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Australian Transport Safety Bureau

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International Road Safety Comparisons: the 2005 report

**A comparison of road safety statistics in
OECD nations and Australia**

**Australian Transport Safety Bureau
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Abstract

The International Road Safety Comparisons report presents detailed tables of road death rates for Organisation for Economic Co-operation and Development (OECD) nations and Australian states/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.

Note

ATSB reports are disseminated in the interest of information exchange.

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EXECUTIVE SUMMARY

The *International Road Safety Comparisons* report presents detailed tables of road death rates for Organisation for Economic Co-operation and Development (OECD) nations and Australian states/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.

Among the OECD nations for which 2005 data were available, Australia had:

- 11th lowest rate of 26 nations in terms of road deaths per 100,000 population (8.0 deaths);
- 9th lowest rate of 25 nations in terms of road deaths per 10,000 registered vehicles (1.2 deaths); and
- 7th lowest rate of 15 nations in terms of road deaths per 100 million vehicle kilometres travelled (0.8 deaths).

Overall, of the OECD nations for which 2005 data were available:

- Netherlands recorded the lowest rate of road deaths per 100,000 population (4.6 deaths);
- Norway recorded the lowest rate of road deaths per 10,000 registered vehicles (0.8 deaths); and
- Sweden recorded the lowest rate of road deaths per 100 million vehicle kilometres travelled (0.6 deaths).

When compared with the OECD median in 2005:

- Australia's road death rate of 8.0 per 100,000 population was below the OECD median of 9.5;
- Australia's road death rate of 1.2 per 10,000 registered vehicles was below the OECD median of 1.4; and
- Australia's road death rate of 0.8 per 100 million vehicle kilometres travelled was below the OECD median of 0.9.

Within Australia in 2005:

- Victoria performed better than any other Australian state/territory across the range of the three specific road death rates:
 - 6.9 deaths per 100,000 population;
 - 0.9 deaths per 10,000 registered vehicles; and
 - 0.7 deaths per 100 million vehicle kilometres travelled.
- Northern Territory recorded the highest road death rates among Australian states/territories:
 - 27.0 deaths per 100,000 population;
 - 5.0 deaths per 10,000 registered vehicles; and
 - 3.4 deaths per 100 million vehicle kilometres travelled.

DATA SOURCES

International data

Data provided for OECD nations—with the exception of Australia—were mostly derived from the International Road Traffic and Accident Database (IRTAD) website. IRTAD is maintained by the OECD/ECMT (European Conference of Ministers of Transport) Joint Transport Research Committee.

Each year member nations supply OECD/ECMT with the most recent data available, in addition to any revisions to historical data. The information provided in this document is therefore subject to revision with each successive report in the series.

Further information on IRTAD is available at <<http://www.irtad.net>>.

In a small number of cases, where recent data were not available from IRTAD, member countries were contacted directly or data were extracted from the country's relevant government website.

Australian data

The Australian Transport Safety Bureau gratefully acknowledges the provision of police road crash data from: Roads and Traffic Authority, New South Wales; VicRoads, Victoria; Queensland Transport; Department for Transport, Energy & Infrastructure, South Australia; Western Australian Police Service; Department of Infrastructure Energy and Resources, Tasmania; Northern Territory Police, Fire and Emergency Services; and Department of Territory & Municipal Services, Australian Capital Territory.

Australian state and territory road death data were extracted from the Australian Transport Safety Bureau's online *Fatal Road Crash Database* <http://www.atsb.gov.au/road/road_fatality_statistics/fatal_road_crash_database.aspx>.

Population information was obtained from the Australian Bureau of Statistics' publication *Australian Demographic Statistics*.

Registered vehicle information was obtained from the Australian Bureau of Statistics' publication *Motor Vehicle Census*. However, as no survey was carried out in 2000, and in order to compare Australian rates with international rates for the year 2000, data were linearly interpolated from 1999 and 2001 figures.

Vehicle kilometres travelled information was obtained from the Australian Bureau of Statistics' publication *Survey of Motor Vehicle Use*. Surveys on vehicle kilometres travelled were conducted in 1976, 1979, 1982, 1991, 1995, and annually from 1998 onwards. In order to compare Australian rates with international rates across a fuller range of years, the following substitutions were incorporated into the vehicle kilometres travelled data: 1976 figures were provided against 1975; 1979 figures were provided against 1980; and 1991 figures were provided against 1990.

