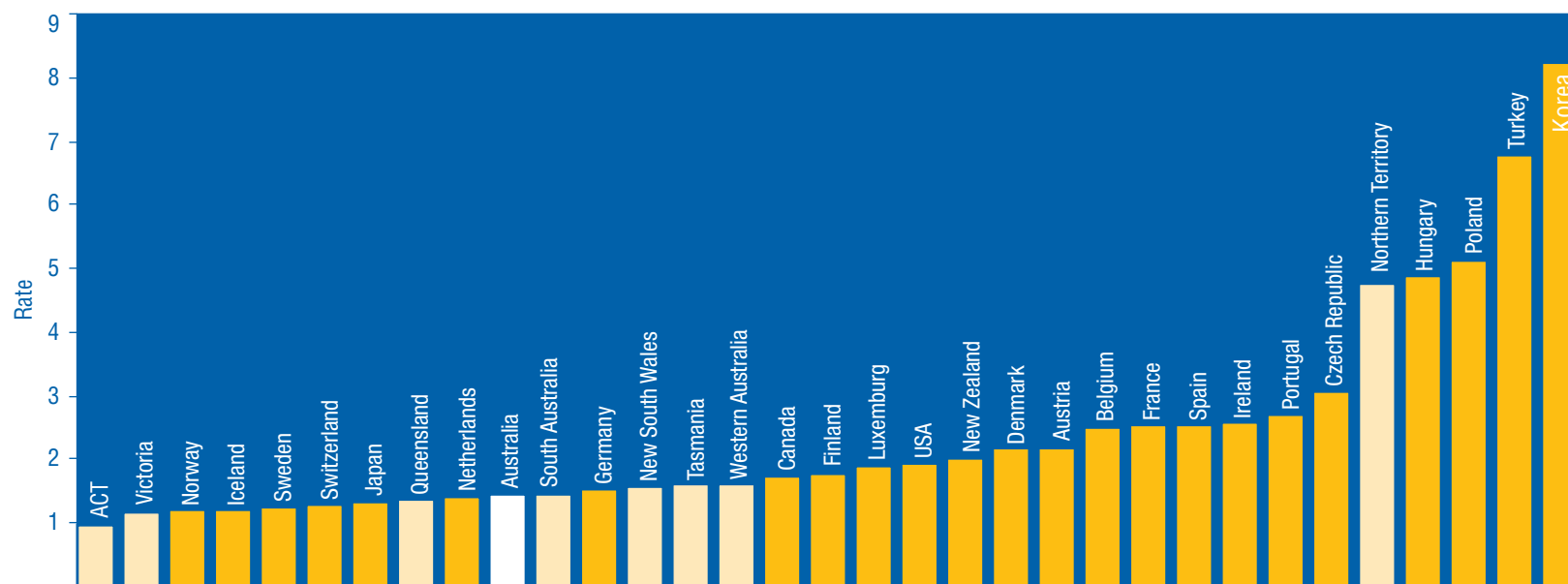
Registered vehicles, Australian States and Territories, 1999

	Fatalities per 10 000 registered vehicles	Total registered vehicles (millions)	Total number killed
New South Wales	1.6	3.7	577
Victoria	1.2	3.3	383
Queensland	1.4	2.3	314
South Australia	1.5	1.0	151
Western Australia	1.6	1.3	217
Tasmania	1.6	0.3	53
Northern Territory	4.7	0.1	49
Australian Capital Territory	1.0	0.2	19

Registered vehicles, OECD countries 1999

	Fatalities per 10 000 registered vehicles	Total registered vehicles (millions)	Total number killed
Australia	1.4	12.3	1763
Austria	2.2	5.0	1079
Belgium	2.5	5.6	1397
Canada	1.7	17.3	2972
Czech Republic	3.1	4.7	1455
Denmark	2.2	2.4	514
Finland	1.8	2.4	431
France	2.5	33.4	8487
Germany	1.5	50.6	7772
Greece	-	-	2116
Hungary	4.9	2.7	1306
Iceland	1.2	0.2	21
Ireland	2.6	1.6	413
Italy	-	-	-
Japan	1.3	77.8	10372
Korea	8.2	13.1	10756
Luxemburg	1.9	0.3	58
Netherlands	1.4	7.6	1090
New Zealand	2.0	2.5	509
Norway	1.2	2.5	304
Poland	5.1	13.2	6730
Portugal	2.7	7.4	1995
Spain	2.6	22.4	5738
Sweden	1.3	4.6	580
Switzerland	1.3	4.5	583
Turkey	6.8	8.8	5975
UK	-	-	3564
USA	2.0	212.7	41611
OECD median	2.0		

Fatalities per 10 000 registered vehicles, OECD nations and Australian States/Territories, 1999



OECD countries, 1999

In 1999, Australia recorded 1.4 fatalities per 10 000 registered vehicles. Australia recorded the 7th lowest rate of the 25 OECD nations for which this information is available.

In 1999, of the 25 OECD nations where information is available:

- Iceland and Norway had the equal lowest rate recording 1.2 fatalities per 10 000 registered vehicles.

