



**Australian Government**

**Department of Infrastructure, Transport,  
Regional Development, Communications and the Arts**

STATISTICAL REPORT



bitre

Safety

**International road safety comparisons  
2020**

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ISSN: 1447-8218

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Bureau of Infrastructure and Transport Research Economics

# **International road safety comparisons 2020**

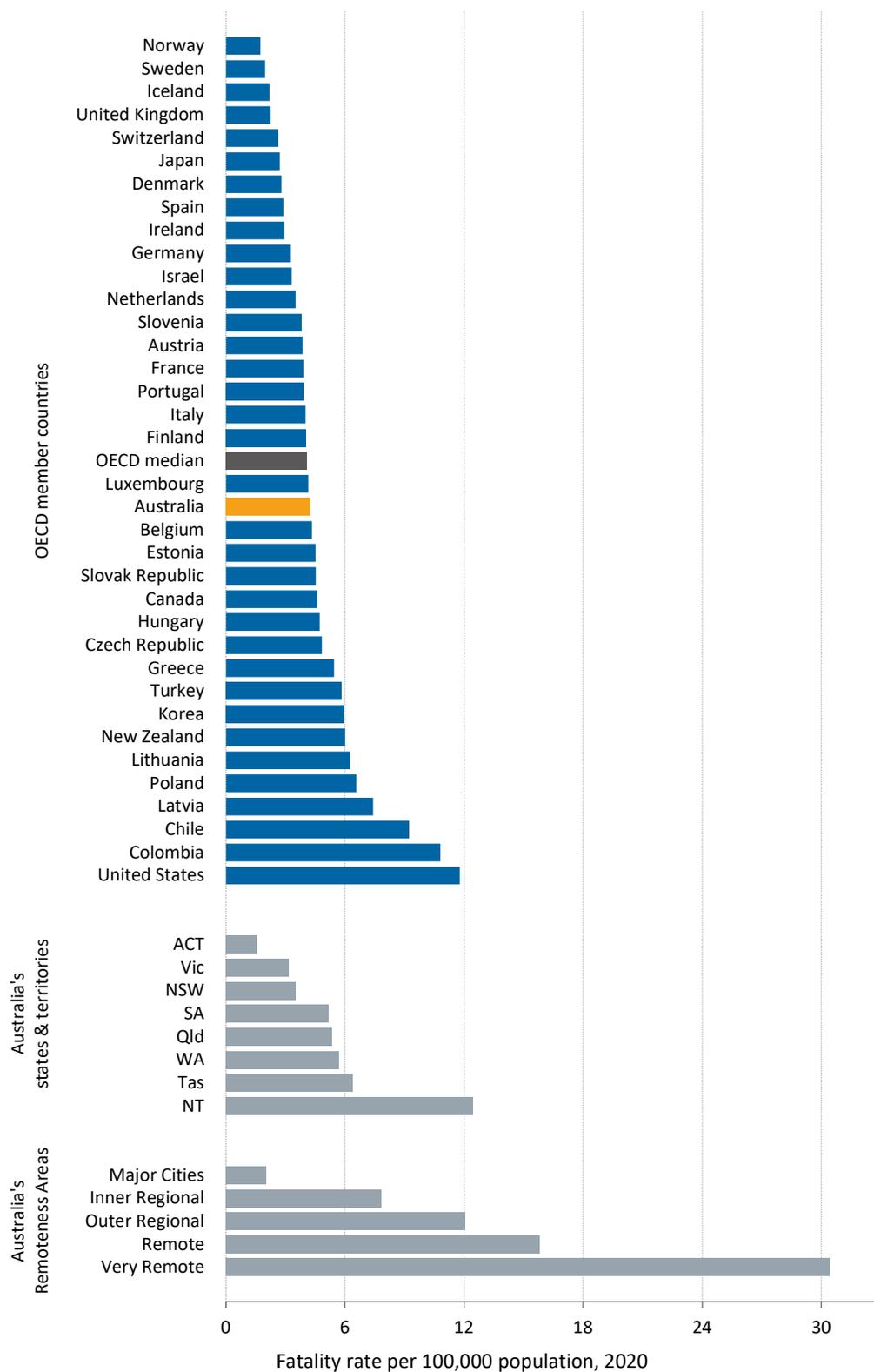
Department of Infrastructure, Transport, Regional Development, Communications and the Arts  
Canberra, Australia

# 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 2020.

- In terms of the fatality rate per 100,000 population in 2020:
  - Australia's rate of 4.26 was ranked 20<sup>th</sup> out of the 36 nations. The nations with the three lowest rates were Norway (1.73), Sweden (1.98) and Iceland (2.20).
  - Between 2011 and 2020 Australia's fatality rate declined by 25.4 per cent. Over the same period, the OECD median rate declined by 34.6 per cent (Figure 1.2).
  - In Australia, rates vary significantly across Remoteness Areas classifications. Major City rates have been consistently the lowest (2.03 in 2020) and Very Remote areas are consistently the highest (30.41 in 2020) (Figure 1.1).
- In terms of the fatality rate per 10,000 registered vehicles in 2020:
  - Australia's rate of 0.55 was ranked 18<sup>th</sup> out of the 30 nations with available data. The nations with the three lowest rates were Norway (0.23), Iceland (0.23) and Sweden (0.32) (Table 1.3).
  - Between 2011 and 2020 Australia's fatality rate declined by 29.2 per cent. Over the same period, the OECD median rate declined by 33.7 per cent (Figure 1.4).
- In terms of the fatality rate per 100 million vehicle kilometres travelled (VKT) in 2020:
  - Australia's rate of 0.44 was ranked 9<sup>th</sup> out of 15 nations with available data. The nations with the three lowest rates were Iceland (0.21), Norway (0.21) and Sweden (0.26) (Table 1.5).
  - Between 2011 and 2020 Australia's fatality rate declined by 19.1 per cent. Over the same period, the OECD median rate declined by 25.3 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.
- In Australia in 2020, vulnerable road users (motorcyclist, pedestrian or cyclist) accounted for 35.0 per cent of total road deaths. This is low compared to most other OECD countries. For the OECD in total, this percentage is 44.2 per cent.

**Figure I.1 Fatality rate per 100,000 population – 36 OECD countries, Australian states/territories and Australia’s Remoteness Areas, 2020**



# Data sources

## International data

The International Road Traffic Accident Database (IRTAD 2022) 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). In this report, the ARDD was used for 1990-2010 data and the NCD was used for 2011-2020 data. 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 used in this report was current to June 2022.

ARDD data are available at <[https://www.bitre.gov.au/statistics/safety/fatal\\_road\\_crash\\_database](https://www.bitre.gov.au/statistics/safety/fatal_road_crash_database)>.

# Acknowledgements

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

Transport for New South Wales;  
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;  
Transport Canberra and City Services Directorate, Australian Capital Territory.

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# **SECTION I**

## **Rates**

## Fatality rate per 100,000 population – OECD countries, 2020

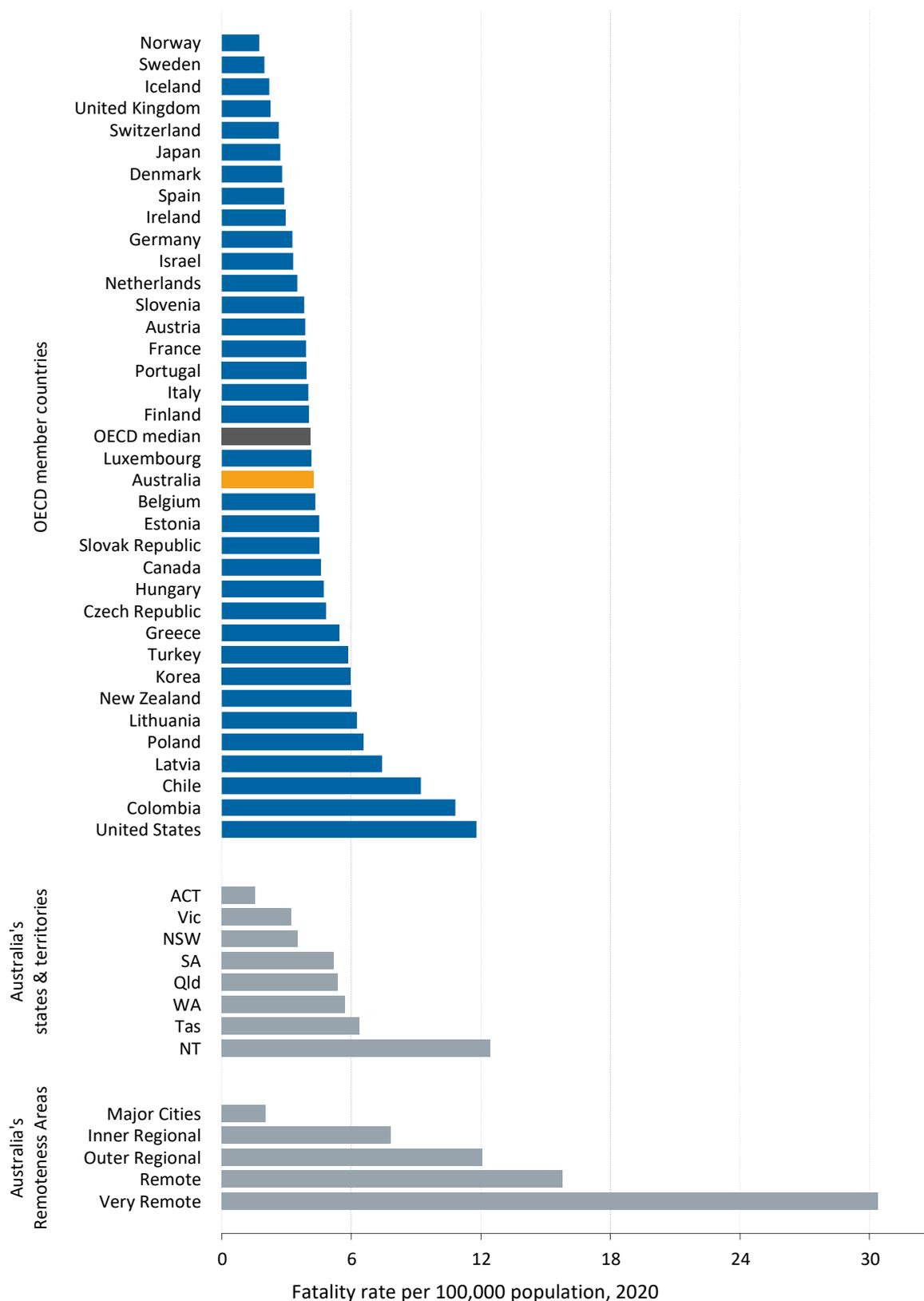
**Table I.1 Fatality rate per 100,000 population – 36 OECD countries and Australian states/territories, 2020**