1 INTRODUCTION

1.1 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.”

1.2 Nations that comply with the definition

Nations that comply with this definition include:

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

1.3 Nations that do not comply with the definition

Nations that do not comply with this definition have correction factors applied to their death figures by the ECMT Transport Research Centre to ensure consistency within the IRTAD database. These nations include:

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

2.1 Death rates per population, 2005

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

Table 1: Road deaths per 100,000 population, OECD nations, OECD median, and Australian states/territories, 2005

	Road deaths per 100,000 population	Population (millions)	Road deaths
Australia	8.0	20.3	1,627
Austria	9.3	8.2	768
Belgium	10.4	10.4	1,089
Canada	9.1	32.3	2,925
Czech Republic	12.6	10.2	1,286
Denmark	6.1	5.4	331
Finland	7.2	5.2	379
France	8.8	60.6	5,318
Germany	6.5	82.5	5,361
Great Britain	5.5	58.5	3,201
Greece	15.0	11.1	1,658
Hungary	12.7	10.1	1,278
Iceland	6.3	0.3	19
Ireland	9.5	4.2	396
Italy	-	-	-
Japan	6.2	127.8	7,931
Luxembourg	-	-	-
Netherlands	4.6	16.3	750
New Zealand	9.9	4.1	405
Norway	4.9	4.6	224
Poland	14.3	38.2	5,444
Portugal	11.8	10.6	1,247
Slovakia	-	-	-
Slovenia	12.9	2.0	258
South Korea	13.2	48.3	6,376
Spain	10.2	43.5	4,442
Sweden	4.9	9.0	440
Switzerland	5.5	7.4	409
Turkey	-	-	-
United States of America	14.7	296.4	43,443
OECD median	9.5		
New South Wales	7.5	6.8	508
Victoria	6.9	5.0	346
Queensland	8.3	4.0	330
South Australia	9.6	1.5	148
Western Australia	8.1	2.0	163
Tasmania	10.5	0.5	51
Northern Territory	27.0	0.2	55
Australian Capital Territory	8.0	0.3	26

Note: The 2005 OECD median includes 2004 data for Italy, Luxembourg and Slovakia, and excludes Turkey.

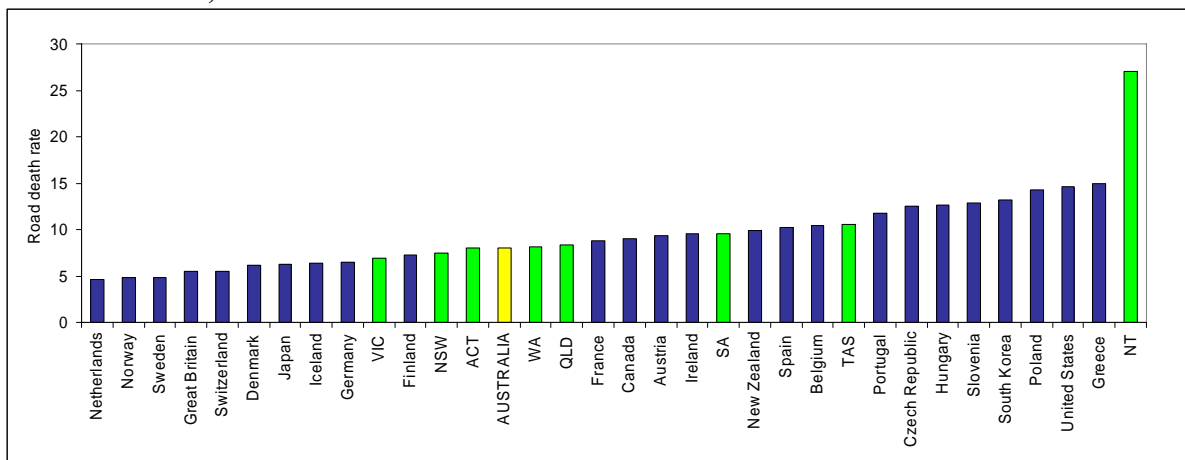
2.2 OECD nations, 2005

In 2005, Australia recorded 8.0 road deaths per 100,000 population. Australia's rate was eleventh lowest of the 26 OECD nations for which this information was available.