- Korea, with 8.2 fatalities per 10 000 registered vehicles had the highest rate of the OECD nations.

The OECD median fatalities per 10 000 registered vehicles was 2.0 in 1999.

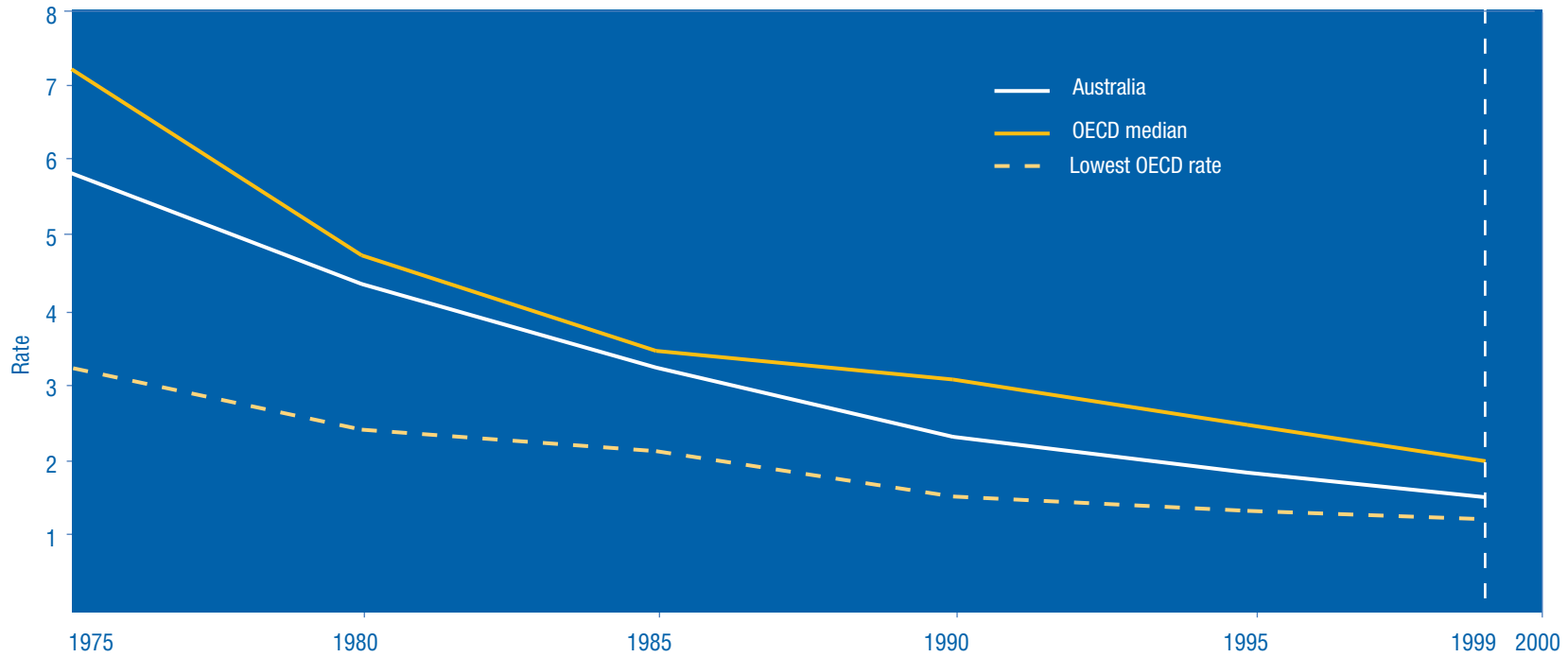
Australian States and Territories, 1999

The ACT had the lowest rate compared with all OECD nations and Australian States or Territories,

recording 1.0 fatalities per 10 000 vehicles. Victoria, with 1.2 fatalities per 10 000 vehicles matched the OECD best performance of Norway and Iceland.

The Northern Territory recorded the highest rate of all Australian States and Territories with 4.7 death per 10 000 registered vehicles.

Fatalities per 10 000 registered vehicles, OECD median and Australia



Historical trends

Road fatalities relative to vehicle ownership have declined significantly between 1975 and 1999.

In 1975, there were 5.8 fatalities per 10 000 registered vehicles in Australia. In 1999, this had decreased to 1.4.

The median rate for OECD nations also declined significantly. In 1975 the OECD median was 7.2, by 1999 it was 2.0.

For the years reported, Australia's rate of death per 10 000 registered vehicles was below that reported for the OECD median.