<i>Nation</i>	<i>Road deaths</i>	<i>Population (000s)</i>	<i>Fatality rate per 100,000 population</i>
Norway	93	5,368	1.73
Sweden	204	10,328	1.98
Iceland	8	364	2.20
United Kingdom	1,516	67,082	2.26
Switzerland	227	8,606	2.64
Japan	3,416	125,708	2.72
Denmark	163	5,823	2.80
Spain	1,370	47,333	2.89
Ireland	147	4,964	2.96
Germany	2,719	83,167	3.27
Israel	305	9,215	3.31
Netherlands	610	17,408	3.50
Slovenia	80	2,096	3.82
Austria	344	8,901	3.86
France	2,541	65,124	3.90
Portugal	404	10,296	3.92
Italy	2,395	59,641	4.02
Finland	223	5,525	4.04
<b>OECD median</b>			<b>4.09</b>
Luxembourg	26	626	4.15
<b>Australia</b>	<b>1,094</b>	<b>25,655</b>	<b>4.26</b>
Belgium	499	11,522	4.33
Estonia	60	1,329	4.51
Slovak Republic	247	5,459	4.52
Canada	1,746	38,025	4.59
Hungary	462	9,770	4.73
Czech Republic	517	10,694	4.83
Greece	584	10,719	5.45
Turkey	4,866	83,385	5.84
Korea	3,081	51,781	5.95
New Zealand	306	5,094	6.01
Lithuania	175	2,795	6.26
Poland	2,491	37,958	6.56
Latvia	141	1,900	7.42
Chile	1,794	19,458	9.22
Colombia	5,447	50,372	10.81
United States	38,824	329,484	11.78
<b>ACT</b>	<b>7</b>	<b>451</b>	<b>1.55</b>
<b>Vic</b>	<b>211</b>	<b>6,606</b>	<b>3.19</b>
<b>NSW</b>	<b>284</b>	<b>8,094</b>	<b>3.51</b>
<b>SA</b>	<b>93</b>	<b>1,794</b>	<b>5.19</b>
<b>Qld</b>	<b>277</b>	<b>5,175</b>	<b>5.35</b>
<b>WA</b>	<b>155</b>	<b>2,718</b>	<b>5.70</b>
<b>Tas</b>	<b>36</b>	<b>564</b>	<b>6.39</b>
<b>NT</b>	<b>31</b>	<b>249</b>	<b>12.45</b>

Sources

ABS 2022a, IRTAD 2022 and National Crash Database

**Figure I.1 Fatality rate per 100,000 population – 36 OECD countries, Australian states/territories and Australia's Remoteness Areas, 2020**



Sources ABS 2022a, ABS 2022c, IRTAD 2022 and National Crash Database

## OECD countries, 1990, 2000, 2010 and 2011 to 2020

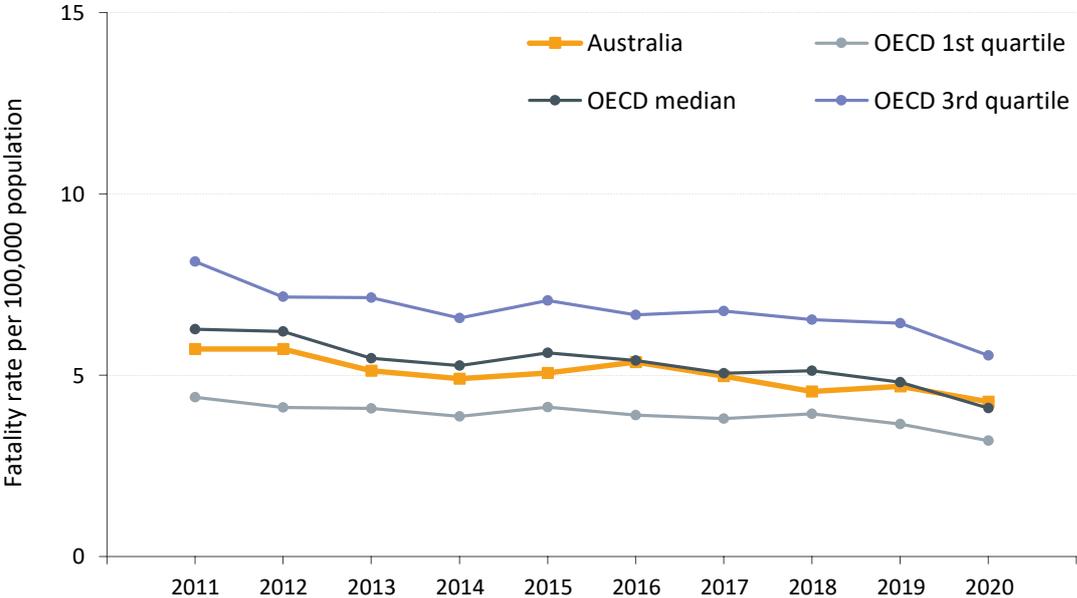
**Table I.2 Fatality rate per 100,000 population – OECD countries and Australian states/territories, 1990, 2000, 2010 and 2011 to 2020**

