

### **Australian Government**

### **Department of Infrastructure and Regional Development**

Bureau of Infrastructure, Transport and Regional Economics



ISSN: 1447-8218

ISBN: 978-1-925531-71-8 September 2017/INFRA3364

### Ownership of intellectual property rights in this publication

Unless otherwise noted, copyright (and any other intellectual property rights, if any) in this publication is owned by the Commonwealth of Australia (referred to below as the Commonwealth).

### **Disclaimer**

The material contained in this publication is made available on the understanding that the Commonwealth is not providing professional advice, and that users exercise their own skill and care with respect to its use, and seek independent advice if necessary.

The Commonwealth makes no representations or warranties as to the contents or accuracy of the information contained in this publication. To the extent permitted by law, the Commonwealth disclaims liability to any person or organisation in respect of anything done, or omitted to be done, in reliance upon information contained in this publication.

### **Creative Commons licence**

With the exception of (a) the Coat of Arms; and (b) the Department of Infrastructure's photos and graphics, copyright in this publication is licensed under a Creative Commons Attribution 3.0 Australia Licence.

Creative Commons Attribution 3.0 Australia Licence is a standard form licence agreement that allows you to copy, communicate and adapt this publication provided that you attribute the work to the Commonwealth and abide by the other licence terms. A summary of the licence terms is available from http://creativecommons.org/licenses/by/3.0/au/deed.en. The full licence terms are available from http://creativecommons.org/licenses/by/3.0/au/legalcode.

### Use of the Coat of Arms

The Department of the Prime Minister and Cabinet sets the terms under which the Coat of Arms is used. Please refer to the Department's Commonwealth Coat of Arms and Government branding web page http://www.dpmc.gov.au/guidelines/index.cfm#brand and, in particular, the Guidelines on the use of the Commonwealth Coat of Arms publication.

### An appropriate citation for this report is:

Bureau of Infrastructure, Transport and Regional Economics (BITRE), 2017, International road safety comparisons 2015, BITRE, Canberra ACT.

### Contact us

This publication is available in PDF format. All other rights are reserved, including in relation to any Departmental logos or trade marks which may exist. For enquiries regarding the licence and any use of this publication, please contact:

Bureau of Infrastructure, Transport and Regional Economics (BITRE)

Department of Infrastructure and Regional Development

GPO Box 501, Canberra ACT 2601, Australia
Telephone: (international) +61 2 6274 7210
Fax: (international) +61 2 6274 6855
Email: bitre@infrastructure.gov.au

Website: www.bitre.gov.au

Bureau of Infrastructure, Transport and Regional Economics

# International road safety comparisons 2015

Department of Infrastructure and Regional Development Canberra, Australia

### At a glance

This report presents tabulations of road deaths and road death rates for Organisation for Economic Co-operation and Development (OECD) nations and Australian states and territories. The rates allow for a comparison of Australia's road safety performance with that of other OECD nations by accounting for the differing levels of population, motorisation and distances travelled.

• In terms of annual deaths per 100,000 population in 2015:

Australia's rate of 5.05 (up from 4.89 in 2014) was the 14th lowest rate out of the 32 nations with available data. The nations with the three lowest rates were

Norway 2.27
 Sweden 2.66
 United Kingdom 2.77

Between 2006 and 2015, Australia's rate declined 35.3 per cent. Over the same period the OECD median fell 40.2 per cent.

- Rates per 100,000 population increased for two thirds of OECD countries in 2015 compared to 2014.
- In terms of Remoteness Area, rates per 100,000 population in 2015 increased in Major Cities, Outer Regional Australia, and Remote Australia, were unchanged in Inner Regional Australia, and decreased in Very Remote Australia.
- In terms of annual deaths per 10,000 registered vehicles in 2015:

Australia's rate of 0.67 (up marginally on 2014) was the 12th lowest rate out of the 24 nations with available data. The nations with the three lowest rates were

_	Norway	0.30
_	Switzerland	0.42
_	Sweden	0.43

Between 2006 and 2015, Australia's rate declined 39.8 per cent. Over this period the OECD median declined 44.7 per cent.

• In terms of annual deaths per 100 million vehicle kilometres travelled in 2015:

Australia's rate of 0.49 (up marginally on 2014) was the  $8^{th}$  lowest rate out of 18 nations with available data. The nations with the three lowest rates were

_	Norway	0.26
_	Sweden	0.32
_	Denmark	0.34

Between 2006 and 2015, Australia's rate declined 33.4 per cent whilst the OECD median declined 38.1 per cent.

### Data sources

### International data

The International Road Traffic Accident Database (IRTAD 2017) is the main source of fatality and exposure data in this report. IRTAD is maintained by the Joint Transport Research Centre of the OECD and the International Transport Forum. Each year member nations supply IRTAD with their most recent data, which may include revisions to historical data. Further information on IRTAD is available at <a href="http://internationaltransportforum.org/irtadpublic/about.html">http://internationaltransportforum.org/irtadpublic/about.html</a>>.

In addition to the IRTAD database, other sources include OECD.Stat (OECD 2017) and in a small number of cases, a country's relevant government website.