Fatalities per 10 000 registered vehicles, OECD nations and Australian States/Territories. 1975 to 1999

	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Australia	5.8	4.3	3.2	2.9	2.3	2.1	1.9	1.9	1.8	1.8	1.8	1.5	1.5	1.4
Austria	11.6	7.2	4.8	4.4	4.2	4.1	3.6	3.1	3.1	2.7	2.3	2.4	2.0	2.2
Belgium	7.5	6.4	4.5	4.5	4.3	4.0	3.5	3.4	3.4	2.8	2.6	2.6	2.8	2.5
Canada	5.3	4.0	3.0	2.5	2.3	2.2	2.1	2.2	1.9	2.0	1.8	1.7	1.6	1.7
Czech Republic	-	4.8	3.4	3.5	4.0	4.0	4.5	4.4	4.5	4.1	3.9	3.7	3.0	3.1
Denmark	5.0	3.7	4.1	3.2	3.1	2.9	2.8	2.7	2.6	2.7	2.3	2.2	2.1	2.2
Finland	7.2	4.0	3.1	3.5	2.9	2.8	2.6	2.1	2.2	2.0	1.8	1.9	1.7	1.8
France	8.1	6.3	4.6	4.4	4.2	3.9	3.6	3.4	3.2	3.1	3.0	2.9	2.7	2.5
Germany	7.2	4.9	2.9	2.5	2.6	2.6	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5
Greece	17.0	10.6	9.9	7.8	7.4	7.3	-	6.8	6.7	6.7	5.7	5.2	5.0	-
Hungary	12.6	9.0	9.0	8.8	11.2	8.8	8.5	6.7	6.1	6.0	5.0	5.0	4.9	4.9
Iceland	-	2.8	2.1	2.0	1.7	2.0	1.5	1.3	0.9	1.8	0.7	1.0	1.7	1.2
Ireland	8.6	6.2	4.5	4.5	4.5	4.0	3.7	3.7	3.4	3.5	3.4	3.3	3.0	2.6
Italy	6.0	4.7	3.1	2.3	2.3	2.5	2.4	2.0	2.0	1.9	1.8	1.8	1.7	-
Japan	4.3	2.7	2.4	2.4	2.4	2.2	2.2	1.9	1.8	1.8	1.6	1.5	1.4	1.3
Korea	238.8	95.4	54.5	47.6	36.8	32.3	23.0	17.1	14.1	12.5	13.5	11.1	8.0	8.2
Luxemburg	11.7	6.4	4.0	3.2	3.3	3.6	3.1	3.1	2.5	2.5	2.5	2.1	1.9	1.9
Netherlands	6.3	4.3	2.8	2.5	2.3	2.1	2.1	2.0	2.0	2.0	1.7	1.7	1.5	1.4
New Zealand	4.3	3.5	3.9	3.6	3.3	2.9	2.9	2.7	2.5	2.5	2.2	2.3	2.1	2.0
Norway	-	2.4	2.2	1.7	1.5	1.5	1.5	1.3	1.2	1.3	1.1	1.3	1.4	1.2
Poland	14.4	10.9	6.6	-	8.1	8.0	6.8	6.1	6.2	6.2	5.4	5.9	5.6	5.1
Portugal	26.1	15.2	9.2	7.6	6.8	6.7	5.9	4.8	4.1	4.2	4.0	3.4	3.1	2.7
Spain	9.0	6.4	5.4	6.3	5.8	5.3	4.5	3.6	3.1	3.1	2.8	2.8	2.8	2.6
Sweden	3.8	2.5	2.2	2.2	1.8	1.7	1.7	1.5	1.4	1.3	1.2	1.2	1.2	1.3
Switzerland	5.8	4.5	2.7	2.5	2.4	2.1	2.1	1.8	1.7	1.7	1.5	1.4	1.4	1.3
Turkey	-	-	-	-	-	-	-	-	-	-	-	8.7	7.7	6.8
UK	3.9	3.4	2.5	2.3	2.2	1.9	1.8	1.6	1.5	1.5	1.4	1.4	1.3	-
USA	3.2	3.2	2.6	2.5	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0
OECD median	7.2	4.7	3.4	3.2	3.1	2.9	2.7	2.7	2.5	2.5	2.2	2.1	2.0	2.0
New South Wales	5.9	5.2	3.6	3.0	2.5	2.2	2.0	1.8	2.0	1.9	1.7	1.6	1.5	1.6
Victoria	5.4	3.4	2.8	3.0	2.1	1.8	1.5	1.6	1.3	1.5	1.4	1.2	1.2	1.2
Queensland	6.7	4.4	3.2	2.5	2.3	2.4	2.3	2.1	2.1	2.2	1.8	1.7	1.3	1.4
South Australia	5.5	3.8	3.3	2.6	2.6	2.1	1.9	2.4	1.7	1.9	1.8	1.5	1.6	1.5
Western Australia	5.3	3.9	2.8	2.5	1.9	1.9	1.8	1.9	1.8	1.8	2.0	1.6	1.7	1.6
Tasmania	6.2	4.4	2.9	2.8	2.4	2.6	2.4	1.9	1.9	1.8	2.0	1.0	1.5	1.6
Northern Territory	13.9	13.4	9.3	8.0	8.6	8.9	6.7	5.3	4.5	6.6	7.5	6.2	6.8	4.7
Australian Capital Territory	3.0	2.8	2.6	2.2	1.6	1.1	1.2	0.7	0.9	0.8	1.2	0.9	1.1	1.0

Road fatalities per 100 million vehicle kilometres travelled

The number of deaths for every 100 million vehicle kilometres travelled is a direct measure of the risk associated with road travel.