<i>Nation</i>	1990	2000	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Norway	7.8	7.6	4.3	3.4	2.9	3.7	2.9	2.3	2.6	2.0	2.0	2.0	1.73
Sweden	9.1	6.7	2.8	3.4	3.0	2.7	2.8	2.7	2.7	2.5	3.2	2.2	1.98
Iceland	9.5	11.5	2.5	3.8	2.8	4.7	1.2	4.9	5.4	4.7	5.2	1.7	2.20
United Kingdom	9.4	6.1	3.0	3.1	2.8	2.8	2.9	2.8	2.8	2.8	2.8	2.7	2.26
Switzerland	13.9	8.3	4.2	4.1	4.3	3.3	3.0	3.1	2.6	2.7	2.7	2.2	2.64
Japan	11.8	8.2	4.6	4.3	4.1	4.1	3.8	3.8	3.7	3.5	3.3	3.1	2.72
Denmark	12.3	9.3	4.6	4.0	3.0	3.4	3.2	3.1	3.7	3.0	3.0	3.4	2.80
Spain	23.3	14.4	5.3	4.4	4.1	3.6	3.6	3.6	3.9	3.9	3.9	3.7	2.89
Ireland	13.6	11.0	4.7	4.1	3.6	4.1	4.1	3.5	3.9	3.2	2.8	2.9	2.96
Germany	10.0	9.1	4.5	4.9	4.5	4.1	4.2	4.3	3.9	3.9	4.0	3.7	3.27
Israel	8.7	7.9	4.9	4.9	3.7	3.8	3.9	4.2	4.4	4.2	3.6	3.9	3.31
Netherlands	9.2	6.8	3.2	3.3	3.4	2.8	2.8	3.1	3.1	3.1	3.9	3.8	3.50
Slovenia	25.9	15.8	6.7	6.9	6.3	6.1	5.2	5.8	6.3	5.0	4.4	4.9	3.82
Austria	20.4	12.2	6.6	6.2	6.3	5.4	5.1	5.6	5.0	4.7	4.6	4.7	3.86
France	19.8	13.7	6.4	6.3	5.8	5.1	5.3	5.4	5.4	5.3	5.0	5.0	3.90
Portugal	29.3	20.0	8.9	8.4	6.8	6.1	6.1	5.7	5.4	5.8	6.6	6.0	3.92
Italy	12.6	12.4	7.0	6.5	6.3	5.7	5.6	5.6	5.4	5.6	5.5	5.3	4.02
Finland	13.0	7.7	5.1	5.4	4.7	4.8	4.2	4.9	4.7	4.3	4.3	3.8	4.04
Luxembourg	18.7	17.5	6.4	6.4	6.5	8.4	6.4	6.4	5.6	4.2	6.0	3.6	4.15
<b>Australia</b>	<b>13.7</b>	<b>9.5</b>	<b>6.1</b>	<b>5.7</b>	<b>5.7</b>	<b>5.1</b>	<b>4.9</b>	<b>5.1</b>	<b>5.4</b>	<b>5.0</b>	<b>4.5</b>	<b>4.7</b>	<b>4.26</b>
Belgium	19.9	14.4	7.8	8.0	7.5	6.8	6.7	6.8	5.9	5.4	5.3	5.6	4.33
Estonia	27.8	14.6	5.9	7.6	6.6	6.1	5.9	5.1	5.4	3.6	5.1	3.9	4.51
Slovak Republic	-	12.0	6.5	6.0	6.5	4.6	5.4	5.7	5.1	5.1	4.8	5.0	4.52
Canada	14.3	9.5	6.6	5.9	6.0	5.5	5.2	5.3	5.2	5.1	5.2	4.7	4.59
Hungary	23.4	11.7	7.4	6.4	6.1	6.0	6.3	6.6	6.2	6.4	6.5	6.2	4.73
Czech Republic	12.5	14.5	7.7	7.4	7.1	6.2	6.5	7.0	5.8	5.5	6.2	5.8	4.83
Greece	20.3	18.7	11.2	10.3	8.9	8.0	7.3	7.3	7.6	6.8	6.5	6.4	5.45
Turkey	11.5	8.6	5.5	5.2	5.0	4.8	4.6	9.6	9.2	9.2	8.2	6.6	5.84
Korea	33.1	21.8	11.1	10.5	10.7	10.1	9.4	9.1	8.4	8.1	7.3	6.5	5.95
New Zealand	21.4	12.0	8.6	6.4	6.9	5.7	6.5	6.9	7.0	7.9	7.7	7.1	6.01
Lithuania	29.2	18.3	9.7	9.8	10.1	8.7	9.1	8.2	6.6	6.8	6.2	6.7	6.26
Poland	19.3	16.4	10.2	10.9	9.3	8.7	8.4	7.7	8.0	7.5	7.5	7.7	6.56
Latvia	32.9	24.8	10.4	8.7	8.7	8.9	10.6	9.5	8.1	7.0	7.8	7.1	7.42
Chile	15.7	14.4	12.1	11.8	11.3	11.9	11.9	11.9	12.0	10.5	10.4	10.3	9.22
Colombia	-	-	12.3	11.8	11.8	12.7	13.3	13.8	14.8	13.7	13.7	13.3	10.81
United States	17.9	14.9	10.7	10.4	10.8	10.4	10.3	11.1	11.7	11.5	11.3	11.1	11.78
<b>ACT</b>	<b>9.2</b>	<b>5.7</b>	<b>5.3</b>	<b>1.6</b>	<b>3.2</b>	<b>1.8</b>	<b>2.6</b>	<b>3.8</b>	<b>2.7</b>	<b>1.2</b>	<b>2.1</b>	<b>1.4</b>	<b>1.55</b>
<b>Vic</b>	<b>12.5</b>	<b>8.7</b>	<b>5.3</b>	<b>5.2</b>	<b>5.0</b>	<b>4.2</b>	<b>4.2</b>	<b>4.2</b>	<b>4.7</b>	<b>4.1</b>	<b>3.3</b>	<b>4.1</b>	<b>3.19</b>
<b>NSW</b>	<b>13.7</b>	<b>9.4</b>	<b>5.7</b>	<b>5.0</b>	<b>5.1</b>	<b>4.5</b>	<b>4.1</b>	<b>4.6</b>	<b>4.9</b>	<b>5.0</b>	<b>4.4</b>	<b>4.4</b>	<b>3.51</b>
<b>SA</b>	<b>15.8</b>	<b>11.1</b>	<b>7.3</b>	<b>6.3</b>	<b>5.7</b>	<b>5.8</b>	<b>6.4</b>	<b>6.0</b>	<b>5.0</b>	<b>5.8</b>	<b>4.6</b>	<b>6.4</b>	<b>5.19</b>
<b>Qld</b>	<b>13.8</b>	<b>9.0</b>	<b>5.7</b>	<b>6.0</b>	<b>6.1</b>	<b>5.8</b>	<b>4.7</b>	<b>5.1</b>	<b>5.2</b>	<b>5.0</b>	<b>4.9</b>	<b>4.3</b>	<b>5.35</b>
<b>WA</b>	<b>12.2</b>	<b>11.3</b>	<b>8.4</b>	<b>7.6</b>	<b>7.5</b>	<b>6.5</b>	<b>7.2</b>	<b>6.3</b>	<b>7.7</b>	<b>6.2</b>	<b>6.1</b>	<b>6.2</b>	<b>5.70</b>
<b>Tas</b>	<b>15.4</b>	<b>9.1</b>	<b>6.1</b>	<b>4.7</b>	<b>6.1</b>	<b>6.8</b>	<b>6.4</b>	<b>6.4</b>	<b>7.0</b>	<b>6.1</b>	<b>5.9</b>	<b>5.3</b>	<b>6.39</b>
<b>NT</b>	<b>41.5</b>	<b>25.6</b>	<b>21.8</b>	<b>19.5</b>	<b>20.8</b>	<b>15.3</b>	<b>16.1</b>	<b>20.0</b>	<b>18.3</b>	<b>12.5</b>	<b>20.1</b>	<b>14.1</b>	<b>12.45</b>

Sources

ABS 2022a, Australian Road Deaths Database, IRTAD 2022 and National Crash Database

**Figure I.2** Fatality rate per 100,000 population – OECD quartiles and Australia, 2011 to 2020



Sources ABS 2022a, IRTAD 2022 and National Crash Database

## Fatality rate per 10,000 registered vehicles – OECD countries, 2020

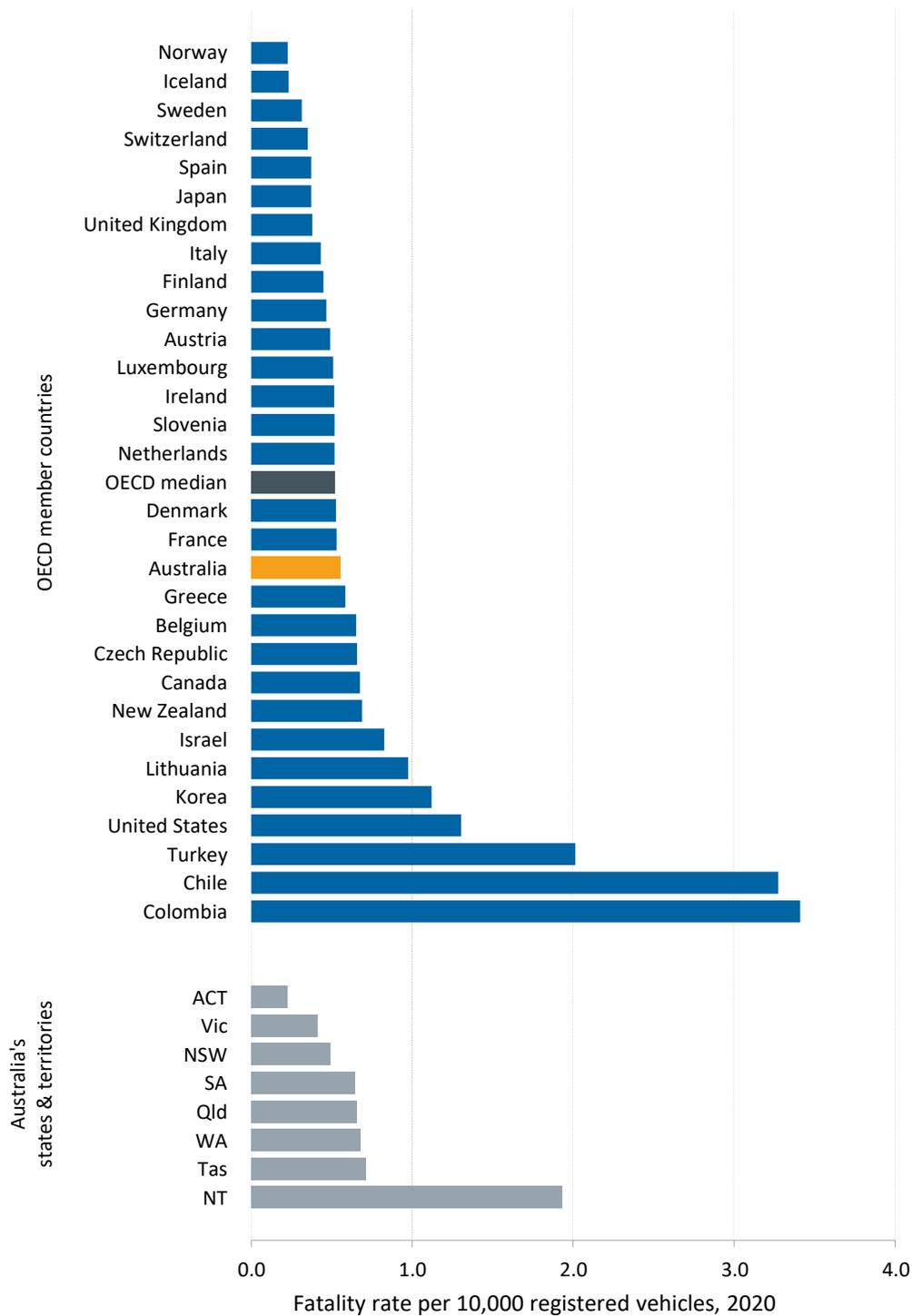
**Table 1.3 Fatality rate per 10,000 registered vehicles – 30 OECD countries and Australian states/territories, 2020**

