

# Facts about our most vulnerable road users

December 2020



**For the better**

# How those most vulnerable are being killed and injured on Western Australian roads

Road users such as pedestrians, cyclists and motorcyclists can be considered as ‘vulnerable’ due to their lack of protection when interacting with traffic, and for this reason they are at greater risk of being fatally or seriously injured in a crash. In fact, it is widely recognised that the chances of a vulnerable road user (VRU) being fatally or seriously injured rapidly increases from around 30km/h<sup>1</sup>.

In the five years from 1 January 2015 to 31 December 2019, a total of 693 pedestrians, 468 cyclists and 1,669 motorcyclists were killed or seriously injured (KSI) on WA roads, accounting for over a third of all KSI during this period<sup>2</sup>. Over seven in 10 of VRU KSI occurred on metropolitan roads<sup>3</sup>.



## Pedestrians

Pedestrians have their own needs and difficulties when using the road network<sup>4</sup>:

- » older pedestrians are more vulnerable due to their increased physical frailty and the impact of ageing on sensory, perceptual, cognitive and physical ability<sup>5</sup>;
- » child pedestrians are still developing physically<sup>6</sup>, and refining their motor and decision-making skills<sup>7</sup>; and
- » those with physical or cognitive impairments may cross the road more slowly, be at a higher risk of falls, or have difficulties when making accurate judgements about safety<sup>8</sup>.

693 pedestrians were killed or seriously injured on our roads between 2015 and 2019 (just over 8 per cent of all KSI during this period). Of these fatal and serious injuries:

- » 46 per cent occurred while the pedestrian was crossing the road (over half involved the pedestrian being hit by a vehicle travelling in the lane closest to the kerb that the pedestrian was leaving - Figure 1);

- » 25 per cent were recorded at an intersection; and
- » 22 per cent occurred when the pedestrian was playing, working, or standing on the road<sup>9</sup> - Figure 2.

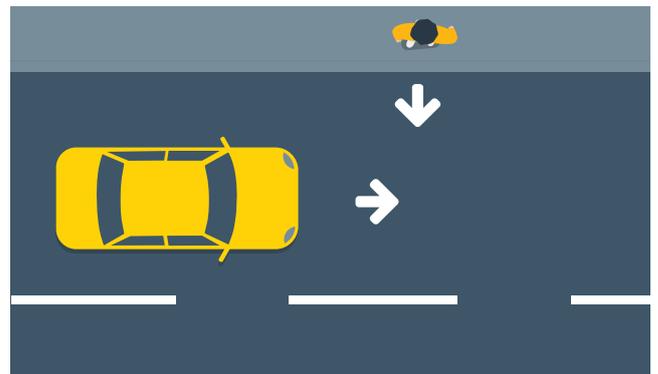


Figure 1

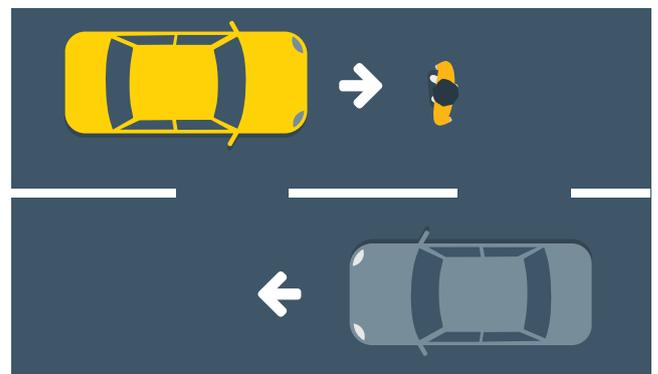


Figure 2

RAC's January<sup>10</sup> [Member Priorities Tracker](#) found that 93 per cent of respondents thought it was important<sup>11</sup> for government to make walking easier and safer, yet only 13 per cent were very or extremely confident<sup>12</sup> in government's plans to do so. When it comes to intersections, the March<sup>13</sup> Member Priorities Tracker found that 16 per cent of respondents did not feel safe<sup>14</sup> as a pedestrian crossing at a signalised intersection, and a further 18 per cent felt neither safe nor unsafe<sup>15</sup>.

<sup>1</sup> Hussain, Q, Feng, H, Brijs, T, Grzebieta, R. & Olivier, J. (2018). *A systematic review and meta-analysis of impact speed and probability of pedestrian fatality*. Available at: <https://www.sciencedirect.com/journal/accident-analysis-and-prevention/vol/129/suppl/C>

<sup>2</sup> Calculation based on data provided by Main Roads Western Australia. (2020).