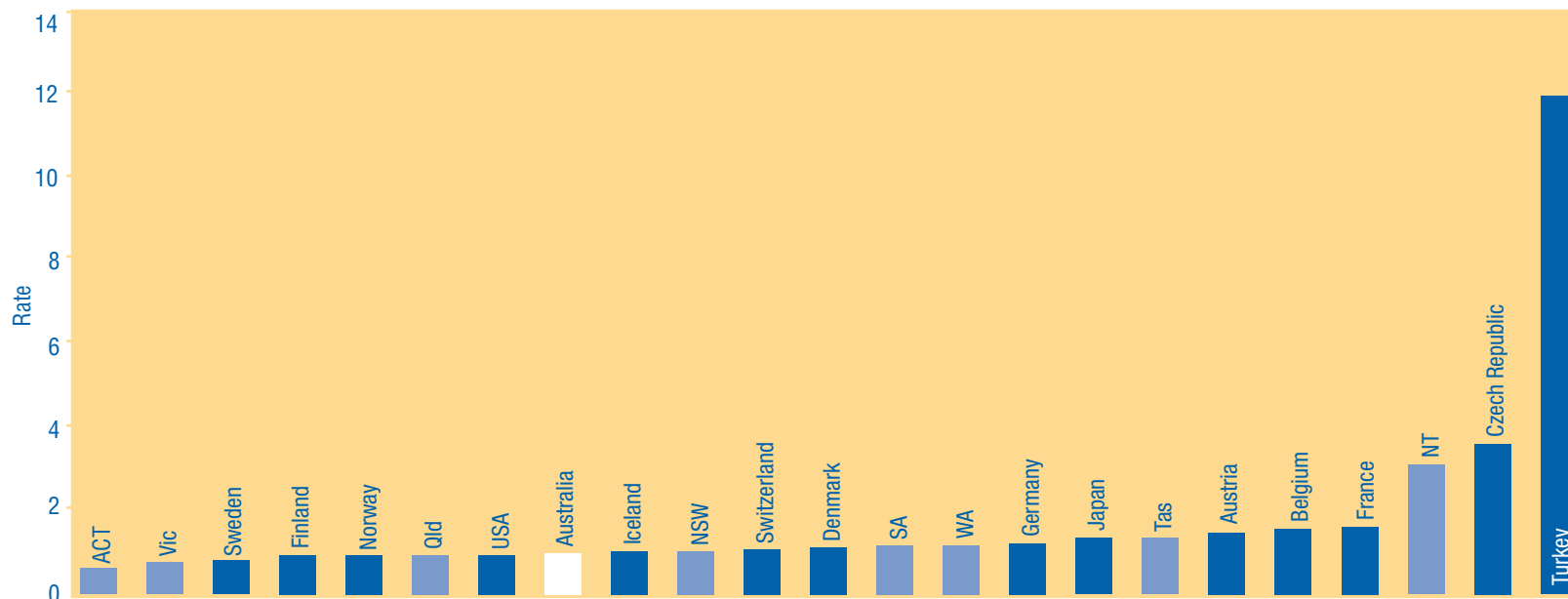
Kilometres travelled Australian States and Territories, 1999

	Fatalities per 100 million vehicle kilometres travelled	Total vehicle kilometres travelled (100 million)	Total number killed
New South Wales	1.0	555.8	577
Victoria	0.8	492.8	383
Queensland	1.0	327.7	314
South Australia	1.2	129.9	151
Western Australia	1.2	185.0	217
Tasmania	1.4	38.8	53
Northern Territory	3.1	15.8	49
Australian Capital Territory	0.6	30.6	19

Kilometres travelled, OECD countries 1999

	Fatalities per 100 million vehicle kilometres travelled	Total vehicle kilometres travelled (100 million)	Total number killed
Australia	1.0	1776.4	1763
Austria	1.5	723.7	1079
Belgium	1.6	891.1	1397
Canada	-		2972
Czech Republic	3.6	403.0	1455
Denmark	1.1	464.4	514
Finland	0.9	460.1	431
France	1.6	5230.0	8487
Germany	1.2	6393.0	7772
Greece	-		2116
Hungary	-		1306
Iceland	1.0	20.5	21
Ireland	-		413
Italy	-		-
Japan	1.4	7650.6	10372
Korea	-		10756
Luxemburg	-		58
Netherlands	-		1090
New Zealand	-		509
Norway	1.0	318.4	304
Poland	-		6730
Portugal	-		1995
Spain	-		5738
Sweden	0.8	695.6	580
Switzerland	1.1	540.8	583
Turkey	12.0	498.7	5975
UK	-		3564
USA	1.0	43312.9	41611
OECD median	1.1		

Fatalities per 100 million vehicle kilometres travelled, OECD nations & Australian States/Territories, 1999



OECD countries, 1999

In 1999, Australia recorded 1.0 fatalities per 100 million vehicle kilometres travelled. Australia's rate was the equal fifth lowest of the 15 OECD nations for which this data is available.