<i>Nation</i>	<i>Road deaths</i>	<i>Total registered motor vehicles (000s)</i>	<i>Fatality rate per 10,000 registered vehicles</i>
Norway	93	4,075	0.23
Iceland	8	343	0.23
Sweden	204	6,454	0.32
Switzerland	227	6,470	0.35
Spain	1,370	36,657	0.37
Japan	3,416	91,290	0.37
United Kingdom	1,516	39,801	0.38
Italy	2,395	55,386	0.43
Finland	223	4,968	0.45
Germany	2,719	58,158	0.47
Austria	344	6,996	0.49
Luxembourg	26	510	0.51
Ireland	147	2,848	0.52
Slovenia	80	1,543	0.52
Netherlands	610	11,760	0.52
<b>OECD median</b>			<b>0.52</b>
Denmark	163	3,100	0.53
France	2,541	47,817	0.53
<b>Australia</b>	<b>1,094</b>	<b>19,805</b>	<b>0.55</b>
Greece	584	9,966	0.59
Belgium	499	7,651	0.65
Czech Republic	517	7,863	0.66
Canada	1,746	25,820	0.68
New Zealand	306	4,435	0.69
Israel	305	3,689	0.83
Lithuania	175	1,793	0.98
Korea	3,081	27,504	1.12
United States	38,824	297,644	1.30
Turkey	4,866	24,145	2.02
Chile	1,794	5,479	3.27
Colombia	5,447	15,977	3.41
<b>ACT</b>	<b>7</b>	<b>311</b>	<b>0.23</b>
<b>Vic</b>	<b>211</b>	<b>5,120</b>	<b>0.41</b>
<b>NSW</b>	<b>284</b>	<b>5,779</b>	<b>0.49</b>
<b>SA</b>	<b>93</b>	<b>1,445</b>	<b>0.64</b>
<b>Qld</b>	<b>277</b>	<b>4,205</b>	<b>0.66</b>
<b>WA</b>	<b>155</b>	<b>2,279</b>	<b>0.68</b>
<b>Tas</b>	<b>36</b>	<b>506</b>	<b>0.71</b>
<b>NT</b>	<b>31</b>	<b>160</b>	<b>1.93</b>

Sources

ABS 2021, IRTAD 2022 and National Crash Database

**Figure I.3 Fatality rate per 10,000 registered vehicles – 30 OECD countries and Australian states/territories, 2020**



Sources

ABS 2021, IRTAD 2022 and National Crash Database

## OECD countries, 1990, 2000, 2010 and 2011 to 2020

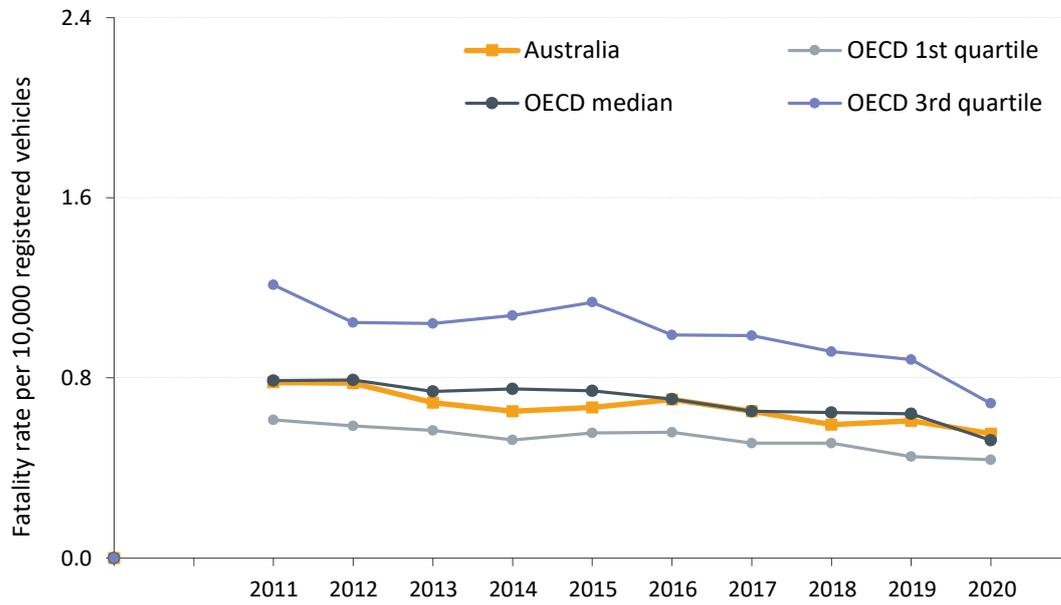
**Table I.4 Fatality rate per 10,000 registered vehicles – OECD countries and Australian states/territories, 1990, 2000, 2010 and 2011 to 2020**

<i>Nation</i>	1990	2000	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Norway	1.4	1.2	0.6	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.23
Iceland	-	1.8	0.3	0.5	0.3	0.6	0.1	0.6	0.6	0.5	0.5	0.2	0.23
Sweden	1.7	1.2	0.5	0.6	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.3	0.32
Switzerland	2.2	1.2	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.35
Spain	5.1	2.2	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.37
Japan	1.9	1.2	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.37
United Kingdom	2.1	1.2	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.38
Italy	2.1	1.6	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.43
Finland	2.8	1.5	0.7	0.7	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.4	0.45
Germany	-	1.4	0.7	0.8	0.7	0.6	0.6	0.6	0.6	0.6	-	-	0.47
Austria	3.7	1.8	0.9	0.9	0.9	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.49
Luxembourg	3.3	2.4	0.8	0.8	0.8	1.0	0.8	0.8	0.7	0.5	0.7	0.4	0.51
Ireland	4.5	2.5	0.9	0.8	0.7	0.8	0.8	0.6	0.7	0.6	0.5	0.5	0.52
Slovenia	-	-	1.0	1.1	1.0	0.9	0.8	0.9	0.9	0.7	0.6	0.7	0.52
Netherlands	-	-	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.52
Denmark	2.9	2.0	-	-	-	-	-	-	-	-	-	-	0.53
France	3.6	2.3	0.9	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.53
<b>Australia</b>	<b>2.3</b>	<b>1.5</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.55</b>
Greece	-	3.1	1.3	1.2	1.0	0.9	0.8	0.8	0.9	0.8	0.7	0.7	0.59
Belgium	-	-	-	-	-	-	-	-	-	0.8	0.8	0.8	0.65
Czech Republic	3.3	3.2	1.3	1.3	1.2	1.0	1.1	1.1	0.9	0.8	0.9	0.8	0.66
Canada	2.3	1.6	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.68
New Zealand	3.3	1.8	1.2	0.9	0.9	0.8	0.9	0.9	0.9	1.0	1.0	0.8	0.69
Israel	4.1	2.8	1.5	1.4	1.1	1.1	1.1	1.2	1.2	1.1	0.9	1.0	0.83
Lithuania	12.7	5.0	1.4	1.4	1.3	1.1	1.8	1.5	1.2	1.2	1.1	1.1	0.98
Korea	-	-	-	-	-	2.3	2.1	1.9	1.7	1.6	1.4	1.2	1.12
United States	2.4	1.9	1.3	1.2	1.3	1.2	1.2	1.3	1.3	1.3	1.2	1.2	1.30
Turkey	16.8	6.6	2.7	2.4	2.2	2.1	1.9	3.8	3.5	3.3	2.9	2.4	2.02
Chile	-	10.6	6.3	5.7	5.1	5.0	4.7	4.6	4.5	3.8	3.6	3.5	3.27
Colombia	-	-	7.1	6.2	5.7	5.6	5.5	5.3	5.4	4.8	4.6	4.3	3.41
<b>ACT</b>	<b>1.6</b>	<b>0.9</b>	<b>0.7</b>	<b>0.2</b>	<b>0.4</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.4</b>	<b>0.2</b>	<b>0.3</b>	<b>0.2</b>	<b>0.23</b>
<b>Vic</b>	<b>2.1</b>	<b>1.2</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.5</b>	<b>0.4</b>	<b>0.5</b>	<b>0.41</b>
<b>NSW</b>	<b>2.5</b>	<b>1.6</b>	<b>0.9</b>	<b>0.8</b>	<b>0.8</b>	<b>0.7</b>	<b>0.6</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.49</b>
<b>SA</b>	<b>2.6</b>	<b>1.6</b>	<b>1.0</b>	<b>0.8</b>	<b>0.7</b>	<b>0.7</b>	<b>0.8</b>	<b>0.8</b>	<b>0.6</b>	<b>0.7</b>	<b>0.6</b>	<b>0.8</b>	<b>0.64</b>
<b>Qld</b>	<b>2.3</b>	<b>1.4</b>	<b>0.7</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.6</b>	<b>0.6</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.5</b>	<b>0.66</b>
<b>WA</b>	<b>1.9</b>	<b>1.6</b>	<b>1.0</b>	<b>0.9</b>	<b>0.9</b>	<b>0.8</b>	<b>0.8</b>	<b>0.7</b>	<b>0.9</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.68</b>
<b>Tas</b>	<b>2.4</b>	<b>1.3</b>	<b>0.8</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.7</b>	<b>0.7</b>	<b>0.8</b>	<b>0.7</b>	<b>0.7</b>	<b>0.6</b>	<b>0.71</b>
<b>NT</b>	<b>8.6</b>	<b>5.0</b>	<b>3.7</b>	<b>3.3</b>	<b>3.5</b>	<b>2.5</b>	<b>2.6</b>	<b>3.2</b>	<b>2.9</b>	<b>2.0</b>	<b>3.1</b>	<b>2.2</b>	<b>1.93</b>

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 2021, Australian Road Deaths Database, IRTAD 2022 and National Crash Database