In 2005, of the OECD nations for which data were available:

- Netherlands recorded the lowest rate (4.6 deaths per 100,000 population);
- Greece recorded the highest rate (15.0 deaths per 100,000 population); and
- largest reduction between 2004 and 2005 occurred in Switzerland where there was a fall of 20 per cent.

Figure 1: Road deaths per 100,000 population for OECD nations and Australian states/territories, 2005



2.3 Australian states/territories, 2005

In 2005:

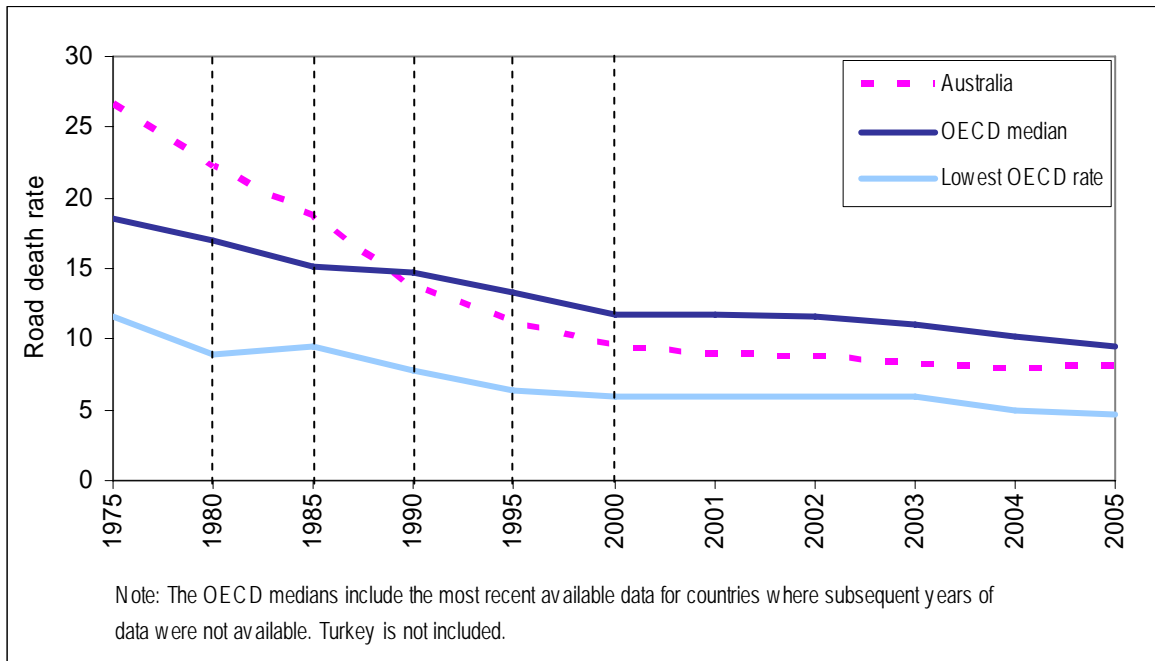
- Victoria recorded the lowest rate of deaths per 100,000 population (6.9 deaths) of all Australian states/territories; and
- Northern Territory recorded the highest rate (27.0 deaths).

2.4 Historical trends

The public risk associated with road use declined significantly in Australia between 1975 and 2005. In 1975, Australia-wide, there were 26.6 road deaths per 100,000 population; this rate had fallen to 8.0 deaths in 2005—a drop of 70 per cent.

Over this same period, the median rate for OECD nations also declined. In 1975, the OECD median rate was 18.5 deaths, and in 2005 it had reduced to 9.5 deaths—a drop of 49 per cent.

Figure 2: Road deaths per 100,000 population, OECD median, lowest OECD rate, and Australia, 1975 to 2005



Australia's reduction in the rate of road deaths per 100,000 population reflected a greater improvement than that achieved by the OECD median over the 1975-2005 period:

- in 1975 the Australian rate was 44 per cent above the OECD median; and
- in 2005 the Australian rate was 16 per cent below the OECD median.

Between 2004 and 2005, there was a:

- 7 per cent fall in the OECD median road death rate per 100,000 population; and
- 2 per cent rise in the Australian road death rate per 100,000 population.