In 1999, of the 15 OECD nations where data is available:

- Sweden had the lowest rate, recording 0.8 fatalities per 100 million vehicle kilometres travelled.

- Turkey, with 12.0 fatalities per 100 million kilometres travelled, had the highest rate of OECD nations in 1999.

The OECD median number of fatalities per 100 million vehicle kilometres travelled was 1.1 for 1999.

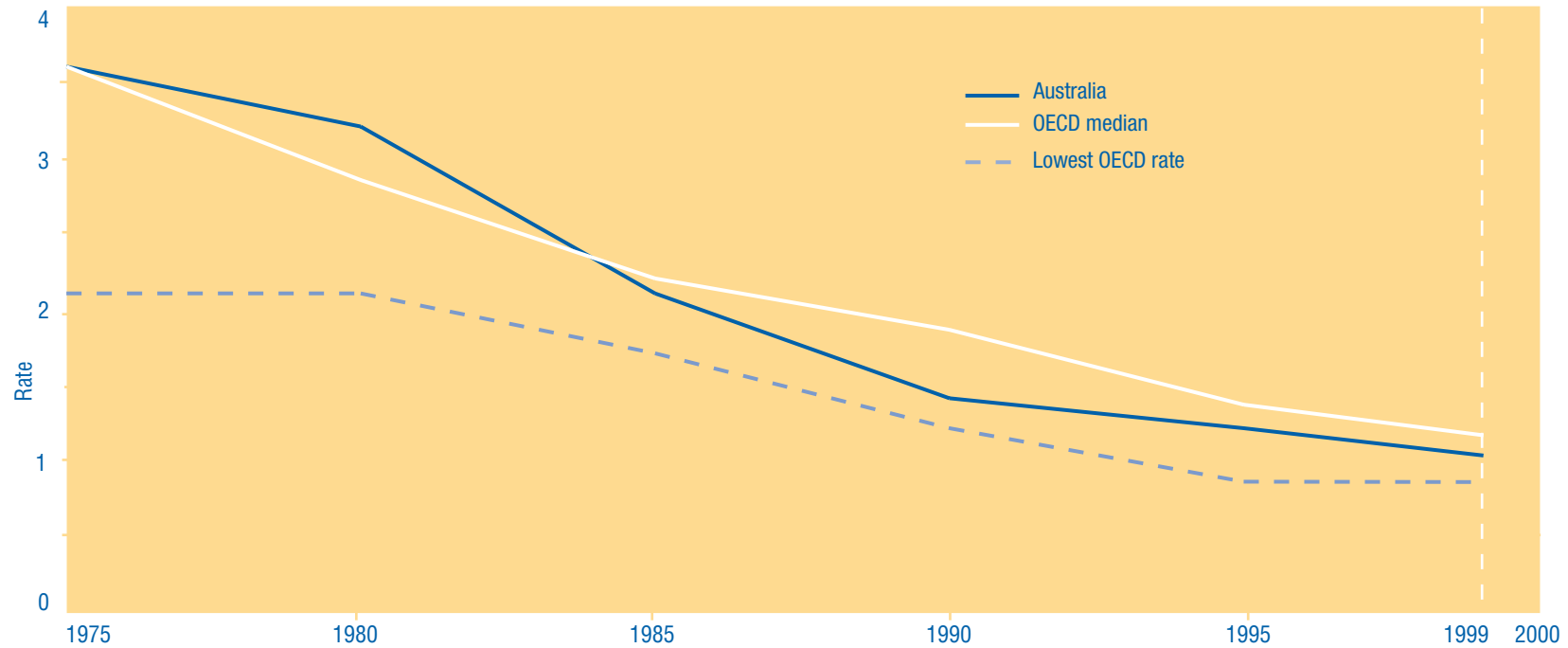
Australian States and Territories, 1999

The ACT had the lowest rate, recording 0.6 fatalities per 100 million vehicle kilometres

travelled. This rate was lower than all OECD countries where data was reported. Victoria, with 0.8 fatalities per 100 million vehicle kilometres travelled matched the OECD best performance of Sweden.

The Northern Territory had the highest rate of all States and Territories recording 3.1 fatalities per 100 million vehicle kilometres travelled.

Fatalities per 100 million vehicle kilometres travelled, OECD median and Australia



Historical trends

The degree of actual risk associated with road travel declined significantly in Australia between 1975 and 1998.

In 1975, there were 3.6 fatalities per 100 million vehicle kilometres travelled in Australia. In 1999, this had decreased to 1.0.

The median rate for the OECD nations reported also declined from 3.6 in 1975 to 1.1 in 1998. For the years reported, Australia's rate was comparable with the OECD median.