**Figure I.4 Fatality rate per 10,000 registered vehicles – OECD quartiles and Australia, 2011 to 2020**



Sources ABS 2021, IRTAD 2022 and National Crash Database

## Fatality rate per 100 million vehicle kilometres travelled (VKT) – OECD countries, 2020

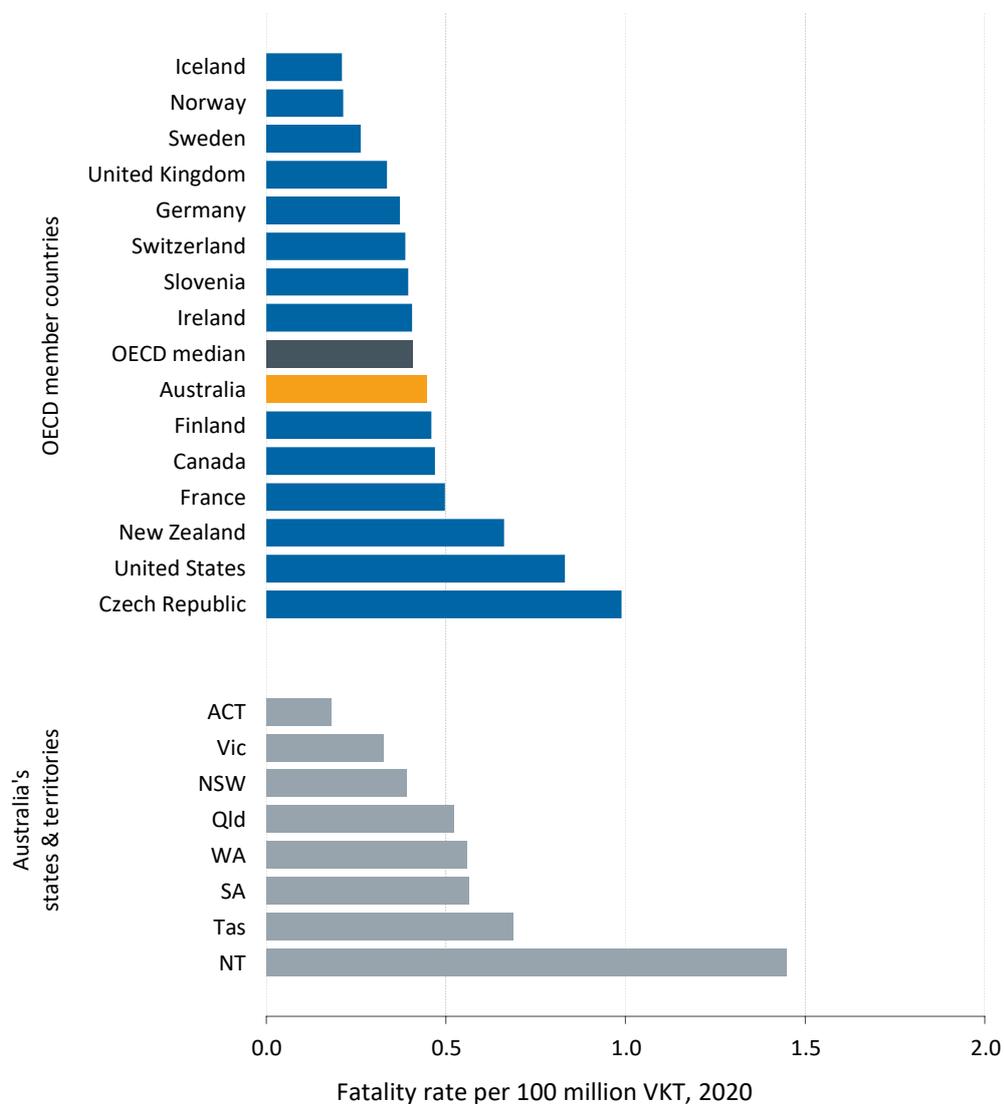
**Table 1.5 Fatality rate per 100 million vehicle kilometres travelled (VKT)  
– 15 OECD countries and Australian states/territories, 2020**

<i>Nation</i>	<i>Road deaths</i>	<i>Total VKT (millions)</i>	<i>Fatality rate per 100 million VKT</i>
Iceland	8	3,800	0.21
Norway	93	43,406	0.21
Sweden	204	77,737	0.26
United Kingdom	1,516	451,590	0.34
Germany	2,719	733,014	0.37
Switzerland	227	58,654	0.39
Slovenia	80	20,242	0.40
Ireland	147	36,237	0.41
<b>OECD median</b>			<b>0.41</b>
<b>Australia</b>	<b>1,094</b>	<b>245,930</b>	<b>0.44</b>
Finland	223	48,543	0.46
Canada	1,746	372,499	0.47
France	2,541	511,172	0.50
New Zealand	306	46,234	0.66
United States	38,824	4,672,927	0.83
Czech Republic	517	52,280	0.99
<b>ACT</b>	<b>7</b>	<b>3,900</b>	<b>0.18</b>
<b>Vic</b>	<b>211</b>	<b>64,656</b>	<b>0.33</b>
<b>NSW</b>	<b>284</b>	<b>72,707</b>	<b>0.39</b>
<b>Qld</b>	<b>277</b>	<b>53,058</b>	<b>0.52</b>
<b>WA</b>	<b>155</b>	<b>27,721</b>	<b>0.56</b>
<b>SA</b>	<b>93</b>	<b>16,505</b>	<b>0.56</b>
<b>Tas</b>	<b>36</b>	<b>5,241</b>	<b>0.69</b>
<b>NT</b>	<b>31</b>	<b>2,142</b>	<b>1.45</b>

Sources

BITRE 2021, IRTAD 2022 and National Crash Database

**Figure I.5 Fatality rate per 100 million vehicle kilometres travelled (VKT) – 15 OECD countries and Australian states/territories, 2020**



Sources

BITRE 2021, IRTAD 2022 and National Crash Database

## OECD countries, 1990, 2000, 2010 and 2011 to 2020

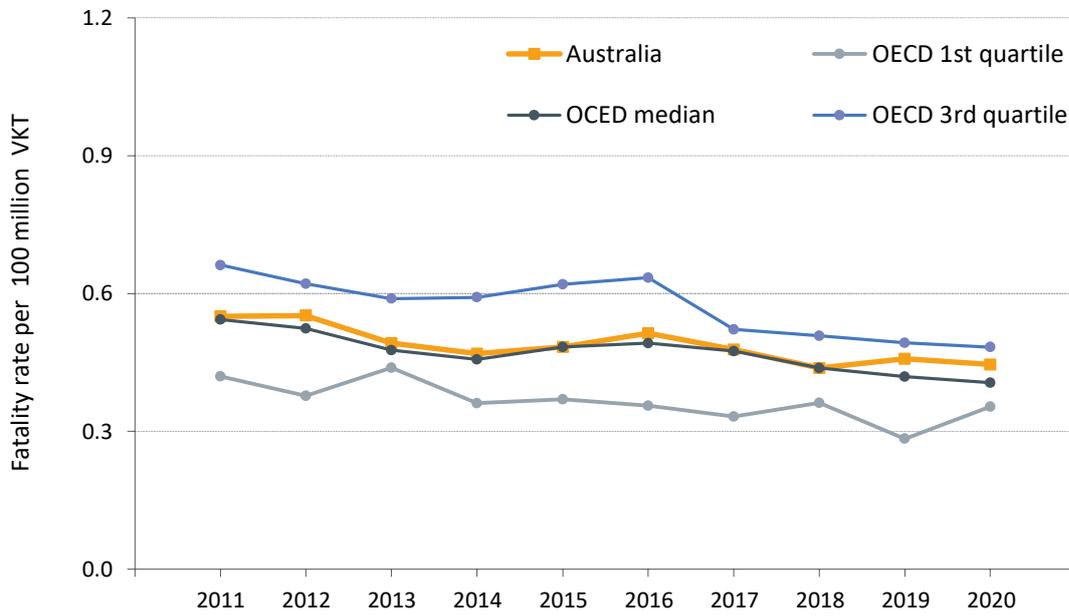
**Table 1.6 Fatality rate per 100 million vehicle kilometres travelled (VKT) – OECD countries and Australian states/territories, 1990, 2000, 2010 and 2011 to 2020**

<i>Nation</i>	1990	2000	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Iceland	1.5	1.4	0.3	0.4	0.3	0.5	0.1	0.5	0.5	0.4	0.4	0.2	0.21
Norway	1.2	1.0	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.21
Sweden	1.2	0.9	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.26
United Kingdom	-	0.7	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.34
Germany	-	1.1	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.37
Switzerland	1.9	1.1	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.39
Slovenia	6.5	2.7	0.8	-	-	0.7	0.6	0.7	0.7	0.5	0.4	0.5	0.40
Ireland	1.9	1.2	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.41
<b>Australia</b>	<b>1.4</b>	<b>0.9</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.4</b>	<b>0.5</b>	<b>0.44</b>
Finland	1.6	0.8	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.46
Canada	-	0.9	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.47
France	2.7	1.6	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.50
New Zealand	-	1.4	0.9	0.7	0.8	0.6	0.7	0.7	0.7	0.8	0.8	0.7	0.66
United States	1.3	0.9	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.83
Czech Republic	4.8	3.7	1.6	1.6	1.6	1.4	1.4	1.4	1.2	1.1	1.2	1.1	0.99
<b>ACT</b>	<b>1.0</b>	<b>0.6</b>	<b>0.5</b>	<b>0.2</b>	<b>0.3</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.3</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>0.18</b>
<b>Vic</b>	<b>1.2</b>	<b>0.8</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.3</b>	<b>0.4</b>	<b>0.33</b>
<b>NSW</b>	<b>1.5</b>	<b>1.0</b>	<b>0.6</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.4</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.4</b>	<b>0.5</b>	<b>0.39</b>
<b>Qld</b>	<b>1.4</b>	<b>0.8</b>	<b>0.5</b>	<b>0.5</b>	<b>0.6</b>	<b>0.5</b>	<b>0.4</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.4</b>	<b>0.4</b>	<b>0.52</b>
<b>WA</b>	<b>1.2</b>	<b>1.0</b>	<b>0.8</b>	<b>0.7</b>	<b>0.7</b>	<b>0.6</b>	<b>0.7</b>	<b>0.6</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.56</b>
<b>SA</b>	<b>1.7</b>	<b>1.1</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.5</b>	<b>0.6</b>	<b>0.5</b>	<b>0.7</b>	<b>0.56</b>
<b>Tas</b>	<b>1.7</b>	<b>0.9</b>	<b>0.6</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.5</b>	<b>0.69</b>
<b>NT</b>	<b>4.7</b>	<b>2.8</b>	<b>2.4</b>	<b>2.2</b>	<b>2.4</b>	<b>1.7</b>	<b>1.8</b>	<b>2.3</b>	<b>2.1</b>	<b>1.4</b>	<b>2.2</b>	<b>1.6</b>	<b>1.45</b>

