BENCHMARKING ROAD SAFETY STATISTICS AROUND THE WORLD

THE 1998 REPORT

1975
1980
1985
1990
1995
1998

This report was compiled by the Australian Transport Safety Bureau to benchmark Australia's road safety performance against that of other OECD nations.

The report also compares trends in deaths as a result of road crashes with deaths due to other external causes in Australia.

Detailed tables are provided for OECD nations and Australian States and Territories.

1975
1980
1985
1990
1995
1998

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Compared with other OECD nations, Australia ranked

- 8th in terms of fatalities per 100 000 population
- 6th in terms of fatalities per 10 000 registered vehicles.
- 4th in terms of fatalities per 100 million vehicle kilometres travelled.

Sweden was the safest nation, in terms of fatalities per 100 000 population, fatalities per 10 000 registered vehicles and fatalities per 100 million vehicle kilometres travelled.

In Australia, road crashes accounted for 34.9% of accidental deaths due to external causes.

Since 1975, deaths due to road crashes have declined significantly.

In 1998, the ACT performed better than any OECD nation or other Australian State or Territory, in terms of deaths per 10 000 registered vehicles and deaths per 100 million vehicle kilometres travelled.

KINGSMARKING ROAD SAFETY

AUSTRALIAN TRANSPORT SAFETY BUREAU

ATSB Australian Transport Safety Bureau

INTERNATIONAL COMPARISONS

DEFINITIONS

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 Availablilty, 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 on the IRTAD database.

These nations include:

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

NOTES

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.

Historical information reported for Germany is as provided by IRTAD and includes correction factors as they applied to East and West Germany prior to unification on 3 October 1990.

Where the information was unavailable for a particular country against each of the rates provided, they were excluded from calculating the OECD median.

Data Sources

Figures provided for all OECD nations, with the exception of Australia, were derived from the International Road Traffic and Accident Database (IRTAD) using IRTAD PC Version 2.0 18/07/00 ©Copyright Bundesanstalt fur Strassenwesen (BASt) D - 51401 Bergisch Gladbach, Germany.

The Australian Transport Safety Bureau subscribes to BASt for the supply of the IRTAD database.

Australia

Sources for Australian figures are provided below.

1975, 1980, 1985, 1990, 1995

Road fatalities per 100 000 population were taken from the ATSB publication *Road Fatalities Australia 1998 Statistical Summary*, Table 8.

Road fatalities per 10 000 registered vehicles were taken from the ATSB publication *Road Fatalities Australia 1996 Statistical Summary*, Table 8.

Road fatalities per 100 million vehicle kilometres travelled were also taken from the ATSB publication *Road Fatalities Australia 1998 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, 1985, 1988, 1991 and 1995 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.

1998

Road fatality rates per 100 000 population were derived from the following population and road fatality counts.

Population figures as at 30 June 1998 were extracted from the June 1999 issue of the quarterly Australian Bureau of Statistics publication *Australian Demographic Statistics* (catalogue no. 3101.0). Road fatality counts were derived from the ATSB publication *Road Fatalities Australia Monthly Bulletin, December 1999.*

Road fatality rates per 10,000 registered vehicles were derived from the following counts of registered vehicles and road fatalities.

Vehicle figures as at 31 October 1998 were extracted from the September 1999 issue of the annual Australian Bureau of Statistics publication *Motor Vehicle Census* (catalogue no. 9309.0). Road fatality counts were derived from the ATSB publication *Road Fatalities Australia Monthly Bulletin, December 1999.*

Kilometres travelled figures were extracted from the Australian Bureau of Statistics *Survey of Motor Vehicle Use* for the twelve months ending 31st July 1998. Road fatality counts were derived from the ATSB publication *Road Fatalities Australia Monthly Bulletin, December, 1999.*

BENCHMARKING: INTERNATIONAL COMPARISONS

Fatalities per 100 000 population: current year

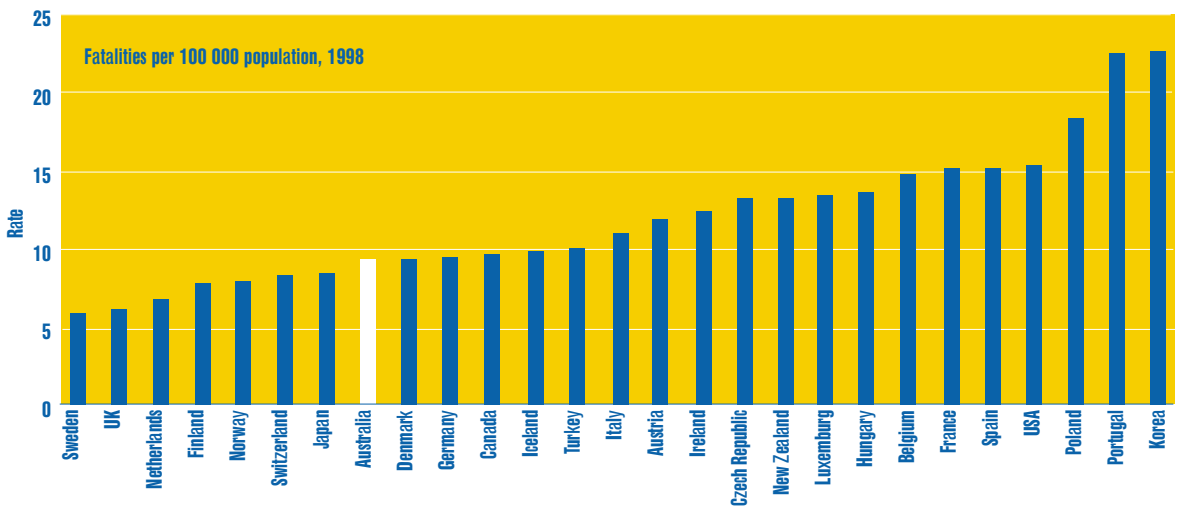
The number of deaths for every 100 000 of population is a measure of the public health risk associated with road trauma.

In 1998, Australia recorded 9.4 deaths per 100 000 population. Australia ranked equal eighth of the 27 OECD nations for which this information is available.

Sweden and the UK had the lowest rates both recording 6.0 deaths per 100 000 population.

Korea with 22.6 deaths per 100 000 population had the highest rate of the OECD nations.

The OECD median deaths per 100 000 population for 1998 was 11.0.



Population, 1998

	Fatalities per 100 000 population	Total population (millions)	Total number killed		Fatalities per 100 000 population	Total population (millions)	Total number killed
Australia	**9.4**	**18.8**	**1763**	**Korea**	22.6	46.0	10416
Austria	11.9	8.1	963	**Luxemburg**	13.4	0.4	57
Belgium	14.7	10.2	1500	**Netherlands**	6.8	15.7	1066
Canada	9.7	30.3	2934	**New Zealand**	13.3	3.8	502
Czech Republic	13.2	10.3	1360	**Norway**	8.0	4.4	352
Denmark	9.4	5.3	499	**Poland**	18.3	38.7	7080
Finland	7.8	5.1	400	**Portugal**	22.4	9.5	2126
France	15.1	59.0	8918	**Spain**	15.1	39.3	5957
Germany	9.5	82.1	7792	**Sweden**	6.0	8.8	531
Greece	-	-	2226	**Switzerland**	8.4	7.1	597
Hungary	13.5	10.1	1371	**Turkey**	10.1	63.5	6416
Iceland	9.8	0.3	27	**UK**	6.0	59.2	3581
Ireland	12.4	3.7	458	**USA**	15.3	270.3	41471
Italy	11.0	57.6	6326				
Japan	8.5	126.5	10805	**OECD median**	**11.0**		

Fatalities per 100 000 population: historical trends

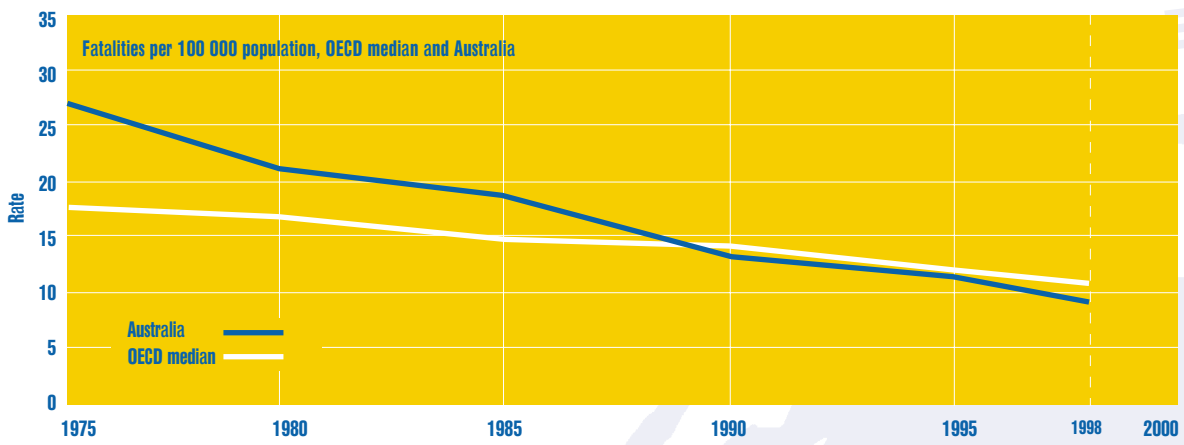
The public health risk associated with road use declined significantly in Australia between 1975 and 1998.