Table 2: Road deaths per 100,000 population, OECD nations, OECD median, and Australian states/territories, 1975 to 2005

	1975	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005
Australia	26.6	22.3	18.6	13.7	11.2	9.5	8.9	8.7	8.2	7.9	8.0
Austria	33.4	26.5	20.1	20.3	15.2	12.2	11.9	11.8	11.5	10.7	9.3
Belgium	24.0	24.3	18.3	19.9	14.3	14.4	14.5	13.1	11.7	11.2	10.4
Canada	26.7	22.7	17.3	14.9	11.4	9.5	8.9	9.3	8.7	8.5	9.1
Czech Republic	16.3	12.2	9.6	12.5	15.4	14.5	13.0	14.0	14.2	13.5	12.6
Denmark	16.4	13.5	15.1	12.3	11.2	9.3	8.1	8.6	8.0	6.8	6.1
Finland	19.4	11.5	11.1	13.0	8.6	7.7	8.4	8.0	7.3	7.2	7.2
France	27.3	25.1	20.6	19.8	15.3	13.6	13.8	12.9	10.2	9.3	8.8
Germany	22.0	19.3	13.0	14.0	11.6	9.1	8.5	8.3	8.0	7.1	6.5
Great Britain	11.6	10.9	9.4	9.4	6.4	6.0	6.0	6.0	6.1	5.5	5.5
Greece	13.8	15.0	20.2	20.2	23.1	18.7	17.2	14.9	14.6	15.1	15.0
Hungary	16.0	15.2	16.5	23.4	15.5	11.9	12.1	14.0	13.1	12.8	12.7
Iceland	15.1	11.0	10.0	9.4	9.0	11.3	8.4	10.1	7.9	7.8	6.3
Ireland	18.4	16.6	11.6	13.6	12.1	11.0	10.7	9.6	8.4	9.2	9.5
Italy	18.6	16.4	13.5	12.4	12.3	11.5	11.6	11.8	10.6	9.7	-
Japan	12.5	9.7	9.9	11.8	10.1	8.2	7.9	7.5	7.0	6.7	6.2
Luxembourg	34.7	27.0	21.6	18.8	17.0	17.5	15.9	14.0	11.8	11.1	-
Netherlands	17.1	14.2	9.9	9.2	8.6	6.8	6.2	6.1	6.3	4.9	4.6
New Zealand	20.0	18.9	22.6	21.4	15.9	12.1	11.8	10.3	11.5	10.7	9.9
Norway	13.5	8.9	9.7	7.8	7.0	7.6	6.1	6.9	6.2	5.6	4.9
Poland	16.5	16.8	12.6	19.2	17.9	16.3	14.3	15.2	14.8	15.0	14.3
Portugal	34.7	27.7	22.1	28.2	25.2	18.1	16.2	16.1	14.8	12.3	11.8
Slovakia	-	-	-	-	12.3	11.6	11.4	11.3	11.9	11.1	-
Slovenia	32.9	29.2	23.5	25.9	20.9	15.8	13.9	13.5	12.1	13.7	12.9
South Korea	12.6	17.2	21.4	33.4	26.6	21.8	17.1	15.2	15.0	13.6	13.2
Spain	16.6	17.6	16.6	23.2	14.7	14.5	13.8	12.9	12.8	11.0	10.2
Sweden	14.3	10.2	9.7	9.1	6.5	6.7	6.2	6.0	5.9	5.3	4.9
Switzerland	19.0	19.2	13.6	13.9	9.9	8.3	7.6	7.1	7.5	6.9	5.5
Turkey	-	-	14.3	14.8	-	-	-	-	-	-	-
United States of America	20.7	22.5	18.4	17.9	15.9	15.2	14.8	14.9	14.7	14.5	14.7
OECD median	18.5	17.0	15.1	14.8	13.3	11.8	11.7	11.6	11.0	10.2	9.5
New South Wales	26.1	25.2	19.5	13.7	10.1	9.3	8.0	8.4	8.1	7.6	7.5
Victoria	24.0	16.8	16.6	12.5	9.3	8.6	9.2	8.1	6.7	6.9	6.9
Queensland	31.0	24.6	19.5	13.8	14.0	8.9	8.9	8.7	8.2	8.0	8.3
South Australia	26.8	20.6	19.5	15.8	12.3	11.0	10.1	10.1	10.3	9.1	9.6
Western Australia	26.3	23.1	17.1	12.2	12.1	11.3	8.7	9.3	9.2	9.0	8.1
Tasmania	29.7	23.6	17.6	15.4	12.0	9.1	12.9	7.8	8.6	12.0	10.5
Northern Territory	68.9	53.3	45.1	41.5	34.4	26.1	25.3	27.8	26.7	17.5	27.0
Australian Capital Territory	16.1	13.4	13.1	9.2	4.9	5.7	5.0	3.1	3.4	2.8	8.0

3 ROAD DEATHS PER 10,000 REGISTERED VEHICLES

3.1 Death rates per registered vehicle, 2005

The number of deaths for every 10,000 registered vehicles is a means of comparing road death levels among nations by taking into account their different levels of motorisation.

