



Australian Government

Department of Infrastructure, Transport, Regional Development and Communications

Bureau of Infrastructure and Transport Research Economics

STATISTICAL REPORT

A stylized world map composed of white dots on a light blue background, with abstract blue and white curved lines flowing around it.

bitre

Safety

International road safety comparisons 2019

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Bureau of Infrastructure and Transport Research Economics

International road safety comparisons 2019

Department of Infrastructure, Transport, Regional Development and Communications
Canberra, Australia

At a glance

This report presents 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. The latest available international data is for 2019.

- In terms of the fatality rate per 100,000 population in 2019:

Australia's rate of 4.68 was ranked 16th out of the 36 nations. The nations with the three lowest rates were Iceland (1.66), Norway (2.02) and Sweden (2.15).

Between 2010 and 2019 Australia's fatality rate declined by 23.9 per cent. Over the same period, the OECD median rate declined by 25.7 per cent (Figure 1.2).

In Australia, rates vary significantly across Remoteness Areas classifications. Major City rates have been consistently the lowest (2.22 in 2019) and Very Remote areas are consistently the highest (29.94 in 2019) (Figure 1.1).
- In terms of the fatality rate per 10,000 registered vehicles in 2019:

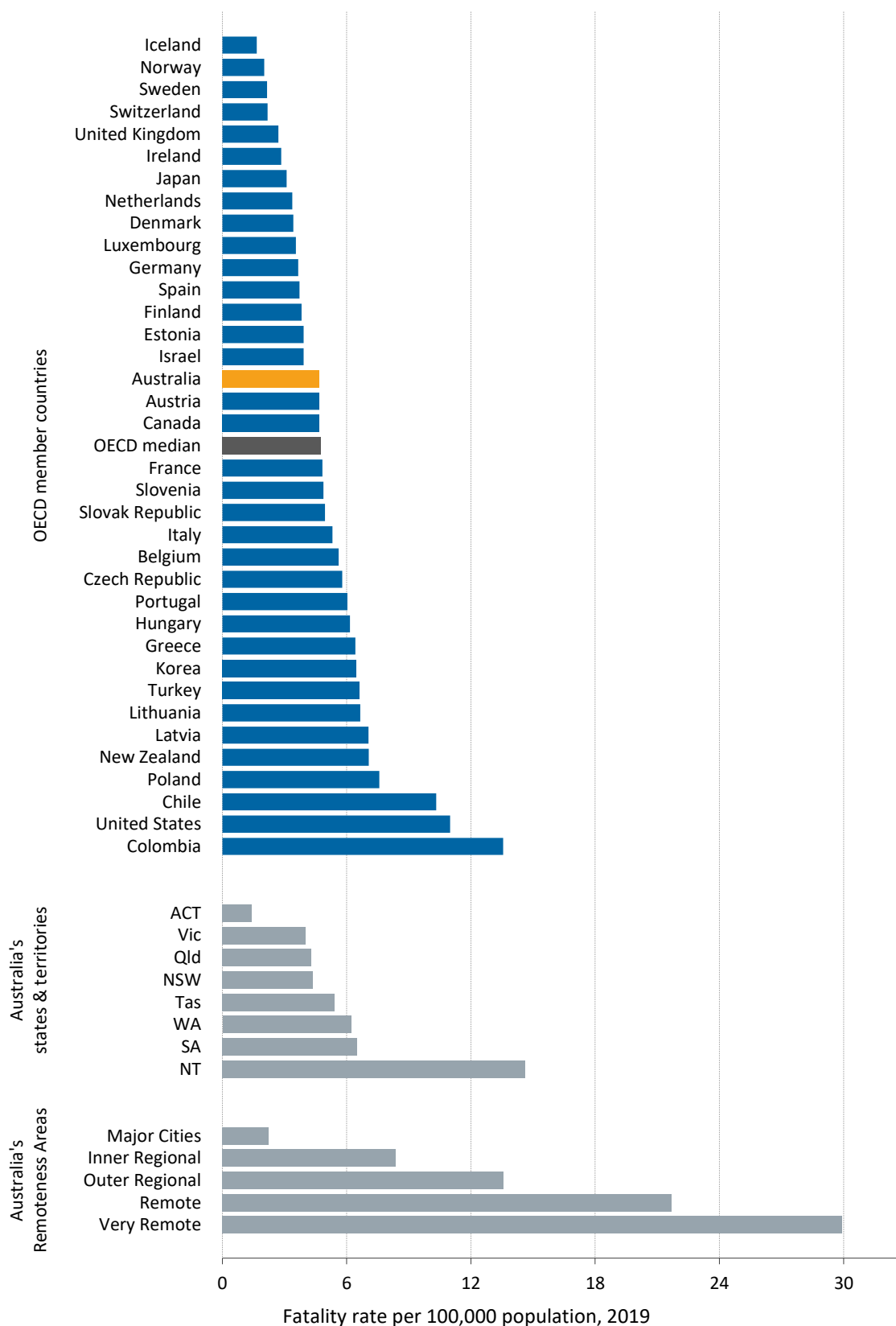
Australia's rate of 0.61 was ranked 14th out of the 25 nations with available data. The nations with the three lowest rates were Iceland (0.18), Norway (0.27) and Switzerland (0.29) (Table 1.3).

Between 2010 and 2019 Australia's fatality rate declined by 27.8 per cent. Over the same period, the OECD median rate declined by 29.8 per cent (Figure 1.4).
- In terms of the fatality rate per 100 million vehicle kilometres travelled (VKT) in 2019:

Australia's rate of 0.45 was ranked 11th out of 23 nations with available data. The nations with the three lowest rates were Iceland (0.15), Norway (0.23) and Sweden (0.26) (Table 1.5).

Between 2010 and 2019 Australia's fatality rate declined by 24.1 per cent. Over the same period, the OECD median rate declined by 33.1 per cent (Figure 1.6).
- The three rates are positively correlated (approximately $r = +0.8$) (Table 1.8). The country rankings will be similar for the three measures.
- Comparing age-group distributions of persons killed in road crashes between Australia and the OECD shows that these are largely similar. There is however a slightly higher proportion of young adults killed in Australia, and a slightly lower proportion of elderly persons killed.
- In Australia in 2019, vulnerable road users (motorcyclist, pedestrian or pedal cyclist) accounted for 34.6 per cent of total road deaths. This is low compared to most other OECD countries. For the OECD in total, this percentage is 47.2 per cent, and for several countries it is over 55 per cent.

Figure 1.1 Fatality rate per 100,000 population – 36 OECD countries, Australian states/territories and Australia's Remoteness Areas, 2019



Data sources

International data

The International Road Traffic Accident Database (IRTAD 2021) 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 <<http://internationaltransportforum.org/irtadpublic/about.html>>. In cases of particular countries where required data was not held by IRTAD, data was retrieved from the country's relevant government agency.

Australian data

Australian road fatality data in this report are based on two Bureau of Infrastructure and Transport Research 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 <http://www.bitre.gov.au/statistics/safety/fatal_road_crash_database.aspx>. ARDD data used in this report was current to August 2021.

Acknowledgements

The Department of Infrastructure, Transport, Regional Development and Communications acknowledges the provision of data from the following agencies:

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Department of Transport, Victoria;
Department of Transport and Main Roads, Queensland;
Department of Planning, Transport and Infrastructure, South Australia;
Western Australian Police;
Department of State Growth, Tasmania;
Department of Infrastructure, Planning and Logistics, Northern Territory;
Territory and Municipal Services Directorate, ACT.