Fatalities per 100 million vehicle kilometres travelled, OECD nations and Australian State/Territories, 1975 to 1999

	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Australia	3.6	3.2	2.1	-	1.4	1.4	-	-	-	1.2	-	-	1.0	1.0
Austria	8.3	5.6	3.8	2.9	2.8	2.7	2.3	2.1	2.1	1.9	1.5	1.6	1.4	1.5
Belgium	6.2	5.0	3.4	2.9	2.8	2.5	2.2	2.2	2.1	1.8	1.7	1.6	1.7	1.6
Canada	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	-	5.9	4.5	-	5.2	-	-	-	-	4.9	4.5	4.4	3.5	3.6
Denmark	3.1	2.5	2.6	1.9	1.7	1.6	1.5	1.4	1.4	1.4	1.2	1.1	1.1	1.1
Finland	3.7	2.1	1.7	1.9	1.6	1.6	1.4	1.2	1.1	1.0	1.0	1.0	0.9	0.9
France	5.9	4.4	3.3	2.7	2.6	2.3	2.1	2.0	1.9	1.9	1.8	1.7	1.8	1.6
Germany	-	3.7	2.4	1.9	2.0	2.0	1.8	1.7	1.7	1.6	1.4	1.4	1.2	1.2
Greece	-	-	-	-	-	-	-	3.4	3.4	3.5	3.0	2.7	2.7	-
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	-	2.1	1.8	1.6	1.4	1.4	1.1	0.9	0.6	1.3	0.5	0.8	1.4	1.0
Ireland	-	2.8	-	1.9	1.9	1.8	1.6	1.6	1.4	1.4	1.3	-	-	-
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Japan	4.9	2.9	2.8	2.9	2.3	2.2	2.2	1.9	1.8	1.8	1.6	1.5	1.4	1.4
Korea	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxemburg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	2.7	1.8	1.5	1.4	1.3	1.2	1.2	1.2	1.2	1.1	1.0	0.9	-
New Zealand	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	3.5	1.9	1.7	1.4	1.2	1.2	1.2	1.0	1.0	1.0	0.8	1.0	1.1	1.0
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	2.7	1.6	1.5	1.4	1.2	1.1	1.2	1.0	0.9	0.9	0.8	0.8	0.8	0.8
Switzerland	3.6	3.1	2.0	1.8	1.9	1.6	1.7	1.5	1.4	1.4	1.2	1.1	1.1	1.1
Turkey	-	-	-	-	-	-	-	-	-	-	-	13.9	12.8	12.0
UK	-	-	-	-	-	1.1	1.0	0.9	0.9	0.8	0.8	0.8	-	-
USA	2.1	2.1	-	1.4	1.3	-	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0
OECD median	3.6	2.9	2.3	1.9	1.8	1.6	1.5	1.4	1.4	1.4	1.2	1.1	1.2	1.1
New South Wales	3.8	3.5	2.3	-	1.4	1.4	-	-	-	1.3	-	-	1.0	1.0
Victoria	3.3	2.8	1.8	-	1.2	1.2	-	-	-	1.0	-	-	0.8	0.8
Queensland	3.9	3.5	2.2	-	1.5	1.5	-	-	-	1.3	-	-	1.0	1.0
South Australia	3.2	3.0	2.2	-	1.4	1.4	-	-	-	1.3	-	-	1.2	1.2
Western Australia	3.2	2.4	1.7	-	1.3	1.3	-	-	-	1.2	-	-	1.3	1.2
Tasmania	3.9	3.1	2.0	-	2.0	2.0	-	-	-	1.3	-	-	1.1	1.4
Northern Territory	9.2	7.5	5.4	-	4.6	4.6	-	-	-	4.2	-	-	4.5	3.1
Australian Capital Territory	2.3	1.4	1.6	-	0.6	0.6	-	-	-	0.5	-	-	0.7	0.6

EXTERNAL CAUSES OF DEATH IN AUSTRALIA

This section compares deaths resulting from road crashes with deaths from other external causes.

Deaths from external causes include those resulting from accident and from intentional acts, ie homicide and intentional self harm.

Data sources

External causes of death data were supplied by the Australian Bureau of Statistics (ABS) using the International Classification of Diseases supplementary External Causes of Morbidity and Mortality Codes.

The International Classification of Diseases

The International Classification of Diseases (ICD) was developed by the World Health Organisation to classify morbidity and mortality information.

The classification is used internationally for a number of purposes including:

- The statistical analysis of mortality and morbidity data;
- the indexing of hospital records; and
- the reporting of mortality and morbidity trends.

This system classifies mortality according to the disease or injury causing death except in the case of accidental or violent death. In these cases, supplementary codes, the External Causes of Morbidity and Mortality Codes are used. These codes are standardised internationally and allow direct comparisons of external causes of death both within and between countries.

Definitions

External causes of death were split into six categories, using ICD revision 10 (ICD-10) coding.