In 1975 there were 26.6 deaths per 100 000 population in Australia. In 1998 this had decreased to 9.4.

The median rate for the OECD nations reported also declined. In 1975, the OECD median was 18.4. By 1998 it was 11.0.

Australia's rate of improvement greatly exceeded that of the OECD median.

- In 1975, the Australian rate was 45% above the OECD median.
- In 1998, the Australian rate was 15% below the OECD median.



Fatalities per 100 000 population

	1975	1980	1985	1990	1995	1998		1975	1980	1985	1990	1995	1998
Australia	**26.6**	**22.3**	**18.6**	**13.7**	**11.2**	**9.4**	**Korea**	12.6	17.2	21.4	33.4	26.6	22.6
Austria	33.4	26.5	20.1	20.3	15.1	11.9	**Luxemburg**	-	27.0	21.6	18.5	17.0	13.4
Belgium	24.0	24.3	18.3	19.9	14.3	14.7	**Netherlands**	17.1	14.2	9.9	9.2	8.6	6.8
Canada	26.7	22.7	17.3	14.9	11.4	9.7	**New Zealand**	20.3	18.9	22.7	21.5	16.2	13.3
Czech Republic	16.3	12.2	9.6	12.5	15.4	13.2	**Norway**	13.5	8.9	9.7	7.8	7.0	8.0
Denmark	16.4	13.5	15.1	12.3	11.2	9.4	**Poland**	16.5	16.8	12.6	19.2	17.9	18.3
Finland	19.4	11.5	11.1	13.0	8.6	7.8	**Portugal**	39.5	31.5	25.2	32.2	28.8	22.4
France	27.3	25.4	20.7	19.9	15.3	15.1	**Spain**	16.6	17.6	16.6	23.2	14.7	15.1
Germany	22.0	19.3	13.0	14.0	11.6	9.5	**Sweden**	14.3	10.2	9.7	9.1	6.5	6.0
Greece	13.8	15.0	20.2	20.2	23.1	-	**Switzerland**	19.0	19.2	13.6	13.9	9.9	8.4
Hungary	16.0	15.2	16.5	23.4	15.5	13.5	**Turkey**	-	-	14.3	14.8	-	10.1
Iceland	-	11.0	10.0	9.4	9.0	9.8	**UK**	11.9	11.1	9.4	9.4	6.4	6.0
Ireland	18.4	16.6	11.6	13.6	12.1	12.4	**USA**	20.7	22.5	18.4	17.9	15.9	15.3
Italy	18.6	16.4	13.5	12.4	12.3	11.0							
Japan	12.5	9.7	9.9	11.8	10.1	8.5	**OECD median**	**18.4**	**16.8**	**14.7**	**14.4**	**12.3**	**11.0**

BENCHMARKING: INTERNATIONAL COMPARISONS

Fatalities per 10 000 registered vehicles: current year

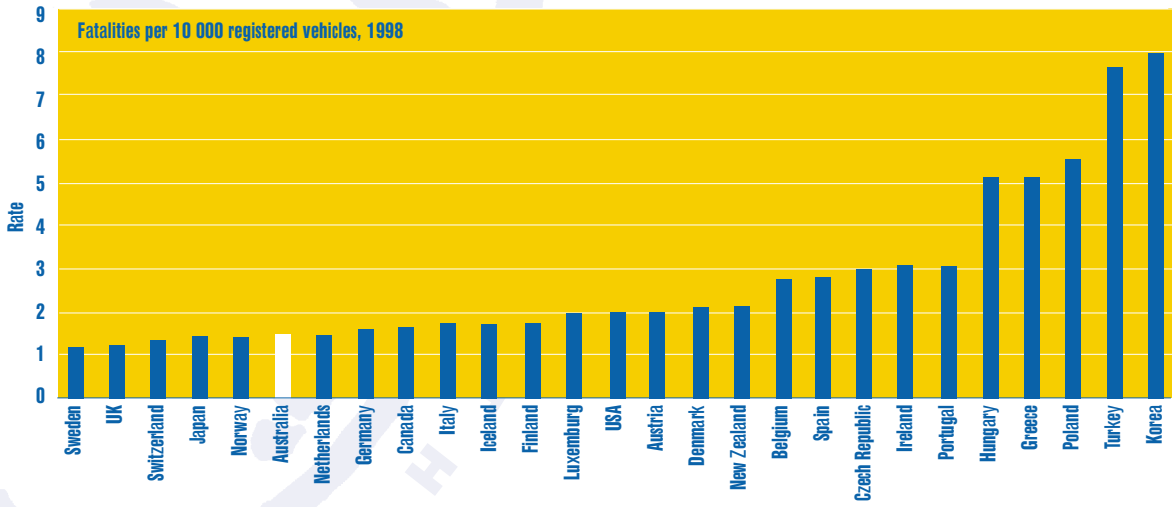
The number of deaths for every 10 000 registered vehicles is a method of comparing road fatality levels between countries taking into account the respective levels of motorisation.

In 1998, Australia recorded 1.5 deaths per 10 000 registered vehicles. Australia ranked equal sixth of the 27 OECD nations for which this information is available.

Sweden had the lowest rate recording 1.2 deaths per 10 000 registered vehicles.

Korea with 8.0 deaths per 10 000 registered vehicles had the highest rate of the OECD nations.

The OECD median deaths per 10 000 registered vehicles for 1998 was 2.0.



Registered vehicles, 1998

	Fatalities per 10 000 registered vehicles	Total registered vehicles (millions)	Total number killed
Australia	1.5	12.1	1763
Austria	2.0	4.8	963
Belgium	2.8	5.5	1500
Canada	1.6	18.0	2934
Czech Republic	3.0	4.5	1360
Denmark	2.1	2.3	499
Finland	1.7	2.3	400
France	-	-	8918
Germany	1.6	49.6	7792
Greece	5.1	4.3	2226
Hungary	5.1	2.7	1371
Iceland	1.7	0.2	27
Ireland	3.0	1.5	458
Italy	1.7	37.8	6326
Japan	1.4	77.1	10805
Korea	8.0	13.0	10416
Luxemburg	1.9	0.3	57
Netherlands	1.5	7.2	1066
New Zealand	2.2	2.3	502
Norway	1.4	2.5	352
Poland	5.6	12.7	7080
Portugal	3.1	6.9	2126
Spain	2.8	21.3	5957
Sweden	1.2	4.5	531
Switzerland	1.4	4.3	597
Turkey	7.7	8.4	6416
UK	1.3	28.1	3581
USA	2.0	207.6	41471
OECD median	2.0		

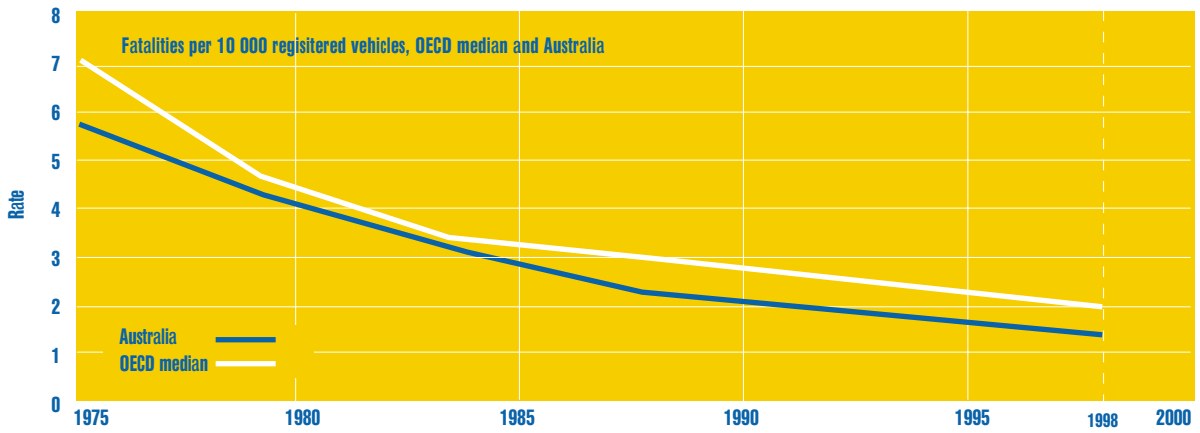
Fatalities per 10 000 registered vehicles: historical trends

Road fatalities relative to vehicle ownership declined significantly in Australia between 1975 and 1998.