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SECTION I

Rates

Fatality rate per 100,000 population – OECD countries, 2019

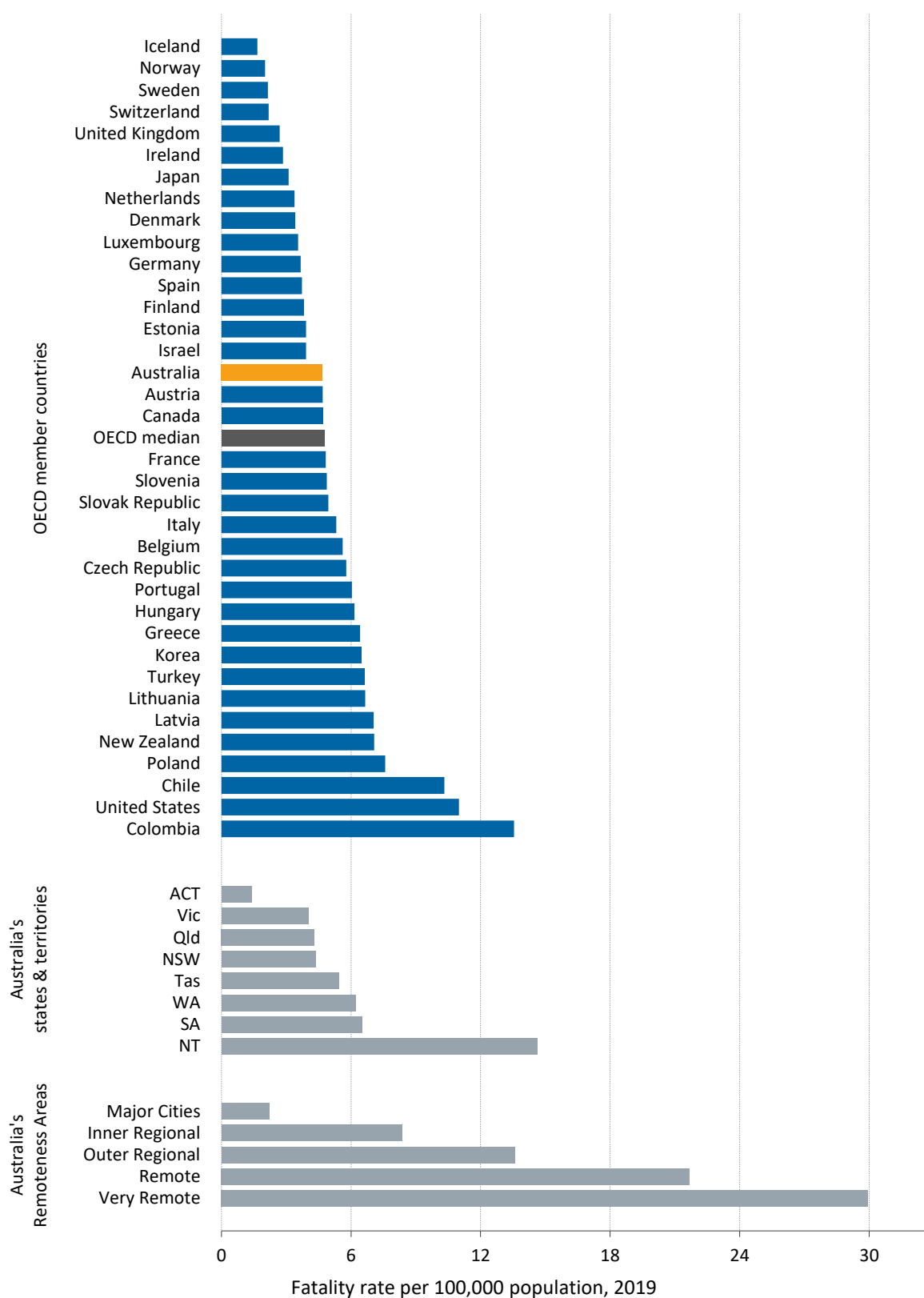
Table I.1 **Fatality rate per 100,000 population – 36 OECD countries and Australian states/territories, 2019**

<i>Nation</i>	<i>Road deaths</i>	<i>Population (000s)</i>	<i>Fatality rate per 100,000 population</i>
Iceland	6	361	1.66
Norway	108	5,348	2.02
Sweden	221	10,279	2.15
Switzerland	187	8,575	2.18
United Kingdom	1,804	66,797	2.70
Ireland	140	4,921	2.84
Japan	3,920	126,167	3.11
Netherlands	586	17,345	3.38
Denmark	199	5,814	3.42
Luxembourg	22	620	3.55
Germany	3,046	83,093	3.67
Spain	1,755	47,105	3.73
Finland	211	5,522	3.82
Estonia	52	1,327	3.92
Israel	355	9,054	3.92
Australia	1,186	25,366	4.68
Austria	416	8,878	4.69
Canada	1,762	37,593	4.69
OECD median			4.76
France	3,244	67,216	4.83
Slovenia	102	2,089	4.88
Slovak Republic	270	5,454	4.95
Italy	3,173	59,729	5.31
Belgium	644	11,462	5.62
Czech Republic	617	10,669	5.78
Portugal	621	10,286	6.04
Hungary	602	9,771	6.16
Greece	688	10,722	6.42
Korea	3,349	51,709	6.48
Turkey	5,473	82,579	6.63
Lithuania	186	2,794	6.66
Latvia	135	1,914	7.05
New Zealand	352	4,979	7.07
Poland	2,909	38,386	7.58
Chile	1,973	19,107	10.33
United States	36,096	328,330	10.99
Colombia	6,826	50,374	13.55
ACT	6	426	1.41
Vic	266	6,597	4.03
Qld	219	5,094	4.30
NSW	353	8,087	4.36
Tas	29	535	5.42
WA	163	2,623	6.21
SA	114	1,753	6.50
NT	36	246	14.63

Sources

ABS 2021a, Australian Road Deaths Database, IRTAD 2021 and National Crash Database

Figure I.1 Fatality rate per 100,000 population – 36 OECD countries, Australian states/territories and Australia's Remoteness Areas, 2019



Sources

ABS 2021a, Australian Road Deaths Database, IRTAD 2021 and National Crash Database

OECD countries, 1990, 2000 and 2010 to 2019

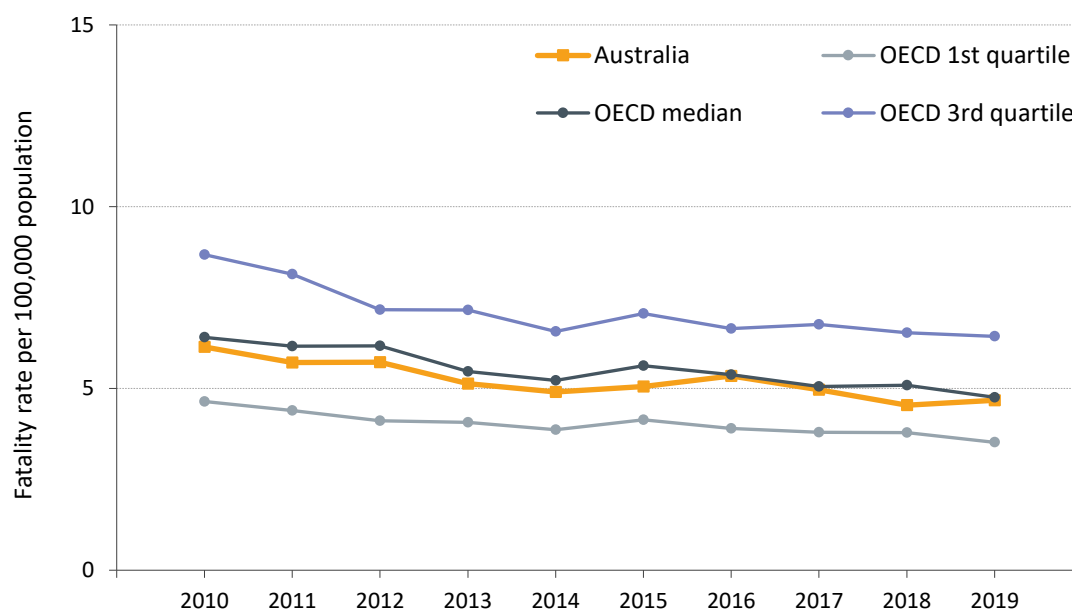
Table 1.2 Fatality rate per 100,000 population – OECD countries and Australian states/territories, 1990, 2000 and 2010 to 2019