<sup>3</sup> Ibid.

<sup>4</sup> Oxley, J, Corben, B, Fildes, B, & Charlton, J. (2004). *Older Pedestrians - Meeting their Safety and Mobility Needs*. Available at: <https://acrs.org.au/files/arsrpe/RSO40052.pdf>

<sup>5</sup> Ibid.

<sup>6</sup> World Health Organisation. (2008). *World Report on Child Injury Prevention*. Available at: [https://www.who.int/violence\\_injury\\_prevention/child/injury/world\\_report/World\\_report.pdf](https://www.who.int/violence_injury_prevention/child/injury/world_report/World_report.pdf)

<sup>7</sup> Hobday, M & Meuleners, L. (2008). *Child and adolescent pedestrians and cyclists in Western Australia: how safe are they?* Available at: <https://www.rsc.wa.gov.au/RSC/media/Documents/Child-pedestrian-and-cyclist.pdf>

<sup>8</sup> Road Safety Commission. (2018). *The Safety of People Walking and Riding Pedestrians*. Available at: <https://www.rsc.wa.gov.au/RSC/media/Documents/Resources/Pedestrians-Information-Sheet.pdf>

<sup>9</sup> Supra note 2.

<sup>10</sup> 474 from the Perth and Peel region, 150 from regional WA and four members currently outside WA. Age, gender and location sampling quotas were applied, and data has been post-weighted to be representative of RAC's membership (which is broadly consistent with the WA population profile) - the margin of error at total sample level is +/-3.9% at the 95% confidence level. Results are as at 18 August 2020.

<sup>11</sup> Members were asked to indicate the extent to which they thought it was extremely, very, moderately, slightly, or not at all important for government to make walking easier and safer. Results are members who said it was extremely, very, or moderately important.

<sup>12</sup> Members were asked to indicate the extent to which they were extremely, very, moderately, slightly, or not at all confident in government's plans to make walking easier and safer.

<sup>13</sup> 251 respondents were from the Perth and Peel region and 94 from regional WA. Age, gender and location sampling quotas were applied, and data has been post-weighted to be representative of RAC's membership (which is broadly consistent with the WA population profile - the margin of error at total sample level is +/-5.3% at the 95% confidence level. Results are as at 18 August 2020.

<sup>14</sup> Members were asked to indicate the extent to which they strongly agreed, agreed, were neutral, disagreed, or strongly disagreed with the statement that they feel safe as a pedestrian when crossing at signalised intersections. Results are members who said they strongly disagreed or disagreed.

<sup>15</sup> Members were asked to indicate the extent to which they strongly agreed, agreed, were neutral, disagreed, or strongly disagreed with the statement that they feel safe as a pedestrian when crossing at signalised intersections. Results are members who said they were neutral.

 **Cyclists**

RAC's Member Priorities Tracker<sup>16</sup> has found that approximately one in six ride a bicycle weekly.



468 cyclists were killed or seriously injured on our roads between 2015 and 2019 (almost 6 per cent of all KSI during this period). Of these fatal and serious injuries:

- » 58 per cent were at an intersection (most commonly the result of thru-thru movements, where both road users were travelling straight through an intersection and collided at a 90 degree angle, accounting for over one in five KSI - Figure 3);
- » 16 per cent occurred when the cyclist and vehicle were travelling in the same direction (three in four were the result of a rear end collision);
- » 15 per cent occurred when the cyclist and vehicle collided as either one or the other was leaving a driveway, or moving from a footpath onto the road; and
- » 12 per cent occurred when the cyclist and vehicle were travelling in opposite directions (over five in six were the result of when one tried to turn right and collided with the oncoming vehicle/bicycle)<sup>17</sup>.