In 1975, there were 5.8 deaths per 10 000 registered vehicles in Australia. In 1998 this had decreased to 1.5.

The median rate for the OECD nations reported also declined. In 1975, the OECD median was 7.2, by 1998 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

	1975	1980	1985	1990	1995	1998
Australia	5.8	4.3	3.2	2.3	1.8	1.5
Austria	11.6	7.2	4.8	4.2	2.7	2.0
Belgium	7.5	6.4	4.5	4.3	2.8	2.8
Canada	5.3	4.0	3.0	2.3	2.0	1.6
Czech Republic	-	4.8	3.4	4.0	4.1	3.0
Denmark	5.0	3.7	4.1	3.1	2.7	2.1
Finland	7.2	4.0	3.1	2.9	2.0	1.7
France	8.1	6.3	4.6	4.2	3.1	-
Germany	7.2	4.9	2.9	2.6	2.0	1.6
Greece	17.0	10.6	9.9	7.4	6.7	5.1
Hungary	12.6	9.0	9.0	11.2	6.0	5.1
Iceland	-	2.8	2.1	1.7	1.8	1.7
Ireland	8.6	6.2	4.5	4.5	3.5	3.0
Italy	6.0	4.7	3.1	2.3	1.9	1.7
Japan	4.3	2.7	2.4	2.4	1.8	1.4
Korea	238.8	95.4	54.5	36.8	12.5	8.0
Luxemburg	11.7	6.4	4.0	3.3	2.5	1.9
Netherlands	6.3	4.3	2.8	2.3	2.0	1.5
New Zealand	4.3	3.5	3.9	3.3	2.5	2.2
Norway	-	2.4	2.2	1.5	1.3	1.4
Poland	14.4	10.9	6.6	8.1	6.2	5.6
Portugal	26.1	15.2	9.2	7.7	4.8	3.1
Spain	9.0	6.4	5.4	5.8	3.1	2.8
Sweden	3.8	2.5	2.2	1.8	1.3	1.2
Switzerland	5.8	4.5	2.7	2.4	1.7	1.4
Turkey	-	-	-	-	-	7.7
UK	3.9	3.4	2.5	2.2	1.5	1.3
USA	3.2	3.2	2.6	2.4	2.1	2.0
OECD median	7.2	4.7	3.4	3.1	2.5	2.0

BENCHMARKING: INTERNATIONAL COMPARISONS

Fatalities per 100 million vehicle kilometres travelled: current year

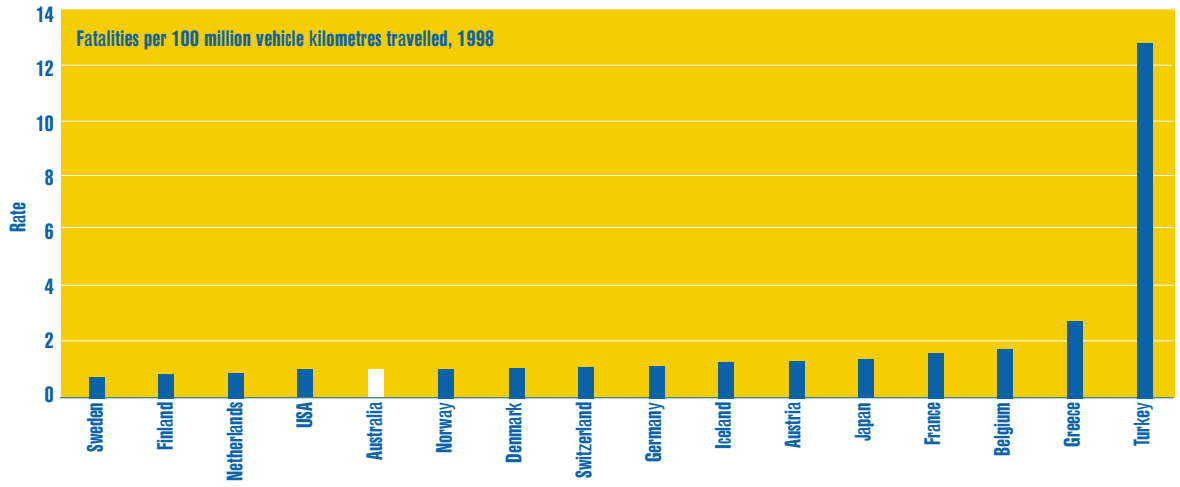
The number of deaths for every 100 million vehicle kilometres travelled is a direct measure of the risk associated with road travel.

In 1998, Australia recorded 1.0 deaths per 100 million vehicle kilometres travelled. Australia ranked equal fourth out of 16 OECD nations for which data is avaliable.

Of those OECD countries for which 1998 rates are available, Sweden had the lowest rate, recording 0.8 deaths per 100 million vehicle kilometres travelled.

Turkey, with 12.8 deaths per 100 million vehicle kilometres travelled, had the highest rate of the OECD nations in 1998.

The OECD median number of deaths per 100 million vehicle kilometres travelled for 1998 was 1.2.



Vehicle kilometres travelled, 1998

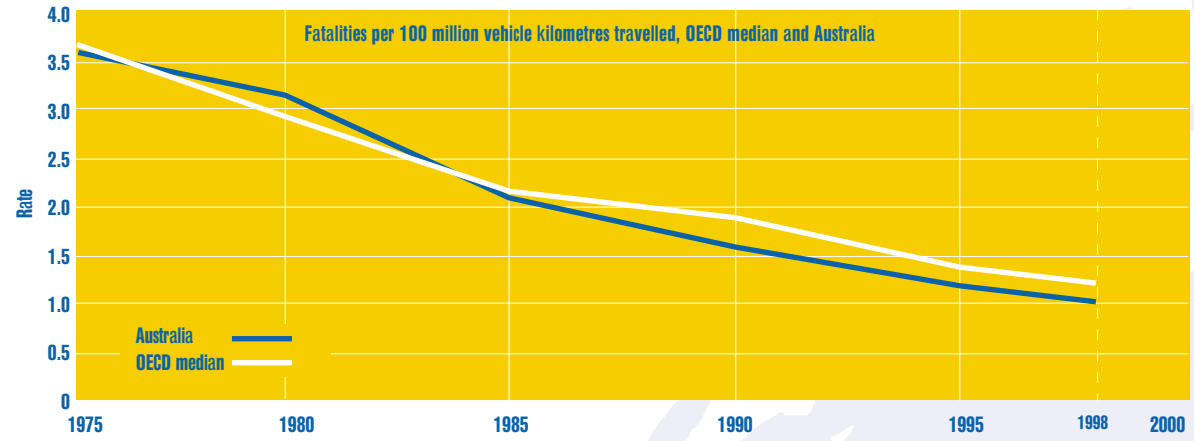
	Fatalities per 100 million vehicle kms travelled	Total vehicle kms travelled (100 million)	Total number killed		Fatalities per 100 million vehicle kms travelled	Total vehicle kms travelled (100 million)	Total number killed
Australia	1.0	1733	1763	Korea	-	-	10416
Austria	1.4	701	963	Luxemberg	-	-	57
Belgium	1.7	861	1500	Netherlands	0.9	1150	1066
Canada	-	-	2934	New Zealand	-	-	502
Czech Republic	-	-	1360	Norway	1.1	317	352
Denmark	1.1	444	499	Poland	-	-	7080
Finland	0.9	448	400	Portugal	-	-	2126
France	1.7	5310	8918	Spain	-	-	5957
Germany	1.2	6272	7792	Sweden	0.8	674	531
Greece	2.7	816	2226	Switzerland	1.1	529	597
Hungary	-	-	1371	Turkey	12.8	499	6416
Iceland	1.4	20	27	UK	-	-	3581
Ireland	-	-	458	USA	1.0	42251	41471
Italy	-	-	6326				
Japan	1.4	7460	10805	OECD median	1.2		

Fatalities per 100 million vehicle kilometres travelled: 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 deaths per 100 million vehicle kilometres travelled in Australia. In 1998 this had decreased to 1.0.