<i>Nation</i>	<i>1990</i>	<i>2000</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>
Iceland	9.4	11.4	2.5	3.8	2.8	4.6	1.2	4.8	5.4	4.7	5.1	1.66
Norway	7.8	7.6	4.3	3.4	2.9	3.7	2.9	2.3	2.6	2.0	2.0	2.02
Sweden	9.0	6.7	2.8	3.4	3.0	2.7	2.8	2.6	2.7	2.5	3.2	2.15
Switzerland	13.8	8.2	4.2	4.0	4.2	3.3	3.0	3.1	2.6	2.7	2.7	2.18
United Kingdom	9.4	6.1	3.0	3.1	2.8	2.8	2.9	2.8	2.8	2.8	2.8	2.71
Ireland	13.6	11.0	4.7	4.1	3.5	4.1	4.1	3.5	3.8	3.2	2.8	2.84
Japan	11.8	8.2	4.6	4.3	4.1	4.1	3.8	3.8	3.7	3.5	3.3	3.11
Netherlands	9.2	6.8	3.2	3.3	3.4	2.8	2.8	3.1	3.1	3.1	3.5	3.38
Denmark	12.3	9.3	4.6	4.0	3.0	3.4	3.2	3.1	3.7	3.0	3.0	3.42
Luxembourg	18.6	17.4	6.3	6.4	6.4	8.3	6.3	6.3	5.5	4.2	5.9	3.55
Germany	-	9.1	4.5	5.0	4.5	4.1	4.2	4.2	3.9	3.8	4.0	3.67
Spain	23.2	14.2	5.3	4.4	4.1	3.6	3.6	3.6	3.9	3.9	3.9	3.73
Finland	13.0	7.7	5.1	5.4	4.7	4.7	4.2	4.9	4.7	4.3	4.3	3.82
Estonia	27.8	14.8	5.9	7.6	6.6	6.1	5.9	5.1	5.4	3.6	5.1	3.92
Israel	9.0	8.0	4.9	4.9	3.7	3.8	3.9	4.2	4.4	4.2	3.6	3.92
Australia	13.7	9.5	6.1	5.7	5.7	5.1	4.9	5.1	5.3	5.0	4.5	4.68
Austria	20.3	12.2	6.6	6.2	6.3	5.4	5.0	5.6	4.9	4.7	4.6	4.69
Canada	14.3	9.5	6.6	5.9	6.0	5.6	5.2	5.3	5.3	5.1	5.2	4.69
France	19.8	13.7	6.2	6.1	5.6	5.0	5.1	5.2	5.2	5.2	4.8	4.83
Slovenia	25.9	15.8	6.7	6.9	6.3	6.1	5.2	5.8	6.3	5.0	4.4	4.88
Slovak Republic	-	-	6.5	6.0	6.5	4.6	5.4	5.7	5.1	5.1	4.8	4.95
Italy	12.6	12.4	6.9	6.4	6.2	5.6	5.6	5.7	5.5	5.6	5.6	5.31
Belgium	19.8	14.3	7.8	8.0	7.5	6.9	6.7	6.8	5.9	5.4	5.3	5.62
Czech Republic	12.5	14.5	7.6	7.4	7.1	6.2	6.5	7.0	5.8	5.4	6.2	5.78
Portugal	29.3	20.0	8.9	8.4	6.8	6.1	6.1	5.7	5.5	5.8	6.6	6.04
Hungary	23.4	11.8	7.4	6.4	6.1	6.0	6.3	6.6	6.2	6.4	6.5	6.16
Greece	20.2	18.7	11.3	10.3	8.9	8.0	7.3	7.3	7.6	6.8	6.5	6.42
Korea	33.1	21.8	11.1	10.5	10.7	10.1	9.4	9.1	8.4	8.1	7.3	6.48
Turkey	-	-	5.5	5.2	5.0	4.8	4.6	9.6	9.2	9.2	8.2	6.63
Lithuania	-	-	9.7	9.8	10.1	8.7	9.1	8.2	6.6	6.8	6.2	6.66
Latvia	-	-	10.4	8.7	8.7	8.9	10.6	9.5	8.1	7.0	7.8	7.05
New Zealand	21.5	12.0	8.6	6.5	7.0	5.7	6.5	6.9	6.9	7.9	7.7	7.07
Poland	19.3	16.5	10.1	10.9	9.3	8.7	8.3	7.6	7.9	7.4	7.5	7.58
Chile	15.7	14.3	12.1	11.8	11.3	11.9	11.9	11.9	12.0	10.5	10.4	10.33
United States	17.9	14.9	10.7	10.4	10.8	10.4	10.3	11.1	11.7	11.5	11.3	10.99
Colombia	-	-	11.4	12.1	12.7	13.2	13.3	14.2	14.7	13.6	13.0	13.55
ACT	9.2	5.7	5.3	1.6	3.2	1.8	2.6	3.8	2.5	1.2	2.14	1.41
Vic	12.5	8.7	5.3	5.2	5.0	4.2	4.2	4.2	4.7	4.1	3.30	4.03
Qld	13.8	9.0	5.7	6.0	6.1	5.8	4.7	5.1	5.2	5.0	4.89	4.30
NSW	13.7	9.4	5.7	5.0	5.1	4.5	4.1	4.6	4.9	4.9	4.35	4.36
Tas	15.4	9.1	6.1	4.7	6.1	7.0	6.4	6.6	7.1	6.1	6.06	5.42
WA	12.2	11.3	8.4	7.6	7.5	6.5	7.3	6.3	7.6	6.2	6.09	6.21
SA	15.8	11.1	7.3	6.3	5.7	5.9	6.4	6.0	5.0	5.8	4.61	6.50
NT	41.5	25.6	21.8	19.5	20.8	15.3	16.1	20.0	18.3	12.5	20.24	14.63

Sources

ABS 2021a, Australian Road Deaths Database and IRTAD 2021

Figure I.2 Fatality rate per 100,000 population – OECD quartiles and Australia, 2010 to 2019



Sources

ABS 2021a, Australian Road Deaths Database and IRTAD 2021

Fatality rate per 10,000 registered vehicles – OECD countries, 2019

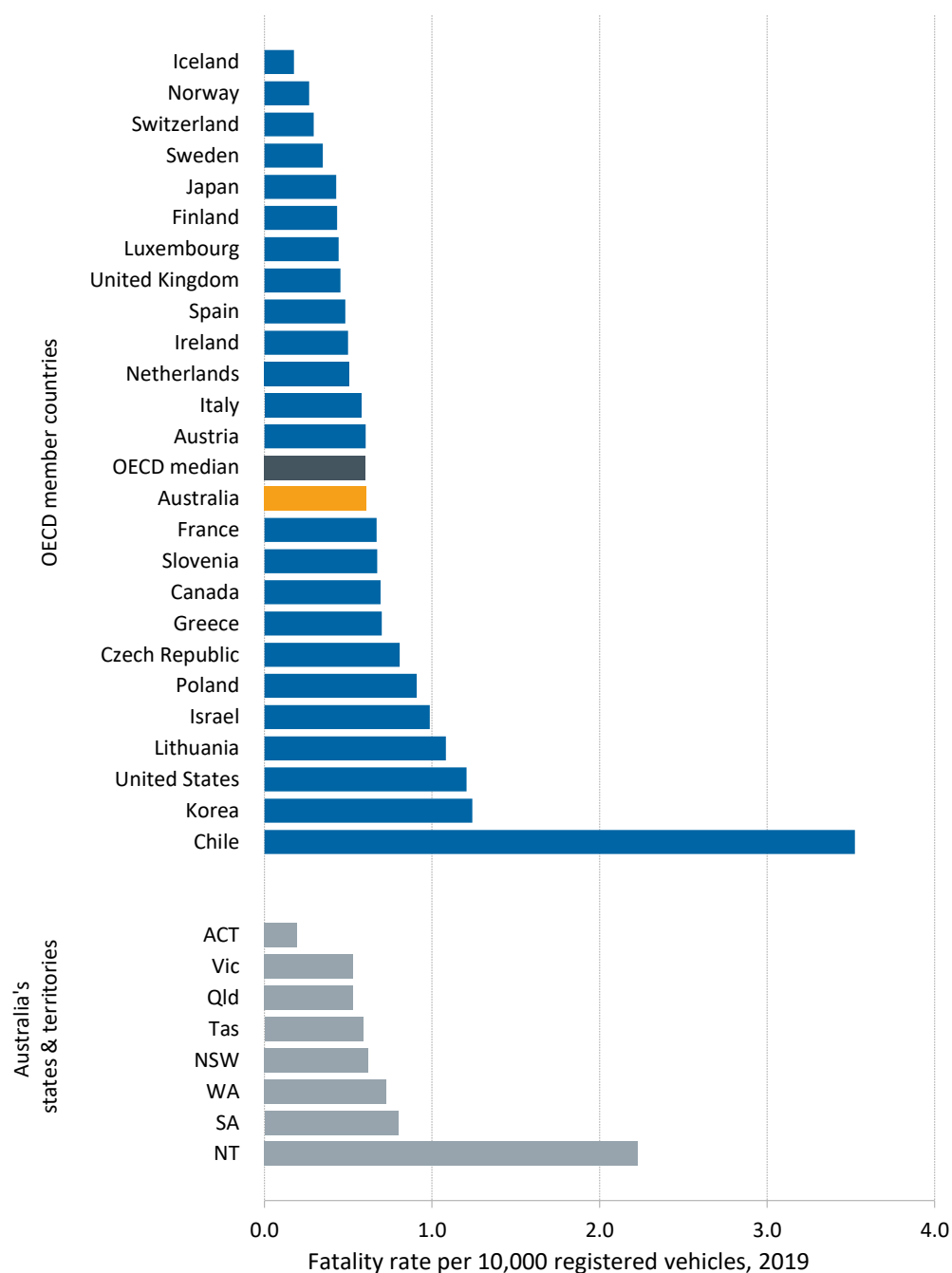
Table 1.3 **Fatality rate per 10,000 registered vehicles – 25 OECD countries and Australian states/territories, 2019**