- Motor vehicle traffic accidents (V01-V89, excluding non-motor vehicle accidents and non-traffic accidents)
- Accidental falls (W00-W19)
- Accidental drowning and submersion (W65-W74)
- Intentional self-harm (X60-X84)
- Assault (X85-Y09)

All other external causes of death (remainder of external causes of death, V01-Y98) including:

- Water Transport Accidents (V90-V94)
- Air and Space Transport Accidents (V95-V97)
- Accidental poisoning (X20-X49)
- Exposure to forces of nature (X30-X39)
- Legal intervention & operations of war (Y35-Y36)

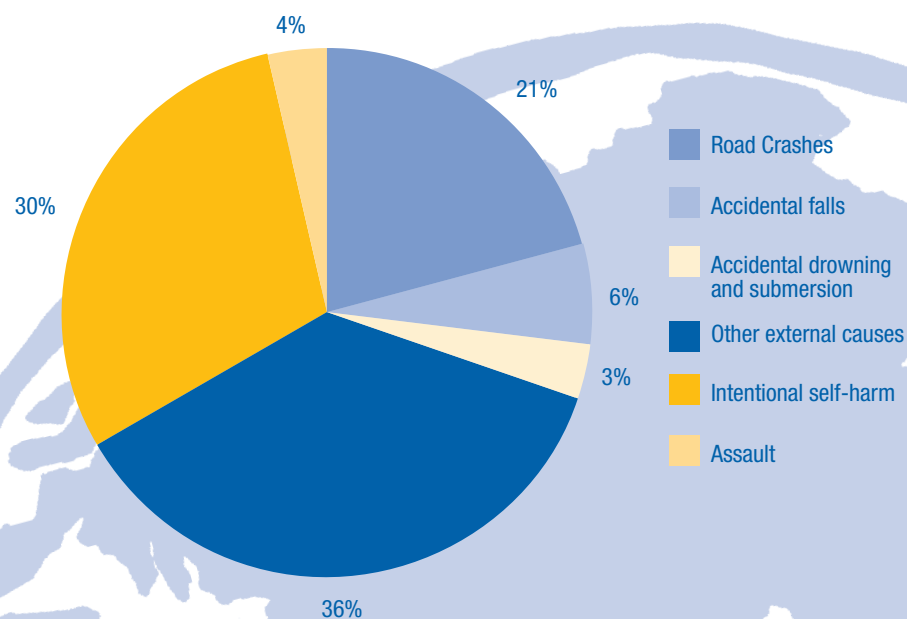
Notes

- As of the 1 January 1999 the tenth revision of the International Classification of Diseases (ICD-10) was adopted for Australian use for registering deaths. Prior to 1999 deaths were registered in Australia using the ninth revision of the International Classification of Diseases (ICD-9).
- For consistency, data from 1989 to 1998, which was coded using the ninth edition of the International Classification of Diseases (ICD-9), has been categorised by the ABS using ICD-10. As a result of these changes, external causes of death data appearing in this publication are not comparable with previous editions of this publication.
- For the purposes of reporting road crashes as a cause of death in Australia, a road crash has been defined as a motor vehicle traffic accident, where the crash must involve a motor vehicle and must have occurred, at least in part, on public road way.
- Due to definitional differences between the ABS data presented here and the ATSB data presented earlier in the report road crash figures are not comparable. For example, road deaths are reported by the Australian Bureau of Statistics according to the date of death, whereas the ATSB reports road deaths according to the date of crash.
- Further information is available in the ABS publication Causes of Death, catalogue 3303.0.

External causes of death in Australia, 1999

In 1999, road crashes accounted for 20.8 per cent of all external causes of deaths and 31.2 per cent of accidental deaths.

Intentional self-harm accounted for the largest proportion of deaths (29.8%) where the external cause was specified.



	Number	Per cent of subtotal	Per cent of total
Accidental			
Road Crashes	1738	31.2	20.8
Accidental falls	520	9.3	6.2
Accidental drowning and submersion	278	5.0	3.3
Other external causes	3033	54.5	36.3
Subtotal	5569	100.0	
Intentional			
Intentional self-harm	2492	89.3	29.8
Assault	300	10.7	3.6
Subtotal	2792	100.0	
Total	8361		

External causes of death in Australia, 1989 to 1999

Road crashes as an external cause of death declined significantly between 1989 and 1999. In fact, road crashes had the highest rate of decrease of all external causes of death.

In absolute terms, road crash deaths declined by 38.5 per cent between 1989 and 1999.

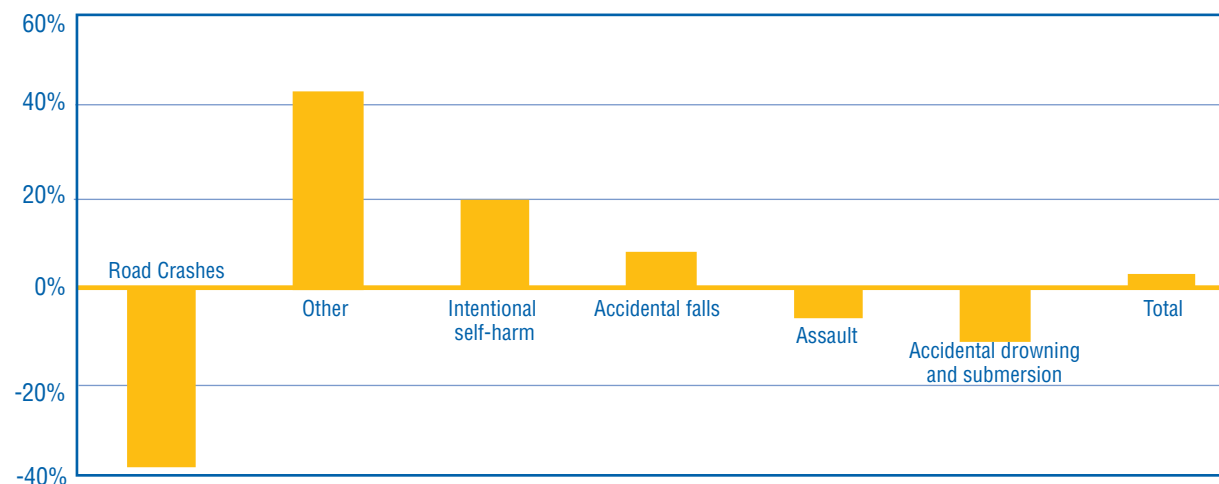
Intentional self-harm increased by 18.9 per cent over the same period, the largest increase where the external cause is specified.