### Australian data

Australian road fatality data in this report are based on two Bureau of Infrastructure, Transport and Regional Economics (BITRE) databases: the Australian Road Deaths Database (ARDD) and the National Crash Database (NCD). There are minor data differences between the two databases due to the timing differences in data receipt and ongoing validation by data providers. ARDD data are available at <a href="http://www.bitre.gov.au/statistics/safety/fatal\_road\_crash\_database.aspx">http://www.bitre.gov.au/statistics/safety/fatal\_road\_crash\_database.aspx</a>>. ARDD and NCD data used in this report were current to August 2017.

Australian data for population and registered vehicles were obtained from the Australian Bureau of Statistics, (ABS 2017) and (ABS 2017b) respectively. Estimates of vehicle kilometres travelled were obtained from the Bureau of Infrastructure and Regional Economics (BITRE unpublished).

# Acknowledgements

The Department of Infrastructure and Regional Development gratefully acknowledges the provision of road crash data from the following agencies:

Transport for New South Wales;

VicRoads;

Queensland Department of Transport and Main Roads;

Department of Planning, Transport and Infrastructure South Australia;

Western Australian Police;

Main Roads Western Australia;

Department of State Growth, Tasmania;

Department of Transport, Northern Territory;

Transport Canberra and City Services Directorate, Australian Capital Territory.

# Contents

At a glance		iii
Data sources .		iv
Acknowledger	ments	iv
SECTION I	Road deaths per 100,000 population	I
SECTION 2	Road deaths per 10,000 registered vehicles	9
SECTION 3	Road deaths per 100 million vehicle kilometres travelled	15
References		20

# **Tables**

Table I.I	Road deaths per 100,000 population – 32 OECD countries and Australian states/territories, 2015
Table 1.2	Annual road deaths per 100,000 population – OECD countries and Australian states/territories, 1990, 2000 and 2003 to 2015
Table 1.3	Categories of Remoteness Area, with 2015 population6
Table 1.4	Annual road deaths per 100,000 population – Australia by Remoteness Area, 2011 to 2015
Table 2.1	Road deaths per 10,000 registered vehicles – 24 OECD countries and Australian states/territories, 2015
Table 2.2	Annual road deaths per 10,000 registered vehicles – OECD countries and Australian states/territories, 1990, 2000 and 2003 to 2015
Table 3.1	Road deaths per 100 million vehicle kilometres travelled – 18 OECD countries and Australian states/territories, 2015
Table 3.2	Annual road deaths per 100 million vehicle kilometres travelled – OECD countries and Australian states/territories, 1990, 2000 and 2003 to 2015
Figures	
Figure 1.1	Road deaths per 100,000 population – 32 OECD countries, Australian states/territories and Australian Remoteness Areas, 2015
Figure 1.2	Annual road deaths per 100,000 population – OECD quartiles and Australia, 2003 to 2015
Figure 1.3	ASGS remoteness areas 2011 and selected cities and towns
Figure 2.1	Road deaths per 10,000 registered vehicles – 24 OECD countries and Australian states/territories, 2015
Figure 2.2	Annual road deaths per 10,000 registered vehicles – OECD quartiles and Australia, 2003 to 2015
Figure 3.1	Road deaths per 100 million vehicle kilometres travelled – 18 OECD countries and Australian states/territories, 2015
Figure 3.2	Annual road deaths per 100 million vehicle kilometres travelled – OECD quartiles and Australia, 2003 to 2015

BITRE •	International	road	safety	comparisons	2015
			•	•	

This page is intentionally left blank.

# SECTION I

# Road deaths per 100,000 population

The number of road deaths per population is a measure of the public health risk associated with road crashes.

### Road deaths per 100,000 population - OECD countries, 2015

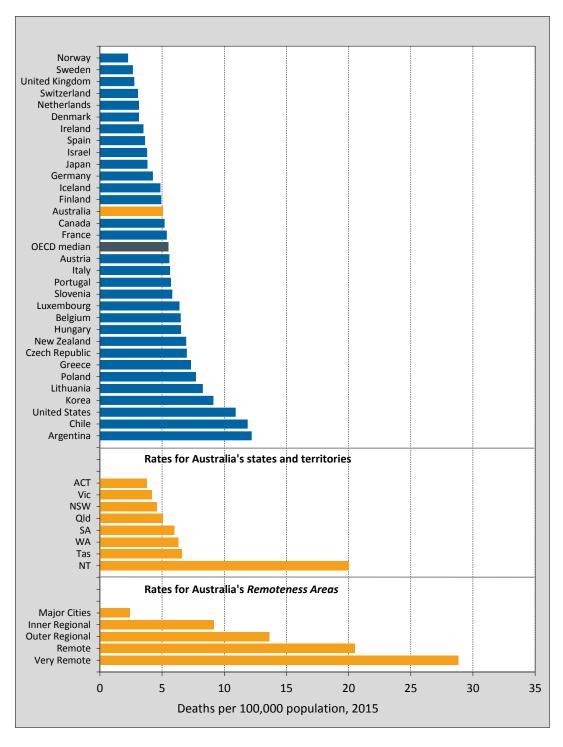
Table 1.1 Road deaths per 100,000 population – 32 OECD countries and Australian states/territories, 2015