<i>Nation</i>	<i>Road deaths</i>	<i>Total registered motor vehicles (000s)</i>	<i>Fatality rate per 10,000 registered vehicles</i>
Iceland	6	342	0.18
Norway	108	4,049	0.27
Switzerland	187	6,372	0.29
Sweden	221	6,364	0.35
Japan	3,920	91,458	0.43
Finland	211	4,878	0.43
Luxembourg	22	496	0.44
United Kingdom	1,804	39,890	0.45
Spain	1,755	36,343	0.48
Ireland	140	2,806	0.50
Netherlands	586	11,553	0.51
Italy	3,173	54,975	0.58
Austria	416	6,896	0.60
OECD median			0.60
Australia	1,186	19,505	0.61
France	3,244	48,520	0.67
Slovenia	102	1,515	0.67
Canada	1,762	25,423	0.69
Greece	688	9,822	0.70
Czech Republic	617	7,643	0.81
Poland	2,909	31,989	0.91
Israel	355	3,601	0.99
Lithuania	186	1,719	1.08
United States	36,096	299,267	1.21
Korea	3,349	26,990	1.24
Chile	1,973	5,600	3.52
ACT	6	309	0.19
Vic	266	5,031	0.53
Qld	219	4,134	0.53
Tas	29	493	0.59
NSW	353	5,702	0.62
WA	163	2,245	0.73
SA	114	1,429	0.80
NT	36	162	2.23

Sources

ABS 2021c, Australian Road Deaths Database and IRTAD 2021

Figure I.3 **Fatality rate per 10,000 registered vehicles – 25 OECD countries and Australian states/territories, 2019**



Sources

ABS 2021c, Australian Road Deaths Database and IRTAD 2021

OECD countries, 1990, 2000 and 2010 to 2019

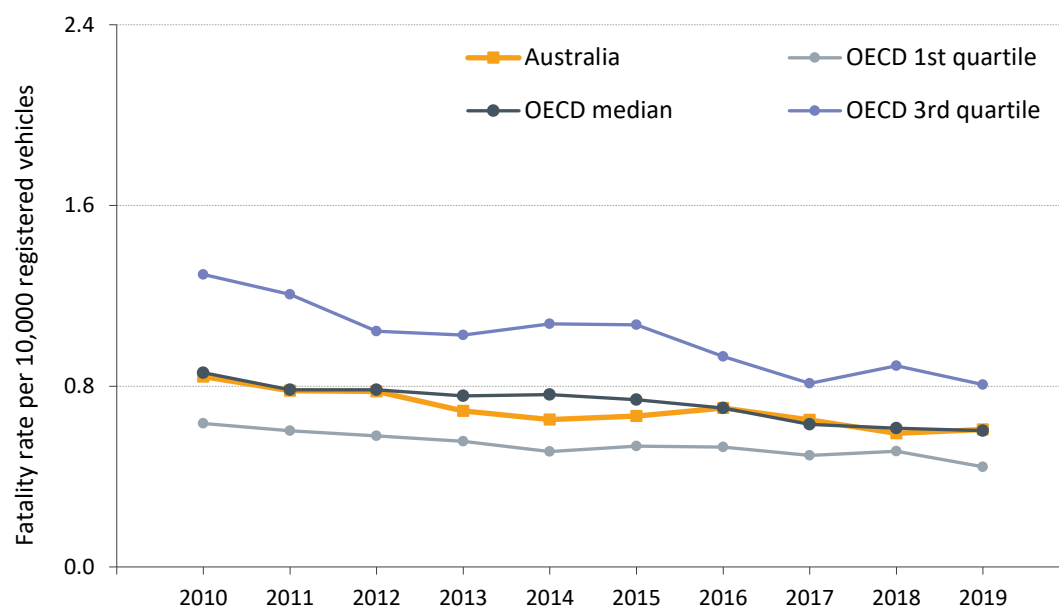
Table 1.4 **Fatality rate per 10,000 registered vehicles – OECD countries and Australian states/territories, 1990, 2000 and 2010 to 2019**

<i>Nation</i>	<i>1990</i>	<i>2000</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>
Iceland	1.7	1.8	0.3	0.5	0.3	0.6	0.1	0.6	0.6	0.5	0.53	0.18
Norway	1.4	1.2	0.6	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.27	0.27
Switzerland	2.2	1.2	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.37	0.29
Sweden	1.7	1.2	0.5	0.6	0.5	0.4	0.5	0.4	0.4	0.4	0.51	0.35
Japan	1.9	1.2	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.46	0.43
Finland	2.8	1.5	0.7	0.7	0.6	0.6	0.5	0.6	0.6	0.5	0.50	0.43
Luxembourg	3.3	2.4	0.8	0.8	0.8	1.0	0.8	0.8	0.7	0.5	0.75	0.44
United Kingdom	2.1	1.2	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.47	0.45
Spain	5.1	2.2	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.51	0.48
Ireland	4.5	2.5	0.9	0.8	0.7	0.8	0.8	0.6	0.7	0.6	0.52	0.50
Netherlands	2.2	1.3	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.60	0.51
Italy	2.1	1.6	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.61	0.58
Austria	3.7	1.8	0.9	0.9	0.9	0.7	0.7	0.7	0.7	0.6	0.60	0.60
Australia	2.3	1.5	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.59	0.61
France	3.6	2.3	1.0	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.74	0.67
Slovenia	-	-	1.0	1.1	1.0	0.9	0.8	0.9	0.9	0.7	0.62	0.67
Canada	2.3	1.6	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.72	0.69
Greece	7.4	3.1	1.3	1.2	1.0	0.9	0.8	0.8	0.9	0.8	0.74	0.70
Czech Republic	3.3	3.2	1.3	1.3	1.2	1.0	1.1	1.1	0.9	0.8	0.89	0.81
Poland	-	-	1.7	1.7	1.4	1.3	1.2	1.1	1.1	1.0	0.93	0.91
Israel	4.1	2.5	1.5	1.4	1.1	1.1	1.1	1.2	1.2	1.1	0.91	0.99
Lithuania	12.7	5.0	1.4	1.4	1.3	1.1	1.8	1.5	1.2	1.2	1.06	1.08
United States	2.4	1.9	1.3	1.2	1.3	1.2	1.2	1.3	1.3	1.3	1.23	1.21
Korea	-	-	-	-	-	2.3	2.1	1.9	1.7	1.6	1.40	1.24
Chile	-	10.6	6.3	5.7	5.1	5.0	4.7	4.6	4.5	3.8	3.63	3.52
ACT	1.6	0.9	0.7	0.2	0.4	0.3	0.4	0.5	0.3	0.2	0.3	0.19
Vic	2.1	1.2	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.4	0.53
Qld	2.3	1.4	0.7	0.8	0.8	0.8	0.6	0.6	0.7	0.6	0.6	0.53
Tas	2.4	1.3	0.8	0.6	0.7	0.8	0.7	0.8	0.8	0.7	0.7	0.59
NSW	2.5	1.6	0.9	0.8	0.8	0.7	0.6	0.7	0.7	0.7	0.6	0.62
WA	1.9	1.6	1.0	0.9	0.9	0.8	0.9	0.7	0.9	0.7	0.7	0.73
SA	2.6	1.6	1.0	0.8	0.7	0.8	0.8	0.8	0.6	0.7	0.6	0.80
NT	8.6	5.0	3.7	3.3	3.5	2.5	2.6	3.2	2.9	2.0	3.1	2.23

Note 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.

Sources ABS 2021c, Australian Road Deaths Database and IRTAD 2021

Figure I.4 Fatality rate per 10,000 registered vehicles – OECD quartiles and Australia, 2010 to 2019



Sources

ABS 2021c, Australian Road Deaths Database and IRTAD 2021

Fatality rate per 100 million vehicle kilometres travelled (VKT) – OECD countries, 2019