The median rate for the OECD nations reported also declined, from 3.7 in 1975 to 1.2 in 1998. For the years reported from 1975 to 1998, Australia's rate was comparable to the OECD median.



Fatalities per 100 million vehicle kilometres travelled

	1975	1980	1985	1990	1995	1998		1975	1980	1985	1990	1995	1998
Australia	3.6	3.2	2.1	1.4	1.2	1.0	Korea	-	-	-	-	-	-
Austria	8.3	5.6	3.8	2.8	1.9	1.4	Luxemburg	-	-	-	-	-	-
Belgium	6.2	5.0	3.4	2.8	1.8	1.7	Netherlands	-	2.7	1.8	1.4	1.2	0.9
Canada	-	-	-	-	-	-	New Zealand	-	-	-	-	-	-
Czech Republic	-	5.9	4.5	5.2	4.9	-	Norway	3.5	1.9	1.7	1.2	1.0	1.1
Denmark	3.1	2.5	2.6	1.7	1.4	1.1	Poland	-	-	-	-	-	-
Finland	3.7	2.1	1.7	1.6	1.0	0.9	Portugal	-	-	-	-	-	-
France	5.9	4.4	3.3	2.6	1.8	1.7	Spain	-	-	-	-	-	-
Germany	-	3.7	2.4	2.0	1.6	1.2	Sweden	2.7	1.6	1.5	1.2	0.9	0.8
Greece	-	-	-	-	3.5	2.7	Switzerland	3.6	3.1	2.0	1.9	1.4	1.1
Hungary	-	-	-	-	-	-	Turkey	-	-	-	-	-	12.8
Iceland	-	2.1	1.8	1.4	1.3	1.4	UK	-	-	-	-	0.8	-
Ireland	-	2.8	-	1.9	1.4	-	USA	2.1	2.1	-	1.3	1.1	1.0
Italy	-	-	-	-	-	-							
Japan	4.9	2.9	2.8	2.3	1.8	1.4	OECD median	3.7	2.9	2.2	1.9	1.4	1.2

EXTERNAL CAUSES OF DEATH IN AUSTRALIA

Data sources

The International Classification of Diseases 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, a supplementary code, the External Cause of Injury code (or E code), is used to describe the circumstance leading to the injury that caused death. E codes are standardised internationally and allow direct comparisons of external causes of death both within and between countries.

External causes of death data were supplied by the Australian Bureau of Statistics using the International Classification of Diseases supplementary E codes E800 - E999 for the years 1975, 1980, 1985, 1990, 1995 and 1998.

The data reported for 1975 were coded according to the eighth revision of the International Classification of Diseases (ICD-8) which was current from 1968 to 1978. Data reported for 1980 to 1998 were coded according to the ninth revision of the International Classification of Diseases (ICD-9) which was introduced in 1979 and was current in Australia until 1998.

For more comprehensive data on all causes of death refer to the Australian Bureau of Statistics annual publication *Causes of Death* (catalogue no. 3303.0).

DEFINITIONS

External causes of death were split into six categories, according to the coding in ICD-9:

- Motor vehicle traffic accidents (E810 - E819);
- Accidental falls (E880 - E888);
- Accidental drowning and submersion (E910);
- Suicide (E950 - E959);
- Homicide (E960 - E969); and
- All other external causes of death (Remainder of E800 - E999) including:
  - E830-838 Water transport accidents
  - E840-845 Air and space transport accidents
  - E850-869 Accidental poisoning
  - E890-899 Accidents caused by fire and flames
  - E900-909 Accidents due to natural and environmental factors
  - E970-978 Legal intervention
  - E990-999 Injury resulting from operations of war.

NOTES

For the purposes of reporting road crashes as a cause of death in Australia, road crashes have been defined here as events covered by E codes *E810 - E819,* as is also the case in material published by the Australian Bureau of Statistics. The scope of these codes is not fully consistent with the scope specified by ATSB when compiling the national road toll, and therefore road crash figures provided here do not necessarily equate with those based on ATSB data.

For example, codes *E817 Noncollision motor vehicle traffic accident while boarding or alighting* and *E818 Other noncollission motor vehicle traffic accident* contain examples of crashes which are not counted as part of the national road toll. However, *E826 Pedal cycle accident*, *E827 Animal-drawn vehicle accident* and *E828 Accident involving animal being ridden* contain examples of crashes which are counted as part of the national road toll.

Furthermore, road deaths are reported by the Australian Bureau of Statistics according to the date of death, whereas ATSB report road deaths according to the date of the crash.

BENCHMARKING: EXTERNAL CAUSES OF DEATH

External causes of death in Australia: current year

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

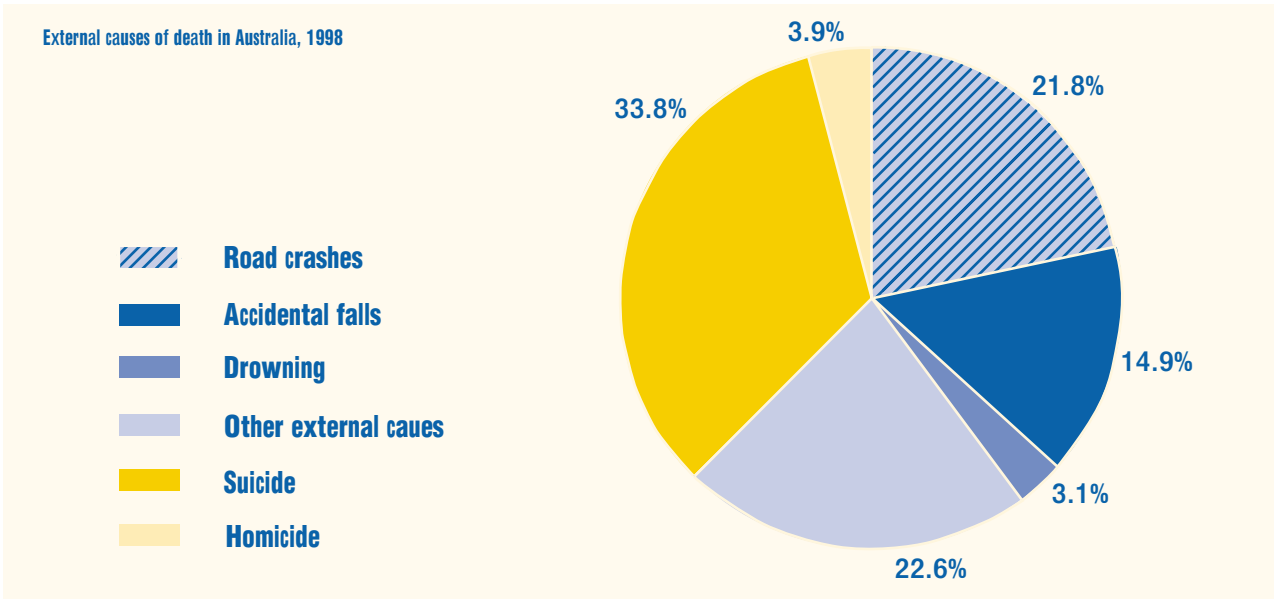
Deaths from external causes includes those resulting from accidents and from intentional acts, ie homicide and suicide.

In 1998 road crashes accounted for 21.8% of all external causes of death and 34.9% of all accidental deaths.

Suicide accounted for the largest proportion of deaths (33.8%) due to external causes.