Nation	Road	Population	Deaths per 100,000
	deaths	(000s)	population
Norway	117	5,166	2.26
Sweden	259	9,747	2.66
United Kingdom	1,804	65,110	2.77
Switzerland	253	8,238	3.07
Netherlands	531	16,901	3.14
Denmark	178	5,660	3.15
Ireland	162	4,629	3.50
Spain	1,689	46,450	3.64
Israel	322	8,463	3.80
Japan	4,867	127,095	3.83
Germany	3,459	81,198	4.26
Iceland	16	329	4.86
Finland	270	5,472	4.93
Australia	1,205	23,851	5.05
Canada	1,858	35,750	5.20
France	3,461	64,277	5.38
OECD median	<u> </u>	<u> </u>	5.48
Austria	479	8,576	5.59
Italy	3,428	60,796	5.64
Portugal	593	10,375	5.72
Slovenia	120	2,063	5.82
Luxembourg	36	563	6.39
Belgium	732	11,258	6.50
Hungary	644	9,856	6.53
New Zealand	319	4,597	6.94
Czech Republic	737	10,538	6.99
Greece	793	10,858	7.30
Poland	2,938	38,006	7.73
Lithuania	242	2,921	8.28
Korea	4,621	50,617	9.13
United States	35,092	321,419	10.92
Chile	2,140	18,006	11.88
Argentina	5,300e	43,418	12.21
7 <b>6</b>	2,2 2 2 2	,	
ACT	15	397	3.78
Vic	252	6,033	4.18
NSW	350	7,627	4.59
Qld	243	4,784	5.08
SA	102	1,702	5.99
WA	160	2,544	6.29
Tas	34	515	6.60
NT	49	245	20.00

Sources

ABS 2017; Australian Road Deaths Database; IRTAD 2017; OECD 2017

Figure 1.1 Road deaths per 100,000 population – 32 OECD countries, Australian states/territories, and Australia's Remoteness areas, 2015



Note See page 6 for more information on Remoteness Areas.

Sources ABS 2017; ABS 2017b; Australian Road Deaths Database; IRTAD 2017; OECD 2017

### OECD countries, 1990, 2000 and 2003 to 2015

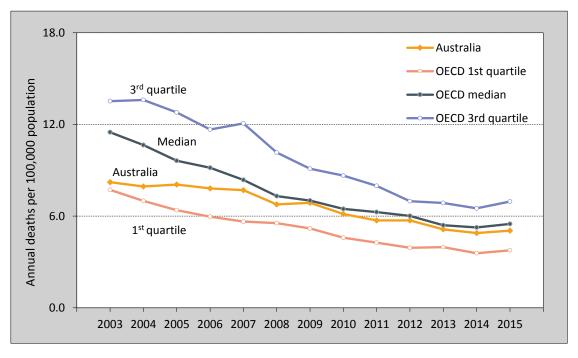
Table 1.2 Annual road deaths per 100,000 population – OECD countries and Australian states/territories, 1990, 2000 and 2005 to 2015