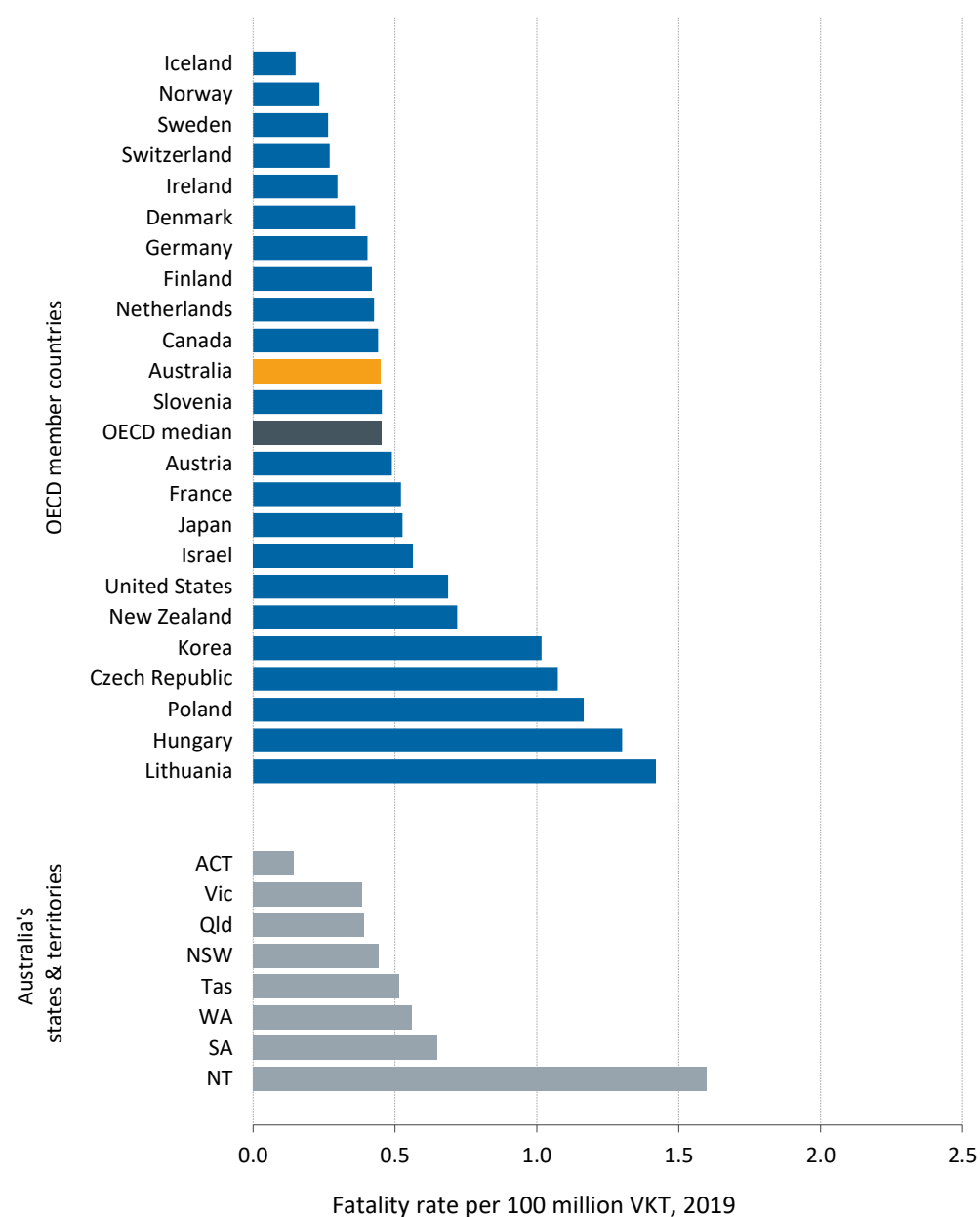
Table 1.5 **Fatality rate per 100 million vehicle kilometres travelled (VKT)**
– 23 OECD countries and Australian states/territories, 2019

<i>Nation</i>	<i>Road deaths</i>	<i>Total VKT (millions)</i>	<i>Fatality rate per 100 million VKT</i>
Iceland	6	3,998	0.15
Norway	108	46,226	0.23
Sweden	221	83,723	0.26
Switzerland	187	69,299	0.27
Ireland	140	47,072	0.30
Denmark	199	55,066	0.36
Germany	3,046	755,000	0.40
Finland	211	50,387	0.42
Netherlands	586	137,459	0.43
Canada	1,762	399,568	0.44
Australia	1,186	264,000	0.45
Slovenia	102	22,477	0.45
OECD median			0.45
Austria	416	85,035	0.49
France	3,244	622,988	0.52
Japan	3,920	744,644	0.53
Israel	355	63,191	0.56
United States	36,096	5,249,313	0.69
New Zealand	352	48,930	0.72
Korea	3,349	329,554	1.02
Czech Republic	617	57,485	1.07
Poland	2,909	249,620	1.17
Hungary	602	46,301	1.30
Lithuania	186	13,099	1.42
ACT	6	4,182	0.14
Vic	266	69,469	0.38
Qld	219	56,148	0.39
NSW	353	79,616	0.44
Tas	29	5,654	0.51
WA	163	29,097	0.56
SA	114	17,580	0.65
NT	36	2,253	1.60

Sources

Australian Road Deaths Database, BITRE 2020 and IRTAD 2021

Figure I.5 **Fatality rate per 100 million vehicle kilometres travelled (VKT)**
– 23 OECD countries and Australian states/territories, 2019



Sources

Australian Road Deaths Database, BITRE 2020 and IRTAD 2021

OECD countries, 1990, 2000 and 2010 to 2019

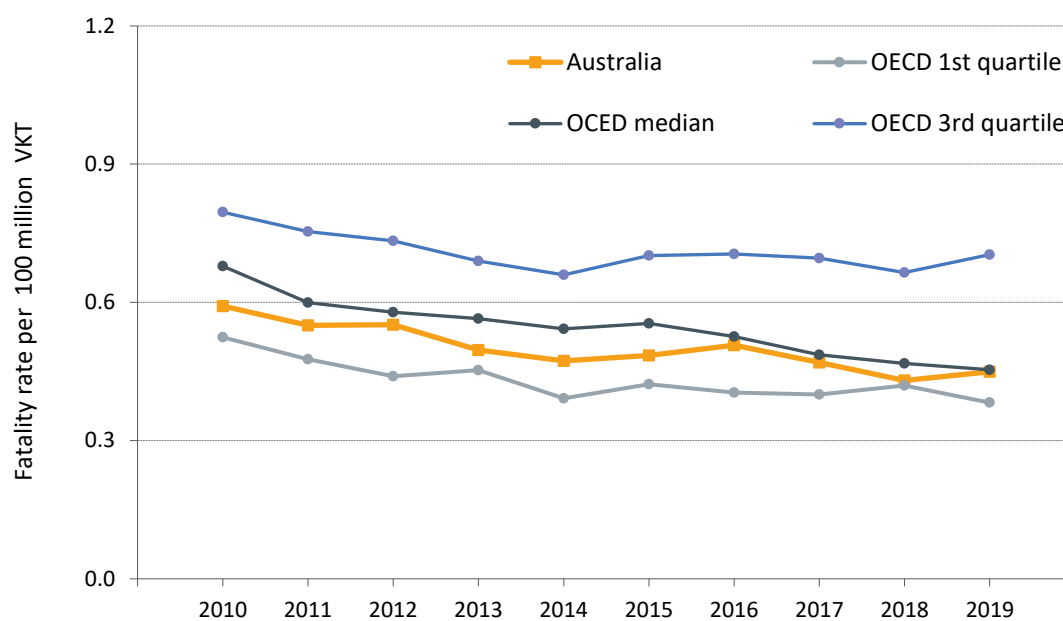
Table 1.6 **Fatality rate per 100 million vehicle kilometres travelled (VKT) – OECD countries and Australian states/territories, 1990, 2000 and 2010 to 2019**

<i>Nation</i>	<i>1990</i>	<i>2000</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>
Iceland	1.5	1.4	0.3	0.4	0.3	0.5	0.1	0.5	0.5	0.4	0.4	0.15
Norway	1.2	1.0	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.23
Sweden	1.2	0.9	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.26
Switzerland	1.9	1.1	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.27
Ireland	1.9	1.2	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.30
Denmark	1.7	1.1	0.6	0.5	0.3	0.4	0.4	0.3	0.4	0.3	0.3	0.36
Germany	-	1.1	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.40
Finland	1.6	0.8	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.42
Netherlands	1.4	0.9	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.43
Canada	-	0.9	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.44
Australia	1.4	0.9	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.45
Slovenia	6.5	2.7	0.8	-	-	0.7	0.6	0.7	0.6	0.5	0.4	0.45
Austria	3.2	1.5	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.49
France	2.6	1.6	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.52
Japan	2.3	1.3	0.8	0.8	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.53
Israel	-	1.2	0.8	0.8	0.6	0.6	0.6	0.6	0.7	0.6	0.5	0.56
United States	1.3	0.9	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.69
New Zealand	-	1.4	0.9	0.7	0.8	0.6	0.7	0.7	0.7	0.8	0.8	0.72
Korea	-	4.9	1.9	2.0	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.02
Czech Republic	4.8	3.7	1.6	1.6	1.6	1.4	1.4	1.4	1.2	1.1	1.2	1.07
Poland	-	-	2.0	2.0	1.7	1.6	1.5	1.3	1.3	1.2	1.1	1.17
Hungary	-	-	-	-	-	-	-	-	-	-	-	1.30
Lithuania	-	-	3.0	2.9	3.0	2.5	2.5	2.1	1.6	1.6	1.4	1.42
ACT	1.0	0.6	0.5	0.2	0.3	0.2	0.3	0.4	0.2	0.1	0.22	0.14
Vic	1.2	0.8	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.31	0.38
Qld	1.4	0.8	0.5	0.5	0.6	0.5	0.4	0.5	0.5	0.4	0.44	0.39
NSW	1.5	1.0	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.44	0.44
Tas	1.7	0.9	0.6	0.5	0.6	0.7	0.6	0.6	0.7	0.6	0.57	0.51
WA	1.2	1.0	0.8	0.7	0.7	0.6	0.7	0.6	0.7	0.5	0.54	0.56
SA	1.7	1.1	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.45	0.65
NT	4.7	2.8	2.4	2.2	2.4	1.8	1.8	2.3	2.1	1.4	2.22	1.60

Sources

Australian Road Deaths Database, BITRE 2020 and IRTAD 2021

Figure I.6 Fatality rate per 100 million vehicle kilometres travelled (VKT)
– OECD quartiles and Australia, 2010 to 2019



Sources

Australian Road Deaths Database, BITRE 2020 and IRTAD 2021

Comparing the three measures:

Population, registered vehicles and vehicle kilometres travelled are highly correlated. The ranking of countries according to the rates will be similar for each of these exposure measures.