Other external causes accounted for the largest proportion of accidental deaths (36.3%).

External causes of death in Australia, 1998



	No.	% of subtotal	% of total
Accidental			
Road crashes	1731	34.9%	21.8%
Accidental falls	1182	23.8%	14.9%
Accidental drowning and submersion	245	4.9%	3.1%
Other external causes	1798	36.3%	22.6%
Subtotal	**4956**	**100.0%**	
Intentional			
Suicide	2683	89.7%	33.8%
Homicide	307	10.3%	3.9%
Subtotal	**2990**	**100.0%**	
Total	**7946**		

External causes of death in Australia: historical trends

Road crashes as an external cause of death declined significantly between 1975 and 1998. In fact, deaths related to road crashes had the highest rate of decrease of all external causes of death.

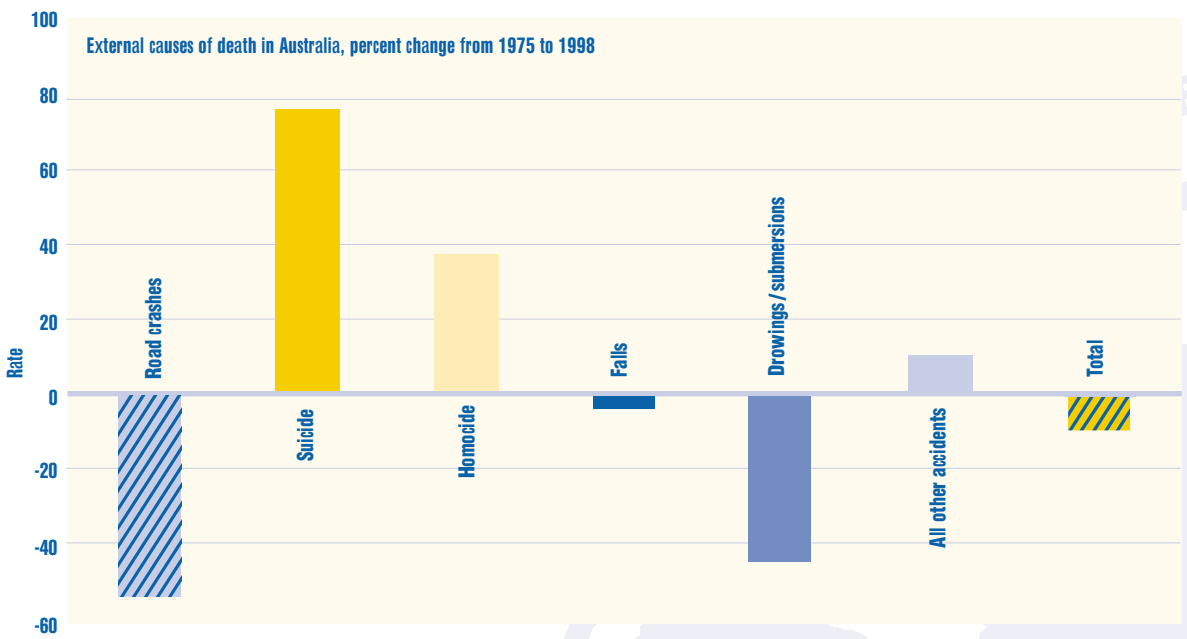
- In absolute terms, road crash deaths declined by 53.1% between 1975 and 1998.

Suicide increased over the period by 75.6%, the largest increase of any category.

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

- In 1975, 3689 deaths were due to road crashes and 1528 were due to suicide.
- In 1998, 1731 deaths were due to road crashes and 2683 were due to suicide.

External causes of death in Australia, percent change from 1975 to 1998



External causes of death in Australia

	1975	1980	1985	1990	1995	1998	% change 1975-1998
Road crashes	3689	3478	2933	2489	2029	1731	-53.1%
Suicide	1528	1607	1827	2161	2367	2683	75.6%
Homicide	224	280	314	385	333	307	37.1%
Accidental falls	1199	964	936	1030	995	1182	-1.4%
Accidental drowning and submersion	435	341	294	300	259	245	-43.7%
Other external causes	1638	1582	1515	1570	1430	1798	9.8%
Total	**8713**	**8252**	**7819**	**7935**	**7413**	**7946**	**-8.8%**

DETAILED TABLES

DEFINITIONS

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 Availablilty, 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 on the IRTAD database.

These nations include:

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

NOTES

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.

Historical information reported for Germany is as provided by IRTAD and includes correction factors as they applied to East and West Germany prior to unification on 3 October 1990.

Where the information was not available for a particular country against each of the rates provided, they were excluded from calculating the OECD median.

Fatalities per 100 million vehicle kilometres travelled for more recent years for Australia and the States and Territories are reported against the years in which it was available.

Data sources

Figures provided for all OECD nations, with the exception of Australia, were derived from the International Road Traffic and Accident Database (IRTAD) using IRTAD PC Version 2.0 18/07/00 © Copyright Bundesanstalt fur Strassenwesen (BASt) D - 51401 Bergisch Gladbach, Germany.

The Australian Transport Safety Bureau subscribes to BASt for the supply of the IRTAD database.

Australia, States and Territories

Sources for Australian figures are provided below.

1975–1997

Road fatalities per 100 000 population were taken from the ATSB publication *Road Fatalities Australia 1998 Statistical Summary*, Table 8, *Road Fatalities Australia 1993 Statistical Summary*, Table 16 and *Road Fatalities Australia 1992*, Table 20.

Road fatalities per 10 000 registered vehicles for 1975 to 1995 were taken from the ATSB publication *Road Fatalities Australia 1996 Statistical Summary*, Table 8 and *Road Fatality Statistics Australia 1992* Table 20. For 1996 and 1997 these rates were derived from the same sources as the 1998 rates described below.

Road fatalities per 100 million vehicle kilometres travelled were also taken from the ATSB publication *Road Fatalities Australia 1998 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, 1985, 1988, 1991 and 1995 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.

1998

Road fatality rates per 100 000 population were derived from the following population and road fatality counts.

Population figures as at 30 June 1998 were extracted from the June 1999 issue of the quarterly Australian Bureau of Statistics publication *Australian Demographic Statistics* (catalogue no. 3101.0). Road fatality counts were derived from the ATSB publication *Road Fatalities Australia Monthly Bulletin, December 1999.*

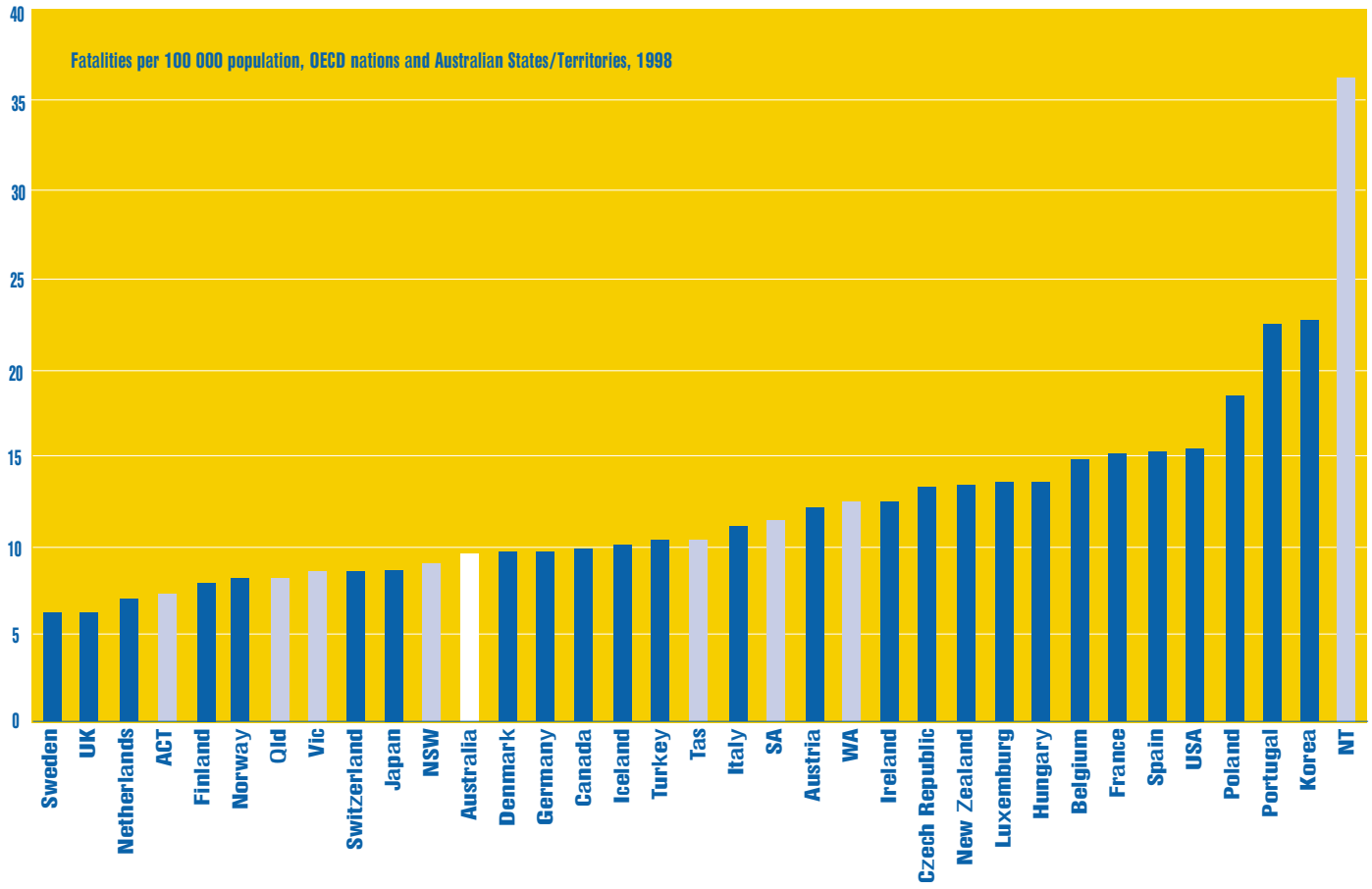
Road fatality rates per 10 000 registered vehicles were derived from the following counts of registered vehicles and road fatalities.