Nation	1990	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Norway	7.8	7.6	6.2	5.6	4.8	5.2	5.0	5.4	4.4	4.3	3.4	2.9	3.7	2.88	2.27
Sweden	9.1	6.7	5.9	5.3	4.9	4.9	5.2	4.3	3.9	2.8	3.4	3.0	2.7	2.80	2.66
United Kingdom	9.4	6.1	6.1	5.6	5.5	5.4	5.0	4.3	3.8	3.0	3.1	2.8	2.8	2.87	2.77
Switzerland	13.9	8.3	7.5	6.9	5.5	5.0	5.1	4.7	4.5	4.2	4.1	4.3	3.3	2.99	3.07
Netherlands	9.2	6.8	6.3	4.9	4.6	4.5	4.3	4.1	3.9	3.2	3.3	3.4	2.8	2.83	3.14
Denmark	12.3	9.3	8.0	6.8	6.1	5.6	7.5	7.4	5.5	4.6	4.0	3.0	3.4	3.23	3.15
Ireland	13.6	11.0	8.5	9.3	9.6	8.7	7.8	6.3	5.3	4.7	4.1	3.5	4.1	4.19	3.50
Spain	23.3	14.4	12.9	11.1	10.3	9.3	8.5	6.8	5.9	5.3	4.4	4.1	3.6	3.63	3.64
Israel	8.7	7.1	6.6	6.8	6.3	5.7	5.3	5.6	4.2	4.6	4.4	3.3	3.4	3.40	3.81
Japan	11.8	8.2	7.0	6.7	6.3	5.7	5.2	4.8	4.6	4.6	4.3	4.1	4.1	3.81	3.83
Germany	-	9.1	8.0	7.1	6.5	6.2	6.0	5.4	5.1	4.5	4.9	4.5	4.1	4.18	4.26
Iceland	9.5	11.5	8.0	7.9	6.5	10.3	4.9	3.8	5.3	2.5	3.8	2.8	4.7	1.23	4.86
Finland	13.0	7.7	7.3	7.2	7.2	6.4	7.2	6.5	5.2	5.1	5.4	4.7	4.8	4.20	4.93
Australia	13.7	9.5	8.2	7.9	8.1	7.8	7.7	6.8	6.9	6.1	5.7	5.7	5.1	4.89	5.05
Canada	14.3	9.5	8.8	8.6	9.0	8.8	8.4	7.3	6.6	6.6	5.9	5.9	5.4	5.28	5.20
France	19.8	13.7	10.1	9.2	8.7	7.7	7.5	6.9	6.8	6.4	6.3	5.8	5.1	5.29	5.38
Austria	20.4	12.2	11.5	10.8	9.4	8.8	8.3	8.2	7.6	6.6	6.2	6.3	5.4	5.06	5.59
Italy	12.6	12.4	11.5	10.6	10.1	9.8	8.8	8.1	7.2	7.0	6.5	6.3	5.7	5.56	5.64
Portugal	29.3	20.0	16.4	13.7	13.1	10.2	10.2	9.3	8.8	8.9	8.4	6.8	6.1	6.12	5.72
Slovenia	25.9	15.8	12.1	13.7	12.9	13.1	14.6	10.6	8.4	6.7	6.9	6.3	6.1	5.24	5.82
Luxembourg	18.7	17.5	11.8	11.0	10.2	9.2	9.5	7.2	9.7	6.4	6.4	6.5	8.4	6.37	6.40
Belgium	19.9	14.4	11.7	11.2	10.4	10.2	10.1	8.9	8.8	7.7	7.8	6.9	6.5	6.49	6.50
Hungary	23.4	11.7	13.1	12.8	12.7	12.9	12.2	9.9	8.2	7.4	6.4	6.1	6.0	6.34	6.53
New Zealand	21.4	12.0	11.5	10.7	9.8	9.5	10.0	8.6	8.9	8.6	6.4	6.9	5.7	6.50	6.94
Czech Republic	12.5	14.5	14.2	13.6	12.6	10.4	11.9	10.4	8.6	7.7	7.4	7.1	6.2	6.55	6.99
Greece	20.3	18.7	14.6	15.1	15.0	14.9	14.5	13.9	13.0	11.2	10.3	8.9	8.0	7.28	7.30
Poland	19.3	16.4	14.8	15.0	14.3	13.7	14.6	14.3	12.0	10.2	10.9	9.3	8.7	8.42	7.73
Lithuania	29.3	18.3	20.7	22.1	23.0	23.1	22.8	15.5	11.6	9.5	9.7	10.0	8.7	9.07	8.28
Korea	33.1	21.8	15.1	13.6	13.2	13.0	12.7	12.1	12.0	11.3	10.5	10.8	10.1	9.44	9.13
United States	17.9	14.9	14.8	14.6	14.7	14.3	13.7	12.3	11.0	10.7	10.4	10.8	10.4	10.27	10.92
Chile	-	-	14.0	14.3	13.1	13.2	13.0	13.9	11.6	12.1	11.9	11.4	12.0	11.89	11.89
Argentina	-	-	-	-	-	-	-	-	13.0	12.6	12.3	12.3	12.3	12.37	12.21
ACT	9.2	5.7	3.4	2.7	7.8	3.9	4.1	4.0	3.4	5.3	1.6	3.2	1.8	2.57	3.78
Vic	12.5	8.7	6.8	7.0	6.9	6.7	6.4	5.8	5.4	5.3	5.2	5.0	4.2	4.20	4.18
NSW	13.7	9.4	8.1	7.7	7.6	7.4	6.4	5.4	6.4	5.7	5.0	5.0	4.5	4.08	4.59
Qld	13.8	9.0	8.3	8.1	8.4	8.4	8.8	7.8	7.6	5.7	6.0	6.1	5.8	4.72	5.08
SA	15.8	11.1	10.3	9.1	9.6	7.5	7.9	6.2	7.4	7.3	6.3	5.7	5.9	6.34	5.99
WA	12.2	11.3	9.2	9.0	8.1	9.8	11.2	9.4	8.5	8.4	7.6	7.5	6.5	7.25	6.29
Tas	15.4	9.1	8.6	12.0	10.5	11.2	9.1	7.8	12.5	6.1	4.7	6.1	7.0	6.42	6.60
NT	41.5	25.6	26.3	17.3	26.7	21.5	27.1	34.1	13.7	21.8	19.5	20.8	15.2	16.01	20.00

Sources

ABS 2017; Australian Road Deaths Database; IRTAD 2017; OECD 2017

Figure 1.2 Annual road deaths per 100,000 population – OECD quartiles and Australia, 2003 to 2015



Sources

ABS 2017; Australian Road Deaths Database; IRTAD 2017; OECD 2017

# Road deaths per 100,000 population by Remoteness Area – Australia, 2011 to 2015

In this section, Australia's annual fatality rates (per population) are classified by *Remoteness Area*. This classification is part of the Australian Bureau of Statistics – Australian Statistical Geography Standard (ASGS)<sup>a</sup>. A map of Australia in Figure 1.3 shows the boundaries of the five remoteness areas.

Table 1.3 shows the five different levels of Remoteness, and the proportions of Australia's 2015 population in each.

Table 1.3 Categories of Remoteness Area, with 2015 population

Remoteness Area	Proportion of population (2015)
Major Cities of Australia	71.0%
Inner Regional Australia	18.2%
Outer Regional Australia	8.7%
Remote Australia	1.3%
Very Remote Australia	0.8%
Total	100%

Sources ABS 2013; ABS 2017c

Table 1.4 shows Australia's annual fatality rates per 100,000 population by Remoteness and year.

Table 1.4 Annual road deaths per 100,000 population – Australia, by Remoteness Area, 2011 to 2015

Remoteness Area	2011	2012	2013	2014	2015
Major Cities of Australia	2.7	2.9	2.5	2.3	2.4
Inner Regional Australia	10.4	10.8	9.5	9.2	9.2
Outer Regional Australia	14.0	13.8	11.6	11.7	13.6
Remote Australia	24.5	16.1	23.2	19.9	20.5
Very Remote Australia	30.5	27.8	26.3	32.6	28.8
Total Australia	5.7	5.7	5.1	4.9	5.1

Note Total includes unknown locations.