The following tables present the correlation between firstly the exposure measures, and then between the fatality rates.

Table I.7 Correlation between exposure measures

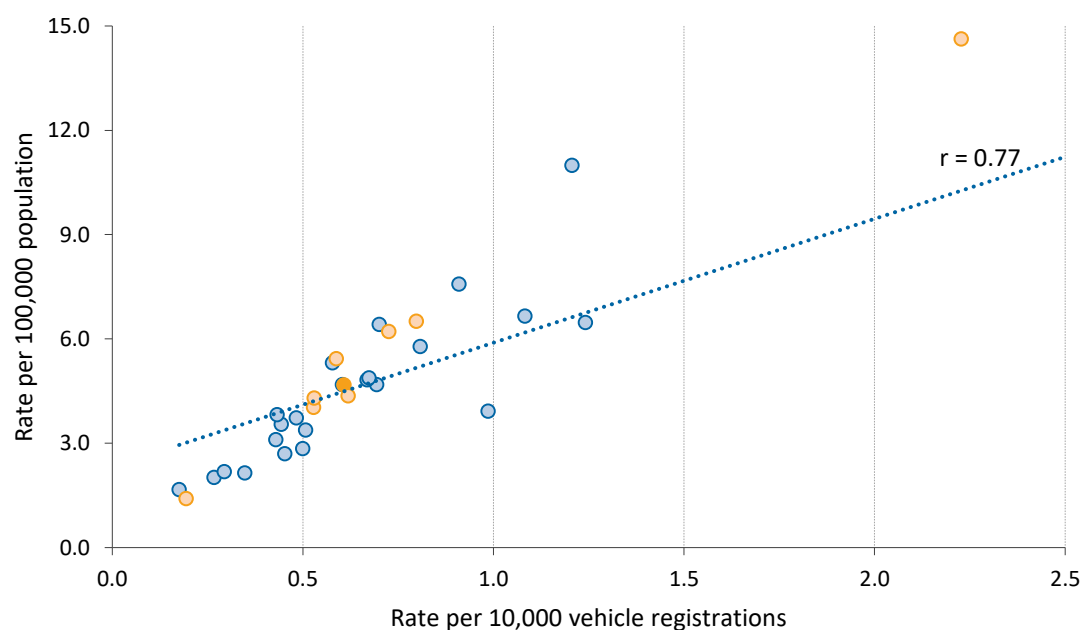
<i>Measures</i>	<i>Population</i>	<i>Veh. Registration</i>	<i>VKT</i>
Population	1.00	0.99	0.97
Veh. Registration		1.00	0.99
VKT			1.00

Table I.8 Correlation between rates

<i>Measures</i>	<i>Population</i>	<i>Veh. Registration</i>	<i>VKT</i>
Population	1.00	0.77	0.70
Veh. Registration		1.00	0.79
VKT			1.00

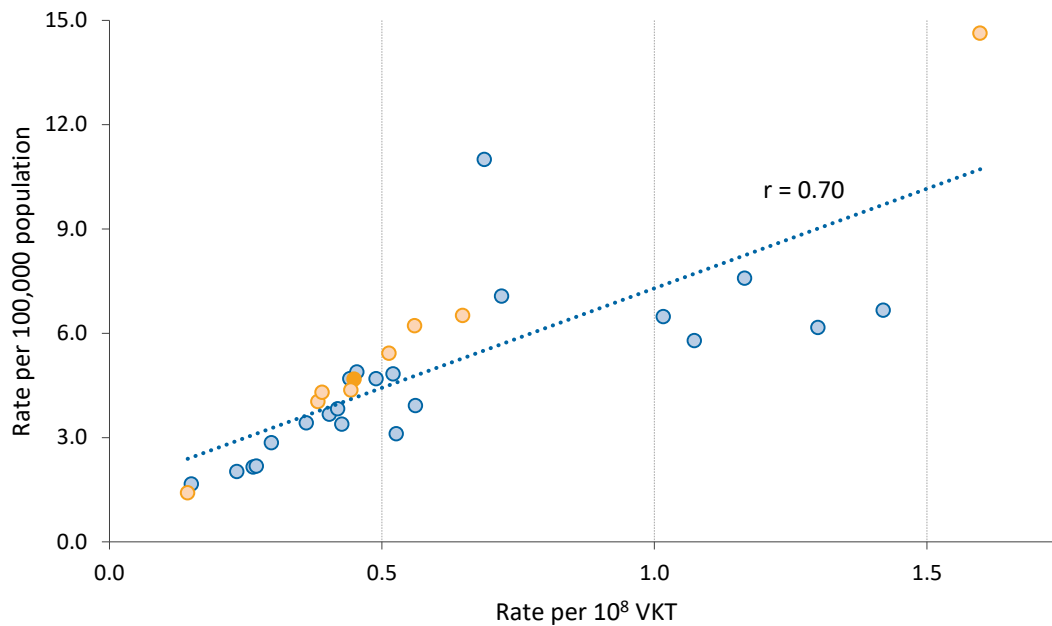
The charts following illustrate the similarity of the three measures presented in sections 1,2 and 3.

Figure I.7 Population rates vs vehicle registration rates, 2019



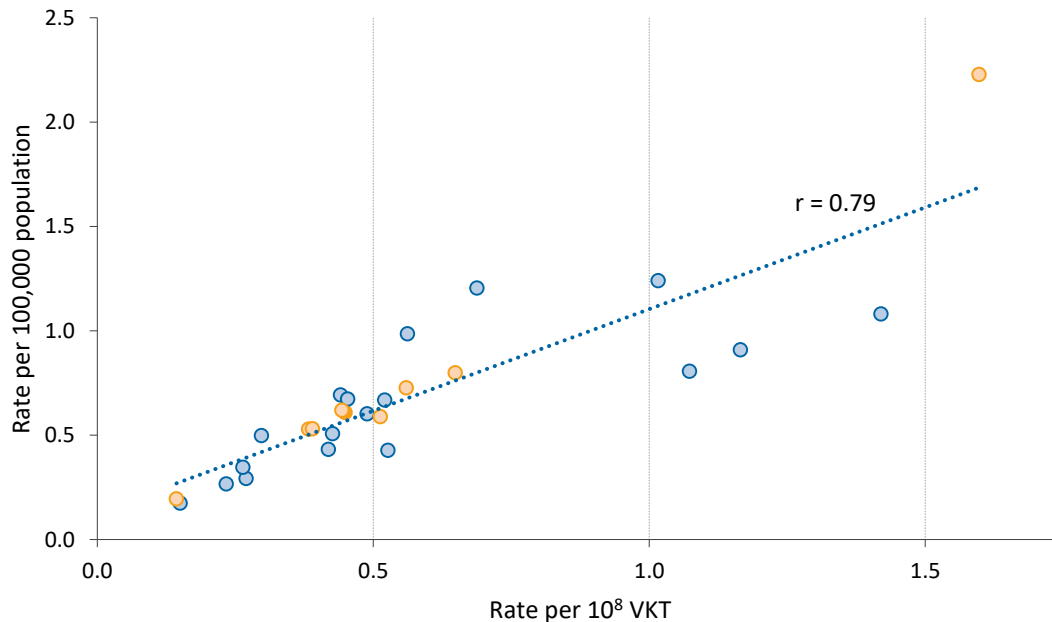
Sources

ABS 2021a, ABS 2021c, Australian Road Deaths Database and IRTAD 2021

Figure I.8 Population rates vs vehicle kilometres travelled rates, 2019

Sources

ABS 2021a, Australian Road Deaths Database, BITRE 2020 and IRTAD 2021

Figure I.9 Vehicle registration rates vs vehicle kilometres travelled rates, 2019