Sources

Australian Road Deaths Database, BITRE 2021, IRTAD 2022 and National Crash Database

**Figure I.6 Fatality rate per 100 million vehicle kilometres travelled (VKT) – OECD quartiles and Australia, 2011 to 2020**



Sources

BITRE 2021, IRTAD 2022 and National Crash Database

## Comparing the three measures:

Within OECD countries there is a strong correlation between population, registered vehicles and vehicle kilometres travelled. The ranking of countries according to the fatality 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**

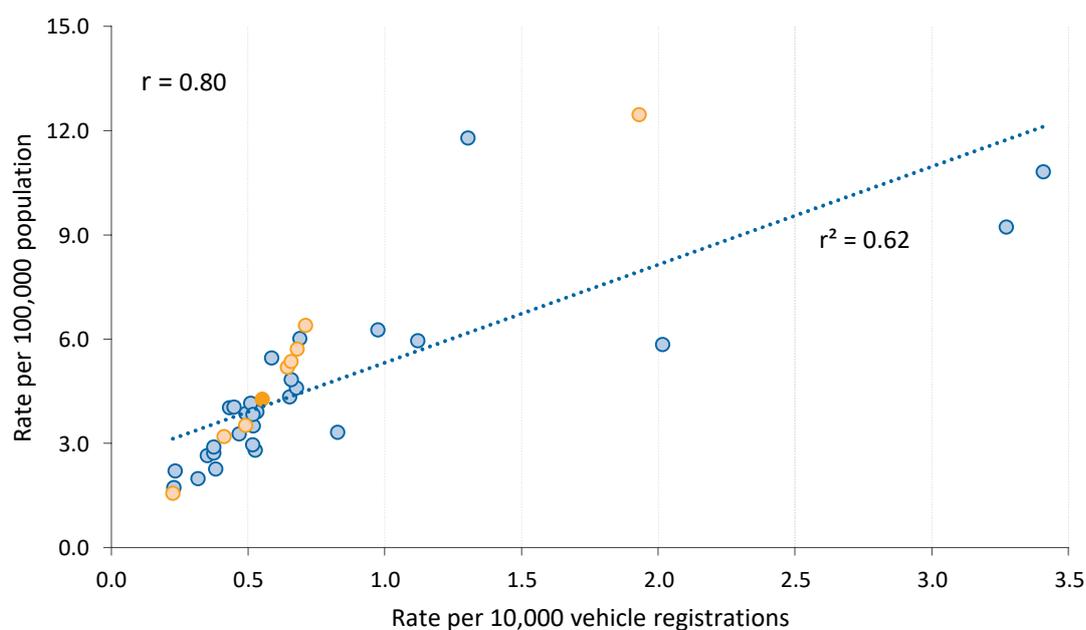
Measures	Population	Veh. Registration	VKT
Population	1.00	0.98	0.99
Veh. Registration		1.00	1.00
VKT			1.00

**Table I.8 Correlation between rates**

Measures	Population	Veh. Registration	VKT
Population	1.00	0.80	0.75
Veh. Registration		1.00	0.78
VKT			1.00

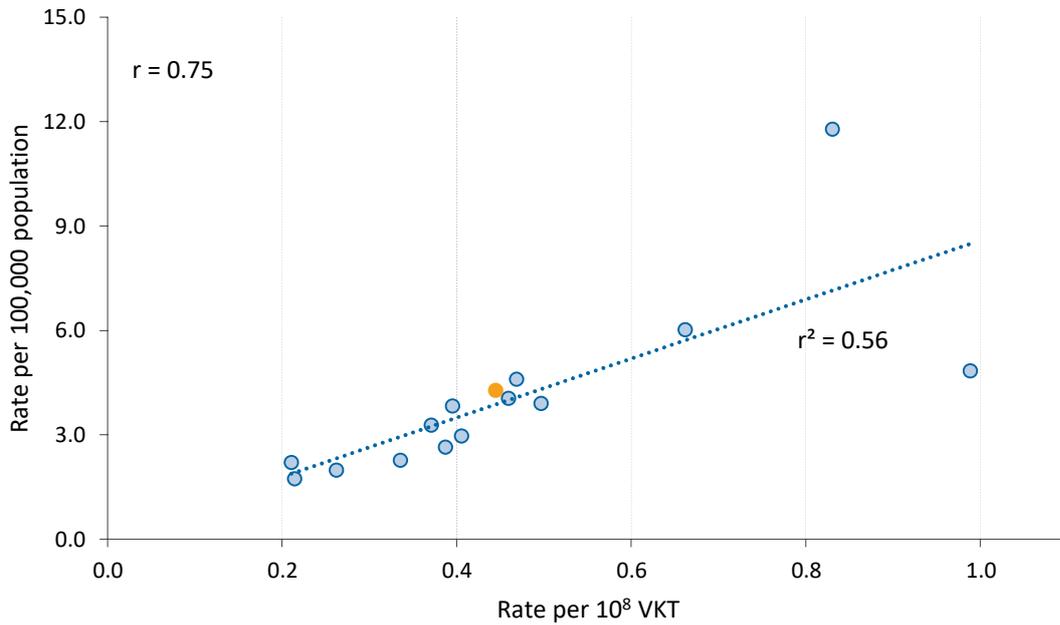
The charts following illustrate the similarity of the three measures presented in sections 1,2 and 3.

**Figure I.7 Population rates vs vehicle registration rates, 2020**



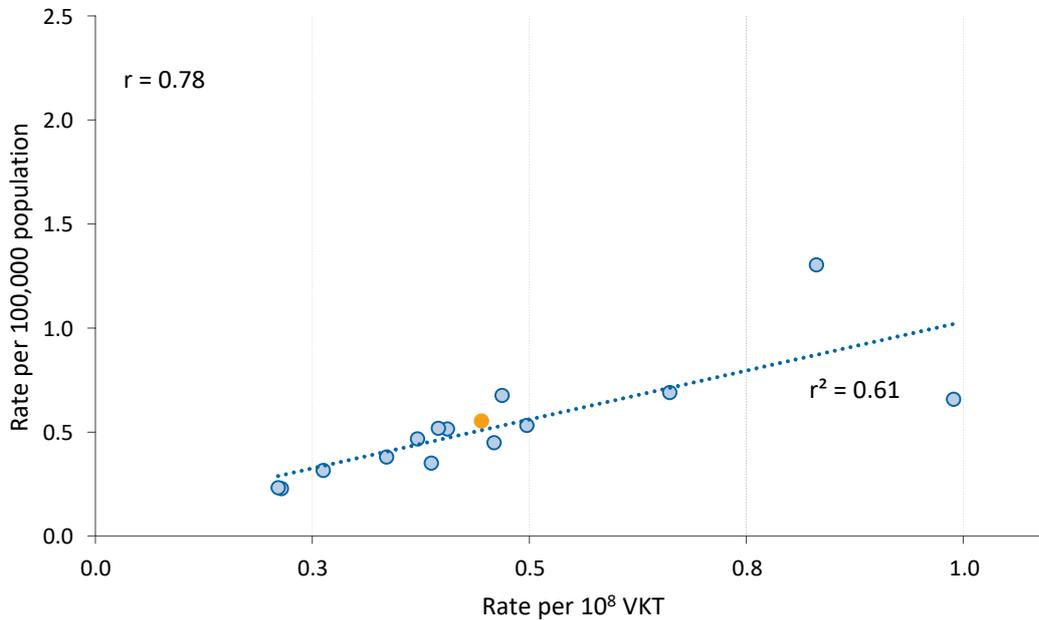
Sources ABS 2022a, IRTAD 2022 and National Crash Database