Vehicle figures as at 31 October 1998 were extracted from the October 1999 issue of the annual Australian Bureau of Statistics publication *Motor Vehicle Census* (catalogue no. 9309.0). Road fatality counts were derived from the ATSB publication *Road Fatalities Australia Monthly Bulletin, December 1999.*

Kilometres travelled figures were extracted from the Australian Bureau of Statistics *Survey of Motor Vehicle Use* for the twelve months ending 31st July 1998. Road fatality counts were derived from the ATSB publication *Road Fatalities Australia Monthly Bulletin, December 1999.*

ATSB Australian Transport Safety Bureau

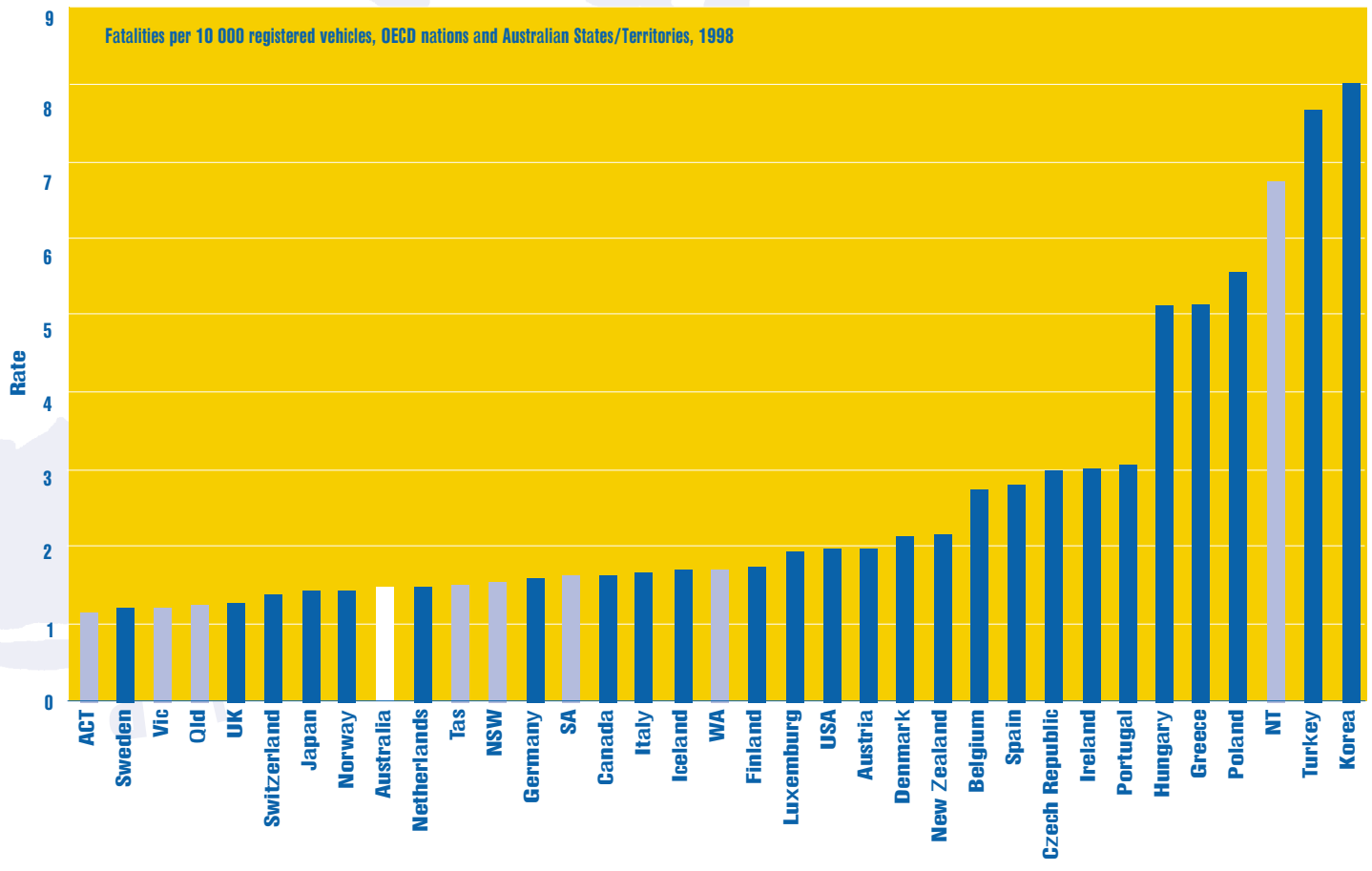
BENCHMARKING: INTERNATIONAL AND DOMESTIC COMPARISONS



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

	1975	1980	1985	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Australia	**26.6**	**22.3**	**18.6**	**17.4**	**16.7**	**13.7**	**12.2**	**11.3**	**11.1**	**10.8**	**11.2**	**10.8**	**9.5**	**9.4**
Austria	33.4	26.5	20.1	21.3	20.6	20.3	20.0	17.8	16.1	16.7	15.1	12.8	13.7	11.9
Belgium	24.0	24.3	18.3	19.9	20.1	19.9	18.8	16.7	16.5	16.8	14.3	13.4	13.4	14.7
Canada	26.7	22.7	17.3	16.0	16.2	14.9	13.7	12.3	12.6	11.2	11.4	10.4	10.2	9.7
Czech Republic	16.3	12.2	9.6	9.2	10.4	12.5	12.8	14.9	14.8	15.8	15.4	15.2	15.5	13.2
Denmark	16.4	13.5	15.1	13.9	13.1	12.3	11.8	11.2	10.8	10.5	11.2	9.8	9.3	9.4
Finland	19.4	11.5	11.1	13.2	14.8	13.0	12.6	12.0	9.6	9.5	8.6	7.9	8.5	7.8
France	27.3	25.4	20.7	20.6	20.5	19.9	18.5	17.3	16.6	15.6	15.3	14.7	14.4	15.1
Germany	22.0	19.3	13.0	12.7	12.5	14.0	14.2	13.2	12.3	12.1	11.6	10.7	10.4	9.5
Greece	13.8	15.0	20.2	17.8	19.9	20.2	20.6	20.9	20.8	21.6	23.1	19.6	20.9	-
Hungary	16.0	15.2	16.5	16.1	20.4	23.4	20.5	20.3	16.3	15.2	15.5	13.4	13.7	13.5
Iceland	-	11.0	10.0	11.7	11.1	9.4	10.5	8.1	6.4	4.5	9.0	3.7	5.5	9.8
Ireland	18.4	16.6	11.6	13.1	13.1	13.6	12.6	11.7	12.1	11.4	12.1	12.4	12.8	12.4
Italy	18.6	16.4	13.5	13.1	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	11.0	11.7	11.8	11.6	12.0	10.6	10.2	10.1	9.3	8.9	8.5
Korea	12.6	17.2	21.4	32.0	34.5	33.4	36.0	31.0	27.4	26.3	26.6	32.3	29.3	22.6
Luxemburg	-	27.0	21.6	22.6	17.9	18.5	20.8	18.7	19.2	16.5	17.0	17.2	14.4	13.4
Netherlands	17.1	14.2	9.9	9.3	9.8	9.2	8.5	8.5	8.2	8.5	8.6	7.6	7.5	6.8
New Zealand	20.3	18.9	22.7	21.7	22.7	21.5	19.0	18.8	17.2	16.5	16.2	14.1	14.4	13.3
Norway	13.5	8.9	9.7	9.0	9.0	7.8	7.6	7.6	6.5	6.5	7.0	5.8	6.9	8.0
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
Portugal	39.5	31.5	25.2	33.7	31.5	32.2	34.4	32.9	28.7	26.6	28.8	28.9	26.7	22.4
Spain	16.6	17.6	16.6	21.3	24.1	23.2	22.7	20.1	16.3	14.4	14.7	14.0	14.3	15.1
Sweden	14.3	10.2	9.7	9.7	10.7	9.1	8.7	8.8	7.3	6.7	6.5	6.1	6.1	6.0
Switzerland	19.0	19.2	13.6	14.0	13.6	13.9	12.4	12.2	10.5	9.7	9.9	8.7	8.3	8.4
Turkey	-	-	14.3	17.3	15.2	14.8	14.4	14.1	14.3	-	-	-	10.6	10.1
UK	11.9	11.1	9.4	9.2	9.7	9.4	8.2	7.5	6.8	6.5	6.4	6.4	6.3	6.0
USA	20.7	22.5	18.4	19.2	18.5	17.9	16.4	15.4	15.6	15.6	15.9	15.9	15.7	15.3
OECD median	**18.4**	**16.8**	**14.7**	**16.0**	**15.2**	**14.4**	**14.1**	**14.1**	**13.5**	**12.4**	**12.3**	**12.4**	**12.2**	**11.0**
New South Wales	26.1	25.2	19.5	18.3	16.6	13.7	11.2	10.9	9.7	10.7	10.1	9.4	9.2	8.8
Victoria	24.0	16.8	16.6	16.2	18.0	12.5	11.4	8.9	9.7	8.4	9.3	9.1	8.2	8.4
Queensland	31.0	24.6	19.5	19.7	15.1	13.8	13.3	13.7	12.7	13.1	13.9	11.5	10.6	8.1
South Australia	26.8	20.6	19.5	15.8	15.6	15.8	12.7	11.3	14.9	10.8	12.3	12.3	10.0	11.3
Western Australia	26.3	23.1	17.1	14.9	15.3	12.2	12.7	12.1	12.5	12.4	12.1	14.0	11.0	12.3
Tasmania	29.8	23.6	17.6	16.7	17.6	15.4	16.5	15.8	12.3	12.5	12.1	13.5	6.8	10.2
Northern Territory	68.9	53.3	45.1	32.1	37.8	41.5	40.5	32.3	26.0	24.0	35.1	39.6	32.1	36.3
Australian Capital Territory	16.1	13.4	13.1	11.7	11.6	9.2	5.9	6.8	4.0	5.7	4.9	7.5	5.5	7.1