Sources ABS 2013; ABS 2017c; National Crash Database

Information on this geographical classification is found in ABS 2013.

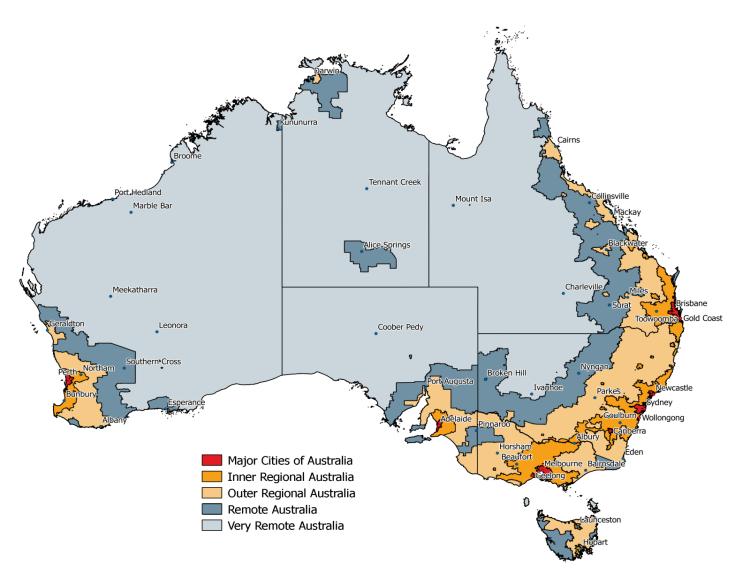


Figure 1.3 ASGS<sup>a</sup> Remoteness Areas 2011 and selected cities and towns

a ASGS: Australian Statistical Geography Standard Source ABS 2013

BITRE • International road safety comparisions 2015

This page is intentionally left blank.

# **SECTION 2**

## Road deaths per 10,000 registered vehicles

The number of road deaths per registered vehicle is a means of comparing road deaths among nations by taking into account their different levels of motorisation.

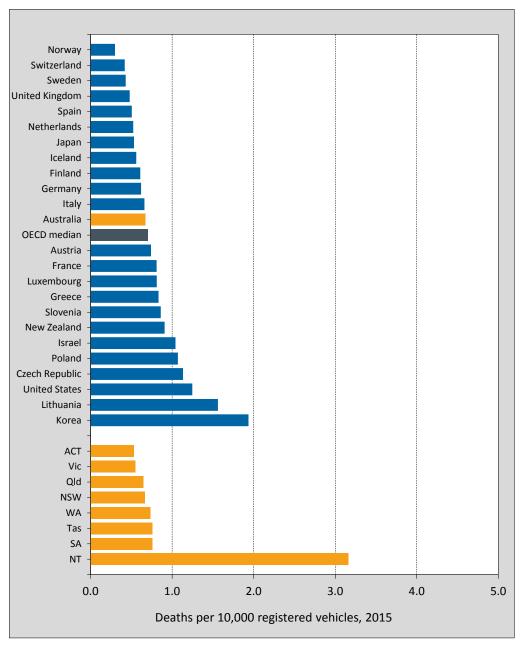
### Road deaths per 10,000 registered vehicles - OECD countries, 2015

Table 2.1 Road deaths per 10,000 registered vehicles – 24 OECD countries and Australian states/territories, 2015

Nation	Road	Total registered	Deaths per 10,000 registered
	deaths	vehicles (000s)	vehicles
Norway	117	3,894	0.30
Switzerland	253	6,046	0.42
Sweden	259	6,021	0.43
United Kingdom	1,804	37,570	0.48
Spain	1,689	33,413	0.51
Netherlands	531	10,133	0.52
Japan	4,867	91,316	0.53
Iceland	16	285	0.56
Finland	270	4,428	0.61
Germany	3,459	55,752	0.62
Italy	3,428	51,910	0.66
Australia	1,205	18,008	0.67
OECD median			0.70
Austria	479	6,466	0.74
France	3,461	42,701	0.81
Luxembourg	36	443	0.81
Greece	793	9,518	0.83
Slovenia	120	1,395	0.86
New Zealand	319	3,515	0.91
Israel	322	3,092	1.04
Poland	2,938	27,409	1.07
Czech Republic	737	6,499	1.13
United States	35,092	281,312	1.25
Lithuania	242	1,549	1.56
Korea	4,621	23,853	1.94
ACT	15	284	0.53
Vic	252	4,567	0.55
Qld	243	3,771	0.64
NSW	350	5,247	0.67
WA	160	2,185	0.73
Tas	34	450	0.75
SA	102	1,348	0.76
NT	49	155	3.16

Sources ABS 2017b; Australian Road Deaths Database; IRTAD 2017; OECD 2017

Figure 2.1 Road deaths per 10,000 registered vehicles – 24 OECD countries and Australian states/territories, 2015