**Figure I.8 Population rates vs vehicle kilometres travelled rates, 2020**



Sources ABS 2021, ABS 2022a, BITRE 2021, IRTAD 2022 and National Crash Database

**Figure I.9 Vehicle registration rates vs vehicle kilometres travelled rates, 2020**



Sources ABS 2021, BITRE 2022, IRTAD 2022 and National Crash Database

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## **SECTION 2**

### **Age, Road user and Gender comparisons**

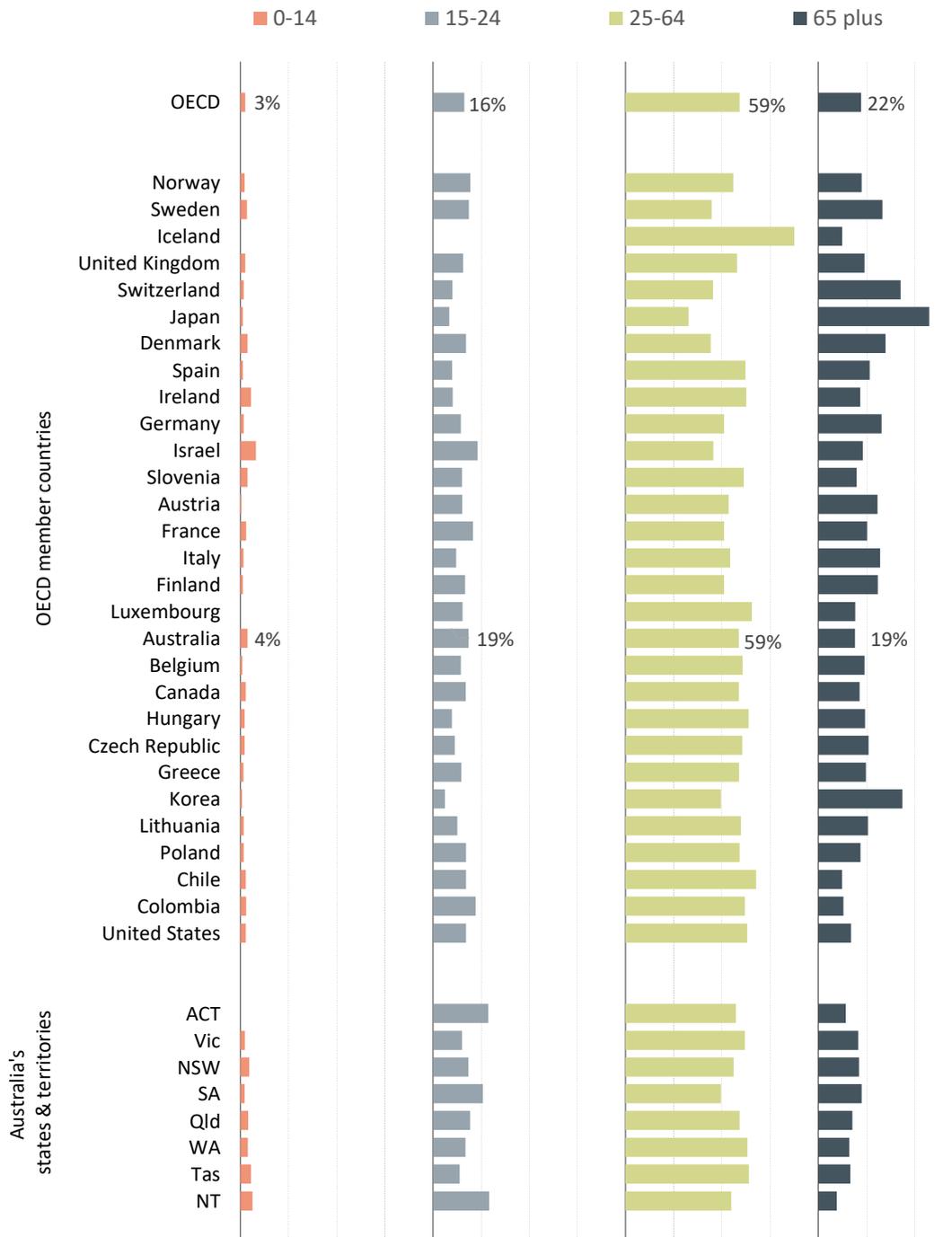
## Proportion of road deaths by age group – OECD countries, 2020

**Table 2.1** Distribution of deaths by age group – 29 OECD and Australian states/territories, 2020

Nation	Age group			
	0-14	15-24	25-64	65 +
Norway	2%	19%	56%	23%
Sweden	3%	19%	45%	33%
Iceland	0%	0%	88%	13%
United Kingdom	2%	16%	58%	24%
Switzerland	2%	10%	45%	43%
Japan	1%	8%	33%	58%
Denmark	4%	17%	44%	35%
Spain	1%	10%	62%	27%
Ireland	5%	10%	63%	22%
Germany	2%	14%	51%	33%
Israel	8%	23%	46%	23%
Slovenia	4%	15%	61%	20%
Austria	1%	15%	53%	31%
France	3%	21%	51%	25%
Italy	2%	12%	54%	32%
Finland	1%	17%	51%	31%
<b>OECD</b>	<b>3%</b>	<b>16%</b>	<b>59%</b>	<b>22%</b>
Luxembourg	0%	15%	65%	19%
<b>Australia</b>	<b>4%</b>	<b>19%</b>	<b>59%</b>	<b>19%</b>
Belgium	1%	14%	61%	24%
Canada	3%	17%	59%	22%
Hungary	2%	10%	64%	24%
Czech Republic	2%	11%	61%	26%
Greece	2%	15%	59%	25%
Korea	1%	6%	49%	44%
Lithuania	2%	13%	60%	26%
Poland	2%	17%	59%	22%
Chile	3%	17%	68%	12%
Colombia	3%	22%	62%	13%
United States	3%	17%	63%	17%
<b>ACT</b>	<b>0%</b>	<b>29%</b>	<b>57%</b>	<b>14%</b>
<b>Vic</b>	<b>2%</b>	<b>15%</b>	<b>62%</b>	<b>21%</b>
<b>NSW</b>	<b>5%</b>	<b>18%</b>	<b>56%</b>	<b>21%</b>
<b>SA</b>	<b>2%</b>	<b>26%</b>	<b>49%</b>	<b>23%</b>
<b>Qld</b>	<b>4%</b>	<b>19%</b>	<b>59%</b>	<b>18%</b>
<b>WA</b>	<b>4%</b>	<b>17%</b>	<b>63%</b>	<b>16%</b>
<b>Tas</b>	<b>6%</b>	<b>14%</b>	<b>64%</b>	<b>17%</b>
<b>NT</b>	<b>6%</b>	<b>29%</b>	<b>55%</b>	<b>10%</b>

Note "Unknown" excluded from the calculation.  
Sources IRTAD 2022 and National Crash Database

**Figure 2.1 Distribution of deaths by age group – 29 OECD countries and Australian states/territories, 2020**



Sources IRTAD 2022 and National Crash Database

## Proportion of road deaths by road user group – OECD countries, 2020

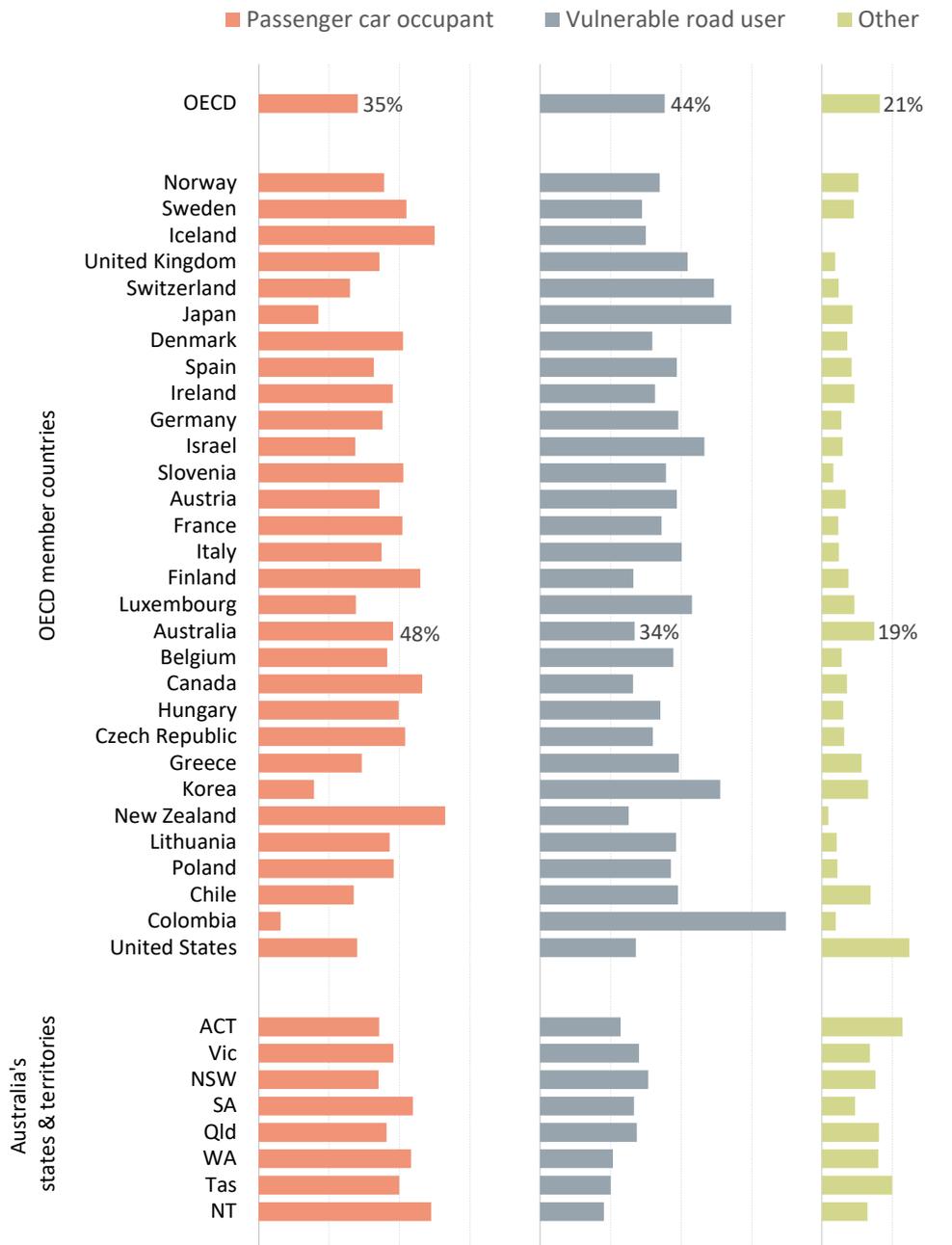
**Table 2.2** Distribution of deaths by road user group – 30 OECD countries and Australian states/territories, 2020