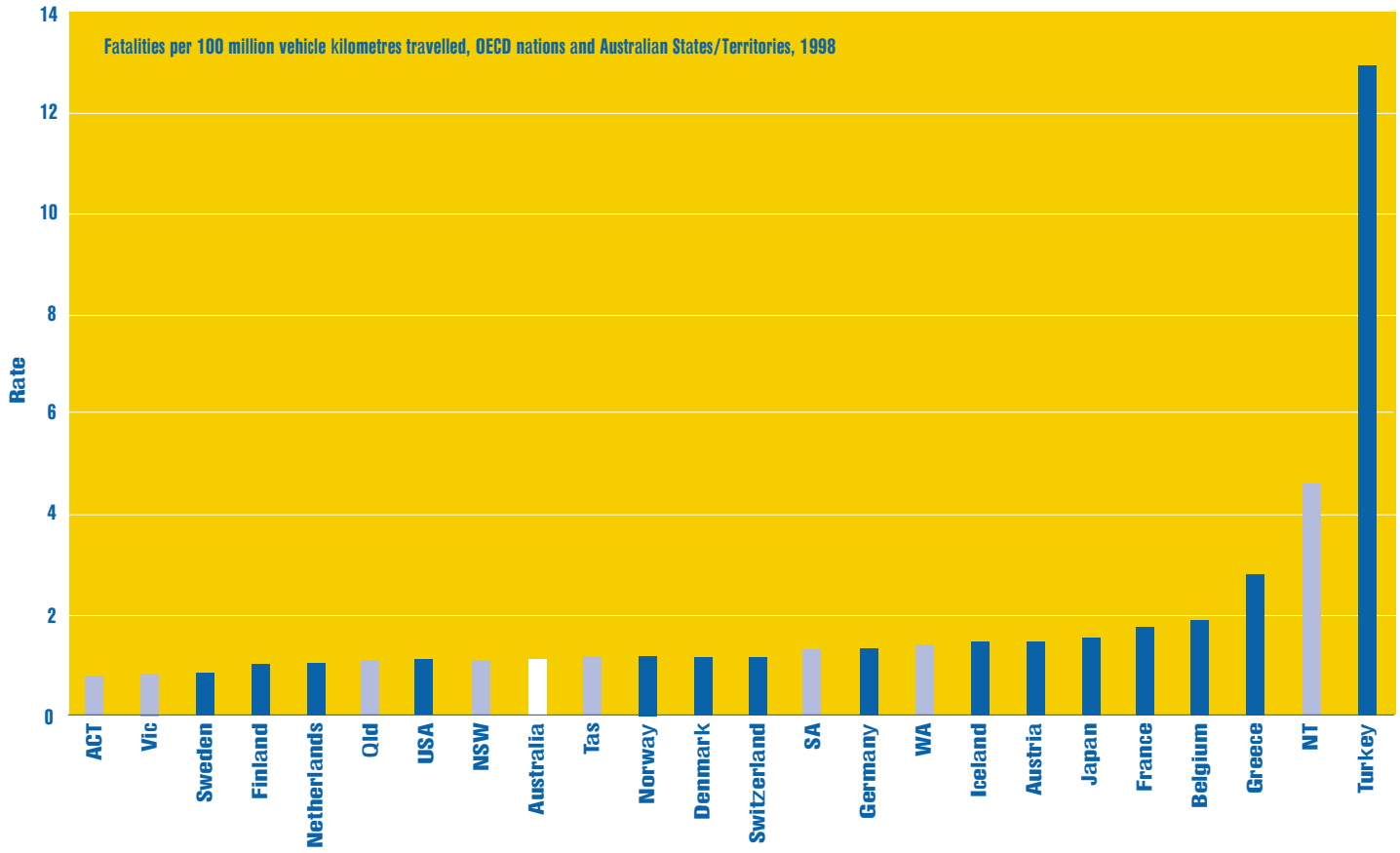
BENCHMARKING: INTERNATIONAL AND DOMESTIC COMPARISONS



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

	1975	1980	1985	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Australia	5.8	4.3	3.2	3.0	2.9	2.3	2.1	1.9	1.9	1.8	1.8	1.7	1.5	1.5
Austria	11.6	7.2	4.8	4.7	4.4	4.2	4.1	3.6	3.1	3.1	2.7	2.3	2.4	2.0
Belgium	7.5	6.4	4.5	4.6	4.5	4.3	4.0	3.5	3.4	3.4	2.8	2.6	2.6	2.8
Canada	5.3	4.0	3.0	2.5	2.5	2.3	2.2	2.1	2.2	1.9	2.0	1.8	1.7	1.6
Czech Republic	-	4.8	3.4	3.1	3.5	4.0	4.0	4.5	4.4	4.5	4.1	3.9	3.7	3.0
Denmark	5.0	3.7	4.1	3.5	3.2	3.1	2.9	2.8	2.7	2.6	2.7	2.3	2.2	2.1
Finland	7.2	4.0	3.1	3.3	3.5	2.9	2.8	2.6	2.1	2.2	2.0	1.8	1.9	1.7
France	8.1	6.3	4.6	4.5	4.4	4.2	3.9	3.6	3.4	3.2	3.1	3.0	2.9	-
Germany	7.2	4.9	2.9	2.5	2.5	2.6	2.6	2.4	2.2	2.1	2.0	1.8	1.7	1.6
Greece	17.0	10.6	9.9	7.4	7.8	7.4	7.3	-	6.8	6.7	6.7	5.4	5.4	5.1
Hungary	12.6	9.0	9.0	7.4	8.8	11.2	8.8	8.5	6.7	6.1	6.0	5.0	5.0	5.1
Iceland	-	2.8	2.1	2.2	2.0	1.7	2.0	1.5	1.3	0.9	1.8	0.7	1.0	1.7
Ireland	8.6	6.2	4.5	4.7	4.5	4.5	4.0	3.7	3.7	3.4	3.5	3.4	3.3	3.0
Italy	6.0	4.7	3.1	2.6	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	2.4	2.2	2.2	1.9	1.8	1.8	1.6	1.5	1.4
Korea	238.8	95.4	54.5	52.5	47.6	36.8	32.3	23.0	17.1	14.1	12.5	13.5	11.1	8.0
Luxemburg	11.7	6.4	4.0	4.0	3.2	3.3	3.6	3.1	3.1	2.5	2.5	2.5	2.1	1.9
Netherlands	6.3	4.3	2.8	2.5	2.5	2.3	2.1	2.1	2.0	2.0	2.0	1.7	1.7	1.5
New Zealand	4.3	3.5	3.9	3.6	3.6	3.3	2.9	2.9	2.7	2.5	2.5	2.2	2.3	2.2
Norway	-	2.4	2.2	1.7	1.7	1.5	1.5	1.5	1.3	1.2	1.3	1.1	1.3	1.4
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
Portugal	26.1	15.2	9.2	10.0	8.6	7.7	7.6	6.7	5.4	4.7	4.8	4.5	3.9	3.1
Spain	9.0	6.4	5.4	5.9	6.3	5.8	5.3	4.5	3.6	3.1	3.1	2.8	2.8	2.8
Sweden	3.8	2.5	2.2	2.0	2.2	1.8	1.7	1.7	1.5	1.4	1.3	1.2	1.2	1.2
Switzerland	5.8	4.5	2.7	2.7	2.5	2.4	2.1	2.1	1.8	1.7	1.7	1.5	1.4	1.4
Turkey	-	-	-	-	-	-	-	-	-	-	-	-	8.7	7.7
UK	3.9	3.4	2.5	2.2	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	2.5	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0
OECD median	7.2	4.7	3.4	3.2	3.2	3.1	2.9	2.7	2.7	2.5	2.5	2.2	2.1	2.0
New South Wales	6.0	5.2	3.6	3.4	3.0	2.5	2.2	2.0	1.8	2.0	1.9	1.7	1.6	1.5
Victoria	5.4	3.4	2.8	2.7	3.0	2.1	1.8	1.5	1.6	1.3	1.5	1.4	1.2	1.2
Queensland	6.8	4.4	3.3	3.3	2.5	2.3	2.4	2.3	2.1	2.1	2.2	1.8	1.7	1.3
South Australia	5.5	3.8	3.3	2.6	2.6	2.6	2.2	1.9	2.4	1.8	1.9	1.8	1.5	1.6
Western Australia	5.3	3.9	2.8	2.5	2.5	1.9	2.0	1.9	1.9	1.9	1.8	2.0	1.6	1.7
Tasmania	6.2	4.4	2.9	2.7	2.8	2.4	2.6	2.4	1.9	1.8	1.8	2.0	1.0	1.5