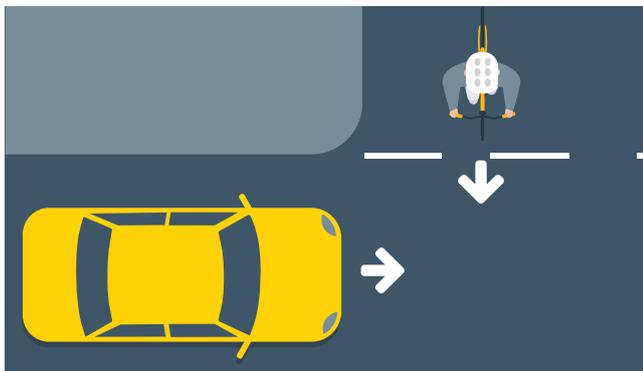


Figure 3

According to the March<sup>18</sup> Member Priorities Tracker results, over three in five do not feel safe<sup>19</sup> as a cyclist when sharing the road with motorists. RAC's 2015 [Cycling Survey](#)<sup>20</sup> also found fear of sharing the roads with motorists (43 per cent) and lack of bike routes (31 per cent) were the top two reasons for not cycling more, and of those who cycle on the road mixing with traffic, 87 per cent do so because there are no alternatives (e.g. shared paths and cycle lanes).

 **Motorcyclists**

Whilst the number of registered motorcycles in WA has declined over the last five years<sup>21</sup> and account for just over five per cent of the State's registered vehicles<sup>22</sup>, almost one in five people killed or seriously injured were riding motorcycles<sup>23</sup>.

1,669 motorcyclists were killed or seriously injured on our roads between 2015 and 2019. Of these fatal and serious injuries:

- » 43 per cent were at an intersection (most commonly the result of when one vehicle tried to turn whilst the other was travelling straight, accounting for two in five - Figure 4);
- » 37 per cent were the result of single vehicle crashes where the motorcycle veered from its path of travel for some reason (over half when the motorcyclist was travelling on a straight section of road);
- » 18 per cent occurred when the colliding vehicles were travelling in the same direction (over half were the result of a rear-end collision and almost a quarter the result of a vehicle changing lanes - Figure 5); and
- » 14 per cent occurred when the colliding vehicles were travelling in opposite directions (around four in five when one vehicle tried to turn right and collided with the oncoming vehicle - Figure 6)<sup>24</sup>.

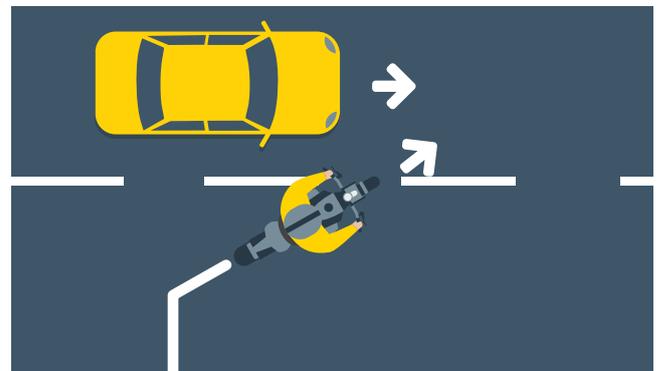


Figure 4

<sup>16</sup> 3,653 respondents from the Perth and Peel region, regional WA and outside of WA. Age, gender and location sampling quotas were applied, and data has been post-weighted to be representative of RAC's membership (which is broadly consistent with the WA population profile). Results are the responses received in January, February, March, May, June, July and August. The margin of error at total sample level is +/-3.9%, +/-4.3%, +/-5.3%, +/-4.0%, +/-4.0%, +/-4.4% and +/-4.5% at the 95% confidence level for each respective month.

<sup>17</sup> Supra note 2.

<sup>18</sup> Supra note 13.

<sup>19</sup> Members were asked to indicate the extent to which they strongly agreed, agreed, were neutral, disagreed, or strongly disagreed with the statement that they feel safe as a cyclist when sharing the road with motorists. Results are members who said they strongly disagreed or disagreed.

<sup>20</sup> RAC. (2015). *Cycling Survey*. Available at: <https://rac.com.au/about-rac/advocating-change/reports>

<sup>21</sup> Australian Bureau of Statistics. *93090 - Motor Vehicle Census, Australia, 31 Jan 2020*. Accessed 18 August 2020 at: <https://www.abs.gov.au/AUSSTATS/abs@nsf/DetailsPage/93090.031%20Jan%202020?OpenDocument>

<sup>22</sup> Ibid.

<sup>23</sup> Supra note 2.

<sup>24</sup> Ibid.