Table 3: Road deaths per 10,000 registered vehicles, OECD nations, OECD median, and Australian states/territories, 2005

	Road deaths per 10,000 registered vehicles	Total registered vehicles (millions)	Total number of road deaths
Australia	1.2	13.9	1,627
Austria	1.5	5.3	768
Belgium	1.8	6.2	1,089
Canada	1.5	19.4	2,925
Czech Republic	2.7	4.7	1,286
Denmark	1.3	2.6	331
Finland	1.3	2.9	379
France	1.4	37.2	5,318
Germany	1.0	54.5	5,361
Great Britain	1.0	32.8	3,201
Greece	2.5	6.6	1,658
Hungary	3.8	3.4	1,278
Iceland	0.8	0.2	19
Ireland	-	-	-
Italy	-	-	-
Japan	1.0	82.8	7,931
Luxembourg	-	-	-
Netherlands	0.9	8.6	750
New Zealand	1.3	3.0	405
Norway	0.8	2.9	224
Poland	3.2	16.8	5,444
Portugal	2.3	5.5	1,247
Slovakia	-	-	-
Slovenia	2.2	1.2	258
South Korea	3.4	18.5	6,376
Spain	1.6	27.7	4,442
Sweden	0.9	5.1	440
Switzerland	0.8	5.0	409
Turkey	-	-	-
United States of America	1.8	242.7	43,443
OECD median	1.4		
New South Wales	1.2	4.2	508
Victoria	0.9	3.6	346
Queensland	1.2	2.8	330
South Australia	1.3	1.1	148
Western Australia	1.1	1.5	163
Tasmania	1.4	0.4	51
Northern Territory	5.0	0.1	55
Australian Capital Territory	1.2	0.2	26

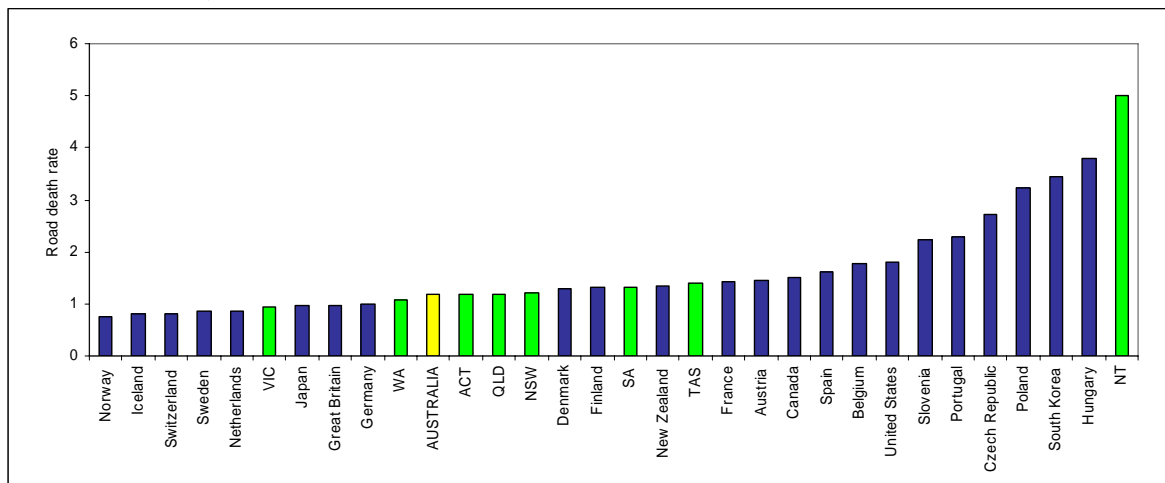
3.2 OECD nations, 2005

In 2005, Australia recorded 1.2 road deaths per 10,000 registered vehicles, which was the ninth lowest rate of the 25 nations for which these data were available.