Northern Territory	13.9	13.5	9.3	6.9	8.0	8.6	8.3	6.7	5.3	4.5	6.8	7.5	6.1	6.8
Australian Capital Territory	3.0	2.8	2.6	2.3	2.2	1.6	1.1	1.2	0.7	0.9	0.8	1.2	0.9	1.1

BENCHMARKING: INTERNATIONAL AND DOMESTIC COMPARISONS



Fatalities per 100 million vehicle kilometres travelled - OECD nations and Australian States/Territories

	1975	1980	1985	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Australia	**3.6**	**3.2**	**2.1**	**1.9**	**-**	**1.4**	**1.4**	**-**	**-**	**-**	**1.2**	**-**	**-**	**1.0**
Austria	8.3	5.6	3.8	3.2	2.9	2.8	2.7	2.3	2.1	2.1	1.9	1.5	1.6	1.4
Belgium	6.2	5.0	3.4	3.0	2.9	2.8	2.5	2.2	2.2	2.1	1.8	1.7	1.6	1.7
Canada	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	-	5.9	4.5	-	-	5.2	-	-	-	-	4.9	-	-	-
Denmark	3.1	2.5	2.6	2.0	1.9	1.7	1.6	1.5	1.4	1.4	1.4	1.2	1.1	1.1
Finland	3.7	2.1	1.7	1.8	1.9	1.6	1.6	1.4	1.2	1.2	1.0	1.0	1.0	0.9
France	5.9	4.4	3.3	2.9	2.7	2.6	2.3	2.1	2.0	1.9	1.8	1.7	1.6	1.7
Germany	-	3.7	2.4	1.9	1.9	2.0	2.0	1.8	1.7	1.7	1.6	1.4	1.4	1.2
Greece	-	-	-	-	-	-	-	-	3.4	3.4	3.5	2.8	2.9	2.7
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	-	2.1	1.8	1.7	1.6	1.4	1.4	1.1	0.9	0.6	1.3	0.5	0.8	1.4
Ireland	-	2.8	-	2.1	1.9	1.9	1.8	1.6	1.6	1.4	1.4	1.3	-	-
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Japan	4.9	2.9	2.8	2.8	2.9	2.3	2.2	2.2	1.9	1.8	1.8	1.6	1.5	1.4
Korea	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxemburg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	2.7	1.8	1.5	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	1.4	1.2	1.2	1.2	1.0	1.0	1.0	0.8	1.0	1.1
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	2.7	1.6	1.5	1.3	1.4	1.2	1.1	1.2	1.0	0.9	0.9	0.8	0.8	0.8
Switzerland	3.6	3.1	2.0	1.9	1.8	1.9	1.6	1.7	1.5	1.4	1.4	1.2	1.1	1.1
Turkey	-	-	-	-	-	-	-	-	-	-	-	-	13.9	12.8
UK	-	-	-	-	-	-	1.1	1.0	0.9	0.9	0.8	0.8	0.8	-
USA	2.1	2.1	-	1.5	1.4	1.3	-	1.1	1.1	1.1	1.1	1.1	1.0	1.0
OECD median	**3.6**	**2.9**	**2.2**	**1.9**	**1.9**	**1.9**	**1.6**	**1.5**	**1.5**	**1.4**	**1.4**	**1.2**	**1.1**	**1.2**
New South Wales	3.8	3.5	2.3	2.1	-	-	1.4	-	-	-	1.2	-	-	1.0
Victoria	3.3	2.8	1.8	1.6	-	-	1.2	-	-	-	1.0	-	-	0.8
Queensland	3.9	3.5	2.2	2.2	-	-	1.5	-	-	-	1.4	-	-	1.0
South Australia	3.2	3.0	2.2	1.7	-	-	1.4	-	-	-	1.4	-	-	1.2
Western Australia	3.2	2.4	1.7	1.5	-	-	1.3	-	-	-	1.2	-	-	1.3
Tasmania	3.9	3.1	2.0	1.9	-	-	2.0	-	-	-	1.3	-	-	1.1
Northern Territory	9.2	7.5	5.4	4.8	-	-	4.6	-	-	-	4.0	-	-	4.5
Australian Capital Territory	2.3	1.4	1.6	1.4	-	-	0.6	-	-	-	0.5	-	-	0.7

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BENCHMARKING ROAD SAFETY