Sources

ABS 2021c, Australian Road Deaths Database, BITRE 2020 and IRTAD 2021

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SECTION 2

Age, Road user and Gender comparisons

Proportion of road deaths by age group – OECD countries, 2019

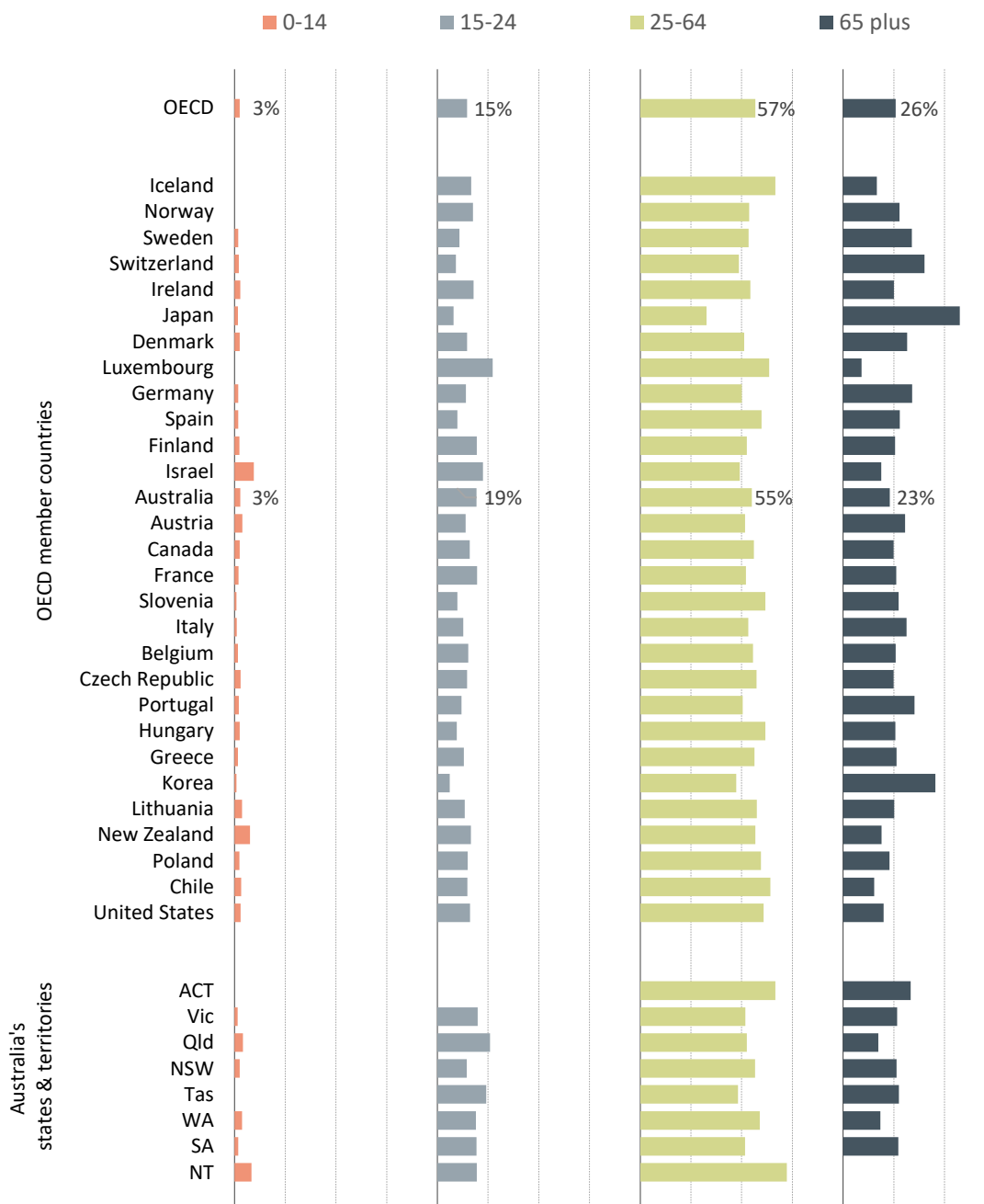
Table 2.1 Distribution of deaths by age group – 29 OECD and Australian states/territories, 2019

<i>Nation</i>	<i>Age group</i>			
	<i>0-14</i>	<i>15-24</i>	<i>25-64</i>	<i>65 +</i>
Iceland	0.0%	16.7%	66.7%	16.7%
Norway	0.0%	17.6%	53.7%	27.8%
Sweden	1.8%	10.9%	53.4%	33.9%
Switzerland	2.1%	9.1%	48.7%	40.1%
Ireland	2.9%	17.9%	54.3%	25.0%
Japan	1.7%	8.0%	32.7%	57.6%
Denmark	2.5%	14.6%	51.3%	31.7%
Luxembourg	0.0%	27.3%	63.6%	9.1%
Germany	1.8%	14.1%	50.0%	34.0%
Spain	1.8%	9.8%	59.8%	28.0%
Finland	2.4%	19.4%	52.6%	25.6%
Israel	9.6%	22.5%	49.0%	18.9%
Australia	2.8%	19.2%	55.0%	23.0%
Austria	3.8%	13.9%	51.7%	30.5%
Canada	2.6%	15.9%	56.0%	24.9%
OECD	2.5%	14.7%	56.8%	26.0%
France	2.0%	19.6%	52.2%	26.2%
Slovenia	1.0%	9.8%	61.8%	27.5%
Italy	1.1%	12.8%	53.3%	31.3%
Belgium	1.7%	15.2%	55.6%	25.9%
Czech Republic	2.9%	14.6%	57.4%	25.0%
Portugal	2.1%	11.9%	50.6%	35.3%
Hungary	2.5%	9.6%	61.6%	25.7%
Greece	1.7%	13.1%	56.4%	26.3%
Korea	1.0%	6.1%	47.3%	45.5%
Lithuania	3.8%	13.4%	57.5%	25.3%
New Zealand	7.7%	16.5%	56.8%	19.0%
Poland	2.3%	14.9%	59.5%	22.8%
Chile	3.3%	14.8%	64.1%	15.3%
United States	2.9%	16.1%	60.9%	20.0%
ACT	0.0%	0.0%	66.7%	33.3%
Vic	1.5%	19.9%	51.9%	26.7%
Qld	4.1%	26.0%	52.5%	17.4%
NSW	2.5%	14.4%	56.7%	26.3%
Tas	0.0%	24.1%	48.3%	27.6%
WA	3.7%	19.0%	58.9%	18.4%
SA	1.8%	19.3%	51.8%	27.2%
NT	8.3%	19.4%	72.2%	0.0%

Sources

Australian Road Deaths Database and IRTAD 2021

Figure 2.1 Distribution of deaths by age group – 29 OECD countries and Australian states/territories, 2019



Sources

Australian Road Deaths Database and IRTAD 2021

Proportion of road deaths by road user group – OECD countries, 2019

Table 2.2 Distribution of deaths by road user group – 29 OECD countries and Australian states/territories, 2019