Nation	Road User				
	Passenger car occupant	Pedestrian	Motorcyclist	Cyclist	Other
Norway	45%	15%	22%	5%	13%
Sweden	52%	12%	15%	9%	11%
Iceland	63%	0%	38%	0%	0%
United Kingdom	43%	23%	20%	10%	5%
Switzerland	32%	17%	25%	19%	6%
Japan	21%	37%	13%	18%	11%
Denmark	51%	15%	7%	18%	9%
Spain	41%	20%	24%	5%	11%
Ireland	48%	22%	12%	7%	12%
Germany	44%	14%	19%	16%	7%
Israel	34%	28%	22%	9%	7%
Slovenia	51%	9%	24%	11%	4%
Austria	43%	15%	22%	12%	9%
France	51%	16%	20%	7%	6%
Italy	44%	18%	25%	8%	6%
Finland	57%	10%	9%	14%	10%
<b>OECD</b>	<b>35%</b>	<b>20%</b>	<b>19%</b>	<b>6%</b>	<b>21%</b>
Luxembourg	35%	15%	27%	12%	12%
<b>Australia</b>	<b>48%</b>	<b>12%</b>	<b>17%</b>	<b>4%</b>	<b>19%</b>
Belgium	46%	13%	17%	17%	7%
Canada	58%	16%	14%	3%	9%
Hungary	50%	24%	9%	9%	8%
Czech Republic	52%	18%	12%	10%	8%
Greece	37%	14%	34%	2%	14%
Korea	20%	37%	21%	7%	16%
New Zealand	66%	10%	18%	4%	2%
Lithuania	47%	30%	10%	8%	5%
Poland	48%	26%	10%	10%	6%
Chile	34%	27%	14%	7%	17%
Colombia	8%	22%	57%	8%	5%
United States	35%	17%	14%	2%	31%
<b>ACT</b>	<b>43%</b>	<b>0%</b>	<b>29%</b>	<b>0%</b>	<b>29%</b>
<b>Vic</b>	<b>48%</b>	<b>14%</b>	<b>15%</b>	<b>6%</b>	<b>17%</b>
<b>NSW</b>	<b>43%</b>	<b>17%</b>	<b>17%</b>	<b>5%</b>	<b>19%</b>
<b>SA</b>	<b>55%</b>	<b>9%</b>	<b>23%</b>	<b>2%</b>	<b>12%</b>
<b>Qld</b>	<b>45%</b>	<b>12%</b>	<b>19%</b>	<b>3%</b>	<b>20%</b>
<b>WA</b>	<b>54%</b>	<b>6%</b>	<b>17%</b>	<b>3%</b>	<b>20%</b>
<b>Tas</b>	<b>50%</b>	<b>14%</b>	<b>11%</b>	<b>0%</b>	<b>25%</b>
<b>NT</b>	<b>61%</b>	<b>10%</b>	<b>10%</b>	<b>3%</b>	<b>16%</b>

Note OECD Motorcyclist (motorised two-wheelers) definition includes mopeds.  
Passenger cars consist of driver and passenger.

Sources IRTAD 2022 and National Crash Database

**Figure 2.2 Distribution of deaths by road user group – 30 OECD countries and Australian states/territories, 2020**



Sources IRTAD 2022 and National Crash Database

## Proportion of road deaths by gender – OECD countries, 2020

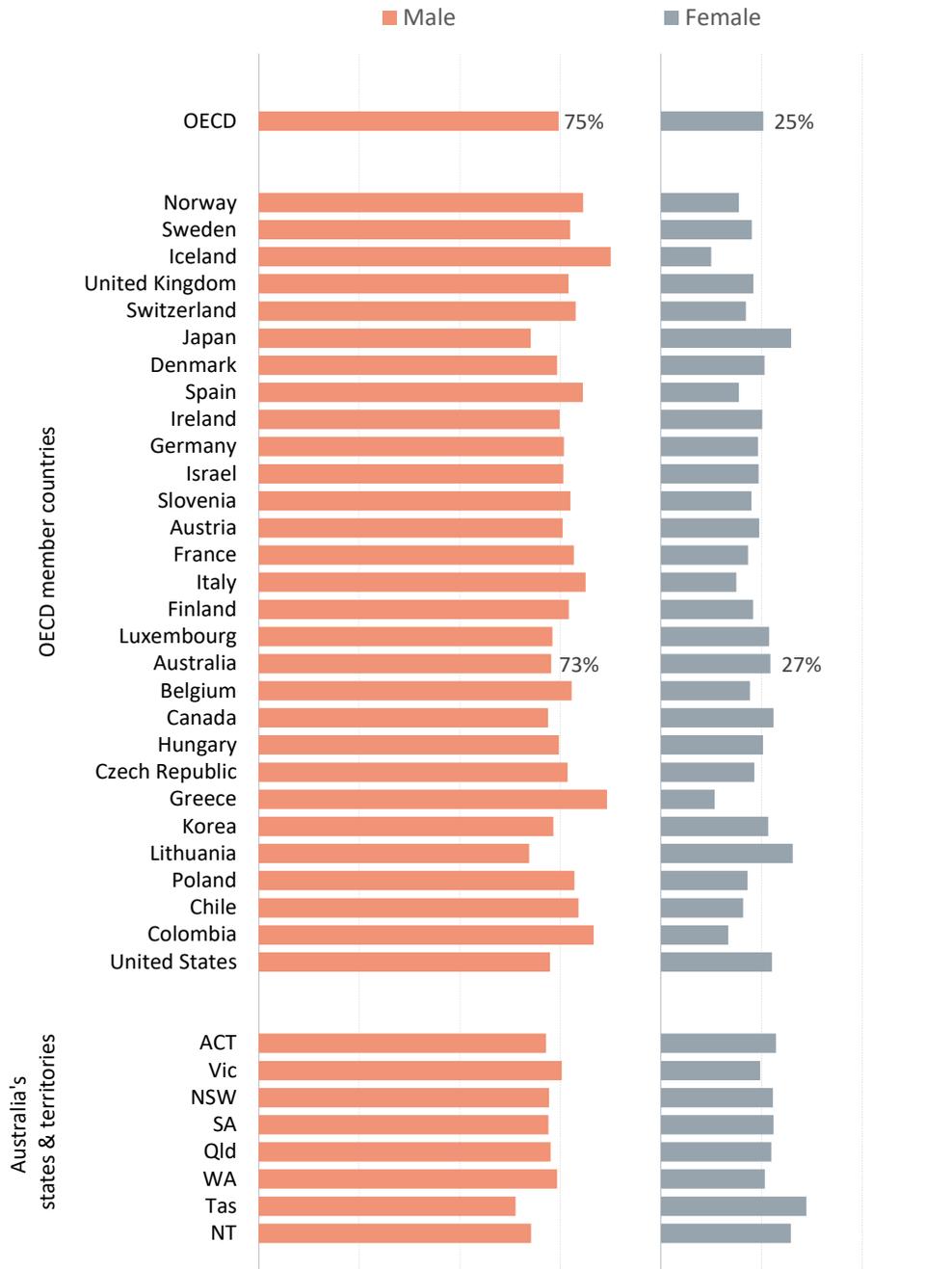
**Table 2.3**      **Distribution of deaths by gender – 29 OECD countries  
Australian states/territories, 2020**

<i>Nation</i>	<i>Gender</i>	
	<i>Male</i>	<i>Female</i>
Norway	81%	19%
Sweden	77%	23%
Iceland	88%	13%
United Kingdom	77%	23%
Switzerland	79%	21%
Japan	68%	32%
Denmark	74%	26%
Spain	81%	19%
Ireland	75%	25%
Germany	76%	24%
Israel	76%	24%
Slovenia	78%	23%
Austria	76%	24%
France	78%	22%
Italy	81%	19%
Finland	77%	23%
<b>OECD</b>	<b>75%</b>	<b>25%</b>
Luxembourg	73%	27%
<b>Australia</b>	<b>73%</b>	<b>27%</b>
Belgium	78%	22%
Canada	72%	28%
Hungary	75%	25%
Czech Republic	77%	23%
Greece	87%	13%
Korea	73%	27%
Lithuania	67%	33%
Poland	79%	21%
Chile	80%	20%
Colombia	83%	17%
United States	72%	28%
<b>ACT</b>	<b>71%</b>	<b>29%</b>
<b>Vic</b>	<b>75%</b>	<b>25%</b>
<b>NSW</b>	<b>72%</b>	<b>28%</b>
<b>SA</b>	<b>72%</b>	<b>28%</b>
<b>Qld</b>	<b>73%</b>	<b>27%</b>
<b>WA</b>	<b>74%</b>	<b>26%</b>
<b>Tas</b>	<b>64%</b>	<b>36%</b>
<b>NT</b>	<b>68%</b>	<b>32%</b>

Sources

IRTAD 2022 and National Crash Database

**Figure 2.3** Distribution of deaths by gender – 29 OECD countries and Australian states/territories, 2020



Sources IRTAD 2022 and National Crash Database

## References

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- ABS 2022a Australian Bureau of Statistics, *Australian Demographic Statistics*, Cat No 3101.0,
- ABS 2022b Australian Bureau of Statistics, *Australian Statistical Geography Standard (ASGS): Volume 5 – Remoteness Structure*, Cat No 1270.0.55.005.
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