Sources ABS 2017b; Australian Road Deaths Database; IRTAD 2017; OECD 2017

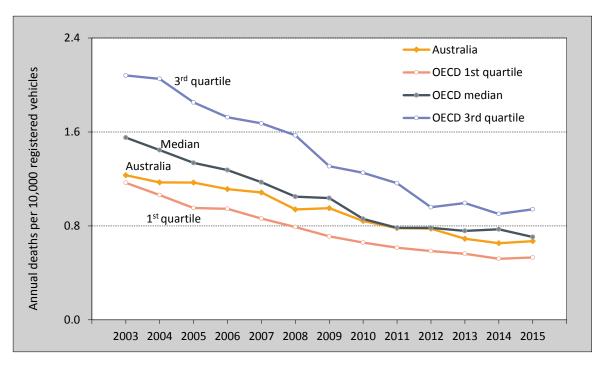
### OECD countries, 1990, 2000 and 2003 to 2015

Table 2.2 Annual road deaths per 10,000 registered vehicles – OECD countries and Australian states/territories, 1990, 2000 and 2003 to 2015

Nation	1990	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Norway	1.4	1.2	1.0	0.9	0.7	0.8	0.7	0.8	0.6	0.6	0.5	0.4	0.5	0.39	0.30
Switzerland	2.2	1.2	1.1	1.0	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.41	0.42
Sweden	1.7	1.2	1.0	0.9	0.8	0.8	0.9	0.7	0.6	0.5	0.6	0.5	0.4	0.46	0.43
United Kingdom	2.1	1.2	1.1	1.0	1.0	1.0	0.9	8.0	0.7	0.5	0.6	0.5	0.5	0.50	0.48
Spain	5.1	2.2	2.0	1.7	1.5	1.3	1.2	0.9	0.8	0.7	0.6	0.6	0.5	0.51	0.51
Netherlands	2.2	1.3	1.2	0.9	0.8	0.8	0.8	0.7	0.7	0.5	0.5	0.6	0.5	0.47	0.52
Japan	1.9	1.2	1.0	1.0	0.9	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.53	0.53
Iceland	1.7	1.8	1.1	1.1	0.9	1.3	0.6	0.5	0.7	0.3	0.5	0.3	0.6	0.15	0.56
Finland	2.8	1.5	1.4	1.3	1.3	1.1	1.2	1.0	0.8	0.7	0.7	0.6	0.6	0.53	0.61
Germany	-	1.4	1.2	1.0	1.0	0.9	0.9	0.9	0.8	0.7	0.8	0.7	0.6	0.61	0.62
Italy	2.1	1.6	1.4	1.3	1.3	1.2	1.1	0.9	0.8	0.8	0.8	0.7	0.7	0.66	0.66
Australia	2.3	1.5	1.2	1.2	1.2	1.1	1.1	0.9	1.0	8.0	0.8	8.0	0.7	0.65	0.67
Austria	3.7	1.8	1.7	1.6	1.4	1.3	1.2	1.2	1.1	0.9	0.9	0.9	0.7	0.67	0.74
France	3.6	2.3	1.6	1.5	1.4	1.2	1.2	1.1	1.1	1.0	1.0	0.9	0.8	0.80	18.0
Luxembourg	3.3	2.4	1.5	1.4	1.3	-	-	0.9	1.2	0.8	0.8	8.0	1.0	18.0	18.0
Greece	7.4	3.1	2.1	2.1	2.0	1.9	1.8	1.7	1.5	1.3	1.2	1.0	0.9	0.84	0.83
Slovenia	-	-	2.2	2.5	2.3	2.2	2.4	1.7	1.3	1.0	1.1	1.0	0.9	0.79	0.86
New Zealand	3.3	1.8	1.6	1.5	1.3	1.3	1.3	1.1	1.2	1.2	0.9	0.9	0.8	0.86	0.91
Israel	4.1	2.5	2.2	2.3	2.1	1.9	1.7	1.7	1.3	1.4	1.3	1.0	1.0	0.94	1.04
Poland	-	-	3.5	3.4	3.2	2.8	2.8	2.5	2.1	1.7	1.7	1.4	1.3	1.21	1.07
Czech Republic	3.3	3.2	3.0	2.8	2.5	2.0	2.2	1.9	1.5	1.3	1.3	1.2	1.0	1.08	1.13
United States	2.4	1.9	1.9	1.8	1.8	1.7	1.6	1.4	1.3	1.3	1.2	1.3	1.2	1.19	1.25
Lithuania	12.7	5.0	4.5	4.6	-	-	3.7	2.4	1.7	1.4	1.4	1.3	1.1	1.79	1.56
Korea	-	-	-	-	-	-	-	-	-	-	-	-	2.3	2.06	1.94
Ireland	4.5	2.5	1.7	1.8	1.9	1.6	1.4	1.1	1.0	0.9	0.8	0.7	0.8	0.77	-
Canada	2.3	1.6	1.5	1.4	1.5	1.5	1.3	1.2	1.0	1.0	0.9	0.9	0.8	0.80	-
Argentina	-	-	-	-	-	-	-	-	3.2	2.9	2.6	2.5	2.3	2.24	-
Portugal	-	3.9	3.0	2.5	2.3	1.8	1.8	1.6	1.5	-	-	-	-	-	-
ACT	1.6	0.9	0.5	0.4	1.2	0.6	0.6	0.6	0.5	0.7	0.2	0.4	0.3	0.36	0.53
Vic	2.1	1.2	0.9	1.0	0.9	0.9	0.9	0.8	0.7	0.7	0.7	0.7	0.6	0.55	0.55
Qld	2.3	1.4	1.2	1.2	1.2	1.2	1.2	1.0	1.0	0.7	0.8	0.8	0.8	0.60	0.64
NSW	2.5	1.6	1.4	1.3	1.2	1.2	1.0	8.0	1.0	0.9	0.8	8.0	0.7	0.60	0.67
WA	1.9	1.6	1.3	1.2	1.1	1.2	1.4	1.2	1.0	1.0	0.9	0.9	0.8	0.85	0.73
Tas	2.4	1.3	1.2	1.7	1.4	1.5	1.2	1.0	1.6	8.0	0.6	0.7	0.8	0.75	0.75
SA	2.6	1.6	1.5	1.3	1.3	1.0	1.1	8.0	1.0	1.0	0.8	0.7	0.8	0.81	0.76
NT	8.6	5.0	5.1	3.3	5.0	3.9	4.9	6.1	2.4	3.7	3.3	3.5	2.5	2.56	3.16