In 2005, of the OECD nations for which data were available:

- Norway recorded the lowest rate (0.8 deaths per 10,000 registered vehicles); and
- Hungary recorded the highest rate (3.8 deaths per 10,000 registered vehicles).

Figure 3: Road deaths per 10,000 registered vehicles, OECD nations, and Australian states/territories, 2005



3.3 Australian states/territories, 2005

In 2005:

- Victoria had the lowest rate of road deaths per 10,000 registered vehicles of all Australian states/territories (0.9 deaths); and
- Northern Territory recorded the highest rate (5.0 deaths) within Australia.

3.4 Historical trends

Road deaths in Australia, relative to vehicle ownership, declined significantly between 1975 and 2005. In 1975 there were 5.8 deaths per 10,000 registered vehicles, while in 2005 this had decreased to 1.2 deaths—a drop of 80 per cent.

The median rate for OECD nations also declined significantly. The OECD median of 7.2 deaths per 10,000 registered vehicles in 1975 had fallen to 1.4 in 2005—a drop of 80 per cent.

During the period 1975 to 2005, Australia’s road death rate per 10,000 registered vehicles has remained consistently below the OECD median rate.

Figure 4: Road deaths per 10,000 registered vehicles, OECD median, lowest OECD rate and Australia, 1975 to 2005

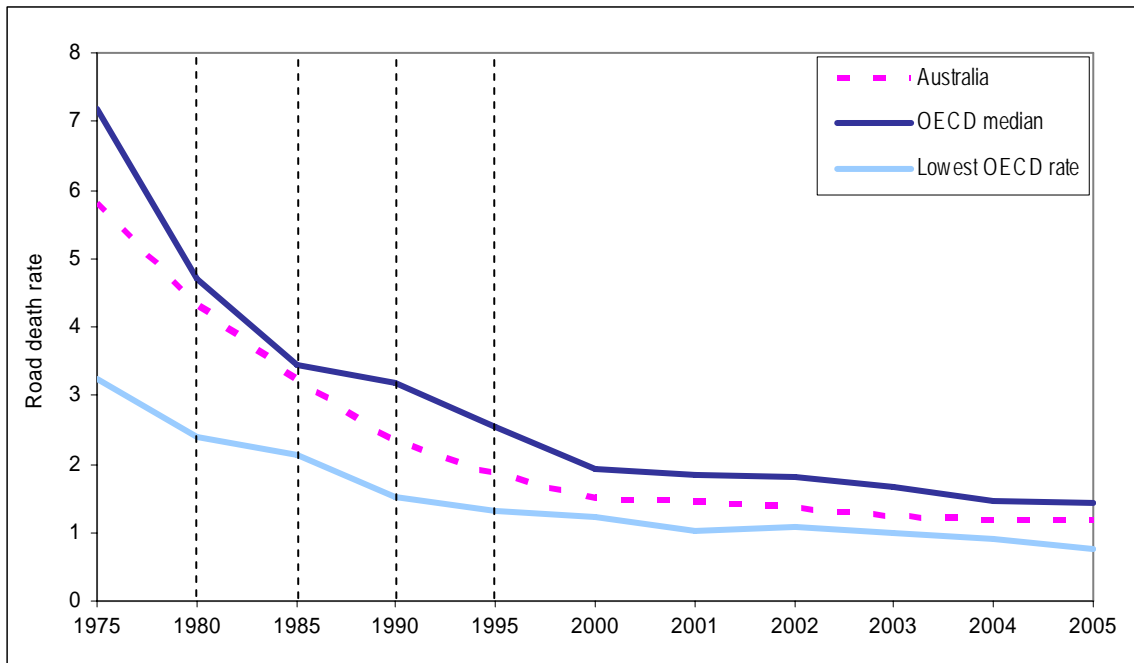


Table 4: Road deaths per 10,000 registered vehicles, OECD nations, OECD median, and Australian states/territories, 1975 to 2005