Historically, the major cause of deaths due to external causes was road deaths. In the early 1990s, intentional self-harm overtook road crashes as the major cause of death due to external causes.

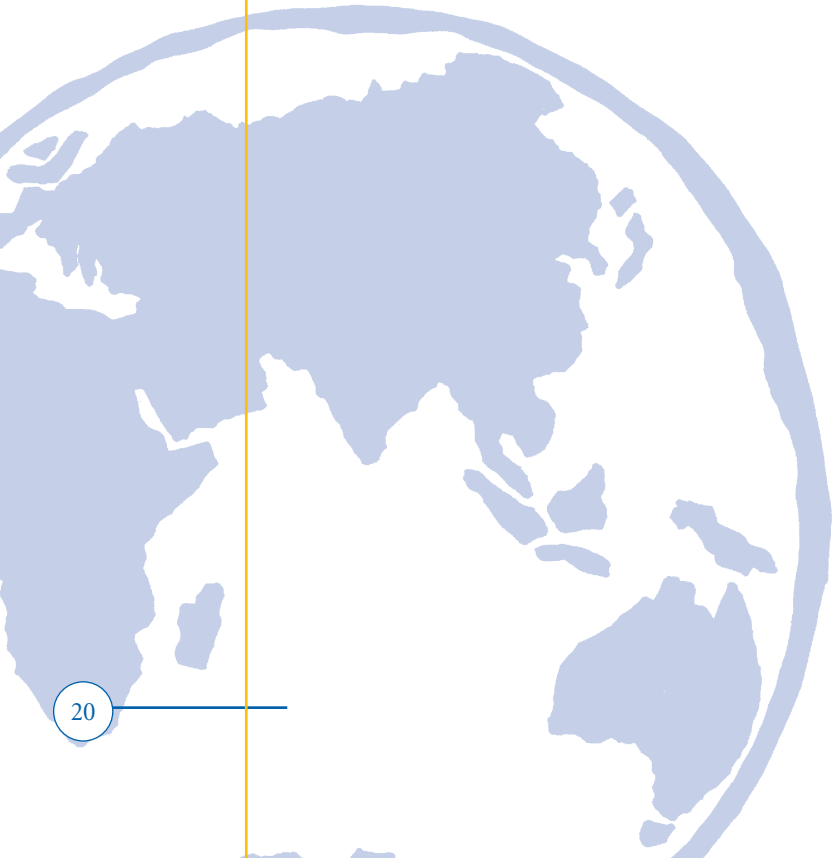
In 1989 there were 2828 deaths due to road crashes and 2096 were due to intentional self-harm.

In 1999 there were 1738 deaths due to road crashes and 2792 were due to intentional self-harm.

External causes of death in Australia, per cent change from 1989 to 1999



	1989	1994	1998	1999	per cent change
Accidental					
Road Crashes	2828	1959	1723	1738	-38.5
Accidental falls	483	402	457	520	7.7
Accidental drowning and submersion	314	249	245	278	-11.5
Other	2131	1986	2531	3033	42.3
Subtotal	5756	4596	4956	5569	-3.2
Intentional					
Intentional self-harm	2096	2258	2683	2492	18.9
Assault	319	332	307	300	-6.0
Subtotal	2415	2590	2990	2792	15.6
Total	8171	7186	7946	8361	2.3





© Commonwealth of Australia, 2002

ISSN: 1327-5321

Acknowledgments

The Australian Transport Safety Bureau gratefully acknowledges the provision of police road crash data by the New South Wales Roads and Traffic Authority, Vicroads, Queensland Transport, South Australian Police, Western Australian Police, Main Roads Western Australia, Tasmanian Department of Infrastructure Energy and Resources, Northern Territory Police and Australian Capital Territory Department of Urban Services.

Inquiries

Inquiries about this publication should be directed to:

The Team Leader
Safety Statistics
Australian Transport Safety Bureau
PO Box 967, Civic Square, ACT 2608

Telephone: 02 6274 7162
E-mail: stats@atsb.gov.au
www.atsb.gov.au