Note Sources ABS vehicle registration data was not available for the year 2000. The average of 1999 and 2001 is used as an estimate for that year. ABS 2017b; Australian Road Deaths Database; IRTAD 2017; OECD 2017

Figure 2.2 Annual road deaths per 10,000 registered vehicles – OECD quartiles and Australia, 2003 to 2015



Sources ABS 2017b; Australian Road Deaths Database; IRTAD 2017; OECD 2017

RITRE .	International	road safety	comparisions	2015

This page is intentionally left blank.

# **SECTION 3**

# Road deaths per 100 million vehicle kilometres travelled

The number of road deaths per vehicle kilometres travelled is a risk measure which takes account of the estimated amount of vehicle travel.

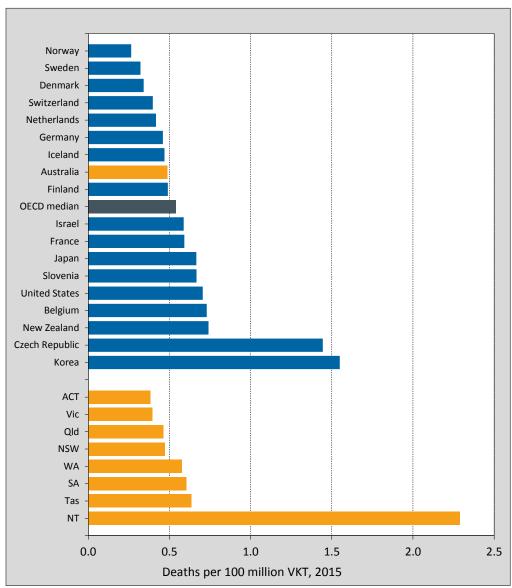
# Road deaths per 100 million vehicle kilometres travelled – OECD countries, 2015

Table 3.1 Road deaths per 100 million vehicle kilometres travelled
- 18 OECD countries and Australian states/territories, 2015

Nation	Road	Total VKT	Deaths per 100 million
	deaths	(millions)	VKTs
Norway	117	44,250	0.26
Sweden	259	80,714	0.32
Denmark	178	52,151	0.34
Switzerland	253	63,761	0.40
Netherlands	531	127,351	0.42
Germany	3,459	752,300	0.46
Iceland	16	3,411	0.47
Australia	1,205	246,617	0.49
Finland	270	55,145	0.49
OECD median			0.54
Israel	322	54,820	0.59
France	3,461	584,914	0.59
Japan	4,867	730,930	0.67
Slovenia	120	18,006	0.67
United States	35,092	4,981,520	0.70
Belgium	732	100,306	0.73
New Zealand	319	43,100	0.74
Czech Republic	737	51,020	1.44
Korea	4,621	298,323	1.55
ACT	15	3,905	0.38
Vic	252	63,895	0.39
Qld	243	52,554	0.46
NSW	350	74,160	0.47
WA	160	27,741	0.58
SA	102	16,879	0.60
Tas	34	5,343	0.64
NT	49	2,140	2.29

Sources BITRE unpublished; Australian Road Deaths Database; IRTAD 2017; OECD 2017

Figure 3.1 Road deaths per 100 million vehicle kilometres travelled -18 OECD countries and Australian states/territories, 2015



Sources BITRE unpublished; Australian Road Deaths Database; IRTAD 2017; OECD 2017

### OECD countries, 1990, 2000 and 2003 to 2015

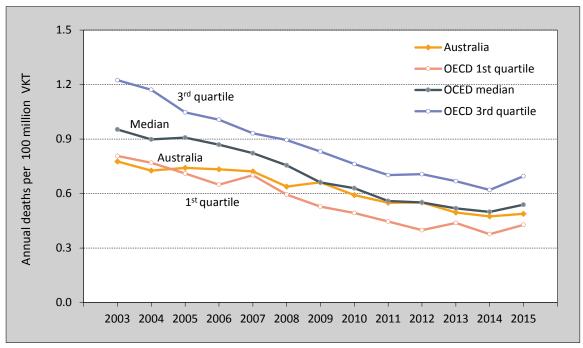
Table 3.2 Annual road deaths per 100 million vehicle kilometres travelled – OECD countries and Australian states/territories, 1990, 2000 and 2003 to 2015