	1975	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005
Australia	5.9	4.3	3.2	2.3	1.8	1.5	1.4	1.3	1.2	1.2	1.2
Austria	11.6	7.2	4.8	4.2	2.7	1.9	1.8	1.8	1.8	1.7	1.5
Belgium	7.5	6.4	4.5	4.3	2.8	2.6	2.5	2.3	2.0	1.9	1.8
Canada	5.3	4.0	3.0	2.3	2.0	1.6	1.5	1.6	1.5	1.4	1.5
Czech Republic	-	4.8	3.4	4.0	4.2	3.4	3.1	3.3	3.2	3.0	2.7
Denmark	5.0	3.7	4.1	3.1	2.7	2.1	1.8	1.9	1.7	1.5	1.3
Finland	7.2	4.0	3.1	2.9	2.0	1.6	1.7	1.6	1.4	1.4	1.3
France	8.1	6.2	4.6	4.2	3.1	2.4	2.3	2.1	1.7	1.5	1.4
Germany	7.2	4.9	2.9	2.6	2.0	1.5	1.3	1.3	1.2	1.1	1.0
Greece	17.0	10.6	9.9	7.4	6.7	4.0	3.5	2.9	2.7	2.6	2.5
Hungary	12.6	9.0	9.0	11.2	6.0	4.4	4.4	4.8	4.2	3.9	3.8
Iceland	-	2.8	2.1	1.7	1.8	1.8	1.2	1.4	1.1	1.1	0.8
Ireland	8.6	6.2	4.5	4.5	3.5	2.5	2.3	2.0	1.7	-	-
Italy	6.0	4.7	3.1	2.3	1.9	1.7	1.6	1.6	1.4	1.3	-
Japan	4.3	2.7	2.4	2.4	1.8	1.3	1.3	1.2	1.1	1.0	1.0
Luxembourg	11.7	6.4	4.0	3.3	2.5	2.4	2.1	1.8	1.5	1.4	-
Netherlands	6.3	4.3	2.8	2.3	2.0	1.4	1.2	1.2	1.2	0.9	0.9
New Zealand	4.3	3.5	3.9	3.3	2.5	1.8	1.7	1.5	1.6	1.5	1.3
Norway	3.6	2.4	2.2	1.5	1.3	1.3	1.0	1.1	1.0	0.9	0.8
Poland	14.4	10.9	6.6	8.1	6.2	4.5	3.8	3.8	3.5	3.4	3.2
Portugal	22.9	13.3	8.1	12.1	6.9	3.9	3.4	3.3	3.0	2.4	2.3
Slovakia	-	-	-	-	4.5	4.1	3.9	3.3	-	-	-
Slovenia	-	-	-	6.9	5.1	3.1	2.7	2.6	2.3	2.5	2.2
South Korea	238.8	67.9	38.7	28.9	10.8	6.9	5.1	4.4	4.1	3.6	3.4
Spain	9.0	6.4	5.4	5.8	3.1	2.5	2.3	2.1	2.1	1.8	1.6
Sweden	3.8	2.5	2.2	1.8	1.3	1.2	1.1	1.1	1.1	0.9	0.9
Switzerland	5.8	4.5	2.7	2.4	1.7	1.3	1.2	1.1	1.1	1.0	0.8
Turkey	-	-	-	-	-	-	-	-	-	-	-
United Kingdom	3.9	3.3	2.5	2.2	1.5	1.2	1.2	1.1	1.1	1.0	1.0
United States of America	3.2	3.2	2.6	2.4	2.1	1.9	1.9	1.9	1.9	1.8	1.8
OECD median	7.2	4.7	3.4	3.2	2.5	1.9	1.8	1.8	1.7	1.5	1.4
New South Wales	5.9	5.2	3.6	2.5	1.9	1.6	1.4	1.5	1.4	1.3	1.2
Victoria	5.4	3.4	2.8	2.1	1.5	1.2	1.3	1.2	0.9	1.0	0.9
Queensland	6.7	4.4	3.2	2.3	2.3	1.4	1.4	1.3	1.2	1.2	1.2
South Australia	5.5	3.8	3.3	2.6	1.9	1.6	1.5	1.4	1.5	1.3	1.3
Western Australia	5.3	3.9	2.8	1.9	1.8	1.6	1.2	1.3	1.3	1.2	1.1
Tasmania	6.2	4.4	2.9	2.4	1.8	1.3	1.8	1.1	1.2	1.7	1.4
Northern Territory	13.9	13.4	9.3	8.6	6.8	5.0	4.9	5.3	5.1	3.3	5.0
Australian Capital Territory	3.0	2.8	2.6	1.6	0.8	0.9	0.8	0.5	0.5	0.4	1.2