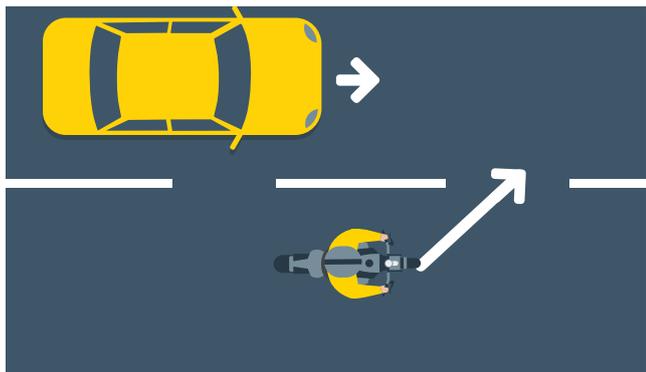


Figure 5

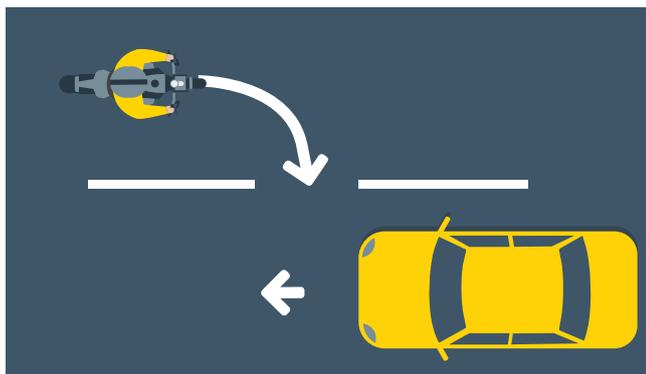


Figure 6

RAC's March<sup>25</sup> Member Priorities Tracker found that as a driver, one in five do not feel confident<sup>26</sup> when interacting with motorcyclists. RAC's 2018 [Motorcycling Survey](#)<sup>27</sup> also found that both drivers and motorcyclists were concerned about the visibility of motorcyclists, with 56 per cent and 44 per cent respectively considering this to be the greatest threat to the safety of motorcyclists.

### Where we stand

Our vision is for a safer, sustainable and connected future for Western Australians. Irrespective of how we choose to travel, we should be safe in doing so.

RAC's social impact activities seek to save lives and serious injuries from needlessly occurring on our roads, aligning with the Safe System approach, which seeks safe road users, safe speeds, safe vehicles, and safe roads.

On behalf of all road users including our more than 1.1 million members, we made a [submission](#) to State Government regarding the new state road safety strategy [Driving Change 2020-2030](#).

Amongst other things, last year we asked that, in facilitating lower and safer travel speeds, the strategy support a review of urban road and street design standards and guidance to prioritise consideration of both movement and place functions, and a user hierarchy that seeks to protect the most vulnerable users, first.

As part of our 2020-2021 [State](#) and [Federal](#) budget submissions, we called on government to:

- » Commit funding towards a program to deliver lower cost, network-wide treatments to address common challenges at different intersection types to create a safer road network for all road users across metropolitan Perth (total initial program cost of \$50 million over five years).
- » Commit funding towards a program to roll out priority projects to accelerate the delivery of safe and connected active transport infrastructure and enhanced streets and places for cycling and walking in WA (total initial program cost of \$80 million over two years).

### RAC supports:

- » The creation of safer streets through, for example:
  - › Increased investment in high quality, well-designed, connected, legible pedestrian and cycling infrastructure.
  - › Road planning and design that takes into account the needs of all users, as well as the function of the road or street.
- » New vehicles integrating safety features designed to protect vulnerable road users in the event of a crash.
- » Investigation of measures to reduce crashes involving vulnerable road users, including legislation which provides this group greater priority at all intersections.
- » Trialling innovative approaches in designing, or re-designing, intersections, particularly on local roads and in relation to better speed management and prioritisation for vulnerable road users to enhance safety and amenity.
- » Trialling and implementing speed limit reductions in urban areas with high pedestrian/bicycle activity, on residential streets, and on roads with a high crash record or identified crash risk.

<sup>25</sup> Supra note 13.

<sup>26</sup> Members were asked to indicate the extent to which they strongly agreed, agreed, were neutral, disagreed, or strongly disagreed with the statement that they feel confident as a driver when interacting with motorcyclists. Results are members who said they strongly disagreed or disagreed.

<sup>27</sup> RAC. (2018). *RAC Motorcycling Survey*. Available at: <https://rac.com.au/about-rac/advocating-change/reports>

For further information  
please contact [advocacy@rac.com.au](mailto:advocacy@rac.com.au)