Nation	1990	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Norway	1.2	1.0	0.8	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.3	0.4	0.34	0.26
Sweden	1.2	0.9	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.3	0.4	0.4	0.3	0.34	0.32
Denmark	1.7	1.1	-	8.0	0.7	0.6	0.8	8.0	0.7	0.6	0.5	0.3	0.4	0.36	0.34
Switzerland	1.9	1.1	1.0	0.9	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.4	0.39	0.40
Netherlands	1.4	0.9	0.8	-	-	-	-	0.5	0.5	0.4	0.4	0.4	0.4	0.37	0.42
Germany	-	1.1	1.0	8.0	0.8	0.7	0.7	0.6	0.6	0.5	0.6	0.5	0.5	0.46	0.46
Iceland	1.5	1.4	0.9	0.9	0.7	1.0	0.5	0.4	0.5	0.3	0.4	0.3	0.5	0.12	0.47
Australia	1.4	0.9	8.0	0.7	0.7	0.7	0.7	0.6	0.7	0.6	0.5	0.6	0.5	0.47	0.49
Finland	1.6	0.8	0.8	0.7	0.7	0.6	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.42	0.49
Israel	2.2	1.2	1.1	1.2	1.0	0.9	0.8	0.9	0.6	0.7	0.7	0.5	0.5	0.53	0.59
France	2.6	1.5	1.1	1.0	1.0	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.59	0.59
Japan	2.3	1.3	1.1	1.1	1.0	1.0	0.9	0.8	0.8	8.0	0.8	0.7	0.7	0.62	0.67
Slovenia	6.5	2.7	1.7	1.8	1.7	1.6	1.7	1.2	1.0	8.0	-	-	0.7	0.61	0.67
United States	1.3	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.67	0.70
Belgium	2.8	1.6	1.3	1.2	1.1	1.1	1.1	1.0	1.0	0.9	0.9	8.0	0.7	0.73	0.73
New Zealand	-	1.4	1.2	1.1	1.0	1.0	1.0	0.9	1.0	0.9	0.7	8.0	0.6	0.70	0.74
Czech Republic	4.8	3.7	3.2	2.9	2.6	2.1	2.3	1.9	1.6	1.6	1.6	1.6	1.4	1.42	1.44
Korea	-	4.9	2.6	2.3	1.8	1.9	1.9	1.8	2.0	1.9	2.0	1.9	1.8	1.64	1.55
Austria	3.2	1.5	1.3	1.3	1.1	1.0	0.9	0.9	0.8	0.7	0.7	0.7	0.6	0.54	-
Canada	-	0.9	0.9	0.9	0.9	0.9	8.0	0.7	0.7	0.7	0.6	0.6	0.5	0.52	-
Ireland	1.9	1.2	0.9	0.9	0.9	0.8	0.7	0.6	0.5	0.4	0.4	0.4	0.5	0.46	-
United Kingdom	1.3	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.36	-
			1.0	0.9	0.9	0.9	0.8	0.8	0.7	0.6	0.6	0.6	0.5	0.50	0.54
ACT	1.0	0.6	0.3	0.3	0.7	0.4	0.4	0.4	0.3	0.5	0.2	0.3	0.2	0.26	0.38
Vic	1.2	8.0	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.39	0.39
Qld	1.4	0.8	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.5	0.5	0.6	0.5	0.43	0.46
NSW	1.5	1.0	0.8	0.8	0.8	0.7	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.42	0.47
WA	1.2	1.0	0.8	0.8	0.7	0.9	1.0	0.8	0.8	0.8	0.7	0.7	0.6	0.67	0.58
SA	1.7	1.1	1.0	0.9	0.9	0.7	0.8	0.6	0.7	0.7	0.6	0.6	0.6	0.64	0.60
Tas	1.7	0.9	0.8	1.1	1.0	1.1	0.9	0.7	1.2	0.6	0.5	0.6	0.7	0.62	0.64
NT	4.7	2.8	2.9	1.9	3.0	2.4	3.0	3.8	1.5	2.4	2.2	2.4	1.8	1.8	2.29

Sources

BITRE unpublished; Australian Road Deaths Database; IRTAD 2017; OECD 2017

Figure 3.2 Annual road deaths per 100 million vehicle kilometres travelled – OECD quartiles and Australia, 2003 to 2015



Sources

BITRE unpublished; Australian Road Deaths Database; IRTAD 2017; OECD 2017

### References

Australian Bureau of Statistics (ABS) 2013, Australian Statistical Geography Standard (ASGS): Volume 5 – Remoteness Structure, Australia 2011, 2013 Cat No 1270.0.55.005

Australian Bureau of Statistics (ABS) 2017, Australian Demographic Statistics, December 2016, June 2017 Cat No 3101.0.

Australian Bureau of Statistics (ABS) 2017b, Motor Vehicle Census, July 2017 Cat No 9309.0.

Australian Bureau of Statistics (ABS) 2017c, Regional Population Growth Australia, 2016, July 2017 Cat No 3218.0.

Bureau of Infrastructure, Transport and Regional Economics (BITRE) unpublished, State and capital city vehicle kilometres travelled October 2016.

International Road Traffic Accident Database (IRTAD) 2017, (member site) < <a href="http://stats.oecd.org/">http://stats.oecd.org/</a>>. Accessed 31 August 2017.

Organisation for Economic Co-operation and Development (OECD) 2017, OECD.Stat Extracts (public site) < <a href="http://stats.oecd.org/">http://stats.oecd.org/</a>>. Accessed 31 August 2017.