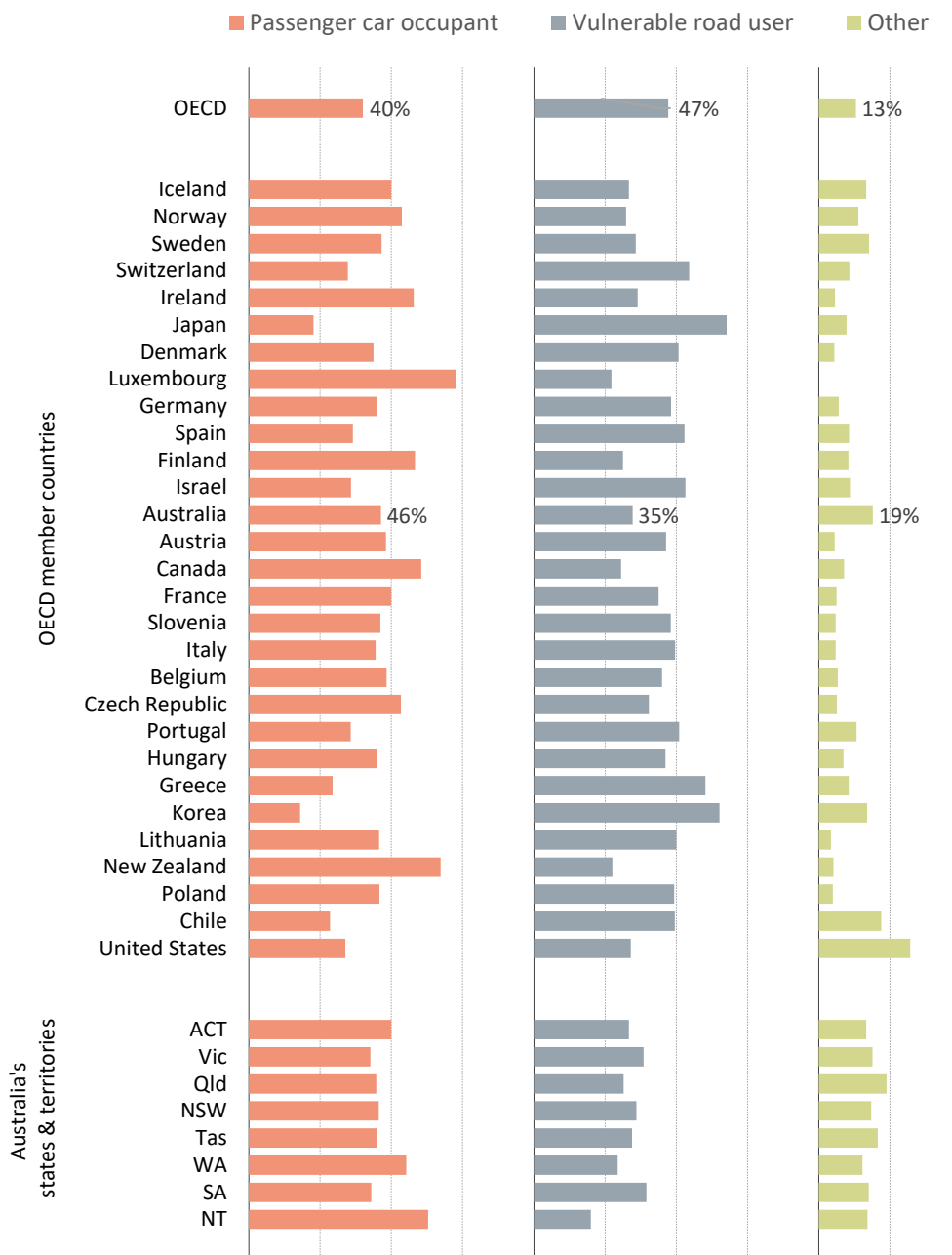
<i>Nation</i>	<i>Road User</i>				
	<i>Passenger car occupant</i>	<i>Pedestrian</i>	<i>Motorcyclist</i>	<i>Pedal cyclist</i>	<i>Other</i>
Iceland	50%	17%	17%	0%	17%
Norway	54%	12%	15%	6%	14%
Sweden	47%	12%	16%	8%	18%
Switzerland	35%	20%	21%	14%	11%
Ireland	58%	19%	11%	6%	6%
Japan	23%	37%	15%	16%	10%
Denmark	44%	15%	20%	16%	6%
Luxembourg	73%	9%	18%	0%	0%
Germany	45%	14%	20%	15%	7%
Spain	37%	22%	27%	5%	11%
Finland	58%	7%	13%	11%	10%
Israel	36%	25%	19%	10%	11%
Australia	46%	13%	18%	3%	19%
Austria	48%	17%	21%	8%	6%
Canada	60%	18%	11%	2%	9%
OECD	40%	22%	20%	6%	13%
France	50%	15%	23%	6%	6%
Slovenia	46%	15%	25%	9%	6%
Italy	44%	17%	25%	8%	6%
Belgium	48%	14%	16%	14%	7%
Czech Republic	53%	18%	14%	9%	6%
Portugal	36%	21%	26%	4%	13%
Hungary	45%	24%	12%	10%	9%
Greece	29%	21%	36%	3%	10%
Korea	18%	39%	21%	5%	17%
Lithuania	46%	32%	12%	6%	4%
New Zealand	67%	8%	16%	3%	5%
Poland	46%	27%	13%	9%	5%
Chile	29%	34%	11%	5%	22%
United States	34%	18%	14%	2%	32%
ACT	50%	33%	0%	0%	17%
Vic	43%	18%	16%	4%	19%
Qld	45%	8%	21%	3%	24%
NSW	46%	13%	19%	4%	18%
Tas	45%	14%	21%	0%	21%
WA	55%	10%	19%	1%	15%
SA	43%	18%	15%	6%	18%
NT	63%	11%	9%	0%	17%

Note OECD Motorcyclist (motorised two-wheelers) definition includes mopeds.

Passenger cars consist of driver and passenger.

Sources IRTAD 2021 and National Crash Database

Figure 2.2 Distribution of deaths by road user group – 29 OECD countries and Australian states/territories, 2019



Sources

IRTAD 2021 and National Crash Database

Proportion of road deaths by gender – OECD countries, 2019

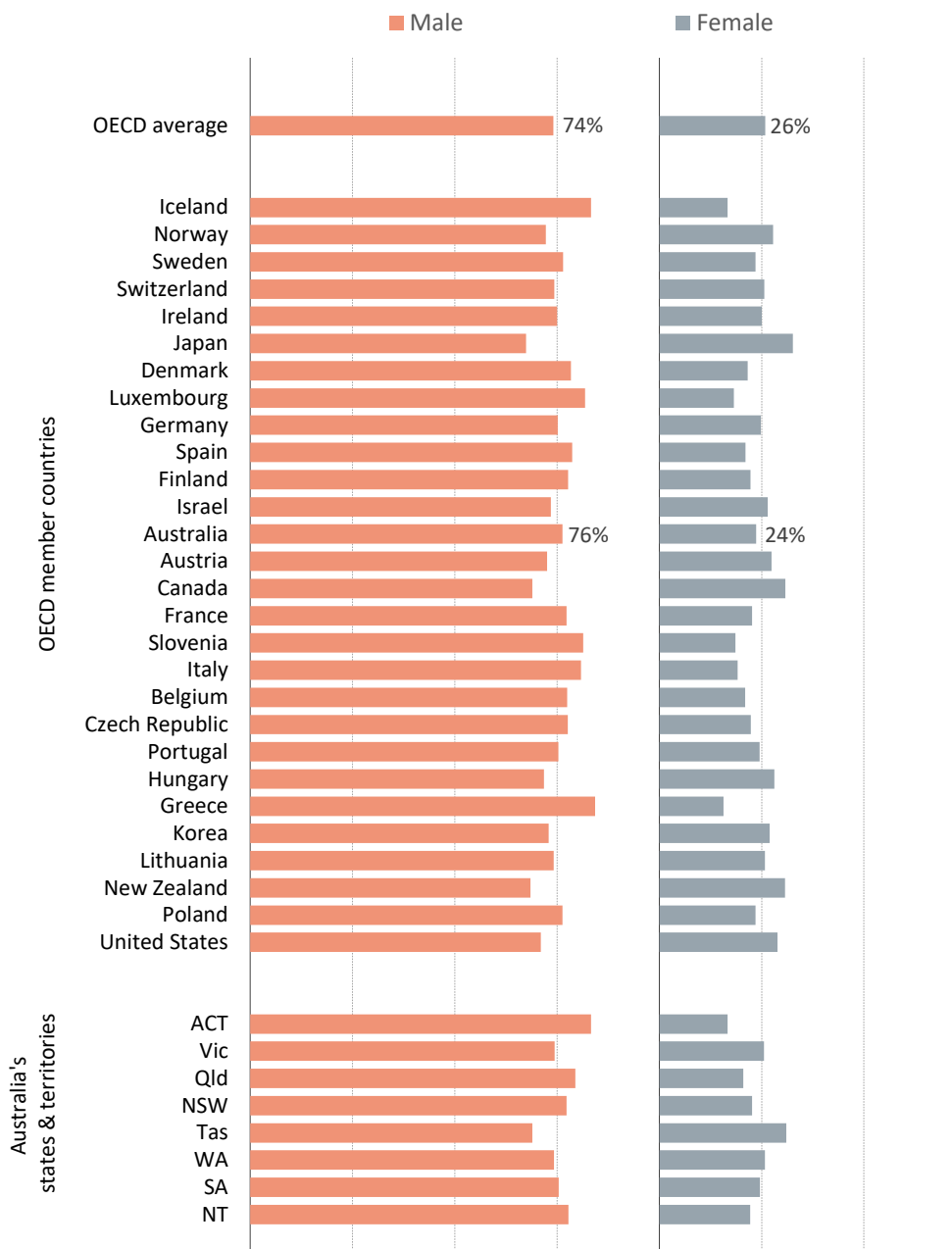
Table 2.3 Distribution of deaths by gender – 28 OECD countries and Australian states/territories, 2019

<i>Nation</i>	<i>Gender</i>	
	<i>Male</i>	<i>Female</i>
Iceland	83%	17%
Norway	72%	28%
Sweden	76%	24%
Switzerland	74%	26%
Ireland	75%	25%
Japan	67%	33%
Denmark	78%	22%
Luxembourg	82%	18%
Germany	75%	25%
Spain	79%	21%
Finland	78%	22%
Israel	74%	26%
Australia	76%	24%
Austria	73%	27%
Canada	69%	31%
OECD	74%	26%
France	77%	23%
Slovenia	81%	19%
Italy	81%	19%
Belgium	77%	21%
Czech Republic	78%	22%
Portugal	75%	24%
Hungary	72%	28%
Greece	84%	16%
Korea	73%	27%
Lithuania	74%	26%
New Zealand	68%	31%
Poland	76%	24%
United States	71%	29%
ACT	83%	17%
Vic	74%	26%
Qld	79%	21%
NSW	77%	23%
Tas	69%	31%
WA	74%	26%
SA	75%	25%
NT	78%	22%

Sources

Australian Road Deaths Database and IRTAD 2021

Figure 2.3 Distribution of deaths by gender – 28 OECD countries and Australian states/territories, 2019



Sources Australian Road Deaths Database and IRTAD 2021

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